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FOREWORD

Winnie Hung[†] *& Jane Ann Levich*[††]

The Annual Review is a yearly publication of the *Berkeley Technology Law Journal* that provides a summary of many of the major developments at the intersection of law and technology. Our aim is to provide a valuable resource for judges, policymakers, practitioners, students, and scholars. Each Note provides a primer into a particular area of law, a development in that area of law, and commentary on that development.

The twenty-two Notes in this issue continue a tradition of covering a wide range of topics. The Notes address developments in traditional intellectual property areas—patent, copyright, trademark, and trade secret law—along with developments in cyberlaw and privacy. Following the Notes in each area of law, we have included a Survey of Additional IP Developments, which contains brief descriptions of important developments that were not addressed in the Notes.

I. PATENT LAW

Our first Note[1] in the Patent Law section examines how an effective fee-shifting regime can reduce abusive patent litigation practices, which waste judicial resources, distract producers from bringing technological innovations to the public, and generate unnecessary social costs. The Note argues that transferring the burden of the winning party's attorneys' fees to the losing party based on the outcome of litigation will effectively deter filings of questionable merit. It further argues that legislative proposals such as the Saving High-Tech Innovators from Egregious Legal Disputes Act of 2013 ("SHIELD Act of 2013")[2] would be more effective than judicial interpretation in reducing abusive patent litigation.

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†† Senior *Annual Review* Editor, Berkeley Technology Law Journal; J.D. Candidate, 2013, University of California, Berkeley School of Law.

1. Emily H. Chen, Note, *Making Abusers Pay: Deterring Patent Litigation by Shifting Attorneys' Fees*, 28 BERKELEY TECH L.J. 351 (2013).

2. H.R. 55, 113th Cong. (1st Sess. 2013).

The second Note[3] argues that the evolution of joint inventorship law as developed by the Federal Circuit is more stable than many commentators have traditionally acknowledged. Through an empirical analysis of sixty-five published cases, the Note shows that equitable and practical considerations guide many of the appellate decisions reached in the past thirty years.

The third Note[4] explains how existing law can be applied to reduce overbroad means-plus-function claims for computer-implemented inventions. It argues that courts should apply the Federal Circuit's heightened scrutiny test to all means-plus-function claims and analyze all functional claims under 35 U.S.C. § 112.[5] Furthermore, the Note highlights the ways in which the Federal Circuit clarified existing law to provide clearer notice to patentees about the scope of ownership rights in software patents.

The fourth Note[6] evaluates the legal landscape for trade secret owners both before and after the Federal Circuit's recent decision in *TianRui Group Co. v. International Trade Commission*.[7] The Note argues that the liberal interpretation of "domestic industry" in *TianRui* will lead to an increase in trade secret complainants in the ITC due to the expanded threshold for proving ITC jurisdiction over foreign acts of misappropriation.

The fifth Note[8] analyzes the Federal Circuit's decision in *In re MSTG, Inc.*,[9] in which the court decided not to privilege settlement documents related to reasonable royalties. The Note identifies eight different types of Non-Practicing Entities ("NPEs") and groups them into three categories according to their litigation characteristics. Through a decision tree analysis, the Note suggests that *MSTG* will have the most impact on the strategies of a subset of NPEs, pejoratively known as "patent trolls," by potentially making them less litigious and more willing to settle.

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3. Eric Ross Cohen, Note, *Clear as Mud: An Empirical Analysis of the Developing Law of Joint Inventorship in the Federal Circuit*, 28 BERKELEY TECH L.J. 383 (2013).

4. Elise S. Edlin, Note, *Computer Claim Disarray: Untangling the Means-Plus-Function Doctrine to Eliminate Impermissible Functional Claiming in Software Patents*, 28 BERKELEY TECH L.J. 417 (2013).

5. 35 U.S.C. § 112 (2006).

6. Natalie Flechsig, Note, *Trade Secret Enforcement After TianRui: Fighting Misappropriation Through the ITC*, 28 BERKELEY TECH L.J. 449 (2013).

7. TianRui Group Co. Ltd. v. Int'l Trade Comm'n, 661 F.3d 1322 (Fed. Cir. 2011).

8. Alex S. Li, Note, *Accidentally on Target: The MSTG Effects on Non-Practicing Entities' Litigation and Settlement Strategies*, 28 BERKELEY TECH L.J. 483 (2013).

9. In re MSTG, Inc., 675 F.3d 1337, 1348 (Fed. Cir. 2012), *reh'g denied*, 468 Fed. App'x. 994 (Fed. Cir. 2012).

The sixth Note[10] considers the rationales behind patent aggregation, the strategies that practicing entities and non-practicing entities use to exploit aggregated portfolios, and the potential effects that activities associated with aggregation impose on innovation and competition. The Note argues that although courts and antitrust agencies can use antitrust law to regulate some anticompetitive harms associated with aggregation, many of these harms must be addressed directly through patent law and patent policy.

The seventh Note[11] reviews the current Federal Circuit split over whether a computer-implemented invention is patent-eligible. It provides an overview of the abstract idea doctrine and discusses the Federal Circuit's prior attempts to articulate a bright-line test for patentability. The Note concludes with a review of the Leahy-Smith America Invents Act[12] and argues that the Act will reduce the problem of overbroad computer method patents that courts have struggled to address.

The eighth Note[13] discusses the Federal Circuit's en banc decision in *Akamai Technologies, Inc. v. Limelight Networks, Inc.*,[14] to relax the rules for proving liability for inducing infringement. The Note first examines the history of divided infringement law and the legislative history of 35 U.S.C. § 271.[15] It then argues that although the new *Akamai* rule is correct in its analysis of patent policy and legislative intent, the decision creates inconsistencies in statutory interpretation. The Note suggests that a better way to prevent entities from knowingly and intentionally inducing infringement would be to lower the relationship standard for the doctrine of joint infringement.

The ninth Note[16] examines the Supreme Court's historical jurisprudence on patentable subject matter. It argues that the Court's decision in *Mayo Collaborative Services v. Prometheus Laboratories, Inc.*[17] obfuscated not only the methodology of examining a process claim relying on a natural phenomenon but also the very understanding of a natural phenomenon itself.

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10. Justin Orr, Note, *Patent Aggregation: Models, Harms, and the Limited Role of Antitrust*, 28 BERKELEY TECH L.J. 525 (2013).

11. Dina Roumiantseva, Note, *The Eye of the Storm: Software Patents and the Abstract Idea Doctrine in* CLS Bank v. Alice, 28 BERKELEY TECH L.J. 569 (2013).

12. Leahy-Smith America Invents Act, Pub. L. No. 112-29, 125 Stat. 284 (2011) (to be codified in scattered sections of 35 U.S.C.).

13. Michael Liu Su, Note, *A Rock and a Hard Place: Choosing Between § 271(a) and (b) for Divided Infringement in* Akamai, 28 BERKELEY TECH L.J. 609 (2013).

14. Akamai Techs., Inc. v. Limelight Networks, Inc., 692 F.3d 1301 (Fed. Cir. 2012).

15. 35 U.S.C. § 271 (2006).

16. Ethan M. Weiner, Note, *Defining A Natural Phenomenon After* Prometheus, 28 BERKELEY TECH L.J. 643 (2013).

17. Mayo Collaborative Servs. v. Prometheus Labs., Inc., 132 S. Ct. 1289 (2012).

II. COPYRIGHT LAW

The first Note[18] in the Copyright Law section describes and analyzes the jurisprudence regarding the use of copyrighted works for educational and research purposes in the wake of *Authors Guild v. Hathitrust*,[19] a 2012 case wherein the U.S. District Court for the Southern District of New York applied a fair use analysis to unauthorized scanning of books for the purpose of creating a full-text search index.[20] The Note argues that uses of copyrighted works that do not provide expressive substitution should remain outside the scope of copyright protection and calls for the expansion of § 108 and § 121 defenses to claims of copyright infringement.

The second Note[21] discusses the history of remittitur and its recent application in peer-to-peer filesharing copyright infringement cases.[22] The Note argues that remittitur has limited application in future peer-to-peer filesharing copyright infringement suits for two reasons: (1) the low likelihood of suits against individual infringers going to trial and (2) the low likelihood of plaintiffs accepting a remitted damage award.

The final Note[23] concerns copyright law and changing demographic and distribution dynamics in the video game industry that have given rise to the so-called "Clone Wars." The Note argues that the necessarily thin scope of copyright protection for video games makes a definitive judicial end to clone gaming unlikely and unwise. Instead, as development becomes more democratized, the onus will be on the increasingly centralized online distribution platforms to adopt more robust copyright review procedures in order to provide legal enforcement in the video game marketplace.

III. TRADEMARK LAW

The first Note[24] in the Trademark Law section discusses the doctrine of aesthetic functionality. The Note focuses on two recent cases that apply the

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18. Angel Siegfried Díaz, Note, *Fair Use & Mass Digitization: The Future of Copy-Dependent Technologies After* Authors Guild v. Hathitrust, 28 BERKELEY TECH. L.J. 683 (2013).

19. Authors Guild v. Hathitrust, No. 11 CV-4351 (HB) 2012 WL 4808939 (S.D.N.Y. Oct. 10, 2012).

20. *Id.*

21. Casey Hultin, Note, *Remittitur and Copyright*, 28 BERKELEY TECH. L.J. 715 (2013).

22. Sony BMG Music Entm't. v. Tenenbaum, No. 07-11446-RWZ, 2012 WL 3639053, at *1 (D. Mass Aug. 23, 2012); Capitol Records, Inc. v. Thomas-Rasset, 692 F.3d 899 (8th Cir. 2012).

23. Nicholas M. Lampros, Note, *Leveling Pains: Clone Gaming and the Changing Dynamics of an Industry*, 28 BERKELEY TECH L.J. 743 (2013).

24. Christina Farmer, Note, *Red in the Eye of the Beholder: The Case for Aesthetic Functionality*, 28 BERKELEY TECH L.J. 777 (2013).

doctrine: *Maker's Mark Distillery, Inc. v. Diageo North America, Inc.*,[25] and *Christian Louboutin S.A. v. Yves Saint Laurent Am. Holdings, Inc.*[26] After examining the history and purpose of the aesthetic functionality doctrine, the Note analyzes its current status given recent judicial interpretation.

The second Note[27] examines contributory infringement in trademark law. The Note uses the recently settled case of *Rosetta Stone Ltd. v. Google, Inc.*[28] as an example of the problems inherent in applying existing trademark law—including precedent, statutes, and real-world analogies—to rapidly evolving technologies such as keyword advertising. The Note then argues that courts considering claims of contributory trademark infringement[29] for keyword advertising should draw on tort law, trademark infringement's predecessor, and impose responsibility on the least cost avoider.

IV. CYBERLAW

The first Note[30] in the Cyberlaw section addresses the recently enacted Theft of Trade Secrets Clarification Act ("TTSCA"),[31] and its concomitant changes to § 1832 of the Economic Espionage Act ("EEA").[32] By focusing on the recent decision in *U.S. v. Aleynikov*[33]—the case that led Congress to take action and reform the EEA—the Note evaluates the TTSCA's potential impact on future cases concerning theft of trade secrets that involve high frequency trading software code.

The second Note[34] in the Cyberlaw section examines the intellectual property enforcement effort by the federal government—under "Operation In Our Site"—which seizes and then forfeits domain names suspected of

25. Maker's Mark Distillery, Inc. v. Diageo North America, Inc., 679 F.3d 410 (6th Cir. 2012).

26. Christian Louboutin S.A. v. Yves Saint Laurent Am. Holdings, Inc., 696 F.3d 206 (2d Cir. 2012).

27. Sarah Wells Orrick, Note, *Deciphering Rosetta Stone: Why The Least Cost Avoider Principle Unlocks The Code To Contributory Trademark Infringement In Keyword Advertising*, 28 BERKELEY TECH L.J. 805 (2013).

28. Rosetta Stone Ltd. v. Google, Inc., 676 F.3d 144 (4th Cir. 2012).

29. 15 U.S.C. § 1114 (2006) (codifying contributory infringement in trademark law).

30. Robert Damion Jurrens, Note, *Fool Me Once:* U.S. v. Aleynikov *and the Theft of Trade Secrets Clarification Act of 2012*, 28 BERKELEY TECH L.J. 833 (2013).

31. The Theft of Trade Secrets Clarification Act, Pub. L. No. 112-236, 126 Stat. 1627 (2012).

32. 18 U.S.C. §§ 1831–1839 (2006).

33. U.S. v. Aleynikov, 785 F. Supp. 2d 46, 54 (S.D.N.Y. 2011).

34. Karen Kopel, Note, *Operation Seizing Our Sites: How The Federal Government Is Taking Domain Names Without Prior Notice*, 28 BERKELEY TECH L.J. 859 (2013).

facilitating copyright infringement or counterfeiting.[35] Although this effort is backed by noble policy concerns, the *ex parte in rem* seizure of a website gives the government the power to seize a domain without any prior notice to the website owner, thus raising due process and free speech concerns.

The last Note[36] evaluates the problems involved in the interpretation and implementation of § 1831 of the Economic Espionage Act ("EEA"), which criminalizes the theft of trade secrets with the intent to benefit a foreign government.[37] The Note argues that judicial treatment of cases involving economic espionage under § 1831 of the EEA conflicts with the goals of Congress and frustrates the prosecutorial objectives of the Department of Justice ("DOJ"). The Note posits that Congress can help correct this misalignment by amending the EEA to reflect the policy goals outlined in recent legislation.[38]

V. PRIVACY LAW

The first Note[39] in the Privacy Law section discusses the budding tension between the Fourth Amendment[40] and the Federal Wiretap Act.[41] The Note argues that although current cases—such as *In re Innovatio IP Ventures, LLC Patent Litigation*[42]—read the Wiretap Act as permitting certain instances of Wi-Fi sniffing, the Fourth Amendment should prohibit the government from intercepting unsecured wireless communications.

The second Note[43] delves into the tension between privacy and newsworthiness in the context of right of publicity claims, as exemplified by the recent case of *Fraley v. Facebook, Inc.*[44] The Note argues that the tension between privacy and newsworthiness takes on a new form in light of changing technology—specifically online social networks. Additionally, the

35. Prioritizing Resources and Organization for Intellectual Property Act of 2008 ("PRO-IP Act"), Pub. L. No. 110-403, 122 Stat. 4256 (codified at 18 U.S.C. § 2323 (2006)) (providing authority for "Operation In Our Site").

36. Robin Kuntz, Note, *How Not to Catch a Thief: Why the Economic Espionage Act Fails to Protect American Trade Secrets*, 28 BERKELEY TECH L.J. 901 (2013).

37. 18 U.S.C. §§ 1831–1839.

38. *See* H.R. 6029, 112th Cong. (2012); S. 678, 112th Cong. (2011).

39. Shaina Hyder, Note, *The Fourth Amendment & Government Interception of Unsecured Wireless Communications*, 28 BERKELEY TECH L.J. 937 (2013).

40. U.S. CONST. amend. IV.

41. 18 U.S.C. § 2511 (2006).

42. In re Innovatio IP Ventures, LLC Patent Litig., No. 11 C 9308, 2012 WL 3594400 (N.D. Ill. Aug. 22, 2012).

43. Jesse Koehler, Note, Fraley v. Facebook*: The Right of Publicity in Online Social Networks*, 28 BERKELEY TECH L.J. 963 (2013).

44. Fraley v. Facebook, Inc., 830 F. Supp. 2d 785, 791 (N.D. Cal. 2011).

Note points out the weaknesses in the current right of publicity law's limited focus on economic harm as applied in *Fraley* and considers alternative approaches that incorporate non-economic harm.

The final Note[45] in the Privacy Law section explores the impact of the recent Supreme Court case *United States v. Jones*[46] on the relevance of Fourth Amendment privacy protections in the Information Age. The Note focuses on the questions raised by the concurring opinions in *Jones* regarding the expectations of privacy associated with the voluntary communication of personal data in modern society.

VI. OTHER DEVELOPMENTS IN IP

The first Note[47] in this section examines possible remedies for screenwriters whose ideas are rejected by Hollywood producers but are subsequently used without attribution or compensation. The Note first discusses breach-of-contract as the dominant theory for legal recourse. It then argues that the Copyright Act, which excludes ideas from federal copyright protection,[48] should not preempt contract-based idea submission claims because (1) these claims come with unique factual and policy considerations that merit judicial attention and (2) the vulnerabilities of screenwriters in the entertainment industry leave them without any other means of protection.

The final Note[49] examines the tension between fostering domestic innovation and attracting high-tech foreign direct investment in China, India, and Brazil. Although prior research suggests that regions seeking to foster innovation should not enforce noncompete agreements, the Note argues that these findings may not be fully applicable to emerging markets. It proposes that policymakers in China, India, and Brazil should implement moderate enforcement of noncompete agreements in order to strike a balance between cultivating domestic innovation and attracting foreign investment.

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45. Lauren Elena Smith, Note, *Jonesing for a Test: Fourth Amendment Privacy in the Wake of* United States v. Jones, 28 BERKELEY TECH L.J. 1003 (2013).

46. United States v. Jones, 132 S. Ct. 945 (2012).

47. Julie Byren, Note, *When the Million-Dollar Pitch Doesn't Pay a Dime: Why Idea Submission Claims Should Survive Copyright Preemption*, 28 BERKELEY TECH L.J. 1037 (2013).

48. 17 U.S.C. § 102(b) (2006) (excluding from copyright protection "any idea, procedure, process, system, method of operation, concept, principle, or discovery, regardless of the form in which it is described, explained, illustrated, or embodied" in an original work of authorship).

49. Grant R. Garber, Note, *Noncompete Clauses: Employee Mobility, Innovation Ecosystems, and Multinational R&D Offshoring*, 28 BERKELEY TECH L.J. 1079 (2013).

BERKELEY TECHNOLOGY LAW JOURNAL
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PATENT LAW

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MAKING ABUSERS PAY: DETERRING PATENT LITIGATION BY SHIFTING ATTORNEYS' FEES

Emily H. Chen†

Abusive patent litigation practices waste judicial resources, distract producers from bringing technological innovations to the public, and generate unnecessary social costs.[1] These abusive practices are abetted by the American Rule, under which each party to a lawsuit bears its own attorneys' fees absent statutory authorization.[2] Under the American Rule, plaintiffs need only be concerned with their own costs of litigation and may even use the defendants' cost of defense as a bargaining chip in brokering a settlement before trial.[3] Creating an exception to the American Rule by transferring the burden of the winning party's legal fees to the shoulders of the losing party based on the outcome of litigation will effectively deter filings of questionable merit and other abusive litigation practices which escalate the cost of defense.[4]

Other areas of American law have successfully implemented and applied attorney-fee-shifting.[5] In patent litigation, although *discretionary* fee-shifting provisions do exist, they are rarely used, and there has never been a *mandatory* fee-shifting provision.[6] While a strict provision for fee-shifting in patent litigation was considered, but ultimately not included, in the America Invents

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1. *See* James Bessen, Jennifer Ford & Michael J. Meurer, *The Private and Social Costs of Patent Trolls*, 34 REGULATION 26, 31 (Winter 2011–2012); FED. TRADE COMM'N, THE EVOLVING IP MARKETPLACE: ALIGNING PATENT NOTICE AND REMEDIES WITH COMPETITION 3 (2001), *available at* http://www.ftc.gov/os/2011/03/110307 patentreport.pdf.

2. Jane P. Mallor, *Punitive Attorneys' Fees for Abuses of the Judicial System*, 61 N.C. L. REV. 613, 613–14 (1983).

3. *Id.* at 617 ("[A] defendant might choose not to challenge a disputed claim, or even a groundless claim, if the costs of defending the claim would exceed the plaintiff's demands . . . . [T]he American rule may function as a 'legalized form of blackmail' that encourages frivolous claims and adds to the congestion of courts.").

4. *Id.* at 619 ("Deterrence of frivolous litigation, compensation of litigants who have been wrongfully subjected to litigation, and punishment of abusive litigation practices can be accomplished through the principled use of the punitive exceptions to the American rule.").

5. *See infra* Section II.A.

6. Colleen V. Chien, *Reforming Software Patents*, 50 HOU. L. REV. (forthcoming 2013) (manuscript at 36–37), *available at* http://digitalcommons.law.scu.edu/facpubs/473.

Act,[7] the recent consideration of the Saving High-Tech Innovators from Egregious Legal Disputes Act of 2012 ("SHIELD Act of 2012")[8] and recent decisions from the Federal Circuit and the Eastern District of Texas indicate that support for this type of policy is growing.[9]

Although Rule 11 of the Federal Rules of Civil Procedure[10] and § 285 of the Patent Act[11] are directed toward abusive litigation, neither provision is strong enough to effectively curtail the problem of weak patent suits.[12] Fee-shifting could effectively curb abusive patent litigation practices in a way which neither Rule 11 nor § 285 have been able to, so long as it is implemented in a consistent manner.

This Note proceeds in three parts. Part I introduces the variables and factors which enable and encourage abusive litigation and how those variables change when litigation costs are shifted to the losing litigant. Part II discusses existing fee-shifting provisions and why they do not effectively deter abusive litigation, whether initiated by patent bullies[13] or by non-practicing entities.[14] Part III explains that a fully enabled and rigorously applied fee-shifting regime would effectively deter some litigation of questionable merit and describes implementation of this policy change through judicial interpretation or—more effectively—through well-drafted legislation.

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7. *Compare* S. 3818, 109th Cong. § 5(b) (2006) *with* Leahy-Smith America Invents Act, Pub. L. No. 112-29, 125 Stat. 284 (2011).

8. *See* Saving High-Tech Innovators from Egregious Legal Disputes Act of 2012, H.R. 6245, 112th Cong. (2d Sess. 2012) [hereinafter SHIELD Act of 2012].

9. *See infra* Part II.

10. FED. R. CIV. P. 11 (allowing Federal courts to impose sanctions on an attorney, law firm, or party that files frivolous claims or makes factual contentions without evidentiary support).

11. Patent Act of 1952, 35 U.S.C. § 285 (2006) (allowing courts to award attorneys' fees to the prevailing party in exceptional patent litigation cases).

12. *See infra* Part II.

13. Ted Sichelman, *The Vonage Trilogy: A Case Study in "Patent Bullying," in* PERSPECTIVES ON PATENTABLE SUBJECT MATTER (Michael Abramowicz, John Duffy & F. Scott Kieff eds., 2012) (manuscript at 4), *available at* http://ssrn.com/abstract=1856703 (defining patent bullies as "large, practicing entities that often hold many patents . . . and assert their patents against entrants to prevent innovative, disruptive technologies from competing with the bullies' outmoded products").

14. This Note will use a broad formulation of non-practicing entities: "individuals and firms who own patents but do not directly use their patented technology to produce goods or services" but instead assert the patents "against companies that do produce goods and services." James Bessen & Michael J. Meurer, *The Direct Costs from NPE Disputes* 3 (Boston Univ. Sch. of Law, Law and Economics Research Paper No. 12-34, 2012), *available at* http://ssrn.com/abstract=2091210.

I. BACKGROUND: THE ECONOMICS OF PATENT INFRINGEMENT CLAIMS

Nuisance claims and litigation of questionable merit clutter the docket, distract from more pressing issues, and result in transferred costs to consumers.[15] These abuses have become quite prominent, prompting various scholars,[16] mainstream media,[17] and even President Barack Obama[18] to discuss and debate the matter. This Part assesses the current practice of abusive patent litigation, laying a foundation for subsequent discussion of attorney-fee-shifting proposals in the context of patent litigation.

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15. Marie Gryphon, *Assessing the Effects of a "Loser Pays" Rule on the American Legal System: An Economic Analysis and Proposal for Reform*, 8 RUTGERS J.L. & PUB. POL'Y 567, 568 ("[L]ow merit legal cases . . . raise the cost of goods and services to consumers by forcing businesses that are sued to cover their legal expenses by raising prices.").

16. *See generally* DAN L. BURK & MARK A. LEMLEY, THE PATENT CRISIS AND HOW THE COURTS CAN SOLVE IT 28–30 (2009) (asserting that the threats of injunctive relief and royalty stacking "lead to a litigation system that is skewed in favor of patent plaintiffs, and . . . encourage[] patent owners to roll the dice of litigation in hopes of reaping a large reward."); Robert P. Merges, *The Trouble With Trolls: Innovation, Rent-Seeking, and Patent Law Reform*, 24 BERKELEY TECH. L.J. 1583 (2009) (analyzing the secondary market for patent rights, including the "questionable market for the settlement of lawsuits involving weak, outdated or irrelevant patents"); Mark A. Lemley & Carl Shapiro, *Patent Holdup and Royalty Stacking*, 85 TEX. L. REV. 1991 (2007) (discussing royalty overcharges and calculations in licensing, litigation, and patent reform).

17. *See* Ashby Jones, *Law Journal: Patent 'Troll' Tactics Spread*, WALL ST. J., July 9, 2012, at B1 (discussing recent trends in nonpracticing entity strategies and business models); Colleen V. Chien, *Turn the Tables on Patent Trolls*, FORBES CIO NETWORK BLOG (Aug. 9, 2011, 11:37 PM) (Eric Savitz ed.), http://www.forbes.com/sites/ciocentral/2011/08/09/turn-the-tables-on-patent-trolls/.

18. In a virtual fireside chat, President Obama commented on the topic of patent trolls:

> The folks that you're talking about are a classic example. They don't actually produce anything themselves. They're just trying to essentially leverage and hijack somebody else's idea and see if they can extort some money out of them. Sometimes these things are challenging. Because we also want to make sure that patents are long enough, and that people's intellectual property is protected. We've got to balance that with making sure that they're not so long that innovation is reduced.

Joe Mullin, *Even Obama Knows patent trolls are "extorting" money*, ARS TECHNICA (Feb. 14, 2013, 5:25 PM), http://arstechnica.com/tech-policy/2013/02/even-obama-knows-patent-trolls-are-extorting-money/; Mike Masnick, *President Obama Admits That Patent Trolls Just Try To 'Extort' Money; Reform Needed*, TECHDIRT (Feb. 14, 2013, 2:45 PM), http://www.techdirt.com/articles/20130214/14351821988/president-obama-admits-that-patent-trolls-just-try-to-extort-money-reform-needed.shtml.

A. A MODEL OF ABUSIVE LITIGATION

The current model of patent litigation has been characterized as expensive, risky, and dangerous.[19] Abusive litigators use these characteristics of patent litigation to their strategic advantage in deciding whether or not to bring a case for patent infringement. Empirical evidence shows that patent litigation is expensive: in 2011, the AIPLA estimated the average cost of patent infringement litigation was $2.7 million for a case worth between $1 and $25 million and $6 million for a case worth more than $25 million.[20] Furthermore, patent litigation is risky and unpredictable because it is difficult to know what facts will be relevant to the dispute and how a trier of fact will evaluate those facts if they become known.[21] To top it off, patent litigation is dangerous, especially for practicing plaintiffs, who might find themselves facing the possibility of an injunction based on counterattacks from a defendant's arsenal of patents.[22] Section I.A.1 provides a model of the various forces at play in patent litigation and serves as a foundation for Section I.A.2, which introduces two approaches to handling the winning defendant's legal fees and discusses how the different approaches impact the forces at play in patent litigation.

1. The Six Rosenberg-Shavell Nuisance Suit Factors

To facilitate a higher level analysis of abusive litigation, Rosenberg and Shavell developed a fundamental six-factor model for nuisance suits. First, they define a nuisance suit as a suit "in which the plaintiff will be able to obtain a positive settlement from the defendant even though the defendant knows the plaintiff's case is sufficiently weak that [the plaintiff] would be unwilling or unlikely actually to pursue his case to trial."[23] An analysis of the six factors in the Rosenberg-Shavell model is helpful in understanding the phenomenon of nuisance suits in the patent litigation context.

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19. Chien, *Turn the Tables on Patent Trolls*, *supra* note 17.

20. AIPLA REPORT OF THE ECONOMY SURVEY I, at 153–54 (2011) (surveying the AIPLA membership on various cost issues).

21. David L. Schwartz, *The Rise of Contingent Fee Representation in Patent Litigation*, 64 ALA. L. REV. 335, 349 (2012); *see also* JAMES BESSEN & MICHAEL J. MEURER, PATENT FAILURE: HOW JUDGES, BUREAUCRATS, AND LAWYERS PUT INNOVATORS AT RISK, 54–62 (2008) (asserting that lack of patent notice and "fuzzy boundaries" in patents result in high risks in patent litigation).

22. *See* Chien, *Turn the Tables on Patent Trolls*, *supra* note 17.

23. *See generally* D. Rosenberg & S. Shavell, *A Model in Which Suits are Brought for Their Nuisance Value*, 5 INT'L REV. L & ECON. 3 (1985) (describing and evaluating a model of the legal dispute which allows nuisance suits to occur); *id.* at 3.

a) Plaintiff's Cost of Litigation

The first—and most readily reformed—factor is the *plaintiff's cost of litigation*. As plaintiffs decide whether to file suit, they must consider their own cost of litigation. These costs include, for example, court filing fees, time and effort required to gather evidence for the complaint and subsequent discovery motions, and the lion's share of the cost: attorneys' fees.

In patent litigation that went through trial between 1985 and 2004, patentee litigants paid $1.04 million on average in fees.[24] However, while traditional hourly billing requires plaintiff-clients to assume nearly all the risks of litigation by directly paying legal fees as they are incurred, contingent fee arrangements—where the lawyer represents the plaintiff in exchange for a percentage of the eventual recovery, if any, from the infringer—shift some of the litigation expenditure risk to the lawyer and is an increasingly popular arrangement.[25]

b) Plaintiff's Cost of Filing a Claim

The second factor is the *plaintiff's cost of filing a claim*. The seemingly simple act of filing a claim for patent infringement costs the plaintiff a significant amount of money: hiring an attorney to preliminarily evaluate the claims, compose and file the complaint, and go through other pre-trial litigation procedures can become quite expensive.[26] In cases decided without a trial between 1985 and 2004, patentee litigants paid $950,000 on average in fees.[27] This factor must be taken into account as a patent-holder decides whether to bring a claim for patent infringement; as the plaintiff's cost of filing a claim increases, the plaintiff is less likely to file suit and is more likely to perform additional investigation to evaluate the likelihood of success before investing financial resources in filing a claim.

c) Plaintiff's Settlement Demand

The third factor is the *plaintiff's settlement demand*. A practicing entity faced with a threat of permanent injunction or patent invalidation may be willing to

24. James E. Bessen & Michael J. Meurer, *The Private Costs of Patent Litigation* 16 (Working Paper Series, Law & Economics Working Paper No. 07-08, Boston University School of Law), http://ssrn.com/abstract_id=983736.

25. Schwartz, *supra* note 21, at 337.

26. Depending on the frequency of the different ways a lawsuit might be terminated, the plaintiff's expected cost of filing a claim has been estimated to be between $483,000 and $624,000. Bessen & Meurer, *The Private Costs of Patent Litigation*, *supra* note 24, at 17.

27. Bessen & Meurer, *The Private Costs of Patent Litigation*, *supra* note 24, at 16.

settle the dispute by licensing the patent in exchange for royalty payments.[28] The trial—the judicial procedure—is the "backup solution" in case settlement negotiations are unsuccessful.[29] Unfortunately, not much empirical data about settlement demands and agreements are publicly available for analysis.[30] Helpfully, scholars have developed models for the economics of settlement demands, which indicate that the primary factor in settlement bargaining is the degree to which information about the patent's validity is shared by the parties.[31]

d) Defendant's Cost of Defense

The fourth factor is the *defendant's cost of defense*. The higher the defendant's cost of defense, the more likely the defendant will settle in order to avoid defense expenses. In 2011, approximately 2,150 unique companies defended 5,842 lawsuits initiated by non-practicing entities ("NPEs"), and the cost of those actions totaled about $29 billion.[32] Small and medium-sized defendant companies shouldered thirty-seven percent of that cost.[33] Perhaps

28. Lemley & Shapiro, *Patent Holdup and Royalty Stacking*, *supra* note 16, at 1992–93; Michael J. Meurer, *The Settlement of Patent Litigation*, 20 THE RAND J. ECON. 77, 77 (1989); *see also* Goodyear Tire & Rubber Co. v. Chiles Power Supply, Inc., 332 F.3d 976, 980 (6th Cir. 2003) ("The ability to negotiate and settle a case without trial fosters a more efficient, more cost-effective, and significantly less burdened judicial system.").

29. Claude Crampes & Corinne Langinier, *Litigation and Settlement in Patent Infringement Cases*, 33 THE RAND J. ECON. 258, 262 (2002) (citing J. O. Lanjouw & J. Lerner, *The Enforcement of Intellectual Property Rights: a Survey of the Empirical Literature* (Nat'l Bureau of Econ. Research, Working Paper No. 6296, 1997); R.C. Marshall, M.J. Meurer & J.F. Richard, *Litigation Settlement and Collusion*, 109 Q.J. ECON. 211, 211–39 (1994)).

30. "There exists a strong public interest in favor of secrecy of matters discussed by parties during settlement negotiations. . . . Moreover, confidential settlement communications are a tradition in this country." Goodyear Tire & Rubber Co. v. Chiles Power Supply, Inc., 332 F.3d 976, 980 (6th Cir. 2003). *But see* Alex S. Li, Note, *A Selective Remedy: The MSTG Effects on Non-Practicing Entities' Litigation Strategies*, 28 BERKELEY TECH. L.J. 483, 496–99 (2013) (discussing the impact of the Federal Circuit's *In re* MSTG decision regarding the discoverability of settlement negotiations by third parties).

31. *See generally* Michael J. Meurer, *The Settlement of Patent Litigation*, 20 THE RAND J. ECON. 77, 77, 80–84 (1989) (discussing patent litigation and settlement licensing when the applicable law is unclear, and explaining that the commonality or privacy of information about the patent's validity are the primary factors in settlement bargaining. Meurer defines "common information bargains" as situations where both the patentee and competitor both predict the same probability of patent invalidity, and defines "private information bargains" as situations where the patentee knows whether the patent is valid, but the competitor believes there is some probability of patent invalidity); Crampes & Langinier, *supra* note 29, 262–64 (modeling how the patent holder decides whether to go to court, settle, or accept the illegal entry, after having clearly identified the infringer, and showing that "bilateral [settlement] negotiation allows both parties to save legal expenses").

32. Bessen & Meurer, *The Direct Costs from NPE Disputes*, *supra* note 14, at 4, 19.

33. *Id.* at 31.

due to variations in NPE tactics, while a large fraction of lawsuits cost less than $200,000, five percent of the lawsuits defended by large companies cost more than $22 million.[34] In the average patent litigation that went *through* trial between 1985 and 2004, the alleged infringers paid $2.46 million in defense-related fees.[35] In cases decided *before* trial, alleged infringers paid $57,000 in fees on average.[36] Approximately eighty percent of patent cases settle, while only five percent of cases are terminated through a trial; thus, the average cost of litigation may be approximated by examining expenditures through discovery.[37] Patent litigation may be logically truncated at two pre-trial checkpoints: (1) like all federal cases, at summary judgment under Rule 56 of the Federal Rules of Civil Procedure;[38] and (2) after the *Markman* claim construction hearing, which is only available in the context of patent litigation.[39] A larger percentage of cases brought by non-practicing entities (sixty percent) are decided at summary judgment than cases brought by practicing entities (fifty-three percent), suggesting that cases brought by non-practicing entities are less likely to raise material factual issues which must be evaluated at trial.[40]

e) Probability that Plaintiff Will Prevail in Litigation

The fifth factor is the *probability that the plaintiff will prevail in litigation*. Generally, a plaintiff will not go to the trouble of bringing a suit unless he believes he will win. The probability that a plaintiff will prevail in litigation, however, can be difficult to assess. Patent cases are especially difficult to predict because: (1) knowing the entire universe of relevant prior art is nearly impossible before litigation commences, and therefore it is difficult to predict the likelihood that a patent is valid before substantial litigation discovery; and (2) there is a high degree of uncertainty in how the patent claims will be

34. *Id.* at 15.

35. Bessen & Meurer, *The Private Costs of Patent Litigation*, *supra* note 24.

36. *Id.*

37. Jay P. Kesan & Gwendolyn G. Ball, *How Are Patent Cases Resolved? An Empirical Examination of the Adjudication and Settlement of Patent Disputes*, 84 WASH. U. L. REV. 237, 264 (2006).

38. FED. R. CIV. P. 56.

39. Markman v. Westview Instruments, Inc., 517 U.S. 370, 390 (1996).

40. *See* Pricewaterhouse Coopers, 2011 PATENT LITIGATION STUDY: PATENT LITIGATION AS THE "AMERICA INVENTS ACT" BECOMES LAW 18 (2011), *available at* http://www.pwc.com/en_US/us/forensic-services/publications/assets/2011-patent-litigation-study.pdf; *see also* Randall R. Rader, Chief Judge, Fed. Cir., Keynote Address at the E.D. Tex. Judicial Conference: The State of Patent Litigation 6 (Sept. 27, 2011), http://www.patentlyo.com/files/raderstateofpatentlit.pdf (suggesting that "summary judgment is the key to efficient resolution of disputes").

interpreted.[41] The likelihood that a plaintiff will prevail in litigation is tied closely to the relative complexity of the patent in suit and the facts at hand. Interestingly, some researchers have found that non-practicing entities actually overwhelmingly lose in summary judgment or at trial, suggesting that non-practicing plaintiffs are less likely to prevail in litigation.[42] There are other risks which cut against the plaintiff's likelihood of prevailing and its consequent incentive to file a lawsuit: the asserted patent may be invalidated at trial (foreclosing any future litigation involving the asserted patent),[43] and plaintiffs may be countersued with patent infringement claims.[44]

f) Amount that Plaintiff Would Win in a Default or Trial Judgment

The sixth factor is the *amount that the plaintiff would win in a default or trial judgment*. A plaintiff who wins a default or trial judgment may obtain injunctive relief, royalty stacking damages, or even treble damages for willful infringement. The monetary values of potential awards to the plaintiff are high, and—perhaps more importantly—the potential business implications of non-monetary awards such as injunctive relief for practicing defendants are enormous. These high stakes give patent plaintiffs more leverage in litigation.[45]

2. The American and English Rules Applied to the Rosenberg-Shavell Model

In the current American patent litigation scheme, each litigant pays its own attorneys' fees.[46] This incentivizes abusive litigation by plaintiffs, which forces defendants to either settle quickly or else defend the claims at significant cost.[47] For instance, in nuisance suits, a patent owner files a patent infringement claim "seeking to license even clearly bad patents for royalty payments small enough that licensees decide it is not worth going to court."[48]

41. Schwartz, *supra* note 21, at 349.

42. John R. Allison, Mark A. Lemley & Joshua Walker, *Patent Quality and Settlement Among Repeat Patent Litigants*, 99 GEO. L.J. 677, 693–94 (2011) (showing that—taking default judgments into account—product-producing companies win 50% of their cases, while non-practicing entities win only 9.2% of their cases).

43. John R. Allison & Mark A. Lemley, *Empirical Evidence on the Validity of Litigated Patents*, 26 AIPLA Q.J. 185, 205 (1998) (noting that 54% of patents were found valid in a population of 300 final validity decisions).

44. Stuart J. Graham & Ted Sichelman, *Why Do Start-Ups Patent?*, 23 BERKELEY TECH. L.J. 1063, 1065 (2008) (noting that many companies patent defensively to create a "game of 'mutually assured destruction' ").

45. BURK & LEMLEY, *supra* note 16, at 28.

46. Marie Gryphon, *supra* note 15, at 567.

47. *Id.*

48. *See* Mark A. Lemley, *Rational Ignorance at the Patent Office*, 95 NW. U. L. REV. 1, 21 (2001); Christopher A. Harkins, *Fending Off Paper Patents and Patent Trolls: A Novel 'Cold Fusion'*

The economics of patent litigation should be reformed so as to deter such low-merit legal suits, which clutter the legal system and ultimately raise costs for consumers.[49] Fee-shifting is one way to effect this change: by forcing plaintiffs to bear the risk of their opponents' legal expenses in addition to their own, plaintiffs will be less likely to file low-merit claims. Modern European codes prescribe "two-way fee-shifting," imposing the costs on the defeated party, whether the defeated party is the plaintiff or the defendant, colloquially referred to as the "English Rule."[50] In contrast, the U.S. Supreme Court held in 1796 that a prevailing party cannot recover attorneys' fees as damages, a doctrine now known as the "American Rule."[51]

Applying the six Rosenberg-Shavell factors demonstrates that shifting the prevailing party's costs of litigation to the losing party changes the willingness of the plaintiff to litigate.[52] Under the American Rule, even if a plaintiff is unwilling to go to trial, it is still profitable for the plaintiff to file a pure nuisance claim whenever the plaintiff's cost of filing is less than the defendant's cost of defense. The defendant would be willing to pay the plaintiff a settlement of any amount up to the defendant's would-be defense costs.[53] Relatedly, if a plaintiff is willing to go to trial (because there is a high likelihood of prevailing and the judgment amounts are sufficiently high), the plaintiff will file a claim more often; that is, whenever the cost of filing is less than the defense costs plus the plaintiff's expected judgment.[54]

However, under the English Rule, where the loser must pay the winner's reasonable legal fees (also known as a "loser pays rule"), plaintiffs would never file "pure" nuisance suits because a plaintiff who is only seeking a settlement and is unwilling to litigate would never file a claim.[55] Especially if the plaintiff is unlikely to prevail, the plaintiff's willingness to file a claim

Defense Because Changing Times Demand It, 17 ALB. L.J. SCI. & TECH. 407, 410 (2007) (stating that some patents are asserted for the "purpose of extorting nuisance settlements").

49. Gryphon, *supra* note 15, at 568.

50. Werner Pfennigstorf, *The European Experience with Attorney Fee Shifting*, 47 L. & CONTEMP. PROBS. 37, 46 (1984); Henry Cohen, *Awards of Attorneys' Fees by Federal Courts and Federal Agencies*, *in* AWARDS OF ATTORNEYS FEES BY FEDERAL COURTS, FEDERAL AGENCIES AND SELECTED FOREIGN FINDINGS 1, 1 (Mary V. Capisio & Henry Cohen, eds., 2002), *available at* http://www.worldcat.org/title/awards-of-attorneys-fees-by-federal-courts-federal-agencies-and-selected-foreign-countries/oclc/248778195/viewport.

51. Mallor, *supra* note 2, at 613, 616 (citing Arcambel v. Wiseman, 3 U.S. 306, 306 (1796) ("The general practice of the United States is in opposition to [fee-shifting], and even if [fee-shifting] were not strictly correct in principle, it is entitled to the respect of the court, till it is changed, or modified, by statute.") (emphasis omitted)).

52. Rosenberg & Shavell, *supra* note 23, at 5, 9.

53. *Id.* at 4–5, fig.1.

54. *Id.* at 5.

55. *Id.*

under the English Rule is lower than under the American Rule. Scholars have analyzed the theoretical tradeoffs between the American and English Rules of fee-shifting, including the impact of each rule on the number of legitimate cases that might be filed.[56] These studies have indicated that there is reason to believe that after adopting a loser pays rule, the reduction in nuisance suits would still be greater than the increase in small, highly meritorious suits.[57] Furthermore, domestic experiences with loser pays rules in Alaska and Florida have generally confirmed theoretical predictions that litigants with weak cases are more likely to abandon their claims, allowing lawyers and courts to focus on more meritorious suits.[58]

II. EXISTING FEE-SHIFTING PROVISIONS ARE INEFFECTIVE

A. HISTORY AND BACKGROUND OF ATTORNEY-FEE-SHIFTING

Attorney-fee-shifting has evolved over 1500 years, since the time of Justinian and the Byzantine Empire, where it began as a policy to deter frivolous litigation and punish bad faith but was later adopted as the general rule for all cases.[59] Today, under the English Rule, European codes prescribe "two-way fee-shifting," wherein the loser is responsible for both litigants' legal fees, regardless of whether the winner was originally a plaintiff or a defendant.[60] On the other hand, under the default American Rule, a prevailing party generally cannot recover attorneys' fees as damages.[61] However, the Supreme Court has explicitly condoned the enactment of exceptions to the American Rule through legislation.[62] Congress has circumvented this default rule in the past by making specific and explicit provisions for the allowance of attorneys' fees under selected statutes granting or protecting various federal rights in order to effectuate important

56. Gryphon, *supra* note 15, at 585.
57. *Id.*
58. *Id.* at 595–601.
59. Pfennigstorf, *supra* note 50, at 42, 65.
60. *Id.* at 46; Cohen, *supra* note 50, at 1.
61. Mallor, *supra* note 2, at 613, 616 (citing Arcambel v. Wiseman, 3 U.S. 306, 306 (1796) ("The general practice of the United States is in opposition to [fee-shifting], and even if [fee-shifting] were not strictly correct in principle, it is entitled to the respect of the court, till it is changed, or modified, by statute.") (emphasis omitted)).
62. *See also* Alyeska Pipeline Serv. Co. v. Wilderness Soc'y, 421 U.S. 240, 262 (1974) ("[I]t is apparent that the circumstances under which attorneys' fees are to be awarded and the range of discretion of the courts in making those awards are matters for Congress to determine.").

legislative policies.[63] Statutory examples of discretion in awarding attorneys' fees are present in antitrust law[64] and in the Civil Rights Act.[65]

Federal statutes already authorize awards of attorneys' fees to "prevailing parties" in other areas of the law, including the Copyright Act, the Civil Rights Attorney's Fees Awards Act of 1976, and the Freedom of Information Act ("FOIA").[66] These federal statutes serve to encourage lawsuits by patent litigants of modest means and also deter wrongful conduct, which would otherwise be encouraged by wrongdoers' knowledge that excessive litigation expenses prevent potential plaintiffs from filing suit.[67] Section 505 of the Copyright Act gives courts the discretion to award attorneys' fees and costs in a provision nearly identical to § 285 of the Patent Act.[68] Unfortunately, there has been a pronounced circuit split in establishing the standard for awarding attorneys' fees, making it difficult for potential litigants to evaluate liability with certainty.[69]

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63. Mallor, *supra* note 2, at 614; *Alyeska Pipeline Serv. Co.*, 421 U.S. at 260.

64. 15 U.S.C. § 15(a) (2006) ("[A]ny person who shall be injured in his business or property by reason of anything forbidden in the antitrust laws may sue therefor . . . and *shall recover* . . . the cost of suit, including a reasonable attorney's fee." (emphasis added)).

65. Civil Rights Act of 1964, tit. II, 42 U.S.C. § 2000a-3(b) (2006) ("In any action commenced pursuant to this subchapter, the court, in its discretion, may allow the prevailing party, other than the United States, a reasonable attorney's fee as part of the costs, and the United States shall be liable for costs the same as a private person.").

66. *See* Peter N. Cubita, Jeffrey S. Lichtman & Daniel D. Rubino, Note, *Awards of Attorney's Fees in the Federal Courts*, 56 ST. JOHN'S L. REV. 277, 286–89, n.34 (1982) (describing notable federal fee-shifting statutes); *Alyeska Pipeline Service Co.*, 421 U.S. at 260–62, nn.33–35 (listing various specific and explicit provisions Congress has made for exceptions to the American Rule in certain statutes which grant or protect various federal rights).

67. Cubita, *supra* note 66, at 287–88, n.34; *see also* Frances Kahn Zemans, *Fee Shifting and the Implementation of Public Policy*, 47 L. & CONTEMP. PROBS. 187, 208–09 (1984) ("Judicial exceptions to [the American Rule] have been largely in the form of the stick to punish inappropriate use of the judicial process—in particular bad faith and vexatious suits.").

68. Copyright Act, 17 U.S.C. § 505 (2006) (stating that the court "may allow the recovery of full costs . . . [and] may also award a reasonable attorney's fee to the prevailing party as part of the costs"); *see also* Patent Act of 1952, 35 U.S.C. § 285 (2006) ("The court in exceptional cases may award reasonable attorneys' fees to the prevailing party.").

69. *See* 4 MELVILLE B. NIMMER & DAVID NIMMER, NIMMER ON COPYRIGHT § 14.10 (Matthew Bender, Rev. Ed. 2012) (discussing the circuit split in defining "the prevailing party"); *see also* Nightingale Home Healthcare v. Anodyne Therapy, 626 F.3d 958, 960–62 (7th Cir. 2010) (summarizing the circuit splits in defining the standard for awarding attorneys' fees in Lanham Act cases). In a related vein, Peter Menell and Ben Depoorter argue that while fee-shifting might be used in copyright in order to encourage fair negotiations over cumulative uses of copyrighted works, the current codification of Section 505 of the Copyright Act is incapable of effecting such fair negotiations. *See generally* Peter S. Menell & Ben Depoorter, *Copyright Fee Shifting: A Proposal to Promote Fair Use and Fair Licensing* (Univ. of Cal. Berkeley Pub. Law Research Paper No. 2,159,325, 2012), *available at* http://ssrn.com/abstract=2159325.

The concept of attorney-fee-shifting is not new in intellectual property law. Initially, the Patent Act of 1790 did not include any provisions for the award of attorneys' fees to the prevailing party.[70] While the Patent Act of 1793 did not provide an express provision, an annotated copy of the 1973 Act noted that a jury may award attorneys' fees as part of damages.[71] The Patent Act of 1836 was silent on the issue of attorneys' fees.[72] However, the Patent Act of 1946 shifted the decision-making authority away from the jury when it provided that "[t]he *court* may in its discretion award reasonable attorney's fees to the prevailing party."[73] By removing the phrase "in [its discretion" and adding the term "exceptional," the Patent Act of 1952 raised the bar by providing in § 285 that a "court in *exceptional* cases may award reasonable attorneys' fees to the prevailing party."[74] Although § 285 of the Patent Act on its face appears to provide recourse for defendants faced with claims that lack merit, courts have rarely awarded attorneys' fees under this section.[75]

B. ATTORNEY-FEE-SHIFTING IN "EXCEPTIONAL" PATENT CASES: 35 U.S.C. § 285

Recent litigation has highlighted defendants' growing desire to use fee-shifting to recoup costs and deter future abusive litigation; it has also highlighted the difficulty of meeting the current "exceptional case" standard for fee-shifting in patent cases.

In a patent case, the prevailing party must show by clear and convincing evidence that the case is exceptional in order to obtain an award of attorney fees under § 285.[76] The attorney-fee-shifting provision of the Patent Act provides that in patent litigation, a "court in *exceptional* cases may award

70. Patent Act of 1790, ch. 7, 1 Stat. 109 (repealed 1793).

71. Annotated Patent Act of 1793, ch. 11, 1 Stat. 318, 320 (repealed 1836) (stating that "[t]he jury may, in an action for the infringement of a patent, give the plaintiff, as part of his actual damages, such expenses for counsel fees, &c., as have been actually incurred in vindicating his right by suit, and which are not taxable in the bill of costs" (citing Boston Mfg. Co. v. Fiske, 3 F. Cas. 957 (D. Mass. 1820))).

72. Patent Act of 1836, ch. 357, 5 Stat. 117 (repealed 1861).

73. Patent Act of 1946, ch. 726, 60 Stat. 778, 778 (repealed 1952) (emphasis added).

74. *Compare* Patent Act of 1946, ch. 726, 60 Stat. 778, 778, *with* Patent Act of 1952, 35 U.S.C. § 285 (2006) (emphasis added).

75. Chien, *Reforming Software Patents*, *supra* note 6 (manuscript at 39 n.299) ("Based on a search in Westlaw, in 2011, approximately 20 awards were made [on the basis of the exceptional cases rule of 35 U.S.C. § 285], and in 2002, 10 awards were made. They were sought in 86 and 50 cases[, respectively].").

76. Highmark, Inc. v. Allcare Health Mgmt. Sys., Inc., 687 F.3d 1300, 1308 (Fed. Cir. 2012).

reasonable attorneys' fees to the prevailing party"[77] and is intended "to reimburse the alleged infringer for defending an action improperly brought."[78] Absent litigation misconduct (Rule 11) or fraud in patent prosecution, the defendant must show that the case is "exceptional" by showing clear and convincing evidence that the litigation was *both* (a) brought in subjective bad faith and (b) objectively baseless.[79] Because both prongs must be satisfied for each asserted claim, an exceptional case finding is determined on a claim-by-claim basis.[80] In other cases, the Federal Circuit has held that attorneys' fees should be awarded in cases involving "vexatious or unjustified litigation" or "frivolous filings."[81] These inconsistent standards do not provide sufficiently clear guidelines for district courts, which must actually apply the Federal Circuit's interpretation of § 285.

C. THE LEAHY-SMITH AMERICA INVENTS ACT

Although Congress members debated the codification of fee-shifting remedies in patent litigation as recently as 2007, Congress ultimately did not codify fee-shifting in the most recent patent reform act. In September 2011, President Barack Obama signed the America Invents Act ("AIA") into law, making some of the most significant changes to U.S. patent statutes since 1952.[82] In anticipation of the complete implementation of the AIA, much of the scholarly discussion of the AIA's primary impact centers on its conversion to a first-to-file priority system,[83] elimination of the best mode

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77. Patent Act of 1952, 35 U.S.C. § 285 (2006) (emphasis added).

78. *Highmark*, 687 F.3d at 1311 (citing Mach. Corp. of Am. v. Gullfiber AB, 774 F.2d 467, 474 (Fed. Cir. 1985)).

79. *Eon-Net*, 653 F.3d at 1324; *Highmark*, 687 F.3d at 1308. On the "objectively baseless" requirement, two panels of the Federal Circuit—with no overlap—have shown a strong meeting of the minds. *See* iLOR, LLC v. Google, Inc., 631 F.3d 1372 (Fed. Cir. 2011); Old Reliable Wholesale, Inc. v. Cornell Corp., 635 F.3d 539 (Fed. Cir. 2011).

80. *Highmark*, 687 F.3d at 1311.

81. *See, e.g.*, Takeda Chem. Indus., Ltd. v. Mylan Labs., Inc., 549 F.3d 1381, 1388 (Fed. Cir. 2008); *Eon-Net*, 653 F.3d at 1324; Waner v. Ford Motor Co., 331 F.3d 851, 857 (Fed. Cir. 2003); Bayer AG v. Duphar Int'l Research B.V., 738 F.2d 1237, 1242 (Fed. Cir. 1984).

82. Leahy-Smith America Invents Act, Pub. L. No. 112-29, 125 Stat. 284 (2011) (codified in various sections of 35 U.S.C.), *available at* http://www.gpo.gov/fdsys/pkg/PLAW-112publ29/pdf/PLAW-112publ29.pdf. *But see* Peter Menell & Ryan Iwahashi, Does Patent Reform By Any Other Name Smell As Sweet? The Mixed Heritage of Modern Patent Reform 2 (April 2, 2013) (unpublished manuscript) (on file with author) (characterizing the AIA as beginning as an omnibus legislative reform proposal, but emerging nearly a decade later as a relatively modest reform package).

83. *See* Stephen M. Hankins & D. Christopher Ohly, *The America Invents Act: An Overview*, Law Technology News (Online) (Oct. 4, 2011), http://www.law.com/jsp/lawtechnologynews/PubArticleLTN.jsp?id=1202517720138&The_America_Invents_Act_An_Overview; Joe Matal, *A Guide to the Legislative History of the America Invents Act: Part I of II*,

requirement,[84] and the AIA's efforts to curb the practice of joining unrelated defendants in the same suit.[85] The AIA went through several iterations from its initial introduction in 2005 to its enactment in 2012.[86] During the 109th Congress, the first version of what later became the AIA was introduced on June 8, 2005, by Representative Lamar Smith, while a similar bill was introduced by Senators Orrin Hatch and Patrick Leahy in 2006.[87]

This 2006 Hatch-Leahy bill included a provision which would modify 35 U.S.C. § 285 to require that the prevailing party in a patent-infringement suit be awarded its attorneys' fees and costs, unless "the position of the nonprevailing party . . . was substantially justified."[88] The record indicates that the attorneys' fees provision was predicted to be a controversial provision and was perhaps already a point of contention between Senators Hatch and Leahy.[89] In fact, there was extensive discussion of the fee-shifting provision in the subcommittee hearing of H.R. 2795.[90] Also during the 109th

21 FED. CIRCUIT B.J. 435, 449–52 (2011) ("No part of the AIA is more significant, nor has generated more legislative discussion and debate, than the Act's changes to § 102. The bill's new § 102 adopts the first-to-file system of patent priority, enacts a new definition of 'prior art,' and creates a new grace period.").

84. *See* Brian J. Love & Christopher B. Seaman, *Best Mode Trade Secrets*, 15 YALE J. L. & TECH. 1, 8–12 (2012–2013); Peter Lee, *Transcending the Tacit Dimension: Patents, Relationships, and Organizational Integration in Technology Transfer*, 100 CALIF. L. REV. 1503, 1517 n.69 (2012).

85. Leahy-Smith America Invents Act, Pub. L. No. 112-29, sec. 19(d), § 299, 125 Stat. 284, 332–33 (2011); *see also* Tracie L. Bryant, *The America Invents Act: Slaying Trolls, Limiting Joinder*, 25 HARV. J.L. & TECH. 687, 688 (2012) (arguing that "one of the purposes of the AIA, including the joinder provision, is to address the problem of 'patent trolls.' ").

86. Matal, *supra* note 83, at 438–48.

87. H.R. 2795, 109th Cong. (2005); S. 3818, 109th Cong. § 5(b) (2006); *see also* Matal, *supra* note 83, at 438–39.

88. S. 3818, 109th Cong. § 5(b) (2006) (amending 35 U.S.C. § 285 to read: "(a) The court shall award, to a prevailing party, fees and other expenses incurred by that party in connection with that proceeding, unless the court finds that the position of the nonprevailing party or parties was substantially justified or that special circumstances make an award unjust"), *available at* http://www.gpo.gov/fdsys/pkg/BILLS-109s3818is/pdf/BILLS-109s3818is.pdf; *see also* Joe Matal, *supra* note 83, at 440 n.26.

89. Senator Hatch made these introductory remarks about the fee-shifting provision in S. 3818:

> The second controversial provision in this section is a mandatory fee-shifting provision. The language of this provision requires courts to award attorneys' fees to a prevailing party in cases where the non-prevailing party's legal position was not substantially justified. This language is similar to the test used in the Equal Access to Justice Act. This provision is intended to discourage litigation in those cases where a plaintiff's or defendant's case is so weak as to be objectively unreasonable.

152 CONG. REC. S8830 (daily ed. Aug. 3, 2006) (statement of Sen. Hatch).

90. *Amendment in the Nature of a Substitute to H.R. 2795, the "Patent Act of 2005": Hearing on H.R. 2795 Before the Subcomm. on Courts, the Internet, & Intellectual Property of the H. Comm. on*

Congress, the same subcommittee discussed the patent troll problem at length in a separate hearing.[91] Ultimately, the 2006 Hatch-Leahy bill was not passed by the 109th Congress.[92]

During the 110th Congress, the effort to enact patent reform legislation became more pronounced, and Senators Leahy and Hatch and Representative Howard Berman introduced parallel bills in the Senate and House on April 18, 2007.[93] However, the 2007 Leahy-Hatch bill omitted the attorneys' fees provision of the 2006 version of the bill, likely due to the contentious debate about the provision during the 109th Congress.[94] Senators Leahy and Hatch commented on these omissions when they introduced Senate Bill 1145 ("S. 1145") in the 110th Congress. [95] Senator Leahy stated that S. 1145 "maintain[s] the traditional rule on attorneys' fees, instead of shifting fees and other expenses to the non-prevailing party as was proposed in S. 3818."[96] Senator Hatch explained that:

> A provision that would provide attorneys' fees and costs to a prevailing party was also left out of this bill. I included this provision in last year's bill to discourage weak cases from clogging the already-burdened judicial system. This is not a new concept in the realm of intellectual property. In fact, I note, Section 505 of the Copyright Act clearly provides courts the discretion to award attorneys' fees and costs. It seems logical that we would provide

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the Judiciary, 109th Cong. 48 (2005), *available at* http://www.gpo.gov/fdsys/pkg/CHRG-109hhrg23434/pdf/CHRG-109hhrg23434.pdf.

91. *See generally Patent Trolls: Fact or Fiction?: Hearing Before the Subcomm. on Courts, the Internet, & Intellectual Property of the H. Comm. on the Judiciary*, 109th Cong. (2006), *available at* http://www.gpo.gov/fdsys/pkg/CHRG-109hhrg28201/pdf/CHRG-109hhrg28201.pdf.

92. *Bill Summary & Status 109th Congress (2005–2006) H.R.2795*, *available at* http://thomas.loc.gov/cgi-bin/bdquery/z?d109:H.R.2795:; *Bill Summary & Status 109th Congress (2005–2006) S.3818*, *available at* http://thomas.loc.gov/cgi-bin/bdquery/z?d109:S3818:.

93. H.R. 1908, 110th Cong. (2007) (as introduced in the House, April 18, 2007); S. 1145, 110th Cong. (2007) (as introduced in the Senate, April 18, 2007); *see also* Matal, *supra* note 83, at 439.

94. *Compare* S. 3818, 109th Cong. § 5(b) (2006), *with* S. 1145, 110th Cong. (2007). *See also Amendment in the Nature of a Substitute to H.R. 2795, the "Patent Act of 2005": Hearing on H.R. 2795 Before the Subcomm. on Courts, the Internet, & Intellectual Property of the H. Comm. on the Judiciary*, 109th Cong. 48 (2005), *available at* http://www.gpo.gov/fdsys/pkg/CHRG-109hhrg23434/pdf/CHRG-109hhrg23434.pdf; *Patent Trolls: Fact or Fiction?: Hearing Before the Subcomm. on Courts, the Internet, & Intellectual Property of the H. Comm. on the Judiciary*, 109th Cong. (2006), *available at* http://www.gpo.gov/fdsys/pkg/CHRG-109hhrg28201/pdf/CHRG-109hhrg28201.pdf.

95. *See* 153 CONG. REC. S4685–92 (daily ed. Apr. 18, 2007) (statements of Sen. Leahy and Sen. Hatch).

96. *Id.* at S4691.

> the same discretion in S. 1145 and I look forward to discussing this issue with Chairman Leahy.[97]

Ultimately, the fee-shifting provision was omitted for reasons which remain unclear.

D. SANCTIONS FOR "FRIVOLOUS" LITIGATION: FEDERAL RULE OF CIVIL PROCEDURE 11

Aside from the statutory provisions awarding attorneys' fee in "exceptional cases" under the Patent Act, another way for patent litigants to recover attorneys' fees is through Rule 11 of the Federal Rules of Civil Procedure, which establishes the federal floor for recovery of attorneys' fees in "frivolous" actions.[98]

To evaluate the frivolity of legal arguments, courts use an objective standard of reasonableness and do not require bad faith or an otherwise culpable state of mind.[99] In *Eon-Net LP v. Flagstar Bancorp*,[100] the Federal Circuit set the bar high by holding that to award Rule 11 sanctions under Ninth Circuit law, the district court must find (1) that the complaint is "legally or factually 'baseless' from an objective perspective" and (2) that the attorney failed to conduct a "reasonable and competent inquiry" before filing the complaint.[101] The Supreme Court has furthermore established that "although Rule 11 determinations involve both factual and legal issues, all aspects of such a determination must be reviewed under a highly deferential abuse of discretion standard."[102]

While in theory Rule 11 appears to target the very heart of abusive patent litigation by sanctioning frivolous litigation, in reality the Rule has very little

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97. *Id.* at S4692.

98. FED. R. CIV. P. 11 (requiring that "the claims, defenses, and other legal contentions are warranted by existing law or by a nonfrivolous argument," and stating that sanctions "imposed under the rule must be limited to what suffices to deter repetition of the conduct or comparable conduct by others similarly situated . . . [and may take the form of] an order directing payment to the movant of part or all of the reasonable attorney's fees . . . .").

99. De La Fuente v. DCI Telecomms. Inc., 259 F. Supp. 2d 250 (S.D.N.Y. 2003); *In re* Farhid, 171 B.R. 94 (N.D. Cal. 1994).

100. Eon-Net LP v. Flagstar Bancorp, 653 F.3d 1314 (Fed. Cir. 2011), *cert. denied*, 132 S. Ct. 2391 (U.S. 2012), *available at* http://www.cafc.uscourts.gov/images/stories/opinions-orders/09-1308.pdf.

101. *Eon-Net*, 653 F.3d at 1328 (citing Christian v. Mattel, Inc., 286 F.3d 1118, 1127 (9th Cir. 2002)).

102. Highmark, Inc. v. Allcare Health Mgmt. Sys., Inc., 687 F.3d 1300, 1322 (Fed. Cir. 2012) (rejecting a de novo standard of appellate review of a Rule 11 determination by a district court, and stating that "[a] district court would necessarily abuse its discretion if it based its ruling on an erroneous view of the law or on a clearly erroneous assessment of the evidence") (citing Cooter & Gell v. Hartmarx Corp., 496 U.S. 384, 405 (1990)).

impact. In a 1992 survey assessing the perceived impact of Rule 11 on filings, fifty percent of federal judges and sixty-two percent of federal attorneys questioned believed the Rule had no impact on filings.[103] Making matters worse, in 1993, the Federal Rules Advisory Committee further diluted Rule 11, making it even less likely that Rule 11 would address the problem of abusive patent litigation.[104]

E. THE INTERSECTION OF "FRIVOLOUS" AND "EXCEPTIONAL"

There is also some interplay between findings of frivolity under Rule 11 and findings of exceptionality under § 285.[105] A court may issue sanctions pursuant to Rule 11, § 285, both, or neither. In *Highmark, Inc. v. Allcare Health Management System, Inc.*,[106] a divided panel considered the district court's award of attorneys' fees against an unsuccessful plaintiff-patentee based on Rule 11 (litigation misconduct) and § 285 (frivolous claims).[107] The panel held that Rule 11 sanctions against an attorney may[108]—but do not necessarily—form a basis for an exceptional case finding.[109]

While the current framework does include several provisions for attorney-fee-shifting, the provisions are not strong enough to effectively deter abusive litigation.

III. FEE-SHIFTING AS AN EFFECTIVE AND IMPLEMENTABLE SOLUTION

A fee-shifting regime has the ability to deter truly abusive litigation practices and patent infringement claims of questionable merit; it is therefore worth being enacted for patent litigation. Although there are a few incredibly egregious cases that are addressed by § 285 and Rule 11, a one-way discretionary fee-shifting regime will discourage the filing of additional cases which might not otherwise be deterred by those two very narrowly applied provisions. Furthermore, the potential reduction in social costs—both to

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103. Gerald F. Hess, *Rule 11 Practice in Federal and State Court: An Empirical, Comparative Study*, 75 MARQUETTE L. REV. 313, 328–29 (1992).

104. Carl Tobias, *The 1993 Revision of Federal Rule 11*, 70 IND. L.J. 171, 208 (1994) (arguing that the 1993 amendment to Rule 11 "leaves district judges with too much discretion while providing for insufficiently rigorous appellate review").

105. *See Highmark*, 687 F.3d at 1313.

106. *Id.* (finding that fee-shifting is reviewed on a claim-by-claim basis, and that assertion of even a single non-infringed claim can result in some fee-shifting).

107. *Id.* at 1308.

108. Brooks Furniture Mfg., Inc. v. Dutalier Int'l, Inc., 393 F.3d 1378, 1381 ("A case may be deemed exceptional when there has been some material inappropriate conduct related to the matter in litigation, such as . . . conduct that violates Fed.R.Civ.P. 11 . . . .").

109. *Id.*

judicial efficiency and to consumers more generally—resulting from abusive litigation is worth the low cost of implementing a fee-shifting regime. Although establishment of a fee-shifting regime will almost certainly face opposition, careful crafting of legislation and statutory amendments may alleviate most concerns and pave the way for the passage of effective and potent fee-shifting legislation.

This Part proceeds in two sections. Section III.A explains why a fee-shifting regime should be established. Section III.B explores the effectiveness of implementing such a fee-shifting policy through judicial interpretation and legislation.

A. A FEE-SHIFTING REGIME *SHOULD* BE ESTABLISHED

Taking into account the groundwork which has been laid over the past decade, policy makers must determine whether fee-shifting in patent litigation ought to be implemented. How might establishing a fee-shifting scheme in patent litigation upset the delicate ecology of patent litigation, and would such changes be beneficial or deleterious?

1. Patent Litigation Behavior Would Likely Change

By implementing an attorney-fee-shifting scheme, it is highly likely that some would-be plaintiffs would pause before filing patent infringement claims.[110] In facing the risk of having to pay the defendant's legal fees if the claim does not meet a certain threshold of legitimacy, plaintiffs must be conscientious about vetting their claims' likelihood of success. However, for this scheme to work in favor of reducing litigation costs and the burden on the courts, it must be true that plaintiffs to date have *not* been conscientious about vetting their claims' likelihood of success. As it stands, it is unclear whether this premise is valid. After all, even pre-trial litigation costs for plaintiffs are significant, requiring production of documents during discovery, filing motions and responses, and expending significant time and effort in claim construction. Even taking into account the assertion that there is a trend of plaintiffs filing patent infringement claims while paying their attorneys on a contingent-fee basis, the plaintiffs' attorneys are likely still performing a relatively rigorous assessment of the claims' merits before agreeing to invest time and resources on a contingent-fee basis.

Implementing a legislative or judicial rule for fee-shifting in patent litigation beyond what already exists in § 285 is nearly no-cost because implementation only requires education of the bar on the new rule. Despite

110. *See* Gryphon, *supra* note 15, at 600.

this low implementation cost, this rule has the potential to shift at least some baseless litigation costs by (1) making whole accused infringers who may otherwise be intimidated into settling simply as a result of the cost analysis of being on the receiving end of a complaint; and (2) deterring less scrupulous plaintiffs from filing baseless infringement contentions, effectively chilling nonmeritorious litigation.

2. Potential Harms if the Standard for Fee-Shifting is Lowered

If a fee-shifting mechanism is implemented, who—if anyone—would be the losers? Based on a traditional defense of the American Rule over the English Rule, inventors and small businesses might be discouraged from filing patent infringement lawsuits in the face of the possibility that they might be later responsible for shouldering the accused infringer's legal fees. In situations where this elevated burden may potentially put the inventor or small business out of existence, there is a concern that such entities might decide not to file patent infringement claims even though they have sufficient grounds to do so. Even with this concern, however, a clear explanation of the objective and subjective standard for awarding attorneys' fees under this new provision would reduce the uncertainty surrounding the risk of having to pay the accused infringer's attorneys' fees; it would also reduce the possibility that a new provision of this nature would wrongfully discourage valid claims. By paying close attention to the clarity of the threshold, these concerns can be allayed without too much trouble.

Many patents asserted by non-practicing entities were originally granted by the USPTO to productive companies, which had business models other than patent licensing.[111] If a more rigorous fee-shifting provision is implemented, the relationships between non-practicing entities and the original inventors or patentees could change due to the impact the provision might have on the non-practicing entities' cost analysis.[112] Assuming that some of the patent litigation that makes its way into the legal system today would be deterred under a lowered standard, the patent infringement litigation market could be less lucrative. Upon licensing these patents from the original inventors or assignees, non-practicing entities generally do not pay royalties back to the original inventor, meaning that the original inventor only benefits once from the assignment of the patent, not from subsequent

111. Michael Risch, *Patent Troll Myths*, 42 SETON HALL L. REV. 457, 484–89 (2012).

112. *But see* Bessen, Ford & Meurer, *supra* note 1, at 35 (arguing that although the secondary patent market improves innovation incentives for independent investors, there is little evidence that NPE litigation resulting in loss of wealth by defendants has produced massive transfers to inventors).

successful litigation. Implementation of a fee-shifting provision would change the economics of the secondary patent market by potentially discouraging non-practicing entities from filing suit, therefore reducing original inventors' ability to profit from a patent that is not otherwise being utilized.

B. HOW LEGISLATION OR JUDICIAL INTERPRETATION CAN EFFECTIVELY ESTABLISH A FEE-SHIFTING REGIME

This Section discusses two readily available methods of implementing a fee-shifting regime to decrease the incidence of abusive litigation: judicial interpretation and legislative enactment.

1. Attorney-Fee-Shifting Through Judicial Interpretation

While judges seem increasingly interested in fee-shifting provisions, such sentiment is essentially moot when stare decisis enters the picture, under which even more liberal interpretations or applications of Rule 11 or § 285 would likely be ineffective in reducing the amount of abusive litigation on a meaningful scale.[113] Prominent members of the judiciary have addressed attorney-fee-shifting in patent litigation either in dicta or while considering the application and use of Rule 11 or § 285.[114]

Chief Judge Randall Rader of the Federal Circuit, a prominent advocate of fee-shifting, has clearly expressed that he believes fee-shifting is a viable method of improving the state of patent litigation.[115]

Judge Leonard Davis of the Eastern District of Texas in Tyler has made known his concerns about plaintiffs attempting to extract "nuisance value" settlements:

> [T]his Court has some concerns about plaintiffs who file cases with extremely weak infringement positions in order to settle for less than the cost of defense and have no intention of taking the case to trial. Such a practice is an abuse of the judicial system and threatens the integrity of and respect for the courts. Often in such cases, a plaintiff asserts an overly inflated damages model, seeking hundreds of millions of dollars, and settles for pennies on the dollar, which is far less than the cost of defense. Where it is clear that a case lacks any credible infringement theory and has been

113. *See infra* Section III.B.1.

114. *See infra* Part III.

115. Rader, Keynote Address at the E.D. Tex. Judicial Conference, *supra* note 40. *See also* Dennis Crouch, *Chief Judge Rader: Improving Patent Litigation*, PATENTLY-O PATENT LAW BLOG (Sept. 27, 2011), http://www.patentlyo.com/patent/2011/09/rader-patent-litigation.html (discussing Chief Judge Rader's speech on Sept. 27, 2011).

> brought only to coerce a nuisance value settlement, Rule 11 sanctions are warranted.[116]

In another instance, Judge Davis modified the usual case schedule in order to consider parts of a claim on the merits while reducing the costs of pre-trial litigation by staying discovery and expediting a *Markman* hearing, recognizing that the traditional case schedule presents defendants with a "Hobson's choice: spend more than the settlement range on discovery, or settle for what amounts to cost of defense, regardless of whether a Defendant believes it has a legitimate defense."[117]

Even with the support of judges like Chief Judge Rader and Judge Leonard Davis, the doctrine of stare decisis demands that "a court must follow earlier judicial decisions when the same points arise again in litigation."[118]

Therefore, despite the best intentions of Chief Judge Rader, Justice Leonard Davis, and other judges, it is unlikely that judges will be able to wield Rule 11 or § 285 within the confines of precedent to effectively reduce abusive patent litigation through attorney-fee-shifting. Instead, it is necessary for Congress to take action by passing legislation, which will establish a new legal framework to enable judges to shift attorneys' fees in more reasonable circumstances and thereby discourage abusive patent litigation practices.

2. *Attorney-Fee-Shifting Through Legislation*

Establishing an attorney-fee-shifting provision through clear and articulate legislation would be more efficient than judicial rulemaking in effecting change in the calculus of patent litigation. If the legislature clearly sets out guidelines for the award of attorneys' fees and the endorsement of such a scheme, patent litigants no longer have to rely on extensive interpretation of judicial opinions and judges' discretion to embrace fee-shifting. Congressional action is a condition precedent for the effective

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116. Raylon LLC v. Complus Data Innovations, Case No. 6:09-cv-357, slip op. at 5 (E.D. Tex. Mar. 9, 2011) (order denying motion for Rule 11 sanctions). Although Judge Davis later found that Rule 11 sanctions were not appropriate in *Raylon* because the assertions were not "objectively frivolous," he clearly sent the message that he would strongly consider the application of Rule 11 under appropriate circumstances. *Id.* at 4. Judge Davis has also indicated that he will pointedly examine plaintiffs' litigation and settlement strategies at the initial Case Management Conference. *See* PacID Group, LLC v. Cisco Sys., Inc., Case No. 6:09-cv-324, slip op. at 3–4 (E.D. Tex. Mar. 16, 2011) (order consolidating cases).

117. Parallel Networks v. Abercrombie & Fitch Co., Case No. 6:10-cv-111, slip. op. at 6 (E.D. Tex. Mar. 15, 2011) (order consolidating cases, denying motion to bifurcate).

118. BLACK'S LAW DICTIONARY, *Stare Decisis* (9th ed. 2009).

implementation of an attorney-fee-shifting regime. Furthermore, the Supreme Court has stated that "the circumstances under which attorneys' fees are to be awarded and the range of discretion of the courts in making those awards are matters for Congress to determine."[119] However, if history is any indication, it will be difficult to pass legislation implementing a provision with enough teeth to effectuate change. Even so, legislation should be pursued as a viable way to establish more useful attorney-fee-shifting guidelines as a small but essential first step towards decreasing abusive patent litigations.

a) Rekindling the Conversation: The *SHIELD Act of 2012*

The debate over legislative action in establishing a fee-shifting provision, tabled by Leahy and Hatch in 2007, was rekindled in 2012 by the introduction of H.R. 6245, the Saving High-Tech Innovators from Egregious Legal Disputes Act of 2012 ("SHIELD Act of 2012").[120] Introduced August 1, 2012, by Representative Peter A. DeFazio (D-Oregon), co-sponsored by Representative Jason Chaffetz (R-Utah), and referred August 15, 2012, to the House Subcommittee on Intellectual Property, Competition and the Internet,[121] the SHIELD Act of 2012 would have allowed the court to give full litigation costs, including reasonable attorneys' fees, to the prevailing party in software and computer-related patent infringement disputes.[122]

The sponsors of the SHIELD Act of 2012 asserted that the bill would put the financial burden on "patent trolls," which "buy patents solely to sue the American tech startups that created the products."[123] Among the bill's supporters were high technology companies, consumer groups, and venture capitalists. The Electronic Frontier Foundation ("EFF"), a self-described

119. Alyeska Pipeline Serv. Co. v. Wilderness Soc'y, 421 U.S. 240, 262 (1974) ("[I]t is apparent that the circumstances under which attorneys' fees are to be awarded and the range of discretion of the courts in making those awards are matters for Congress to determine.").

120. SHIELD Act of 2012, *supra* note 8; The Library of Congress, THOMAS, Bill Summary & Status 112th Congress (2011–2012) H.R. 6245 All Congressional Actions, *available at* http://thomas.loc.gov/cgi-bin/bdquery/z?d112:HR06245:@@@X.

121. SHIELD Act of 2012, *supra* note 8; The Library of Congress, THOMAS, Bill Summary & Status 112th Congress (2011–2012) H.R. 6245, *supra* note 120; Press Release, Congressman Peter DeFazio, DeFazio Introduces SHIELD Act [of 2012] to protect American Innovation, Jobs (Aug. 1, 2012), http://defazio.house.gov/index.php?option=com_content&view=article&id=792:defazio-introduces-shield-act-to-protect-american-innovation-jobs&catid=69:2012-press-releases.

122. SHIELD Act of 2012, *supra* note 8.

123. Press Release, Congressman Peter DeFazio, *supra* note 121; SHIELD Act of 2012, *supra* note 8. But note that there is no language in the proposed legislation which would limit its application to only benefit "tech startup" defendants, and would actually operate to protect companies as small as garage startups and as big as Cisco. *See id.*

champion of the public interest in digital rights and technology,[124] has previously promoted fee-shifting as an element of software patent reform[125] and expressed support for the SHIELD Act of 2012.[126] The Consumer Electronics Association ("CEA"), a trade organization representing 2,000 consumer electronics companies, also strongly endorsed the SHIELD Act of 2012.[127]

Although some ado was made about this bill by outside observers in industry and academia, the House Judiciary Subcommittee on Intellectual Property, Competition, and the Internet effectively killed the bill at the conclusion of the 112th Congress on December 14, 2012, by not taking any action on the legislation.[128] It is likely that any fee-shifting legislation proposal will face opposition from parties wanting to wait and evaluate the impact the AIA has on patent litigation trends,[129] or who may otherwise have an interest in the impact of attorney-fee-shifting and will lobby Congress in opposition to such patent reform.[130] Specifically, taking into account the legislative history of the AIA, it seems likely that the fee-shifting provision in the SHIELD Act of 2012 would face similar criticisms as its predecessor.[131]

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124. *Electronic Frontier Foundation—Mission Statement*, ELECTRONIC FRONTIER FOUNDATION (July 10, 1990), https://w2.eff.org/legal/cases/SJG/?f=eff_creation.html (last visited Mar. 9, 2013).

125. Press Release, Electronic Frontier Foundation, EFF Launches New Patent Reform Project to Defend Innovation (June 19, 2012), https://www.eff.org/press/releases/eff-launches-new-patent-reform-project-defend-innovation.

126. Julie Samuels, *Can You Believe It? Legislation that Would Actually Help Fix the Patent System*, ELECTRONIC FRONTIER FOUNDATION (Aug. 1, 2012), https://www.eff.org/deeplinks/2012/07/can-you-believe-legislation-would-actually-help-fix-patent-system.

127. Press Release, CEA Endorses SHIELD Act of 2012 (Aug. 1, 2012), http://www.ce.org/News/News-Releases/Press-Releases/2012-Press-Releases/CEA-Endorses-SHIELD-Act.aspx; *see also* Gary Shapiro, *Legal Slime Chokes Best Companies*, FORBES, Aug. 1, 2012, *available at* http://www.forbes.com/sites/garyshapiro/2012/08/01/legal-slime-chokes-best-companies/ (President and CEO of the Consumer Electronics Association, praising the SHIELD Act [of 2012] as a first step in solving the "patent troll plague").

128. The Library of Congress, THOMAS, Bill Summary & Status 112th Congress (2011–2012), *supra* note 120.

129. Some portions of the AIA became effective as early as September 16, 2011, while other portions of the AIA (including the First-Inventor-to-File policy and changes in the derivation proceedings) will not become effective until March 16, 2013. *See* United States Patent and Trademark Office, America Invents Act: Effective Dates (Oct. 5, 2011), *available at* http://www.uspto.gov/aia_implementation/aia-effective-dates.pdf.

130. *See* Merges, *supra* note 16, at 1608–10.

131. *See* Section II.B, *supra* (discussing a previously proposed attorney-fee-shifting provision which was ultimately omitted from the enacted version of the AIA). *But see Amendment in the Nature of a Substitute to H.R. 2795, the "Patent Act of 2005": Hearing on H.R. 2795 Before the Subcomm. on Courts, the Internet, & Intellectual Property of the H. Comm. on the*

While it is difficult to determine why exactly the fee-shifting provision was omitted from the 2007 Leahy-Hatch bill, Senators Leahy and Hatch likely received enough pushback on that provision to decide that omission of the provision would facilitate the ultimate passage of the bill by deferring the debate for another day.

At only forty lines long, the SHIELD Act of 2012 was a very short piece of legislation.[132] Furthermore, although the bill defined "computer," "computer hardware patent," and "software patent," the threshold term "reasonable likelihood of succeeding" was not defined.[133] Therefore, while the introduction of the 2012 legislation was a significant first step toward curbing the number of lawsuits filed by non-practicing entities, courts would have had to establish the actual bounds of the "reasonable likelihood" term, a process which would likely have taken many years even after the passage of the 2012 bill.

One opponent to the SHIELD Act of 2012 was the American Innovators for Patent Reform ("AIPR"), which strongly criticized the Act as both unfair and unnecessary and dismissively characterized the bill as the "Shield the Infringers Act."[134] Arguing that the combination of Rule 11 and 35 U.S.C. § 285 already sufficiently addresses the problem of frivolous lawsuits, AIPR argued that lowering the bar for the award of defendants' attorneys' fees serves only to intimidate inventors and small patent owners and protect large software patent owners—who AIPR asserted are the most

Judiciary, 109th Cong. 47–48 (2005), *available at* http://www.gpo.gov/fdsys/pkg/CHRG-109hhrg23434/pdf/CHRG-109hhrg23434.pdf (reporting the testimony of Philip S. Johnson, designee of the Pharmaceutical Research and Manufacturers of America, describing his belief that awarding attorneys' fees to the prevailing party as a method of deterring frivolous litigation would be successful, by reducing asymmetries in litigation risk profiles between troll plaintiffs and innovative firms and asserting that the existing laws (Rule 11, § 285) are not sufficient in deterring frivolous suits, but was advised by others that implementation of the English Rule could not be accomplished). Interestingly, while the fee-shifting provision of the AIA was being considered, another proposal to give Fed. R. Civ. P. Rule 11 more teeth was also being considered. Litigation Abuse Reduction Act, S. 533, 112th Cong. (2011) (amending the sanctions provisions in Rule 11 to *require* the court to impose a sanction on any attorney, law firm, or party that has violated the rule, and *requiring* that any sanction should compensate parties injured by the conduct in question).

132. SHIELD Act of 2012, *supra* note 8.

133. *Id.*

134. *See* AMERICAN INNOVATORS FOR PATENT REFORM, PATENT LEGISLATION: AMERICA INVENTS ACT—SHIELD ACT—H.R. 6245 (Aug. 2, 2012), http://www.aminn.org/patent-legislation (discussing the SHIELD Act of 2012); Alexander Poltorak, PROPOSED SHIELD ACT IS ANTI-INNOVATION AND PRO-MONOPOLY, AMERICAN INNOVATORS FOR PATENT REFORM (Aug. 14, 2012), http://www.aminn.org/proposed-shield-act-antiinnovation-and-promonopoly (discussing the SHIELD Act of 2012).

notorious infringers.[135] Furthermore, AIPR argued that the proponents' assumption that there is a frivolous patent infringement lawsuit crisis is unfounded; patent litigation statistics indicate that plaintiff non-practicing entities (the purported targets of this legislation) are successful most of the time, and even when not, the outcome of the litigation was not foreseeable at the outset.[136] While these statements may be rooted in fact, some of AIPR's rhetoric seems overstated and unfounded.[137] In counterpoint to AIPR's assertion that fee-shifting is not effective since "the outcome of litigation . . . [is] not foreseeable at the outset of litigation," it is important to note that fee-shifting targets a subset of patent infringement claims which *would* be identified as *objectively* unlikely to succeed. While it is certainly true that non-abusive litigants only bring suit for matters which are difficult to discern outcomes, abusive litigants—the targets of fee-shifting—should be encouraged by a fee-shifting provision to more thoroughly assess and evaluate the facts and the merits of the case prior to filing suit so as to maximize the foreseeability of the outcome of litigation.

While the SHIELD Act of 2012 provided a great baseline for implementation of fee-shifting in patent litigation and generated useful debate by virtue of simply being introduced, some amendments to the Act would alleviate detractors' concerns and increase the likelihood that similar fee-shifting legislation will be enacted. Some of the beauty of the SHIELD Act of 2012 lay in its simplicity, but the bare bones approach left open

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135. Poltorak, *supra* note 134.

136. *Id.* (citing Pricewaterhouse Coopers, 2011 PATENT LITIGATION STUDY: PATENT LITIGATION AS THE "AMERICA INVENTS ACT" BECOMES LAW (2011), *available at* http://www.pwc.com/en_US/us/forensic-services/publications/assets/2011-patent-litigation-study.pdf); *see also* Mark A. Lemley, *Essay: Rational Ignorance at the Patent Office*, 95 NW. U. L. REV. 1495, 1518 n.83.

137. For instance, Dr. Alexander Poltorak, AIPR's founder and President, claims that "The SHIELD Act [of 2012] was drafted by lobbyists for the computer industry oligopoly[,] . . . making it easier for the computer industry giants to blatantly infringe the patents of innovators such as independent inventors, universities and small businesses." Poltorak, *supra* note 134; Alexander Poltorak, *Proposed SHIELD law is nothing but a gift to infringers*, THE HILL'S CONGRESS BLOG (Aug. 10, 2012, 2:15 PM), http://thehill.com/blogs/congress-blog/technology/243135-proposed-shield-law-is-nothing-but-a-gift-to-infringers. Dr. Alexander Poltorak is also the CEO and chairman of General Patent Corporation. *See* Teresa Riordan, *Patents; Licensing boutiques help inventors with patent claims against big companies*, N.Y. TIMES (June 10, 2002), http://www.nytimes.com/2002/06/10/business/patents-licensing-boutiques-help-inventors-with-patent-claims-against-big.html?pagewanted=print&src=pm (describing General Patent Corporation as "helping cash-strapped independent inventors pursue their patent claims against the big guys[,]" and also stating that "[t]here are two kinds of patent licensing operations: the carrot variety and the stick approach. Dr. Poltorak acknowledges that he uses a stick, by suing or threatening to sue corporations").

several questions which should be addressed before such legislation is enacted. Although some of the detractors and opponents of the SHIELD Act of 2012 and fee-shifting in general have concerns grounded in valid observations, some of those concerns have been allayed by careful drafting in the next generation of fee-shifting legislation. On February 27, 2013, Representatives Chaffetz and DeFazio continued their aggressive pursuit of fee-shifting legislation by introducing an improved piece of fee-shifting legislation: the Saving High-Tech Innovators from Egregious Legal Disputes Act of 2013 ("SHIELD Act of 2013").[138]

b) The Elusive Definition of "Patent Trolls" and "Abusive Litigants"

One of the biggest difficulties in drafting fee-shifting legislation is in crafting language that will accurately target the typical culprits who utilize abusive litigation practices. Although the press release from the sponsors of the SHIELD Act of 2012 indicated that the intended targets were "patent trolls," there was no language in the 2012 legislation directing the consequences to "patent trolls" or "non-practicing entities," or even identifying specific characteristics of a patent holder that would limit the bill's reach to such non-practicing entities.[139] Opponents of fee-shifting legislation may have raised the argument that small inventors who do not abuse the court system through repeated litigation may be wrongfully discouraged from filing patent infringement claims as a result of this fee-shifting measure, reasoning that the increased risk of bearing the defendants' litigation costs would deter some number of valid claims.

The SHIELD Act of 2013 approaches this challenge in a novel manner: instead of attempting to positively define a "patent troll" or "non-practicing entity," the Act of 2013 uses a negative definition, describing three protected categories which typically are not "patent trolls" or "non-practicing entities" and are therefore exempt from the attorney-fee-shifting provision.[140] Under

138. *See* Saving High-Tech Innovators from Egregious Legal Disputes Act of 2013, H.R. 845, 113th Cong. (1st Sess. 2013) [hereinafter SHIELD Act of 2013]. Notably, the SHIELD Act of 2013 is applicable to all patent litigation, whereas the 2012 version was limited only to computer hardware and software patent litigation. *Compare* SHIELD Act of 2012, *supra* note 8, *with* SHIELD Act of 2013 (eliminating language limiting recovery of patent litigation costs to "computer hardware and software patent litigation").

139. Press Release, Congressman Peter DeFazio, *supra* note 121; SHIELD Act of 2012, *supra* note 8; *see also* Timothy B. Lee, *Bill would force patent trolls to pay defendants' legal bills*, ARS TECHNICA (Aug. 1, 2012), http://arstechnica.com/tech-policy/2012/08/bill-would-force-patent-trolls-to-pay-defendants-legal-bills/.

140. The SHIELD Act of 2013 would amend 35 U.S.C. § 285A to read:

the SHIELD Act of 2013, an adverse party is exempt from fee-shifting if it (1) is the original inventor, (2) has substantially invested in production or sale of an item covered by the patent, or (3) is a university or a technology transfer organization which commercializes technologies developed by a university.[141]

By clearly laying out the procedure and timeline for establishing or rebutting a party's qualification for the three categorical exceptions, the SHIELD Act of 2013 ensures clear and efficient implementation.[142] The "original inventor" and "university or technology transfer organization" categories are clearly defined and should be easily evaluated by the courts.[143] However, courts will likely find it difficult to evaluate whether losing parties fall into the "exploitation of the patent" category.[144] The SHIELD Act of 2013 provides a third exception to the default rule in cases where the losing party "can provide documentation . . . of substantial investment . . . in the

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> [T]he Court shall award the recovery of full costs to any prevailing party asserting invalidity or noninfringement, including reasonable attorney's fees, other than the United States, upon the entry of a final judgment if the court determines that the adverse party did not meet at least one of the conditions described in subsection (d), unless the court finds that exceptional circumstances make an award unjust.

Id. § 285A(a)(4) (internal quotation marks omitted). Subsection 285A(d), referenced above, would provide the three categorical exceptions to the loser-pays default rule:

> (d) CONDITION DEFINED.—For purposes of this section, a 'condition' means, with respect to the party alleging infringement, any of the following:
>
> (1) ORIGINAL INVENTOR.—Such party is the inventor, a joint inventor, or in the case of a patent filed by and awarded to an assignee of the original inventor or joint inventor, the original assignee of the patent.
>
> (2) EXPLOITATION OF THE PATENT.—Such party can provide documentation to the court of substantial investment made by such party in the exploitation of the patent through production or sale of an item covered by the patent.
>
> (3) UNIVERSITY OR TECHNOLOGY TRANSFER ORGANIZATION.—Such party is—
>
> (A) an institution of higher education (as that term is defined in section 101 of the Higher Education Act of 1965 (20 U.S.C. 1001); or
>
> (B) a technology transfer organization whose primary purpose is to facilitate the commercialization of technology developed by one or more institutions of higher education.

Id. § 285A(d) (internal quotation marks omitted).

141. *Id.* § 285A(d).
142. SHIELD Act of 2013, *supra* note 138, § 285A(a)(1)–(3), (c)(1)–(3).
143. *Id.* § 285A(d)(1), (3).
144. *Id.* § 285(A)(d)(2).

exploitation of the patent through production or sale of an item covered by the patent."[145] As drafted, the determination of what qualifies as a "substantial investment" will be highly fact-specific and subject to interpretation. Nevertheless, this novel negative definition of abusive patent litigants is an interesting and effective approach to properly targeting the troublemakers.

c) Setting the Standard: "Reasonable Likelihood of Succe[ss]" Versus "Loser Pays by Default"

In order to be successful, legislation implementing fee shifting must include a clear definition of the standard which must be met to cue the award of attorneys' fees. One of the greatest weaknesses of the SHIELD Act of 2012 was lack of clarity in its use of the term "reasonable likelihood of succeeding" in establishing the standard for awarding attorneys' fees.[146] A more rigorous definition or explanation of the term "reasonable likelihood of succeeding" would have been helpful in giving courts less opportunity to circuitously debate the Act, giving all parties—plaintiffs, defendants, third parties, and courts—a better understanding of the impact of the legislation, leading to more efficient and seamless implementation of the fee-shifting provision.

If a reasonableness standard is desirable, two criteria for establishing such a standard are important. First, the new legislation should clearly distinguish *objective* versus *subjective* reasonableness standards and should precisely elucidate which type of reasonableness standard should be applied to the new fee-shifting scheme. Because remedies already exist to address subjective unreasonableness under Rule 11, the next generation of this legislation should elect to use an *objective* reasonableness test to evaluate the plaintiff's likelihood of success.

Second, the legislation should define *when* the likelihood of success should be evaluated. Several points in the litigation timeline might serve as convenient points for evaluation: just prior to filing the infringement claim, at the summary judgment stage, or after the *Markman* claim construction hearing. At each of these distinct points of evaluation, a reasonable plaintiff who is evaluating the likelihood of success of this litigation might be expected to either abandon or continue the litigation depending on the plaintiff's perception of the likelihood of success. While a plaintiff with a lower likelihood of success at an earlier stage in litigation may reasonably continue to pursue litigation, a plaintiff with a lower likelihood of success at a

145. *Id.*
146. *See* SHIELD Act of 2012, *supra* note 8.

later stage in litigation may be seen as less reasonable in continuing litigation. The Rosenberg factors imply that an earlier understanding or evaluation of the likelihood of successful litigation reduces the incidence of pure nuisance claims.[147]

Another approach to setting the threshold would be to amend Federal Rule of Civil Procedure 68. Currently, under this rule regarding "offer of judgment," after a settlement offeree declines an offer, if the judgment that the offeree finally obtains is not more favorable than the unaccepted offer, the offeree must pay the costs incurred after the offer was made.[148] Amending Rule 68 to include the award of attorneys' fees in the definition of "costs incurred" would effectively implement the fee-shifting provision in this particular situation without very much complexity or uncertainty.

Alternatively, a fee-shifting scheme which simply forces the loser to pay by default bypasses the need for establishing a "reasonableness" standard either upfront in legislation or later through judicial precedent. To this end, the SHIELD Act of 2013, unlike the 2012 version, does not require a judicial determination that the complainant did not have a "reasonable likelihood of succeeding" in its claim for patent infringement.[149] Instead, the SHIELD Act of 2013 simply forces the losing plaintiff to pay by default, unless (1) the losing party is an original inventor, (2) the losing party has substantially invested in production or sale of an item covered by the patent, (3) the losing party is a university or is a technology transfer organization which commercializes technologies developed by a university, or (4) there are exceptional circumstances making the award unjust.[150]

The SHIELD Act of 2013 altogether avoids the problem of establishing a threshold for shifting attorneys' fees by making fee-shifting the default rule, and by simultaneously clearly laying out the four circumstances in which a

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147. *See supra* Section I.A.1.

148. FED. R. CIV. P. 68.

149. *Compare* SHIELD Act of 2012, *supra* note 8, *with* SHIELD Act of 2013, *supra* note 138 (eliminating language providing for recovery of patent litigation costs only "in cases where the court finds the claimant did not have a reasonable likelihood of succeeding").

150. SHIELD Act of 2013, *supra* note 138. The SHIELD Act of 2013 would amend 35 U.S.C. § 285A to read:

> [T]he Court shall award the recovery of full costs to any prevailing party asserting invalidity or noninfringement, including reasonable attorney's fees, other than the United States, upon the entry of a final judgment if the court determines that the adverse party did not meet at least one of the conditions described in subsection (d), unless the court finds that exceptional circumstances make an award unjust.

Id. § 285A(a)(4) (internal quotation marks omitted). Subsection 285A(d), referenced above, would provide the three categorical exceptions to the loser-pays default rule. *Id.* § 285A(d).

losing party may avoid paying the winning party's attorneys' fees and the exact procedure required to establish or rebut a finding of exemption. Furthermore, by establishing a default loser-pays rule in patent infringement and validity cases with a few categorical exceptions to the rule (for which the usual suspects of abusive litigation do not usually qualify), the SHIELD Act of 2013 appears to be relatively easy to implement and is therefore much more likely to successfully target entities which have traditionally employed abusive litigation practices. Beyond these improvements, however, the SHIELD Act of 2013 goes a few steps further in ensuring that plaintiffs have some skin in the patent litigation game.

d) Pay to Play: Requiring Plaintiffs to Post Bond When Bringing Infringement Claims

A bonding requirement (similar to that applied in injunctions) would be a good compromise between the English and American Rules. By requiring a plaintiff to post bond when bringing a patent infringement claim, the plaintiff will have to guarantee it is willing to play the high stakes litigation game and is not simply bullying the defendant into playing a single-sided game of high stakes. Placing this bond in an escrow fund would also ensure that the defendant is not responsible for the distribution of the funds to the plaintiff or to court-determined use. This approach might disadvantage independent inventors and small business owners who may not have the resources to post bond when bringing a claim. However, careful legislation drafting could introduce more flexible bonding requirements (e.g., half-price bonds) for plaintiffs who qualify under the independent inventor or small business owner categories, or who are demonstrably not bullies (e.g., by limiting the grant of flexible bonding requirements to an entity's first five complaints or an entity's first five assertions of a specific patent).

Although the SHIELD Act of 2012 did not have a bonding requirement, the SHIELD Act of 2013 includes a carefully drafted bonding requirement that could provide a strong structure for a compromise between the English and American Rules.[151] Under the SHIELD Act of 2013, any adverse party must post a bond (determined by the court) to cover full costs of the litigation, including attorneys' fees, unless the court determines the adverse party (1) is an original inventor, (2) has substantially invested in production or sale of an item covered by the patent, or (3) is a university or a technology transfer organization that commercializes technologies developed by a

151. *Compare* SHIELD Act of 2012, *supra* note 8, *with* SHIELD Act of 2013, *supra* note 138 (adding a bond requirement).

university.[152] This bonding requirement forces plaintiffs to pay to play the patent litigation game and chills abusive litigation practices by forcing traditionally abusive litigants to put some skin in the game.

IV. CONCLUSION

Abusive litigation practices and nonmeritorious patent infringement claims are real and present dangers in the current patent litigation ecosystem, imposing significant social costs. Therefore, these practices must be addressed in a swift manner. Of all the factors involved in a plaintiff's determination of whether to file a claim of questionable merit, plaintiff's costs of litigation may be the easiest to manipulate. By implementing a fee-shifting provision, under which the loser must pay the winner's legal fees, complainants in patent actions will be more likely to pause and reconsider each new infringement action before it is filed—and even during litigation itself—in order to avoid risking responsibility for paying the defendant's legal costs. While fee-shifting is not the default rule in the United States, the rich history of statutory exceptions to the default rule and the failure of existing fee-shifting provisions to adequately contain and deter abusive litigation supports the establishment of a more robust fee-shifting regime in patent litigation. Careful and deliberate drafting of legislation for statutory amendments can effectively and efficiently modify the calculus of patent litigation so as to reduce the number of patent infringement cases with questionable merit, thereby enabling attorneys, plaintiffs, defendants, courts, and consumers to focus on innovation and other more pressing matters that bear greater societal benefit.

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152. The SHIELD Act of 2013 introduces a bond requirement:

> (b) BOND REQUIRED.—Any [adverse] party that . . . [the Court determines (1) is not an original inventor; (2) has not substantially invested in production or sale of an item covered by the patent; and (3) is neither a university nor a technology transfer organization which commercializes technologies developed by a university] shall be required to post a bond in an amount determined by the court to cover the recovery of full costs [including reasonable attorneys' fees] . . . .

SHIELD Act of 2013, *supra* note 138, § 285A(b).

CLEAR AS MUD: AN EMPIRICAL ANALYSIS OF THE DEVELOPING LAW OF JOINT INVENTORSHIP IN THE FEDERAL CIRCUIT

Eric Ross Cohen†

Naming the inventors on a patent is more than a formality: Doing so incorrectly may significantly hinder the patent holder's ability to enforce his rights or may render the patent invalid altogether.[1] The named inventor receives much more than recognition; he is the owner of the patent and the only one who may assert the accompanying property rights against alleged infringers.[2] As such, there are strict requirements in place for who qualifies as the inventor for a patent.[3] When there is clearly only a single, sole inventor, these issues tend not to cause much confusion beyond priority disputes.[4] However, when multiple people work together and produce a "joint invention," these rights and restrictions take on new significance. Courts must frequently analyze and weigh the individual contributions of the putative inventors and determine whose acts are sufficient for "inventorship" and whose acts fall short.[5] This nuanced and often seemingly arbitrary

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1. *See* 35 U.S.C. §§ 102(f), 256 (2006); *see also infra* Section I.C. Except where otherwise noted, all statutory references are pre- Leahy-Smith America Invents Act, Pub. L. No. 112-29, 125 Stat. 284 (2011) [hereinafter "America Invents Act"].

2. This assumes there is no assignment agreement to a third party. 35 U.S.C. § 261 ("[P]atents shall have the attributes of personal property."); § 262 ("In the absence of any agreement to the contrary, each of the joint owners of a patent may make, use, offer to sell, or sell the patented invention . . . without the consent of and without accounting to the other owners."); *see also* W. Fritz Fasse, *The Muddy Metaphysics of Joint Inventorship: Cleaning Up after the 1984 Amendments to 35 U.S.C. § 116*, 5 HARV. J.L. & TECH. 153, 156 n.19 (1992) ("[A]n invention will initially belong to the inventor(s), but there may be an immediate duty to assign to the employer which is enforceable in court." (quoting Richard C. Witte & Eric W. Guttag, *Employee Inventions*, 71 J. PAT. & TRADEMARK OFF. SOC'Y 467, 469 (1989))).

3. *See, e.g.*, 35 U.S.C. § 101 (requiring "invention" or "discovery"), § 102(g) (requiring "conception" and "reduction to practice" of invention).

4. *See, e.g.*, Coleman v. Dines, 754 F.2d 353 (Fed. Cir. 1985); Hybritech Inc. v. Monoclonal Antibodies, Inc., 802 F.2d 1367 (Fed. Cir. 1986).

5. *See, e.g.*, Burroughs Wellcome Co. v. Barr Labs., Inc., 40 F.3d 1223 (Fed. Cir. 1994); Fina Oil & Chem. Co. v. Ewen, 123 F.3d 1466 (Fed. Cir. 1997); Monsanto Co. v. Kamp, 269 F. Supp. 818 (D.D.C. 1967); Mueller Brass Co. v. Reading Indus., Inc., 352 F. Supp. 1357 (E.D. Pa. 1972).

evaluation process has given the law of joint inventorship the reputation of being "one of the muddiest concepts in the muddy metaphysics of the patent law."[6] Nevertheless, a clear joint inventorship doctrine is critical both for institutional researchers as well as entrepreneurs seeking to structure their operations and business alliances.[7] Because most modern research and development of patentable inventions takes place in institutional settings—where large teams of people work alongside one another—the commercial and scientific importance of a predictable joint invention doctrine is of vital importance to a multitude of modern enterprises.[8]

This Note will analyze all of the joint inventorship cases that have come before the United States Court of Appeals for the Federal Circuit since its inception in 1982[9] and will describe the evolution of the doctrine over the past three decades. Specifically, the Note evaluates the court's jurisprudence since the 1984 congressional amendment of § 116, which regulated the naming of multiple inventors and eased the process for listing groups working on a single patentable idea on the same patent.[10] Since the 1984 amendment, the court has decided sixty-five published cases.[11] Predictably, in the vast majority of these cases the court evaluated whether the putative inventor had made the requisite contribution to the invention in order to qualify as a joint inventor.[12] Even well-reasoned cases, standing alone, tend to affirm the impression that the law is unclear and unhelpful for practitioners guiding researchers and institutions because of the highly case-specific nature of the analysis. However, when read as a unified body of law, the Federal Circuit's joint inventorship jurisprudence reveals a cohesive narrative and a

6. *Mueller Brass*, 352 F. Supp. at 1372.

7. *See* Lawrence M. Sung, *Collegiality and Collaboration in an Age of Exclusivity*, 3 DEPAUL J. HEALTH CARE L. 411, 435–39 (2000) (arguing that the current joint inventorship jurisprudence discourages collaboration and has caused the scientific community to become overly "cautious").

8. *Id.*; *see also* Joshua Matt, *Searching for an Efficacious Joint Inventorship Standard*, 44 B.C. L. REV. 245, 254 (2002) (discussing the "modern paradigm" of institutional research). Matt explains that joint inventorship claims have become "an attractive option for disgruntled scientists suing either their former research partners or former employers. Likewise, defendants accused of infringement might endeavor to find an unnamed, overlooked and minor contributor to defeat a claim of infringement." *Id.* at 247.

9. Federal Courts Improvement Act of 1982, Pub. L. No. 97-164, 96 Stat. 25.

10. Patent Law Amendments Act of 1984, Pub. L. No. 98-622, § 104(a), 98 Stat. 3383, 3384–85 (amending 35 U.S.C. § 116); *see* Matt, *supra* note 8, at 246 (explaining that the revision to § 116 "lowered the bar for joint inventorship status"); *infra* Section I.B.

11. *See infra* Appendix.

12. *See generally* Aaron X. Fellmeth, *Conception and Misconception in Joint Inventorship*, 2 N.Y.U. J. INTELL. PROP. & ENT. L. 73 (2012) (describing the difference between contribution to an individual claim versus the invention as a whole).

set of guiding principles. Ultimately, despite the doctrine's "muddy" reputation, this Note describes that a predictable and coherent joint inventorship doctrine exists in patent law.

Part I of this Note presents an overview of the current state of the law of joint inventorship with an emphasis on the major doctrinal developments over the preceding thirty years.[13] This Part offers a brief but encyclopedic grounding in the rules that currently govern § 116 and § 256.[14] Part II presents the results of the empirical analysis.[15] This Part describes the historical development of joint inventorship jurisprudence[16] and comes to three conclusions: in recent years the Federal Circuit (1) has raised the standard for requisite inventive contribution,[17] (2) has increasingly relied on the presumption of validity of an issued patent,[18] and (3) has acknowledged the unfairness of applying pre-1984 ownership rules to the liberalized joint inventorship standards.[19] Part III concludes with some recommendations for practitioners based on the results of this Note's study.[20]

I. BACKGROUND

The doctrine of joint inventorship, "one of the muddiest concepts in . . . patent law,"[21] is widely considered to be arbitrary and lacking coherent standards. This view in part derives from the fact that joint inventorship law attempts to apply the vague standard requirements of inventorship to the expansive variety of collaborative scenarios in which multiple parties are involved in the inventive process.[22] Before unraveling the thorny doctrine of joint inventorship law, it is helpful to first have an understanding of the underlying requirements for traditional single-party inventorship.

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13. *See infra* Part I.
14. *Id.*; *see* 35 U.S.C. §§ 116, 256.
15. *See infra* Part II.
16. *See infra* Section II.A.
17. *See infra* Section II.B.1.
18. *See infra* Section II.B.2.
19. *See infra* Section II.B.3.
20. *See infra* Part III.
21. Mueller Brass Co. v. Reading Indus., Inc., 352 F. Supp. 1357, 1372 (E.D. Pa. 1972).
22. *See, e.g.*, Fasse, *supra* note 2, at 161 ("The focus on joint conception makes the inquiry difficult in practice and impossible in theory. Can two people really jointly conceive a single complete idea?"); Matt, *supra* note 8, at 245–46 ("[T]he law of joint inventorship has always had vague guidelines, attaching legal significance to an abstract event, adhering to a metaphysical standard that deems an inventor's 'moment of conception' the badge of inventorship.").

A. CONCEPTION IN THE SOLE INVENTOR CONTEXT

Inventorship requires two elements: (1) conception and (2) reduction to practice.[23] However, conception is the more determinative of the two criteria when evaluating inventorship disputes.[24] Conception involves the assembly of a mental concept or image of the specific invention: "the formation in the mind of the inventor, of a definite and permanent idea of the complete and operative invention, as it is hereafter to be applied in practice."[25] The Federal Circuit, recognizing the ambiguity of this definition, has acknowledged that there is no specific, bright-line point at which an inventor's idea achieves the requisite conception.[26] Rather, the court has stated that "conception is complete . . . when the idea is so clearly defined in the inventor's mind that only ordinary skill would be necessary to reduce the invention to practice, without extensive research or experimentation."[27] The inventor must have "a specific, settled idea, a particular solution to the problem at hand, not just a general goal or research plan he hopes to pursue."[28] As such, to establish conception an inventor must prove "possession of every feature" of a claimed invention.[29] However, the inventor need not show that the design "works" at the conception stage.[30] As can be seen from these requirements, conception is an abstract concept that often requires an inquiry into an inventor's thought process.

Given that conception is a mental act, there is a real risk of inventors misremembering or falsely describing the ideas in their possession, especially when the validity of a patent application often rests on this question.[31] As a result, courts require corroborating evidence to back up the putative inventor's claims of conception.[32] Typically, the necessary corroborating

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23. 35 U.S.C. § 102(g) (2006).

24. *See* Burroughs Wellcome Co. v. Barr Labs., Inc., 40 F.3d 1223, 1227–28 (Fed. Cir. 1994) ("Conception is the touchstone of inventorship, the completion of the mental part of invention.").

25. Hybritech Inc. v. Monoclonal Antibodies, Inc., 802 F.2d 1367, 1376 (Fed. Cir. 1986).

26. *Burroughs Wellcome*, 40 F.3d at 1228.

27. *Id.*

28. *Id.*

29. Coleman v. Dines, 754 F.2d 353, 359 (Fed. Cir. 1985).

30. *Burroughs Wellcome*, 40 F.3d at 1228 (citing Applegate v. Scherer, 332 F.2d 571, 573 (C.C.P.A. 1964)). Establishing the efficacy of the invention falls under the reduction to practice prong of inventorship. *Id.*

31. *See* Hess v. Advanced Cardiovascular Sys., 106 F.3d 976, 981 (Fed. Cir. 1997) ("[There is a] temptation for even honest witnesses to reconstruct, in a manner favorable to their own position, what their state of mind may have been." (citing Amax Fly Ash Corp. v. United States, 514 F.2d 1041, 1047 (Ct. Cl. 1975))).

32. *Id.*

evidence is a contemporaneous disclosure that contains sufficiently detailed information to enable one skilled in the art to make the invention.[33] Such a disclosure confirms both the fact of the design and its completeness:

> The conception analysis necessarily turns on the inventor's ability to describe the invention with particularity. Until he can do so, he cannot prove possession of the complete mental picture of the invention. These rules ensure that patent rights attach only when an idea is so far developed that the inventor can point to a definite, particular invention.[34]

Alternatively, an inventor's own reduction to practice can serve as corroborating evidence to demonstrate conception; the result of reducing an idea to practice clearly indicates the boundaries of conception and whether it fits within the claimed invention.[35]

A conception analysis is currently critical in resolving priority disputes under the first-to-invent system of the 1952 Patent Act and § 102.[36] However, the America Invents Act and the switch to a first-to-file system greatly simplify priority disputes and reduce the emphasis on the question of conception.[37] Nonetheless, conception analysis remains an integral part of determining who the proper inventors are when research, discovery, and invention take place in a group setting.

B. JOINT INVENTORSHIP

The statutory definition of a joint invention requires that "when an invention is made by two or more persons jointly, they shall apply for a patent jointly."[38] Although on its face this definition appears to provide a deferential standard for who may be included on the patent application, in fact courts impose strict criteria on who constitutes a "true inventor"—simply being a member of a research or inventing team is insufficient.[39] Moreover, failing to accurately name the true inventors (nonjoinder) or

33. *Burroughs Wellcome*, 40 F.3d at 1228.

34. *Id.*

35. *Id.* at 1228–29. A discussion of the timing implications associated with corroboration through reduction to practice and the changes that accompany the America Invents Act is beyond the scope of this Note. However, where the process of reducing an idea to practice yields new, unexpected results, prior conception will be deemed "incomplete." *See id.* at 1229.

36. *See* 35 U.S.C. § 102 (2006).

37. *See* America Invents Act, Pub. L. No. 112-29, § 3(b)(1), § 102, 125 Stat. 284, 285–87 (2011).

38. 35 U.S.C. § 116.

39. *See, e.g.*, Univ. of Colo. Found. Inc. v. Am. Cyanamid Co., 105 F. Supp. 2d 1164, 1175 (D. Colo. 2000); Agawam Co. v. Jordan, 74 U.S. 583, 602 (1869).

naming persons who are not true inventors (misjoinder) can invalidate the patent.[40] The limitations on those who appropriately may be named on a patent stems from the underlying goals of the patent system and an awareness of the value of the exclusive rights that are granted to patent holders as reward for innovation.[41] As Donald Chisum, a leading commentator on patent law, explains:

> [I]t would be morally offensive to allow one to harvest what another has sown. The requirement bars a patent even if the true inventor does not complain or if the true inventor is not known, as, for example, when a person discovers and imports for the first time into the United States a device in common use in a foreign country. The originality requirement limits patent monopolies to those who actually expend inventive effort successfully.[42]

Although it is clear that only a true inventor may be named on the patent, courts often face the challenging task of ascertaining who are the true inventors. Prior to its amendment in 1984, § 116 addressed joint inventorship[43] but "did little more than acknowledge the occurrence of joint invention and provide procedures for jointly applying for patent and for correcting innocent errors in naming inventors."[44] Despite the lack of a clear statutory definition, the general rule—even before the enactment of the 1952

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40. 35 U.S.C. §§ 102(f), 256. *See infra* Section I.C.

41. *See* U.S. CONST. art. I, § 8, cl. 8 (empowering Congress "to promote the Progress of Science and useful Arts, by securing for limited Times to . . . Inventors the exclusive Right to their . . . Discoveries").

42. 1-2 DONALD CHISUM, CHISUM ON PATENTS § 2.01 (2008).

43. 35 U.S.C. § 116 (1982). The original version of § 116 provided:

> When an invention is made by two or more persons jointly, they shall apply for patent jointly and each sign the application and make the required oath . . . .
>
> If a joint inventor refuses to join in an application for patent or cannot be found or reached after diligent effort, the application may be made by the other inventor on behalf of himself and the omitted inventor . . . .
>
> Whenever through error a person is named in an application for patent as the inventor, or through error an inventor is not named in an application, and such error arose without any deceptive intention on his part, the Commissioner may permit the application to be amended accordingly, under such terms as he prescribes.

Id.

44. *See* Fasse, *supra* note 2, at 162.

Patent Act—was that, to be a joint invention, the claimed "inventors" had to (1) *work together* and (2) *jointly conceive* of the invention.[45]

As discussed in Section I.A, conception is a hazy notion even in the context of a sole inventor.[46] Understandably, courts have struggled to reach a consensus as to how multiple parties may contribute to conception of a single invention.[47] In the watershed case of *Monsanto Co. v. Kamp*,[48] the district court refined the definition of joint inventorship in an interference proceeding:

> A joint invention is the product of collaboration of the inventive endeavors of two or more persons working toward the same end and producing an invention by their aggregate efforts. To constitute a joint invention, it is necessary that each of the inventors work on the same subject matter and make some contribution to the inventive thought and to the final result. Each needs to perform but a part of the task if an invention emerges from all of the steps taken together. It is not necessary that the entire inventive concept should occur to each of the joint inventors, or that the two should physically work on the project together. One may take a step at one time, the other an approach at different times. One may do more of the experimental work while the other makes suggestions from time to time. The fact that each of the inventors plays a different role and that the contribution of one may not be as great as that of another, does not detract from the fact that the invention is joint, if each makes some original contribution, though partial, to the final solution of the problem.[49]

In *Monsanto*, the court attempted to place some upper boundaries on the doctrine of joint inventorship and provided specific negative criteria for what was not required to constitute a joint invention.[50] Subsequently, the court in *SAB Industri AB v. Bendix Corp.* further clarified that joint inventors need not "have combined their efforts as to each claim in the patent."[51] In other

45. *See* 1 W. ROBINSON, THE LAW OF PATENTS FOR USEFUL INVENTIONS § 396 (1890) ("Only where the same single, unitary idea of means is the product of two or more minds, working *pari passu*, and in communication with each other, is the conception truly joint and the result a joint invention.").

46. *See infra* Section I.A.

47. *See supra* note 22.

48. Monsanto Co. v. Kamp, 269 F. Supp. 818 (D.D.C. 1967).

49. *Id.* at 824.

50. *Id.*

51. SAB Industri AB v. Bendix Corp., 199 U.S.P.Q. 95 (E.D. Va. 1978). This decision rebuked the "all claims rule" used by several courts to evaluate joint inventorship claims. *See* Fasse, *supra* note 2, at 178 (explaining that the "all claims rule" was the "biggest hindrance to team research efforts under [the original] section 116").

words, joint inventors did not need to contribute to every aspect of the claimed invention.

In 1984, Congress made several significant amendments to the Patent Act of 1952, including the definition of joint inventorship in § 116:[52]

> When an invention is made by two or more persons jointly, they shall apply for a patent jointly and each make the required oath, except as otherwise provided in this title. Inventors may apply for a patent jointly even though (1) they did not physically work together or at the same time, (2) each did not make the same type or amount of contribution, or (3) each did not make a contribution to the subject matter of every claim of the patent.[53]

This new language directly codified the doctrines adopted by *Monsanto* and *SAB Industri*.[54] However, Congress still relied on only negative criteria in defining joint inventorship, saying what was *not required* to satisfy the statute.[55] Doing so effectively "lowered the bar for joint inventorship status but did not clarify any of the inherent uncertainty in joint inventorship law."[56] The relatively new Federal Circuit took up this task and attempted to describe (1) the requisite collaborative relationship among the joint inventors; and (2) the minimum required contributions of each inventor to the invention's conception, in light of the amended § 116 for joint inventorship.[57]

1. *Collaboration and Communication*

The analysis for joint inventorship first requires that there must be some degree of interaction between the joint inventors and that they are working toward a common goal.[58] Although § 116 states that joint inventors may exist even though "they did not physically work together or at the same time,"[59]

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52. Patent Law Amendments Act of 1984, Pub. L. No. 98-622, § 104(a), 98 Stat. 3383, 3384–85.

53. 35 U.S.C. § 116 (2006).

54. The legislative history for § 116 expressly named *Monsanto* and *SAB Industri* as the motivating cases behind the specific criteria. Section-by-Section Analysis, 130 Cong. Rec. 28,069, 28,071 (1984).

55. *See* Fasse, *supra* note 2, at 177, n.136. Fasse explains that the negative criteria of § 116 "only put upper bounds on what the courts can require of joint inventors." *Id.* This decision to exclude positive criteria "fetter[ed] the courts less drastically" and allowed them to develop the lower bounds on their own. *Id.*

56. Matt, *supra* note 8, at 246.

57. *See* Fasse, *supra* note 2, at 160–61; *supra* note 45 and accompanying text.

58. *See* ROBINSON, *supra* note 45 (noting that that joint inventors must be "in communication" with one another).

59. 35 U.S.C. § 116 (2006).

this requirement does not obviate the collaboration requirement.[60] Rather, it acknowledges the realities of the modern research and development process that takes place in corporations, universities, or other similar institutions.[61]

In *Kimberly-Clark Corp. v. Procter & Gamble Distributing Co.* the Federal Circuit addressed this question of the minimum requirements of collaboration.[62] Kimberly-Clark asserted that three of its employees were joint inventors so that its patent application for a type of diaper (which ultimately incorporated contributions from each of the employees) would benefit from an earlier filing date.[63] However, each employee worked independently and was unaware of the others' research.[64] Therefore, the court held that Kimberly-Clark's invention was not a joint invention because it lacked any "quantum of collaboration or connection" between the named inventors.[65] Although the contributions of each of the named inventors were ultimately compiled into the final invention, the court could not overlook that the employees operated separately from one another:

> What is clear is that the statutory word "jointly" is not mere surplusage. For persons to be joint inventors under § 116, there must be some element of joint behavior, such as collaboration or working under common direction, one inventor seeing a relevant report and building upon it or hearing another's suggestion at a meeting. Here there was nothing of that nature. Individuals cannot be joint inventors if they are completely ignorant of what each other has done until years after their individual independent efforts.

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60. *See* CHISUM, *supra* note 42, § 2.02(2)(f) ("There is no evidence Congress intended to discard the fundamental requirement that there be some form of collaboration between the joint inventors in the development of the final invention.").

61. *See* Matt, *supra* note 8, at 254 (citing legislative history). Matt explains the context for Congress's low collaboration bar:

> [R]esearch teams . . . are often large in number and develop products that may take years to mature. As a consequence, researchers may work on a particular project over a long period of time, sometimes sporadically, and each team member's quantitative contributions to the final invention may vary. With the 1984 amendments, Congress attempted to encourage team research by codifying certain rules existing in the case law and thereby preventing courts from moving in an unfavorable direction.

Id.

62. Kimberly-Clark Corp. v. Procter & Gamble Distrib. Co., 973 F.2d 911 (Fed. Cir. 1992).

63. *Id.* at 912–913.

64. *Id.* at 913.

65. *Id.* at 917.

> They cannot be totally independent of each other and be joint inventors.[66]

The *Kimberly-Clark* statement on the minimal requirements of collaboration represents the standard in joint inventorship case law.[67] Although it sets a low bar—only requiring some slight form of communication and awareness of the other co-inventors—*Kimberly-Clark* demonstrates that the amended § 116 did not eliminate the collaboration requirement for joint inventorship, and it illustrates the doctrine's application in a contemporary institutional research setting.[68]

2. Contribution to Conception

Because the collaboration requirement is not often in dispute, most joint inventorship debates turn on the question of whether each contributing inventor offered enough to the conception of the invention to be deemed a joint inventor for purposes of the resulting patent.[69] Just as conception is the "touchstone of inventorship"[70] in the sole inventor context, the collaborators' individual contributions to the entire conception often determine who comprise the true inventors.[71] As § 116 states, joint inventors need not contribute equally or make contributions to every claim listed in the patent.[72] However, Federal Circuit case law suggests that joint inventors must make a material, "not insignificant" contribution to the overall conception of the invention but cautions that contribution should be evaluated using a qualitative holistic approach rather than a quantitative formulaic rubric.[73]

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66. *Id.*

67. *See, e.g.*, Fasse, *supra* note 2, at 191 ("[T]he minimum *required* collaboration is some form of communication between two joint inventors." (emphasis added)); Matt, *supra* note 8, at 253–254 ("If two parties are wholly unaware of each other's work . . . there can be no collaboration and no joint invention.").

68. In *Monsanto*, the court specifically identified the collaborative relationship necessary for joint inventorship. *Monsanto*, 269 F. Supp. 818, 824 (D. D.C. 1967) (requiring "two or more persons working toward the same end and producing an invention by their aggregate efforts"). While this language is often overlooked because it was not explicitly incorporated into § 116, the reference to *Monsanto* in the legislative history suggests collaboration was intended to remain a requirement. *See supra* note 54; Fasse, *supra* note 2, at 185.

69. *See* Burroughs Wellcome Co. v. Barr Labs., Inc., 40 F.3d 1223, 1227–28 (Fed. Cir. 1994).

70. *Id.*; *see supra* Section I.A.

71. *See Burroughs Wellcome*, 40 F.3d at 1227–28.

72. 35 U.S.C. § 116 (2006) ("Inventors may apply for a patent jointly even though . . . (2) each did not make the same type or amount of contribution, or (3) each did not make a contribution to the subject matter of every claim of the patent.").

73. *See* Fina Oil & Chemical Co. v. Ewen, 123 F.3d 1466, 1473 (Fed. Cir. 1997) ("[A]n individual must make a contribution to the conception of the claimed invention that is not

Thus, there is no bright-line guidance as to when a putative inventor's contribution is sufficient to qualify him as a joint inventor on the claimed invention.[74] Donald Chisum compiled a brief catalog of contributions that courts have found to be insufficient to satisfy inventorship:[75]

- Suggesting a desired end or result, with no suggestion of means[76]
- Following the instructions of the person or persons who conceive the solution without offering any "inventive act"[77]
- Acting to reduce to practice or demonstrate the efficacy of an already completely conceived invention[78]
- Providing general information on design elements or the state of the art, with no knowledge of the ultimate goal or idea[79]

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insignificant *in quality*, when that contribution is measured against the dimension of the full invention." (emphasis added)).

74. *See id.* at 1473 ("[T]he determination of whether a person is a joint inventor is fact specific, and no bright-line standard will suffice in every case.").

75. *See* CHISUM, *supra* note 42, § 2.02.

76. *See, e.g.*, Ethicon, Inc. v. U.S. Surgical Corp. (*Ethicon I*), 937 F. Supp. 1015, 1035 (D. Conn. 1996), *aff'd*, 135 F.3d 1456 (Fed. Cir. 1998) ("An entrepreneur's request to another to create a product that will fulfill a certain function is not conception—even if the entrepreneur supplies continuous input on the acceptability of offered products."); Univ. of Cal. v. Synbiotics Corp., 29 U.S.P.Q. 2d 1463 (S.D. Cal. 1993); S.C. Johnson & Son, Inc. v. Carter-Wallace, Inc., 225 U.S.P.Q. 1022, 1038 (S.D.N.Y. 1985), *aff'd in part, vacated in part, and remanded*, 781 F.2d 198 (Fed. Cir. 1986) ("Suggestions by others that do not reveal the entire invention and how to achieve it do not negate invention by the one who carries the project forward to its successful conclusion.").

77. *See, e.g.*, *Fina Oil*, 123 F.3d at 1473 ("The basic exercise of the normal skill expected of one skilled in the art, without an inventive act . . . does not make one a joint inventor."); Sewall v. Walters, 21 F.3d 411, 416 (Fed. Cir. 1994).

78. *See, e.g.*, Chirichillo v. Prasser, 30 F. Supp. 2d 1132, 1136 (E.D. Wis. 1998) ("One does not qualify as a joint inventor by merely assisting the actual inventor after conception of the claimed invention. . . . One of ordinary skill in the art who simply reduced the inventor's idea to practice is not necessarily a joint inventor."); Burroughs Wellcome Co. v. Barr Labs., Inc, 40 F.3d 1223, 1230 (Fed. Cir. 1994) ("[O]ne of ordinary skill in the art who simply reduced the inventor's idea to practice is not necessarily a joint inventor, even if the specification discloses that embodiment to satisfy the best mode requirement."). *But see* Pannu v. Iolab Corp., 155 F.3d 1344, 1351 (Fed. Cir. 1998) ("All that is required of a joint inventor is that he or she . . . contribute in some significant manner to the conception *or reduction to practice* of the invention (emphasis added)). The court in *Pannu* failed to cite any cases or discuss the apparent inconsistency with prior holdings. Presumably, the court's statement in *Pannu* was a careless reference to instances where reduction to practice is a necessary component of conception. *See supra* Section I.A.

79. *See, e.g.*, Ethicon, Inc. v. U.S. Surgical Corp. (*Ethicon II*), 135 F.3d 1456, 1460 (Fed. Cir. 1998) ("One who simply provides the inventor with well-known principles or explains the state of the art without ever having a firm and definite idea of the claimed combination

However, given the unique factual underpinnings of each joint inventorship dispute, cases rarely fall neatly within these doctrinal shortcuts. Commentators have suggested that the practical effect of this case-specific conception inquiry is that practitioners and researchers have a difficult time planning for and predicting the outcome of joint inventorship disputes.[80] The overarching goal of this Note is to distill patterns or trends in the Federal Circuit's doctrinal reasoning and determine if the Federal Circuit's approach to joint inventorship is as unpredictable as many commentators and practitioners maintain.[81]

C. CHALLENGING A PATENT AND CORRECTING INVENTORSHIP

After a patent has issued, there is a heavy presumption that the inventors named in the application are the correct inventors—that is, they are true inventors, and they are the *only* true inventors.[82] Consequently, anyone seeking to challenge the patent on inventorship grounds must establish by clear and convincing evidence that the named inventors are incorrect and must overcome a substantial evidentiary burden.[83] Corroborating evidence—such as "documents, contemporaneous disclosures of information, or testimony of persons other than the alleged joint inventor confirming a putative inventor's testimony"—is required.[84]

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as a whole does not qualify as a joint inventor."); Hess v. Advanced Cardiovascular Sys., 106 F.3d 976, 981 (Fed. Cir. 1997) (holding that "explaining to the inventors what the then state of the art was and supplying a product to them for use in their invention" was not a sufficient contribution to conception).

80. *See* Andrew B. Dzeguze, *Avoiding the "Fifth Beatle" Syndrome: Practical Solutions to Minimizing Joint Inventorship Exposure*, 6 J. MARSHALL REV. INTELL. PROP. L. 645, 646 (2007) ("[T]here remains a fundamental uncertainty as to what can be an inventive contribution. . . . [T]he variety of situations that can result in co-inventorship disputes should give every patent practitioner pause.").

81. *See infra* Part II.

82. *See Hess*, 106 F.3d at 980; Gemstar-TV Guide Int'l, Inc. v. ITC, 383 F.3d 1352, 1381 (Fed. Cir. 2004) ("Because a patent is presumed valid under 35 U.S.C. § 282, there follows a presumption that the named inventors on a patent are the true and only inventors.").

83. *See* CHISUM, *supra* note 42, § 2.03(4). Chisum explains that the "clear and convincing evidence" standard applied to claims of patent invalidity predates the Federal Circuit. *Id.* (citing Acme Highway Prod. Corp. v. D.S. Brown Co., 431 F.2d 1074 (6th Cir. 1970)). However, the Federal Circuit adopted the standard in the context of claims to correct named inventors under § 256. CHISUM, *supra* note 42, § 2.03(4).

84. *See* Matt, *supra* note 8, at 260 ("This rule [requiring corroboration] follows from the understanding that the temptation is too great for even honest witnesses to reconstruct events and their states of mind in a way favorable to themselves." (citing *Hess*, 106 F.3d at 980)).

Typically, putative inventors and others seeking to correct the named inventors on a patent turn to § 256:[85]

> Whenever through error a person is named in an issued patent as the inventor, or through error an inventor is not named in an issued patent and such error arose without any deceptive intention on his part, the Director may, on application of all the parties and assignees, with proof of the facts and such other requirements as may be imposed, issue a certificate correcting such error.
>
> The error of omitting inventors or naming persons who are not inventors shall not invalidate the patent in which such error occurred if it can be corrected as provided in this section. The court before which such matter is called in question may order correction of the patent on notice and hearing of all parties concerned and the Director shall issue a certificate accordingly.[86]

Under this section, putative inventors may bring claims that they should be added to a patent.[87] Further, § 256 may be used as a powerful defense to infringement.[88] Although improperly naming inventors on a patent is not fatal to the patent's validity—inventorship can be corrected—defendants can obtain retroactive licenses from the previously unnamed inventors and then seek to add the inventor through § 256, thus avoiding liability.[89] Additionally, "all co-owners [of a patent] must ordinarily consent to join as plaintiffs in an infringement suit."[90] Because ownership stems from inventorship—in the absence of a contrary agreement[91]—unnamed inventors can effectively "impede the other co-owner's ability to sue infringers by refusing to voluntarily join in such a suit."[92] Finally, forcing a patent holder to correct the named inventors is an additional judicial proceeding that potential infringers and putative inventors may use as leverage in negotiations.[93] Therefore, the

85. 35 U.S.C. § 256 (2006).

86. *Id.* Under the America Invents Act, § 256 was revised to remove "and such error arose without any deceptive intention." Pub. L. 112-29, § 20(f), 125 Stat. 284, 334 (2011). Thus, under the modern statute, improper inventorship may be corrected despite the presence of "deceptive intent" or bad faith.

87. 35 U.S.C. § 256.

88. *See, e.g.*, *Ethicon II*, 135 F.3d 1456, 1459–60 (Fed. Cir. 1998); Pannu v. Iolab Corp., 155 F.3d 1344, 1350 (Fed. Cir. 1998).

89. *See Ethicon II*, 135 F.3d at 1459–60.

90. *Id.* at 1468.

91. *Id.* at 1466 ("[A] joint inventor as to even one claim enjoys a presumption of ownership in the entire patent.").

92. *Id.* at 1468 (citing Schering Corp. & Roussel-Uclaf S.A. v. Zeneca, Inc., 104 F.3d 341, 345 (Fed. Cir. 1997)).

93. *See Pannu*, 155 F.3d at 1350 ("[A] patent with improper inventorship does not avoid invalidation simply because it *might* be corrected under section 256. Rather, the patentee

opportunity for patent holders to correct errors in the named inventors does not prevent potential infringers from avoiding liability; thus, challenging inventorship has become a commonplace defensive tactic in patent litigation.[94]

II. EMPIRICAL STUDY OF JOINT INVENTORSHIP CASES AT THE FEDERAL CIRCUIT

This Part presents the findings of the empirical study, but it is important first to describe briefly how the results were obtained:[95] An original dataset was created which compiled each of the Federal Circuit's published opinions on joint inventorship. These cases were located by first using a deliberately overbroad search query in Westlaw Next for all Federal Circuit cases mentioning "joint inventorship."[96] From this universe of over-inclusive samples, the dataset was culled to remove cases where joint inventorship analysis was not a significant part of the rule of decision.[97] Sixty-five cases remained and made up the final dataset.[98]

In addition, because this study uses the court's jurisprudence itself as the relevant data, the sixty-five cases needed to be manually parsed and categorized in order to evaluate trends and judicial approaches to the very specific and highly technical fact patterns that comprise most of the court's holdings in this area of the law. While this method permits subjectivity in the

must claim entitlement to relief under the statute and the court must give the patentee an opportunity to correct the inventorship.").

94. *See supra* note 8 and accompanying text. Prior to the enactment of § 256, errors in inventorship were indeed fatal to a patent's validity under § 102(f). *See Pannu*, 155 F.3d at 1349–50 ("[S]ection 102(f) . . . makes the naming of the correct inventor or inventors a condition of patentability; failure to name them renders a patent invalid."). Section 256 serves as a "savings provision" to "ameliorat[e]" this harsh result in many cases. *Id.*

95. The foundational design for this study was drawn from previously published articles on empirical analyses involving patent law. *See* Christopher B. Seaman, *Willful Patent Infringement and Enhanced Damages after* In Re Seagate*: An Empirical Study*, 97 IOWA L. REV. 417 (2012) (empirical study of willful infringement claims in federal district courts); R. Polk Wagner & Lee Petherbridge, *Is the Federal Circuit Succeeding? An Empirical Assessment of Judicial Performance*, 152 U. PA. L. REV. 1105 (2004) (empirical study of claim construction cases in the Federal Circuit).

96. These searches were overbroad to ensure no cases went uncollected. The following query was used: patent AND (joint /5 inventor!)) & DA(aft 12-31-1981). The search produced a list of 122 cases.

97. For example many of the cases that were included within the original search parameter actually involved other patent rules. The most frequent categories of eliminated cases involved: claim construction (19), priority (11), and prior art (8).

98. The cases were cross-referenced against well-known sources to confirm no cases were forgotten. *See* CHISUM, *supra* note 42, §§ 2.01–2.04; 3 R. CARL MOY, MOY'S WALKER ON PATENTS § 10 (4th ed. 2010).

classification of the cases, it was the best way to understand the evolution of the law, which cannot be adequately described merely by objective WestLaw classifications or hornbook summaries.

Section II.A presents a historical overview of the evolution of the joint inventorship jurisprudence. Section II.B presents data from the empirical analysis quantifying the court's shifting approach.

A. TIMELINE OF FEDERAL CIRCUIT JOINT INVENTORSHIP CASES

A review of all the relevant cases reveals that the development of the joint inventorship doctrine occurred in three stages: (1) an early period from just prior to the 1984 amendments up until 1994, with the foundational case of *Burroughs Wellcome Co. v. Barr Laboratories, Inc.*;[99] (2) a developmental period from approximately 1997 to 2003; and (3) a refining period from 2003 to the present. These stages can be understood as a pendulum-like series of responses (or corrections) to the inequitable application of rules of decision that might withhold credit from true inventors or reward perceived free riders.

1. Early Period: Pre-1984 Amendments and the Early Years of the Federal Circuit

Originally, the Patent Act's joint inventorship requirements did not offer any help for figuring out those who qualified as joint inventors.[100] The 1952 Act simply stated that "when an invention is made by two or more persons jointly, they shall apply for a patent jointly and each sign the application and make the required oath, except as otherwise provided in this title."[101] The earliest applications of joint inventorship rules were vague:

> The exact parameters of what constitutes joint inventorship are quite difficult to define . . . . Perhaps one need not be able to point to a specific component as one's sole idea, but one must be able to say that without his contribution to the final conception it would have been less—less efficient, less simple, less economical, less something of benefit. . . . This situation does make it difficult to say . . . with real certainty, whether or not a given person is a joint inventor in a given case.[102]

99. Burroughs Wellcome Co. v. Barr Labs., Inc., 40 F.3d 1223, 1228 (Fed. Cir. 1994).
100. *See* Fasse, *supra* note 2, at 162.
101. 35 U.S.C. § 116 (1952).
102. Mueller Brass Co. v. Reading Indus., Inc., 352 F. Supp. 1357, 1272–73 (E.D. Pa. 1972).

Or,

> The conception of the entire device may be due to one, but if the other makes suggestions of practical value, which assisted in working out the main idea and making it operative, or contributes an independent part the entire invention, which is united with the parts produced by the other and creates the whole, he is a joint inventor, even though his contribution be of comparatively minor importance and merely the application of an old idea.[103]

This historically nebulous case law, combined with the "all claims rule," created an almost impossible environment for institutional research.[104]

The facts of *Eli Lilly & Co. v. Premo Pharmaceutical Laboratories, Inc.*[105] illustrate the problems with the joint inventorship definition prior to the 1984 amendments. In that case two scientists synthesized a compound hoping "it would be an effective oral antibiotic."[106] A third scientist tested the compound and found that it was effective for different reasons than the original two scientists had hypothesized, but the patent listed only the original two researchers.[107] When an accused infringer challenged the patent for nonjoinder, the Third Circuit held that the third scientist was not a joint

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103. De Laski & Thropp Circular Woven Tire Co. v. William R. Thropp & Sons Co., 218 F. 458, 464 (D. N.J. 1914).

104. In many cases the federal courts denied joint inventors the right to file a single patent with multiple claims if all the inventors did not contribute to each and every claim. *See* AMP, Inc. v. Fujitsu Microelects., 853 F. Supp. 808, 817 (M.D. Pa. 1994); *see also supra* note 51 and accompanying text. Fasse explains:

> [The all claims] rule required named joint inventors to have contributed jointly to every aspect of an invention and every claim of a resulting patent. . . .
>
> Complying with this requirement is sometimes difficult and at times impossible.
>
> Scientists or researchers in an organization often work on a particular aspect or embodiment of the invention, or on only a portion of the invention, while others work on different aspects, embodiments or portions. Scientists are continually added to a research team, while other scientists leave the team. Concepts and development plans generated through brainstorming cannot always be accurately attributed.

Fasse, *supra* note 2, at 178 (quoting *Hearings on S. 1535 and S. 1841 Before the Subcomm. on Patents, Copyrights and Trademarks of the S. Comm. on the Judiciary*, 98th Cong., 2d Sess. 28 (1984) (testimony of Gerald J. Mossinghoff, Assistant Secretary and Comm'r of Patents and Trademark)).

105. Eli Lilly & Co. v. Premo Pharm. Labs., Inc., 630 F.2d 120 (3rd Cir. 1980).

106. *Id.* at 122–23.

107. *Id.*

inventor even though he discovered the compound's previously unknown traits.[108] The court said:

> It is without question that the named inventors . . . were the only persons who performed the synthesis that created the patented product. In the words of [Section 116, the drug] was "made by" the two named inventors, not by the biochemist who first noted that the organic chemists' predictions had been realized.[109]

Thus, the third inventor, who had actually discovered the key attributes of the claimed invention, was left off of the patent. This result seems wrong, and after the 1984 amendment of § 116, it is no longer good law.[110]

After the passage of the 1984 amendments, the Federal Circuit did not address the issue of joint inventorship directly until 1993 with *Kimberley-Clark*, where it interpreted the minimum degree of collaboration required of joint inventions.[111] In 1994, however, the Federal Circuit took an important step with *Burroughs Wellcome* and defined the requisite contributions for joint inventors by merging joint inventorship doctrine with traditional conception analysis.[112] Burroughs Wellcome Co.'s ("BW") research focused on developing a treatment for HIV.[113] Tests performed at BW's facilities indicated that a compound, AZT, was a promising antiviral, and BW drafted a patent application to use AZT to treat HIV patients.[114] Before submitting the application, BW sent an AZT sample to the National Institutes of Health ("NIH"), where scientists had developed a test to measure the effectiveness of drugs against active HIV.[115] When the NIH informed BW that AZT was

108. *Id.* at 135.

109. *Id.*

110. The Third Circuit's refusal to add the putative inventor was clearly influenced by its view of the putative inventor's positional status in relation to the original inventors—the biochemist performed a test revealing something new, as opposed to synthesizing the compound. *Id.* However, as the amended § 116 confirms, the relative size or type of the contributions to the invention is not an index for joint inventorship. *See* 35 U.S.C. § 116 (2006); *see also supra* Section I.B.

111. Kimberly-Clark Corp. v. Procter & Gamble Distrib. Co., 973 F.2d 911 (Fed. Cir. 1992). *See supra* Section I.B.1. Three other cases, decided between 1984 and 1993, were essentially priority disputes, which did not materially advance the law of joint inventorship. *See* Coleman v. Dines, 754 F.2d 353 (Fed. Cir. 1985); Hybritech Inc. v. Monoclonal Antibodies, Inc., 802 F.2d 1367 (Fed. Cir. 1986); SmithKline Diagnostics, Inc. v. Helena Labs. Corp., 859 F.2d 878 (Fed. Cir. 1988).

112. Burroughs Wellcome Co. v. Barr Labs., Inc., 40 F.3d 1223 (Fed. Cir. 1994). *See supra* Section I.A.

113. *Id.* at 1225.

114. *Id.*

115. *Id.*

indeed effective against HIV, the company completed its registration for several patents pertaining to the use of AZT to treat patients with HIV.[116]

After BW was granted its patents, the NIH, considering itself also to be a joint inventor, extended a nonexclusive license to Barr Laboratories ("Barr") to market its own version of AZT.[117] BW filed a patent infringement lawsuit, and Barr challenged the validity of BW's patents because they failed to name the NIH scientists as joint inventors.[118] The Federal Circuit ruled that BW had fully conceived of AZT as a treatment for HIV, even before the NIH tests, and, therefore, the NIH scientists were not joint inventors as a matter of law.[119]

According to the legal definition of inventorship, the court explained, it is irrelevant that BW had no affirmative evidence of AZT's effectiveness against HIV until it received the NIH test results.[120] Conception, the "touchstone of inventorship,"[121] requires only that the inventor have "an idea that was definite and permanent enough" and that nothing but "ordinary skill" would be necessary to reduce the invention to practice, and it would not require extensive research or experimentation.[122] Discovery that an invention actually works is part of its reduction to practice and, therefore, is not necessary for conception to be complete.[123] In this case, the Federal Circuit determined that the NIH's contributions went merely to reduction to practice and not to the conception of the invention.[124]

The Federal Circuit's decision is fully consistent with the conventional legal definition of "conception" in the single-inventor context that developed in a line of cases dating back to the 1870s.[125] Thus, *Burroughs Wellcome* laid out the basic framework of the law of joint invention with the traditional conception analysis at its core.[126] This formulation is still the law and remains a crucial factor in evaluating the contributions of putative inventors,[127]

116. *Id.* at 1225–26.
117. *Id.* at 1226–27.
118. *Id.*
119. *Id.* at 1230–31.
120. *Id.*
121. *Id.* at 1228.
122. *Id.*
123. *Id.*
124. *Id.* at 1230–31.
125. *See* CHISUM, *supra* note 42, § 10.04[1].
126. *See id.* § 2.02[5].
127. *See, e.g.*, Fina Oil & Chem. Co. v. Ewen, 123 F.3d 1466 (Fed. Cir. 1997) (holding that conception of a chemical compound requires knowledge of both the specific chemical structure of the compound and an operative method of making it); Falana v. Kent State Univ., 669 F.3d 1349 (Fed. Cir 2012) (finding the putative inventor who envisioned a genus

although, as Section II.A.2 illustrates, the idea was refined considerably in the following years.[128]

2. *Developmental Period: Enabling Unnamed Inventors*

While *Burroughs Wellcome* was the first case to frame joint inventorship in terms of conception, it did little to specify how inventors actually contribute to conception.[129] Over the decade following *Burroughs Wellcome*, the Federal Circuit made significant strides to unify and explain the parameters of what minimum contributions to conception are required for joint inventorship.

In *Fina Oil & Chemical Co. v. Ewen*, Judge Clevenger clearly articulated these formulations, which still serve as the doctrinal basis for the court's current joint inventorship decisions.[130] The case is unusual in that it features a misjoinder problem: Dr. Abbas Razavi claimed that Dr. John Ewen was not a true inventor, even though Ewen was listed as an inventor on the patent.[131] The court offered three important additions to the *Burroughs Wellcome* doctrine: (1) The qualitative value of contribution is the focal point;[132] (2) conception is not the only test of joint inventorship;[133] and (3) the contestant has a heavy burden of proof to overcome the strong presumption of validity afforded by issued patents.[134]

In 1998—the following year—the Federal Circuit applied its *Fina* developments to two important cases, which are responsible for much of the confusion in joint inventorship law, especially because of their continuing reference and citation. These two cases, *Ethicon, Inc. v. United States Surgical*

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of compounds and contributed the method of making them had contributed to the conception of the invention).

128. *See infra* Section II.A.2.

129. In other words, *Burroughs Wellcome* did not specifically articulate what activity related to conception, as opposed to reduction to practice or mere assistance.

130. *Fina*, 123 F.3d 1466.

131. *Id.* at 1468–69. Cases of non-joinder are much more typical, as an unnamed putative inventor is often able to make a stronger case than an outside third party (like Razavi) attempting to remove an already named inventor.

132. *Id.* at 1473 ("[T]o be a joint inventor, an individual must make a contribution to the conception . . . that is not insignificant in quality, when that contribution is measured against the dimension of the full invention.").

133. *Id.* ("Conception [alone] cannot be used . . . to show that because the first person did not conceive or reduce to practice the entire claimed invention, he or she did not at least contribute in some significant way to the ultimate conception.").

134. *Id.* at 1474 ("Dr. Razavi did not meet his burden of establishing undisputed facts to show that Dr. Ewen made no contribution to the conception of the invention . . . or a contribution that was qualitatively insignificant.").

Corp.[135] and *Pannu v. Iolab Corp.*,[136] set the high-water mark in the Federal Circuit's liberalization of joint inventorship law after the 1984 amendments.

In *Ethicon* an inventorship dispute arose in a patent infringement suit involving an endoscopic surgical tool known as a trocar.[137] The patent-in-suit listed Dr. Yoon as the sole inventor of a new trocar design with safety features.[138] As the exclusive licensee of this patent, Ethicon sued U.S. Surgical for infringement.[139] Four years into the litigation, U.S. Surgical discovered that Young Jae Choi, a technician, had worked with Yoon on several projects, including the patented trocar.[140] U.S. Surgical paid Choi to assist in its defense against Ethicon's infringement action, and Choi granted U.S. Surgical a retroactive license to use patented technology that he allegedly helped to invent.[141] U.S. Surgical moved to correct the inventorship of the patent-in-suit to include Choi as a joint inventor, and the district court granted this motion after an extensive hearing.[142]

The Federal Circuit affirmed the district court's ruling that Choi was a joint inventor of certain claims of the patent-in-suit based upon a "rule of reason" analysis that the record contained sufficient corroborating evidence of joint inventorship.[143] The ramifications were clear: each inventor "needs to perform only a part of the task which produces the invention."[144] The Federal Circuit also upheld the dismissal of the lawsuit because all patent co-owners must be joined to bring an infringement lawsuit.[145] In a stinging dissent, Judge Newman challenged the propriety of construing § 116 to vest a joint inventor of certain claims of a patent with full ownership, which amounts to "an undivided interest in the entire patent" carrying "an unencumbered and unfettered right to alienate an interest in the entire patent."[146] In particular, she noted with respect to the amendment to § 116 that:

135. *Ethicon II*, 135 F.3d 1456 (Fed. Cir. 1998).
136. Pannu v. Iolab Corp., 155 F.3d 1344 (Fed. Cir. 1998).
137. *Ethicon II*, 135 F.3d at 1459.
138. *Id.*
139. *Id.*
140. *Id.*
141. *Id.*
142. *Id.* at 1459–60.
143. *Id.* at 1461 ("Under this [rule of reason] analysis, an evaluation of *all* pertinent evidence must be made so that a sound determination of the credibility of the alleged inventor's story may be reached.").
144. *Id.* at 1460.
145. *Id.* at 1468 ("Ethicon's complaint lacks the participation of a co-owner of the patent [Choi]. Accordingly, this court must order dismissal of this suit.").
146. *Id.* at 1471–72 (Newman, J. dissenting).

> This amendment did not also deal with the laws of patent ownership, and did not automatically convey ownership of the entire patent to everyone who could now be named as an inventor, whatever the contribution. The amendment simply permitted persons to be named on the patent document, whether as minor contributors to a subordinate embodiment, or full partners in the creation and development of the invention. The ownership relationships among the persons who, under § 116, could now be recognized as contributors to the invention, is irrelevant to the purpose of the amendment of § 116, and to its consequences. Section 116 has nothing to do with patent ownership.[147]

While Judge Newman objected to it, the majority simply followed *Burroughs Wellcome* and *Fina* to their logical conclusion. The result was the "*Ethicon* rule": § 116 accords co-ownership rights in the entire patent based on joint inventorship of only one claim.[148]

In *Pannu*, later that same year, the accused infringer claimed sole inventorship and ownership of the patent at issue.[149] Similar to the facts of *Ethicon*, *Pannu* featured an eye surgeon, Pannu, who invented a complex intraocular device to be inserted into human eyes after cataract removal.[150] Pannu took the advice of a third party, Heyer-Schulte ("HS"), in order to improve his invention.[151] HS suggested fashioning Pannu's particular intraocular lens as a one-piece unit to reduce the chance of the lens "snagging."[152]

An alleged infringer, Iolab, asserted that Pannu's patent was invalid because it did not name HS on the patent.[153] Rather than merely arguing for joint inventorship for HS and Pannu, Iolab also asserted that HS was the sole inventor, claiming that Pannu's contributions were not patentable and that HS's one-piece design was the only novel aspect of the described invention.[154] The Federal Circuit held that Iolab's claim was substantial enough to require that the matter be remanded to the trial court to determine HS's joint inventor status; however, the court rejected Iolab's sole

147. *Id.* at 1470 (Newman, J. dissenting).

148. *See, e.g.*, Dale L. Carlson & James R. Barney, *The Division of Patent Rights among Joint Inventors Public Policy Concerns after* Ethicon v. U.S. Surgical, 39 IDEA 251, 259 (1999); Matt, *supra* note 8, at 262–65.

149. Pannu v. Iolab Corp., 155 F.3d 1344 (Fed. Cir. 1998).

150. *Id.* at 1346.

151. *Id.*

152. *Id.*

153. *Id.* at 1351.

154. *Id. See* 35 U.S.C § 102(b) (2006) (describing the conditions for novelty and patentability).

inventorship argument.[155] The interesting point is that the Federal Circuit held as a matter of law that Pannu was entitled to at least inventorship status, whereas it remanded the case to the district court to determine the status of HS.[156]

The holding requiring the inclusion of Pannu as a matter of law demonstrates the Federal Circuit's willingness to take fairness into account in its joint inventorship decisions.[157] Coming so soon after *Ethicon*, *Pannu* suggests that the court was willing to pull back from *Ethicon* and will weigh the equities in cases in which a rigid application of the joint inventorship rules would yield an unfair result.[158]

By the end of the first fifteen years of joint inventorship cases before the Federal Circuit, the standards for the addition of putative inventors had shifted considerably. From the original system—which made it nearly impossible to challenge named inventors—*Ethicon* effectively lowered the bar on contribution analysis and seemingly permitted those who deserved even some small credit to be rewarded with the full bounty of inclusion.[159] But, along with those new standards, the first seeds of a balancing of the equities approach had also been introduced in *Pannu*.

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155. *Pannu*, 155 F.3d at 1351.

156. *Id.*

157. *See* Philip Konecny, *Windfall Property Rights for the Left Out Joint Inventor*, 16 SANTA CLARA COMPUTER & HIGH TECH. L.J. 141, 174 (1999)

> A reasonable jury could conclude as a matter of fact that [Pannu] did not contribute significantly to the one piece construction. There [was] enough factual basis that the matter should not be decided as a matter of law. . . . In unnecessarily issuing dicta on a matter that it inadequately explored in a conclusory fashion, it is possible that the court is attempting to soften the harsh effect of the rule in *Ethicon*.

Id.

158. *See id.* at 174–75.

> [I]n order to protect the patentee from the inequitable erosion of property rights that results from a successful § 256 attack, the court is changing the standard for co-inventorship. In [*Pannu*] it is attempting by dicta to ensure as a matter of law the standard for co-inventorship for the patentee is low enough that he will not be disqualified from his own invention.

Id. A year earlier, *Hess v. Advanced Cardiovascular Sys., Inc.* demonstrated an early attempt by the Federal Circuit to put the brakes on the continued liberalization of the joint inventorship doctrine. Hess v. Advanced Cardiovascular Sys., Inc., 106 F.3d 976 (Fed. Cir. 1997). *Hess* held that providing information regarding the state of the art does not constitute an inventive contribution and, for essentially the first time since the 1984 amendments, expressly defined a type of contribution that did not satisfy inventorship. *Id.*

159. *See supra* note 148 and accompanying text.

3. *Refining Period: Responding to* Ethicon

Despite commentators' vocal critique of the holding in *Ethicon*,[160] it was never overruled and remains good law. However, in the years following *Ethicon*, the Federal Circuit has generated a new ameliorative framework to soften the often-harsh inequities of the *Ethicon* rule.

In 2009, almost exactly ten years after *Ethicon*, the Federal Circuit decided *Nartron Corp. v. Schukra U.S.A, Inc.*[161] The case involved an accused infringer who defended on the grounds that an employee had been improperly excluded from the patent.[162] Despite having similar facts to *Ethicon*, the Federal Circuit held that the putative inventor's contributions were insignificant.[163] The two cases are not easy to reconcile. Both turn, at least in part, on the quality of a putative inventor's contribution to at least one of the claims in the patent. The stakes in both cases are high—a third party can secure all the rights to an invention and escape an infringement claim by aligning itself with a left-out joint inventor. The different outcomes are the result of a higher standard for the "significance" of the required contribution by the Federal Circuit[164] and an increased awareness of the equitable positions of the parties.

The turning point can be seen in the court's reasoning in *Board of Education ex rel. Florida State University v. American BioScience, Inc.*[165] In that case, FSU scientists and a graduate student, Tao, were experimenting with anticancer compounds.[166] One of the FSU researchers—Nadizadeh—developed a unique method of synthesis for this class of compounds.[167] Subsequently, a pharmaceutical company hired Tao and, with his help, obtained patents on several related effective anticancer compounds.[168] FSU claimed that its scientists were joint inventors because of their previous collaboration with Tao and because Tao had allegedly used Nadizadeh's methodology.[169]

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160. *See, e.g.*, Matt, *supra* note 8, at 262–65; Sung, *supra* note 7, at 436–37; Konecny, *supra* note 157, at 142–46.

161. Nartron Corp. v. Schukra U.S.A, Inc. (*Nartron II*), 558 F.3d 1352 (Fed. Cir. 2009).

162. *Id.*

163. *Id.* at 1356.

164. This "significance" is in the sense defined by *Fina*. *See supra* Section II.A.2.

165. Bd. of Educ. *ex rel.* Fla. State Univ. v. Am. BioSci., Inc., 333 F.3d 1330 (Fed. Cir. 2003).

166. *Id.* at 1332–37.

167. *Id.*

168. *Id.*

169. *Id.*

The court was not persuaded and discounted the FSU scientists' experimental work.[170] Further, the court bluntly rejected FSU's allegation that Tao used Nadizadeh's secret method:

> [D]espite the fact that Nadizadeh may have developed a method of making [the compound] and other . . . derivatives, the record in the present case indicates that he did not conceive of the claimed compounds; only [Tao and his co-]inventors were in possession of both the structure of the claimed compounds and an operative method of making those compounds.[171]

The holding is unexpected in light of *Fina* and *Ethicon*. The FSU scientists should have only had to show that they contributed to the conception of the invention in some way—conception of the entire compound by any one inventor should be irrelevant as long as the team collectively conceived the claimed compound.[172] Under the existing law, it would not have been a stretch for the Federal Circuit to add the FSU scientists, given that they apparently made "not insignificant" contributions.[173] The court's decision thus pulled back from the liberal rules of *Fina* and *Ethicon* and enhanced the standard for inventive contribution.

More recently, the Federal Circuit once again examined joint inventorship requirements in *Falana v. Kent State University*.[174] The plaintiff, Falana, was a researcher employed by Kent State.[175] He developed an original method of making certain compounds for use in liquid crystal displays.[176] After Falana left the university's employment, his former supervisor used Falana's method to synthesize a compound that he patented without naming Falana as a joint inventor.[177] The university interpreted *American BioScience* to dictate that, because it had not sought to patent Falana's method, and Falana

170. *Id.* at 1340 ("[G]eneral knowledge regarding the anticipated biological properties of groups of complex chemicals is insufficient to confer inventorship status with respect to claimed compounds.").

171. *Id.* at 1342.

172. *See* Fina Oil & Chem. Co. v. Ewen, 123 F.3d 1466, 1473 (Fed. Cir. 1997) ("One need not alone conceive of the entire invention, for this would obviate the concept of joint inventorship. However, a joint inventor must contribute in some significant manner to the conception of the invention."). Subsequently, the Federal Circuit clarified this point in *Vanderbilt Univ. v. ICOS Corp.*, 601 F.3d 1297 (Fed Cir. 2010). In *Vanderbilt*, the court held "the inventors of a chemical compound need to know the structure of compound. There is no conception . . . without envisioning the structure of the compound." *Id.* at 1299.

173. *See id.; Ethicon II*, 135 F.3d 1456, 1460 (Fed. Cir. 1998).

174. Falana v. Kent State Univ., 669 F.3d 1349 (Fed. Cir. 2012).

175. *Id.*

176. *Id.*

177. *Id.* at 1353.

had never conceived the patented compounds, he was not a joint inventor of any compound resulting from the use of his method.[178]

The Federal Circuit disagreed with this understanding of *American BioScience*.[179] But Kent State's reading of the case was not unreasonable; the *American BioScience* opinion was plainly dismissive of a researcher who had contributed a method of making the patented compound without conceiving of the specific compound itself.[180] To get past *American BioScience* without reversing itself, the court had to somehow reconcile its own holding with the fact that Falana, like Nadizadeh in *American BioScience*, had never made or seen the university's patented compounds. To do this, the court resorted to the tactic of distinguishing the cases on the facts.[181] But almost certainly fairness and an unwillingness to strip Falana of all credit may well have played a significant role in the decision.[182]

In the years since *Fina* and *Ethicon*, the Federal Circuit has refined its joint inventorship criteria and raised the standards for addition of an inventor through increased scrutiny of the conception requirement.[183] This trend followed the previous period of liberalization attributable to the 1984 amendments. Considered individually, the cases examine highly technical inventions and the idiosyncratic contributions of the team members. However, collectively, a pattern of shifting judicial scrutiny emerges. Section II.B attempts to quantify and validate these observations.

B. EMPIRICAL RESULTS

This study makes three claims based on the holdings of the sixty-five cases that have been decided by the Federal Circuit since 1984 involving joint inventorship. The first is that the court has created a more rigorous requirement for individuals seeking inventorship status in federal court. This

178. *Id.* at 1357–58.

179. *Id.*

180. Bd. of Educ. ex rel. Fla. State Univ. v. Am. BioSci., 333 F.3d 1330, 1342 (Fed. Cir. 2003); *see supra* note 171 and accompanying quote. *See also* Fellmeth, *supra* note 12, at 134–36 (criticizing the Federal Circuit's "focus on the 'claimed compounds' and discounting of the (unclaimed) method of making them").

181. *Falana*, 669 F.3d at 1357 ("[The university's] reading of *American BioScience* is erroneous and the facts of this case are manifestly distinct.").

182. *Id.* at 1352–54. In Judge Linn's recitation of the facts, she specifically noted that the invention was "very much a team process," that Falana appeared on a jointly authored paper with the other Kent State inventors, and that two other Kent State scientists signed a statement indicating that they "did not object" to Falana's inclusion on the patent. *Id.*

183. Misjoinder is less common but is subject to the same standards—it is equally difficult to remove named inventors as it is to add excluded ones. *See* Univ. of Pittsburgh v. Hendrick, 573 F.3d 1290 (Fed. Cir 2009).

is true even though the black letter law since *Fina* remains largely unchanged. The second is that the Federal Circuit more frequently relies on the presumption of validity of issued patents; the court has been less likely to find that a putative inventor offered clear and convincing evidence of contribution or collaboration in recent years. Finally, the court has exhibited a growing tendency to acknowledge the unfairness of applying pre-1984 ownership rules to liberalized joint inventorship law; that is, the court is weighing the consequences of disproportionate inventive effort among the inventors.[184]

1. *Standards of Inventive Contribution*

Of the court's joint invention cases, the vast majority involves a rigorous analysis of the inventive contribution of the party or parties seeking joinder.[185] These cases generally turn on a detailed investigation and evaluation of each party or team's comparative role in the inventive process. However, a closer examination reveals that in recent years, it has gotten harder to be a joint inventor: In the last ten years (2003–2012), only four of thirty-six challengers were successfully added to the patent as inventors, while in the years prior to that (1984–2002), twenty of twenty-nine putative inventors were successfully added.[186]

A detailed look at the cases shows that the court's method of review has remained essentially unchanged since *Burroughs Welcome*[187] and *Fina*[188] articulated the current process of ascertaining inventive contribution. Collectively, the cases continue to focus on the necessary quality of the contribution as a test that can be either passed or failed according to the evidence.[189] All of the cases in which an inventor has been successfully added have been classified into four categories, in which the putative inventor: (1) identified or solved an unrecognized problem within the team,[190] (2) solved a problem that other collaborators could not,[191] (3) added a

184. *See* Carlson & Barney, *supra* note 148, at 266.

185. The rules are the same for the less common problem of misjoinder. *See supra* note 183. Throughout this Section, however, "addition" is used as shorthand for a patent challenge.

186. *See* Appendix, Table 1.

187. Burroughs Wellcome Co. v. Barr Labs., Inc., 40 F.3d 1223 (Fed. Cir. 1994).

188. Fina Oil and Chemical Co. v. Ewen, 123 F.3d 1466 (Fed. Cir. 1997).

189. For example, when the result of a biological process is claimed, conception requires that the alleged inventor(s) have a "reasonable expectation" of producing the claimed invention. *See* Hitzeman v. Rutter, 243 F.3d 1345, 1358 (Fed. Cir. 2001).

190. *See* Falana v. Kent State Univ., 669 F.3d 1349 (Fed. Cir 2012).

191. *See* Ultra-Precision Mfg., Ltd. v. Ford Motor Co., 411 F.3d 1369 (Fed. Cir. 2005).

nontrivial advantage to the invention that other collaborators did not contemplate,[192] or (4) possessed skills that other members did not have.[193]

2. *Presumption of Validity*

There is a strong presumption that a grant of a patent by the PTO is correct and valid as issued.[194] This presumption concerning validity impacts the final result of joint inventorship litigation in a surprisingly large majority of the Federal Circuit's decisions. For example, five cases since 1984 relied solely on this rule (without additional bases) as the rationale for refusing to add the unnamed inventor.[195] But more significantly, in thirty-one of the thirty-five cases in which the presumption was before the Federal Circuit, the court used the presumption as the significant factor in making close calls where the contribution analysis was not dispositive.[196] This finding is even more striking at the trial court level:[197] District courts invoked the presumption to dispose of challenges based on misjoinder or nonjoinder in 119 of the 171 times the defense was raised since 1998. In the period from 1984–1998, the defense was dispositive in twenty of the fifty-one times it was proffered.[198]

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192. *See* Gemstar-TV Guide Int'l, Inc. v. ITC, 383 F.3d 1352 (Fed. Cir. 2004).

193. *See, e.g.*, Rhone-Poulenc Agro, SA v. Monsanto Co., 445 F. Supp. 2d. 531 (M.D. N.C. 2006); Ethicon, Inc. v. U.S. Surgical Corp., 135 F.3d 1456 (Fed. Cir. 1998). *See* Appendix, Table 2.

194. *See supra* notes 82–83 and accompanying text. The rule acts as a particularly high hurdle in joint invention disputes since, by definition, unnamed inventors never had the opportunity to make their case before the PTO. *See* Vanderbilt Univ. v. ICOS Corp., 601 F.3d. 1297, 1305, n.3 (Fed. Cir. 2010) (rejecting putative inventor's request for a preponderance of the evidence standard); *see also* Microsoft Corp. v. i4i Ltd. P'ship, 131 S. Ct. 2238, 2251 (2011) (confirming that a clear and convincing standard applies to all aspects of an issued patent, regardless of whether an issue was heard by the PTO).

195. *See, e.g.*, Cook Biotech Inc. v. Acell, Inc., 460 F.3d 1365 (Fed. Cir. 2006) (affirming summary judgment because there was insufficient evidence to overcome the presumption of validity).

196. *See, e.g.*, *Vanderbilt*, 601 F.3d. at 1308 (finding that although the plaintiff's and defendant's stories were "equally plausible," the putative inventor's argument failed because it was "unable to carry its burden of proof . . . with clear and convincing evidence").

197. Trial court data was gathered to gain a historical sense of how the application of presumption of validity has changed over time. The Federal Circuit decisions were inconclusive.

198. Reviewing the literature yielded only a single source that discusses the role of presumptive rules, and its focus is on widespread reforms to patent law as a whole, rather than joint inventorship. *See* Kevin Casey, Jade Camara & Nancy Wright, *Standards of Appellate Review in the Federal Circuit: Substance and Semantics*, 11 FED. CIRCUIT B.J. 279 (2002); *see also* Kristen Dietly, *Lightening the Load: Whether the Burden of Proof for Overcoming a Patent's Presumption of Validity Should Be Lowered*, 78 FORDHAM L. REV. 2615, 2655 (2010) (discussing the unfair results of applying this strong presumption in certain cases).

3. *Equitable Considerations*

The least anticipated trend to emerge from this joint inventorship analysis of the past thirty years is the consideration of fairness and equity in the law applying to joint invention.[199] Although the court rarely acknowledges this concern or factor expressly,[200] it is undoubtedly a consideration in a number of the court's joint invention cases considered in this study.[201]

As discussed above, the court has relied on the presumption of validity in an increasing number of the cases before it.[202] But interestingly, the court applies the presumption overwhelmingly in cases that arise in what might be described as the *Ethicon* configuration.[203] In the most recent period of empirical study,[204] in the four cases where the putative inventor was added, none involved the *Ethicon* configuration.[205] Since 1998, the court has not added a joint inventor in a case that mirrors the facts in *Ethicon*.

One possible way of rationalizing the Federal Circuit's recent approach to joint inventorship cases is that the court is implicitly considering the fairness and proportionality of the unnamed inventor's contribution, despite the fact that *Fina*'s "not insignificant" contribution test remains the black letter standard.[206] Since *Ethicon*, the court has been especially strict in its contribution analysis, refusing to add any unnamed inventors in cases in which a windfall would result or free riders would benefit from the addition.

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199. Several commentators have discussed fairness in the context of joint inventorship law. *See, e.g.*, Fellmeth, *supra* note 12, at 76, 79–80; Gregory Mandel, *Left-Brain Versus Right-Brain: Competing Conceptions of Creativity in Intellectual Property Law*, 44 U.C. DAVIS L. REV. 283, 294–95 (2010).

200. *See* Shum v. Intel Corp., 629 F.3d 1360, 1371 (Fed. Cir. 2010) ("The Court must take into account important concerns of justice and fairness, as well as conformity with rule and precedent.").

201. *See supra* Section II.A.2.

202. *See supra* Section II.B.2.

203. In this context, the *Ethicon* configuration is when a third-party accused infringer seeks to obtain an assignment from an unnamed putative inventor as a defense to infringement. *See supra* Section II.A.2.

204. *See* Appendix, Table 1.

205. *See* Falana v. Kent State Univ., 669 F.3d 1349 (Fed. Cir. 2012).

206. *See supra* note 73. Section 116 also explicitly prohibits the use of proportionality in joint inventorship analyses. 35 U.S.C. § 116 (2006) ("Inventors may apply for a patent jointly even though . . . (2) each did not make the same type or amount of contribution."). In *Nartron*, the district court held that the putative inventor's contribution to "an element of [a single claim of 41 claims] was not insignificant in quality" and added him to the patent. Nartron Corp. v. Borg Indak, Inc. (*Nartron I*), No. 06-10683, 2008 WL896060, at *10 (2008). However, the Federal Circuit reversed, holding that the putative inventor (and the accused infringer) failed to overcome the presumption of validity of the patent and that the contribution was, as a matter of law, insignificant. 558 F.3d 1352, 1356 (Fed. Cir. 2009) (*Natron II*).

This concern for fairness was the explicit focus of Judge Newman's dissent in *Ethicon* itself.[207] The Federal Circuit appears unwilling to award parties with the economic benefits of patent ownership without concomitant investment in the patent.

III. CONCLUSION

This study of joint inventorship cases before the Federal Circuit tells a story in three acts. In the first stage, an overly strict and preclusive legal system resisted change to the issued patent and created nearly impossible barriers to joint invention. In the second stage, the Federal Circuit recalibrated the law, ensuring that deserving participants were credited as joint inventors even when they may not have made essential or proportionate contributions. In the third and current stage, the court is backing off overly liberal rules and reviewing joint inventorship cases more restrictively in order to ensure equitable results.

The joint inventorship jurisprudence reveals a court that is unwilling to expressly overrule its own precedents. Rather, the Federal Circuit prefers to chip away and refine the edges of its holdings in order to strengthen the predictability and fairness of the law. This Note, in reviewing the entirety of the Federal Circuit's joint inventorship jurisprudence, reveals trends that may otherwise go unnoticed by a practitioner examining the cases on an individual basis. These trends underscore practical implications: for example, the court remains receptive to unnamed inventors when there is corroborating evidence of her involvement in the invention.[208] Conversely, the Federal Circuit is unsympathetic to alleged infringers who use an unnamed inventor as a defense to infringement.[209]

Clearly, additional empirical analysis—especially at the trial court level—would benefit practitioners and scholars seeking greater understanding of joint inventorship law. However, this Note demonstrates that a longitudinal

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207. *Ethicon II*, 135 F.3d 1456, 1460, 1469–70 (Fed. Cir. 1998) (Newman, J., dissenting); *see supra* note 147 and accompanying text. Judge Newman even expressed frustration that there was so little scholarly attention afforded to this problem at the time. *Ethicon II*, 135 F.3d at 1471 (Newman, J., dissenting) ("By amending § 116 in order to remove an antiquated pitfall whereby patents were being unjustly invalidated, the legislators surely did not intend to create another inequity. . . . I have come upon no discussion of this anomaly in various scholarly articles on the amended § 116.").

208. The type of involvement is also critical. *See* Appendix, Table 2. In addition, long-standing team membership, co-authorship on scholarly publication, and testimony from other team members are convincing factors. *See* Falana v. Kent State Univ., 669 F.3d 1349 (Fed. Cir. 2012).

209. *See* 35 U.S.C. 102(f) (2006); *supra* Section I.C.

study of cases can elicit unexpected ideology and policy considerations. Moreover, the results of this Note demonstrate real, practical implications for patent attorneys and research institutions participating in collaborative work.

At the very least, counsel must be involved at an early stage in the research process to ascertain the role of each member of the team and the potential rights of each person with respect to inventorship claims. Pre-patent planning takes on an even more significant role in light of these considerations.[210] More significantly, the Federal Circuit's unwillingness to scrutinize most challenges without documented evidence of the significance of the purported contribution underscores the importance of developing an extensive record of the inventive process to substantiate claims on behalf of unnamed inventors. Also, since putative inventors aligned by assignment with alleged infringers are likely to face higher hurdles when challenging the patent,[211] counsel should be aware that remedies to correct inventorship could depend greatly on the configuration of the parties and their respective contribution to the inventive process.

210. *See* Sherry L. Murphy, *Determining Patent Rights: A Practical Approach*, 13 N.C. J.L. & TECH 215, 221–24 (2012) (discussing practical considerations caused by *Ethicon*).

211. *See supra* Sections II.B.3.

APPENDIX

Table 1

Trimester	*Inventor Added*	*Total Cases*
1984–1992	*0*	*3*
1993–2002	*20*	*26*
2003–2012	*4*	*36*

Table 2

Nature of Contribution	*Cases Alleged*	*Successful Instances*
Unrecognized problem or solution	*7*	*6*
Resolve problem	*19*	*9*
Addition of nontrivial advantage	*34*	*7*
Unique skills or expertise	*5*	*2*

List of Cases

	Case Name	**Date**	**Citation**
1	Abbott Laboratories v. Brennan	27-Dec-91	952 F.2d 1346
2	Acromed Corp. v. Sofamor Danek Group, Inc.	8-Jun-01	253 F.3d 1371
3	Advanced Cardiovascular Systems, Inc. v. Scimed Life Systems, Inc.	9-Mar-93	988 F.2d 1157
4	Advanced Magnetic Closures, Inc. v. Rome Fastener Corp.	11-Jun-10	607 F.3d 817
5	Amini Innovation Corp. v. Anthony California, Inc.	8-Jan-07	211 Fed. App'x. 938
6	Applied Materials, Inc. v. Gemini Research Corp.	16-Dec-87	835 F.2d 279
7	Bard Peripheral Vascular, Inc. v. W.L. Gore & Associates, Inc.	14-Jun-12	682 F.3d 1003
8	Bard Peripheral Vascular, Inc. v. W.L. Gore & Associates, Inc.	10-Feb-12	670 F.3d 1171
9	Bausch & Lomb, Inc. v. Barnes-Hind/Hydrocurve, Inc.	14-Jul-86	796 F.2d 443
10	BJ Services Co. v. Halliburton Energy Services, Inc.	6-Aug-03	338 F.3d 1368
11	Board of Educ. ex rel. Bd. of Trustees of Florida State University v. American Bioscience, Inc.	23-Jun-03	333 F.3d 1330

12	Bradley v. Chiron Corp.	20-Feb-98	136 F.3d 1317
13	Brasseler, U.S.A. I, L.P. v. Stryker Sales Corp.	9-Jul-99	182 F.3d 888
14	Brasseler, U.S.A. I, L.P. v. Stryker Sales Corp.	9-Oct-01	267 F.3d 1370
15	Bruning v. Hirose	25-Nov-98	161 F.3d 681
16	Buildex Inc. v. Kason Industries, Inc.	23-Jun-88	849 F.2d 1461
17	Burroughs Wellcome Co. v. Barr Laboratories, Inc.	22-Nov-94	40 F.3d 1223
18	C.R. Bard, Inc. v. M3 Systems, Inc.	30-Sep-98	157 F.3d 1340
19	Canon Computer Systems, Inc. v. Nu-Kote Intern., Inc.	8-Jan-98	134 F.3d 1085
20	Carter v. ALK Holdings, Inc.	24-May-10	605 F.3d 1319
21	Caterpillar Inc. v. Sturman Industries, Inc.	28-Oct-04	387 F.3d 1358
22	Chou v. University of Chicago	3-Jul-01	254 F.3d 1347
23	Coleman v. Dines	8-Feb-85	754 F.2d 353
24	Cook Biotech Inc. v. Acell, Inc.	18-Aug-06	460 F.3d 1365
25	Credle v. Bond	3-Jun-94	25 F.3d 1566
26	Davis v. Loesch	9-Jul-93	998 F.2d 963
27	E.I. du Pont de Nemours & Co. v. MacDermid Printing Solutions, L.L.C.	14-May-08	525 F.3d 1353
28	Eli Lilly and Co. v. Aradigm Corp.	20-Jul-04	376 F.3d 1352
29	Engel Industries, Inc. v. Lockformer Co.	8-Oct-91	946 F.2d 1528
30	Ethicon, Inc. v. U.S. Surgical Corp.	3-Feb-98	135 F.3d 1456
31	Falana v. Kent State University	23-Jan-12	669 F.3d 1349
32	Fina Oil and Chemical Co. v. Ewen	9-Nov-94	41 F.3d 1519
33	Fina Oil and Chemical Co. v. Ewen	2-Sep-97	123 F.3d 1466
34	Franklin Pavkov Const. Co. v. Roche	28-Jan-02	279 F.3d 989
35	Gemstar-TV Guide Intern., Inc. v. International Trade Com'n	16-Sep-04	383 F.3d 1352
36	Hess v. Advanced Cardiovascular Systems, Inc.	18-Feb-97	106 F.3d 976
37	Hydril Co. v. Baker Hughes Inc.	19-Aug-97	121 F.3d 728
38	In re Bennett	28-Jun-85	766 F.2d 524
39	Israel Bio-Engineering Project v. Amgen, Inc.	29-Jan-07	475 F.3d 1256
40	Kimberly-Clark Corp. v. Procter & Gamble Distributing Co., Inc.	26-Aug-92	973 F.2d 911
41	Litton Systems, Inc. v. Whirlpool Corp.	14-Feb-84	728 F.2d 1423
42	Lucent Technologies, Inc. v. Gateway, Inc.	25-Sep-08	543 F.3d 710
43	Massachusetts Eye and Ear Infirmary v. Novartis Ophthalmics, Inc.	6-Oct-06	199 Fed.App'x. 960
44	Nartron Corp. v. Schukra U.S.A. Inc.	5-Mar-09	558 F.3d 1352
45	Ortho-McNeil Pharmaceutical, Inc. v. Teva Pharmaceuticals Industries, Ltd.	26-Aug-09	344 Fed.App'x. 595

46	Pannu v. Iolab Corp.	6-Aug-98	155 F.3d 1344
47	Pepitone v. American Standard, Inc.	17-Nov-92	983 F.2d 1087
48	PerSeptive Biosystems, Inc. v. Pharmacia Biotech, Inc.	29-Aug-00	225 F.3d 1315
49	Pro-Mold and Tool Co., Inc. v. Great Lakes Plastics, Inc.	7-Feb-96	75 F.3d 1568
50	Q.G. Products, Inc. v. Shorty, Inc.	7-May-93	992 F.2d 1211
51	Richardson v. Suzuki Motor Co., Ltd.	16-Feb-89	868 F.2d 1226
52	Sewall v. Walters	7-Apr-94	21 F.3d 411
53	Shamrock Technologies, Inc. v. Medical Sterilization, Inc.	4-May-90	903 F.2d 789
54	Shum v. Intel Corp.	24-Aug-07	499 F.3d 1272
55	Shum v. Intel Corp.	22-Dec-10	629 F.3d 1360
56	Shum v. Intel Corp.	22-Dec-10	633 F.3d 1067
57	Sign-a-Way, Inc. v. Mechtronics Corp.	5-Apr-00	232 F.3d 911
58	SmithKline Diagnostics, Inc. v. Helena Laboratories Corp.	12-Oct-88	859 F.2d 878
59	Stark v. Advanced Magnetics, Inc.	11-Jul-97	119 F.3d 1551
60	Stark v. Advanced Magnetics, Inc.	1-Jul-94	29 F.3d 1570
61	Stern v. Trustees of Columbia University in City of New York	17-Jan-06	434 F.3d 1375
62	Symantec Corp. v. Computer Associates Intern., Inc.	11-Apr-08	522 F.3d 1279
63	Trovan, Ltd. v. Irori	8-Sep-00	243 F.3d 559
64	Trovan, Ltd. v. Sokymat SA, Irori	1-Aug-02	299 F.3d 1292
65	Vanderbilt University v. ICOS Corp.	7-Apr-10	601 F.3d 1297

COMPUTER CLAIM DISARRAY: UNTANGLING THE MEANS-PLUS-FUNCTION DOCTRINE TO ELIMINATE IMPERMISSIBLE FUNCTIONAL CLAIMING IN SOFTWARE PATENTS

Elise S. Edlin†

In order for a property system to function successfully, it must clearly establish the rights held by the property owners.[1] In real property, this is the concept of marking the boundaries of a property with a fence. It is efficient because public notice about the extent of ownership rights allows others to avoid trespassing and negotiate permissioned use.[2] In intellectual property, these boundaries are far more difficult to discern, as the patentee must mark his boundaries through the words of a patent's claims.[3] These words can mean different things to different people at different times. As it is in real property, the notice function of patents is intended to promote innovation by providing both the public and the patentee with detailed information about what the patentee owns. This allows others the freedom to operate without fear of infringing vague patents, which lowers investment costs and spurs innovation.[4] To this extent, "[n]otice information is a public good,"[5] and to serve this purpose, the scope of the invention must be clearly delineated by the language of the claims.

Clarity of scope, however, is rarely a priority for inventors, who may benefit from keeping the public in the dark about the true scope of their

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1. *See* JAMES BESSEN & MICHAEL J. MEURER, PATENT FAILURE: HOW JUDGES, BUREAUCRATS, AND LAWYERS PUT INNOVATORS AT RISK 46 (2008).

2. *Id.*

3. *Id.*

4. *See* Peter S. Menell and Michael Meurer, *Notice Failure and Notice Externalities*, J. LEGAL ANALYSIS 9–11 (Jan 3, 2013), *available at* http://jla.oxfordjournals.org/content/early/2013/01/03/jla.las019.full.pdf+html ("In many cases of notice failure, the resource developer knows the property owner, but attempts to avoid infringement rather than bargain for permission. When the scope of the rights is ambiguous, such a strategy can prove costly.").

5. *Id.* at 9.

invention.[6] The reward of ownership rights incentivizes a patentee to maximize the scope of his invention, pushing the boundary line outward in order to encapsulate more subject matter and exclusive rights than would actually correspond to the invention. Troublingly, the patentee may get away with this as the Patent Office often devotes little "effort to clarifying patent boundaries in the examination process" and focuses merely on determining whether a claimed invention is novel or nonobvious over the prior art.[7] Thus, the precise scope of a patentee's invention is often left for federal district court judges to determine ex post during claim construction.[8] Because language is uncertain and open to multiple interpretations, both the patentee and the public remain uncertain about the precise scope of the invention until litigation.[9] This uncertainty harms innovation by imposing external costs on third parties to determine the scope of claims[10] and dampens economic growth.[11] Highlighting this issue, the Supreme Court declared, " 'the limits of a patent must be known' . . . . Otherwise, a 'zone of uncertainty which enterprise and experimentation may enter only at the risk of infringement claims would discourage invention only a little less than unequivocal foreclosure of the field' . . . ."[12]

The scope of a patentee's invention is even more uncertain in the context of means-plus-function claims, as this type of claim allows a patentee to claim a function, provided that they sufficiently describe the corresponding

6. *See id.* (noting that "some resource claimants may prefer to obscure the existence, scope, or ownership of their property rights").

7. J. Jonas Anderson & Peter S. Menell, *From de Novo Review to Informal Deference: An Historical, Empirical, And Normative Analysis of the Standard of Appellate Review for Patent Claim Construction* 5 (UC Berkeley Public Law Research Paper No. 2150360, 2012), *available at* http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2150360.

8. *See id.*

9. *See* Mark Lemley, *Software Patents and the Return of Functional Claiming*, 2013 WIS. L. REV. (forthcoming 2013) (manuscript at 25), *available at* http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2117302 ("And because the Federal Circuit reverses as many as 40% of claim constructions, the parties really can't know what a software patent covers until the Federal Circuit has addressed the issue.") (citations omitted).

10. *See* Harry Surden, *Efficient Uncertainty in Patent Interpretation*, 68 WASH. & LEE L. REV. 1737, 1752 (2011) ("This increases the information transaction costs for a firm of estimating and assessing infringement liability risk. It also raises the cost of proactively reducing risk by reorienting production activities, or attempting to 'invent around' a particular claim by creating products that do not infringe.") (citing BESSEN & MEURER, *supra* note 1, at 147).

11. *Id.* at 1755 (citing Tamar Frankel, *The Legal Infrastructure of Markets: The Role of Contract and Property Law*, 73 B.U. L. REV. 389, 395–97 (1993)).

12. Markman v. Westview Instruments, Inc., 517 U.S. 370, 390 (1996) (quoting Gen. Elec. Co. v. Wabash Appliance Corp., 304 U.S. 364, 369 (1938) and United Carbon Co. v. Binney & Smith Co., 317 U.S. 228, 236 (1942)).

structure in the patent's specification.[13] The scope of the ownership rights obtained through means-plus-function claims is defined by the structure disclosed in the specification, along with equivalents,[14] which can be difficult to discern.[15] Furthermore, in order to broaden the scope of their invention, some patentees try to use means-plus-function claiming to obtain ownership rights to an entire function; they hope to obtain rights over every way of performing the claimed function.[16] To this extent, patentees attempt to broaden the scope of the corresponding structure, often to the point that what they are asserting as structure is merely a restatement of the claimed function.[17] Because a definitive identification of the corresponding structure occurs during claim construction,[18] the precise scope of the patentee's invention is unknown until decided by a court—at which point many of these claims may be deemed invalid as overly broad.[19] The Federal Circuit has devised a procedure for the district courts to follow in construing the

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13. 35 U.S.C. § 112(f) (2006).

14. *Id.*

15. *See* Peter S. Menell, *Promoting Claim Clarity, Solutions to the Software Patent Problem* 1 (UC Berkeley Public Law Research Paper No. 2171287, 2012), *available at* http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2171287 ("[T]he PTO issues a great many vague patent software claims, creating tremendous uncertainty for subsequent inventors.").

16. *See* Lemley, *supra* note 9, at 2–3. Lemley states:

> While experienced lawyers today generally avoid writing their patent claims in means-plus-function format, software patentees have increasingly been claiming to own the function of their program itself, not merely the particular way they achieved that goal . . . . [B]ecause of the way the means-plus-function claim rules have been interpreted by the Federal Circuit, those patentees have been able to write those broad functional claims without being subject to the limitations of section 112(f).

Id.

17. *See, e.g.*, Ergo Licensing, LLC v. CareFusion 303, Inc., 673 F.3d 1361, 1365 (Fed. Cir. 2012) ("The specification merely provides functional language . . . ."); Aristocrat Techs. v. Int'l Game Tech., 521 F.3d 1328, 1334 (Fed. Cir. 2008) ("The equation thus does not disclose the structure of the claimed device, but is only another way of describing the claimed function.").

18. *See* Anderson & Menell, *supra* note 7, at 4; *see also* Lemley, *supra* note 9, at 24–25. Lemley explains:

> Accordingly, no one can really know what a software patent covers until the court has construed the language of the patent claims. And because the Federal Circuit reverses as many as 40% of claim constructions, the parties really can't know what a software patent covers until the Federal Circuit has addressed the issue.

Id. (citations omitted).

19. *See* cases cited *supra* note 17.

scope of means-plus-function claims.[20] As this procedure has evolved, the Federal Circuit has attempted to reign in prohibited functional claiming and clarify blurry boundary issues by relying on the definiteness requirement of 35 U.S.C. § 112(b)[21] to invalidate overbroad and under-described means-plus-function claims.[22]

In software patents, and other inventions that are implemented by a programmed computer, the issues involving functional claiming are exacerbated and have resulted in a number of substantial problems.[23] In his recent article, Mark Lemley asserted that the "most important problem a product-making software company faces today is . . . suits over claims that purport to cover any possible way of achieving a goal."[24] He claimed that this problem is unique to software and is responsible for the current issues that the industry is facing.[25] He further argued that "the law should rein in efforts to claim to own a goal itself rather than a particular means of achieving that goal" and that "ending functional claiming may be the only way out of the software patent morass in which we now find ourselves."[26]

Lemley identified methods by which software patentees attempt to avoid using the means-plus-function format and instead use impermissible functional claiming. He gave the example of a claim that stated "a computer programmed to calculate an alarm limit."[27] He explained that in this situation,

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20. *See infra* Part II.

21. The America Invents Act changed the nomenclature of 35 U.S.C. § 112. Previously, courts referred to the different paragraphs within this section as ¶ 1, ¶ 2, etc. The new law titles them as (a)–(f). This Note will use the new nomenclature, and for consistency, will do so even when referring to pre-AIA cases that cite the old "¶" nomenclature.

22. The definiteness requirement of § 112 (b) requires that "[t]he specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the inventor or a joint inventor regards as the invention." 35 U.S.C. § 112(b).

23. *See* Lemley, *supra* note 9, at 23.

24. *Id.* at 3.

25. *See id.*; *see also id.* at 38. Lemley speculates:

> It is broad functional claiming that leads to assertions that every part of a complex technology product is patented, often by many different people at the same time. It is broad functional claiming that puts stars in the eyes of patent plaintiffs, who can demand huge royalties on the theory that there simply is no other way to implement the technology they have patented. And it is broad functional claiming that makes most of the resulting patents invalid, since even if ten programmers developed ten different algorithms to solve a problem only one of them could be the first to solve the problem at all.

Id.

26. *Id.* at 4.

27. *Id.* at 16.

courts often consider "computer" to be sufficient structural support within the claim and interpret the claims to cover any computer that calculates an alarm limit, no matter how it is programmed to do so.[28] As discussed in Part II, this is not the way that the court would treat this claim if it had been written in the proper means-plus-function format, which would require the court to turn to the specification to find the corresponding structure.[29] Lemley argued that the court should treat this type of claim as a means-plus-function claim and limit the scope of the claim to algorithms disclosed in the specification, as required by existing law.[30] He explained that although "on occasion the Federal Circuit has been more lenient to patentees,"[31] application of existing law could still alleviate the problems associated with overly broad functional claiming, as most of the decisions have not been so tolerant—the Federal Circuit typically limits the claims to the actual implementation of the idea.[32] This Note focuses on this element of Lemley's solution and explains how existing law can be applied to reduce functional claiming and invalidate overly broad software patents. It describes how the Federal Circuit has recently limited the scope of means-plus-function claims by taking the problem of functional claiming seriously, requiring disclosure of sufficient corresponding structure in order to avoid finding a claim indefinite. The heightened scrutiny of means-plus-function claims, combined with Lemley's suggestion of analyzing all functional claims under § 112(f), is a potential solution to the problems caused by overly broad software patents.[33] By highlighting the specifics of this doctrine and honing in on its inconsistencies, this Note also identifies ways in which the law can be clarified to provide clearer notice to patentees and the public about the scope of ownership rights in software patents.

Part I of this Note explains the history of functional claiming and how the Federal Circuit's view on this matter has evolved over time. Part II explains the procedure that the Federal Circuit has used to construe means-plus-function claims. It highlights the specific requirements that the court has developed regarding computer-implemented functions, and explains how a court should determine if the specification contains any corresponding

28. *Id.*

29. *See infra* Part II.

30. *See* Lemley, *supra* note 9, at 38–43.

31. *Id.* at 44 (citing Typhoon Touch Techs., Inc. V. Dell, Inc., 659 F.3d 1376 (Fed. Cir. 2011); *In re* Katz Interactive Call Processing Patent Litig., 639 F.3d 1303 (Fed. Cir. 2011)).

32. Lemley, *supra* note 9, at 45.

33. Other recent proposals also further this goal. *See* Menell, *supra* note 15 at 1–2 (suggesting that identification of means-plus-function claims and corresponding structure at filing would help clarify "vague" software patents).

structure. It also clarifies the role of the person of ordinary skill in the art ("POSITA") in this analysis. Finally, Part III establishes how the Federal Circuit can use existing law to invalidate overly broad patents, and emphasizes the recent ways that the Federal Circuit has done so by heightening the requirements imposed on means-plus-function claims for computer-implemented functions.

I. HISTORICAL BACKGROUND OF FUNCTIONAL CLAIMING

To understand the evolution of functional claiming and the scope of its permissibility, it is important to grasp how the patent system has come to adopt claims as the defining source of inventors' ownership rights.[34]

A. EVOLUTION OF THE PRACTICE OF CLAIMING ONE'S INVENTION

Prior to 1790, "nothing in the nature of a claim had appeared either in British patent practice or in that of the American states."[35] The practice of writing formal claims only emerged over the following decades through "applicant practice spurred by judicial scrutiny of vague patents."[36] Additionally, the Patent Office contributed to the evolution of patent claims.[37] The 1790 Patent Act made no mention of formal claims, but rather focused on a description of the invention.[38] Three years later, in 1793, Congress revised the patent act, requiring that inventors provide a written description

> in such full, clear and exact terms, as to distinguish the same from all other things before known, and to enable any person skilled in

34. *See* Anderson & Menell, *supra* note 7, at 4 n.1 ("The late Judge Giles S. Rich, an architect of 1952 Patent Act and long-serving member of the Court of Appeals for the Federal Circuit (and its predecessor court, the Court of Customs and Patent Appeals), famously noted that "the name of the game is the claim." (citations omitted)).

35. *Id.* at 10 (quoting Karl B. Lutz, *Evolution of the Claims of U.S. Patents*, 20 J. PAT. OFF. SOC'Y 134, 134 (1938)).

36. *Id.* (citing William R. Woodward, *Particularity and Definiteness in Patent Claims*, 46 MICH. L. REV. 755, 758 (1948) (citations omitted)). The authors also note:

> Although this language of the act, and later the decisions of the courts, in time encouraged a good many inventors to include statements more or less in the nature of a claim as part of the patent document, for several decades a good many patents were issued without anything in the nature of a claim.

Id.

37. *Id.*

38. *Id.* at 10–11.

> the art or science, of which it is a branch, or with which it is most nearly connected, to make, compound, and use the same.[39]

However, the earliest patents only described the invention in general terms. The "earliest suggestion of the claim," as Karl Lutz explained, "was the inclusion in the description of a statement that the patentee did not intend to be limited to the specific disclosure of the patent."[40] Lutz and other scholars have credited Robert Fulton with the invention of the formal claim when, in his 1811 patent for the steamboat, he stated:

> Having been the first to demonstrate the superior advantages of a water wheel or wheels, *I claim* as my exclusive right, the use of two wheels, one over each side of the boat to take purchase on the water . . . .[41]

Slowly, other patent drafters began including formal claims at the end of their applications, and by the late 1820's it was common practice for the patentee to follow this procedure.[42] Further cementing this into patent doctrine, Dr. Thomas P. Jones, the newly appointed Superintendent of the Patent Office, published an article in 1828 for the purpose of instructing patent applicants.[43] He explained that "the patentee should distinctly set forth what he claims as new; and this is best done in a separate paragraph, at the end of the specification . . . ."[44]

B. THE SHIFT FROM CENTRAL TO PERIPHERAL CLAIMING

In the early Nineteenth Century, however, the patent system was based on central,[45] rather than peripheral, claiming.[46] The 1836 Act required applicants to "particularly *specify and point out* the part, improvement, or

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39. *Id.* at 11 (quoting Patent Act of Feb. 21 1793, ch. 11 § 3, 1 Stat. 318).

40. *See id.* at 11 (citing Lutz, *supra* note 35, at 135 (describing a 1799 patent)).

41. *Id.* at 12 (citing Woodward, *supra* note 36, at 758 (describing Fulton's patent granted on Feb. 9, 1811) and Lutz, *supra* note 35, at 136–37 (commenting that "Fulton can perhaps more properly be credited with invention of the 'claim' than of the steamboat")).

42. *Id.* at 12–14.

43. *Id.* at 13–14 (citing Thomas P. Jones, *Information to Persons Applying for Patents, or Transacting Other Business at the Patent Office*, 6 FRANKLIN J. & AM. MECH. MAG. 332, 334 (1828)).

44. *Id.*

45. *See* Dan L. Burk & Mark A. Lemley, *Fence Posts or Sign Posts? Rethinking Patent Claim Construction*, 157 U. PA. L. REV. 1743, 1747 (2009) ("Whereas peripheral claiming purports to mark the outermost boundary of the patentee's claims, central claiming describes the core or gist of the patentee's contribution to technology.").

46. *See id.*

combination which he claims as his own invention or discovery."[47] Patentees began using "reference characters," which were alphanumeric labels on the patent drawings to specify their particular improvement.[48] However, during this time, the patent was defined by what the patentee actually built, rather than by its claims.[49] Some patentees during this time used peripheral claiming, in which they used linguistic formulations rather than specific references to define the boundaries of their claims.[50] The Patent Act of 1870 "formalized the use of patent claims by requiring applicants to 'particularly point out and distinctly *claim* the part, improvement, or combination which he claims as his invention or discovery.' "[51]

In 1877, the Court formally acknowledged the importance of the public notice function of patents, and confirmed that the scope of patent protection is linked to that which is disclosed in the claims rather than what the applicant actually constructed.[52] In *Merrill v. Yeomans*, the plaintiff claimed a process for the manufacture of deodorized heavy hydrocarbon oils.[53] The accused infringer did not manufacture the oils in accordance with the claimed process, but instead sold deodorized heavy hydrocarbon oils. Because these oils were described in the specification, the plaintiff sued for infringement.[54] Notably, the Court stated that the "distinct and formal claim is . . . of primary importance . . . in the effort to ascertain precisely what it is that is patented to the appellant in this case."[55] To this extent, the Court held that the defendant did not infringe the plaintiff's claimed invention, as they did not manufacture the oils using the claimed process.[56] Markedly, the decision in *Merrill* emphasized the importance of the notice function of patents, stating that "[t]he public should not be deprived of rights supposed to belong to it,

47. Anderson & Menell, *supra* note 7, at 15 (citing Patent Act of 1836, ch. 357, § 6, 5 Stat. 117, 119 (emphasis added); Lutz, *supra* note 35, at 143 ("This addition to the statute had no immediate effect on the form or substance of claims because it was understood as merely codifying the existing law which had been developed by the courts.")).

48. *Id.* (citing RISDALE ELLIS, PATENT CLAIMS §§ 3, 5 (1949)).

49. *Id.* at 16.

50. *Id.* at 17.

51. *Id.* at 17 (quoting Patent Act of 1870, ch. 230, § 26, 116 Stat. 198, 201 (emphasis added)).

52. *See* Merrill v. Yeomans, 94 U.S. 568, 573 (1877) ("The public should not be deprived of rights supposed to belong to it, without being clearly told what it is that limits these rights."); Keystone Bridge Co. v. Pheonix Iron Co., 95 U.S. 274 (1877); *see also* Anderson & Menell, *supra* note 7, at 21–22.

53. *See Merrill*, 94 U.S. at 570.

54. *Id.* at 568.

55. *Id.*

56. *Id.* at 573–74.

without being clearly told what it is that limits these rights."[57] This decision eventually brought claim construction to the forefront of patent litigation and contributed to the decline of centralized claiming.[58] Patentees became more likely to rely on peripheral claiming to define the outer limits of their invention, and over the next century the courts developed rules for construing patent claims.[59]

C. DEVELOPMENT OF FUNCTIONAL CLAIMING

Because a claim defines the outer boundaries of a patentee's invention, the patentee has an incentive to define these boundaries as broadly as possible in order to obtain exclusive rights over more material.[60] This concept encourages patentees to define their invention in functional terms rather than in technical terms.[61] Functional claiming is desirable for patentees as it potentially allows one to obtain exclusive rights over every way of performing the claimed function, regardless of whether they actually invented a specific method for achieving the desired outcome.[62] However, in 1946, the Supreme Court rejected this practice in *Haliburton Oil Well Cementing Co. v. Walker*, holding that a patentee may not define a claim by using functional language.[63] The Court emphasized the lack of an accurate description of the invention, and declared that "a patentee cannot obtain greater coverage by failing to describe his invention than by describing it as the statute commands."[64] This momentarily put a stop to the practice of functional claiming, but six years later Congress passed the Patent Act of 1952, which permits functional claiming provided that specific requirements are met.[65] 35 U.S.C. § 112(f) states that:

> An element in a claim for a combination may be expressed as a means or step for performing a specified function without the

57. *See id.* at 573.

58. *See* Anderson & Menell, *supra* note 7, at 17 (discussing the rise of peripheral claiming).

59. *Id.* at 23 (citing William Callyhan Robinson, 2 THE LAW OF PATENTS FOR USEFUL INVENTIONS 115 (1890)).

60. *See id.* at 4 ("As a result, patent prosecutors devote substantial effort to crafting patent claims that maximize scope while differentiating prior art."); *see also* Lemley, *supra* note 9, at 1–2 ("And lawyers have a natural tendency to broaden those claims as much as possible in order to secure the strongest possible rights for their clients.").

61. Lemley, *supra* note 9, at 7.

62. *See id.* at 2–3 ("Put another way, patentees were claiming to own not a particular machine, or even a particular series of steps for achieving a goal, but the goal itself.").

63. Haliburton Oil Well Cementing Co. v. Walker, 329 U.S. 1, 9–10 (1946).

64. *Id.* at 13.

65. *See* 35 U.S.C. § 112(f).

> recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.[66]

The new Act allowed functional claiming (i.e. means-plus-function claiming) at the point of novelty, subject to certain conditions, and it rendered *Haliburton* obsolete with regard to that holding.[67] Patentees were once again permitted to claim a function without reciting its structure in the claim, provided that they disclosed adequate corresponding structure in the specification that was linked to the claimed function.[68]

A means-plus-function claim must also meet the requirements of § 112(b) in order to avoid being ruled indefinite.[69] This provision states that a patentee must "particularly point out and distinctly claim" the invention.[70] Taken together, § 112(b) and (f) have been interpreted to require that

> if one employs the means-plus-function language in a claim, one must set forth in the specification an adequate disclosure showing what is meant by that language. If an applicant fails to set forth an adequate disclosure, the applicant has in effect failed to particularly point out and distinctly claim the invention as required by the second paragraph of section 112.[71]

Disclosure of corresponding structure in the specification that "clearly links or associates that structure to the function recited in the claim" is viewed by the Federal Circuit as "quid pro quo" for the convenience of using the means-plus-function claim format.[72] Therefore, a patentee is allowed to use functional claiming, but must pay the price by limiting his claimed invention to specific structures that are disclosed. If this price is not paid, the claim will be ruled indefinite under § 112(b).

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66. *Id.*

67. Lemley, *supra* note 9, at 11 n.32–33; *see also In re* Donaldson Co., Inc., 16 F.3d 1189, 1194 (Fed. Cir. 1994) ("In *Haliburton* . . . the Supreme Court held that means-plus-function language could not be employed at the exact point of novelty in a combination claim. Congress enacted paragraph six [of the Patent Act] . . . to statutorily overrule that holding.").

68. *See* 35 U.S.C. § 112(f).

69. *In re Donaldson Co., Inc.*, 16 F.3d at 1195 ("Although paragraph six statutorily provides that one may use means-plus-function language in a claim, one is still subject to the requirement [in paragraph two] that a claim 'particularly point out and distinctly claim' the invention.").

70. 35 U.S.C. § 112(b).

71. *In re Donaldson Co., Inc.*, 16 F.3d at 1195.

72. B. Braun Med., Inc. v. Abbott Labs., 124 F.3d 1419, 1424 (Fed. Cir. 1997).

II. CONSTRUING MEANS-PLUS-FUNCTION CLAIMS FOR COMPUTER-IMPLEMENTED INVENTIONS

Functional claiming is particularly problematic in software patents because "software is an *abstract* technology."[73] It can be difficult to describe the invention, so patentees often resort to abstract language.[74] Patentees sometimes use means-plus-function claims to limit their claims to the specific structures described.[75] However, software patentees, in particular, often use functional claiming like that which the Court rejected in *Haliburton*.[76] Because they neglect to use the means-plus-function format, the courts do not look to the specification to find the corresponding structure even though the patentee uses functional language in the claims.[77] The Federal Circuit has devised a process for construing means-plus-function claims and specific requirements for those involving computer-implemented functions, and strict application of this doctrine to all functional claims (whether or not they are written in means-plus-function format) has been proposed as a potential solution to the software patent problem.[78] However, the law interpreting means-plus-function claims is incredibly complex and seemingly inconsistent. This Part attempts to clarify the doctrine.

When construing means-plus-function claims, the court first identifies the claimed function.[79] In doing this, the court "construe[s] the function of a means-plus-function limitation to include the limitations contained in the claim language, and only those limitations."[80] Next, the court identifies "the corresponding structure in the written description of the patent that performs that function."[81] In this step, the disclosed structure is only considered the corresponding structure if "the specification or prosecution history clearly links or associates that structure to the function recited in the

73. BESSEN & MEURER, *supra* note 1, at 187.

74. *Id.* at 203.

75. *See id.* at 204–11.

76. *See* Lemley, *supra* note 9, at 15–19 (providing examples of this type of functional claiming); *see id.* at 19 ("Software patents, then, have brought back functional claiming as it existed before 1952.").

77. *Id.*

78. *See id.* at 42–43.

79. *See* Applied Med. Res. Corp. v. U.S. Surgical Corp., 448 F.3d 1324, 1332 (Fed. Cir. 2006).

80. Cardiac Pacemakers, Inc. v. St. Jude Med., Inc., 296 F.3d 1106, 1113 (Fed. Cir. 2002).

81. *See Applied Med. Res. Corp.*, 448 F.3d at 1332.

claim."[82] The identification of the corresponding structure in the specification is the most crucial part of the court's analysis, as it is the point when the court determines the scope of the patentee's invention and has the ability to hold claims that do not reference sufficient structure (or any structure) invalid.[83] It is also the point where the case law is most confusing and inconsistent. Before delving into these concepts and clarifying the law in this area, it is important to outline the Federal Circuit's specific requirements for computer-implemented functions.

A. SPECIFIC DISCLOSURE REQUIREMENTS FOR COMPUTER-IMPLEMENTED FUNCTIONS

1. Definition of Corresponding Structure for Computer-Implemented Functions

In 1992, the Federal Circuit attempted to construe the corresponding structure for a means-plus-function claim where the function was implemented by a computer.[84] In *In re Hayes Microcomputer Products, Inc. Patent Litigation*, the claims at issue recited the terms "timing means" and "means operative."[85] Hayes, the patentee, asserted that the claims were definite because the specification contained sufficient structure by disclosing a "microprocessor."[86] The defendant, Ven Tel, argued that the claims failed to meet the written description requirement under § 112(a), and that the means-plus-function claims were indefinite under § 112(f) for a lack of corresponding structure disclosed in the specification.[87] Ven Tel insisted that Hayes must disclose the firmware that would implement the claimed function in the microprocessor,[88] and argued that "a microprocessor is defined by its programmable resources and, without programmed firmware, the microprocessor has no special functionality."[89] The court "disagree[d]

82. Med. Instrumentation & Diagnostics Corp. v. Elekta AB, 344 F.3d. 1205, 1210 (Fed. Cir. 2003) (quoting B. Braun Med., Inc. v. Abbott Labs., 124 F.3d 1419, 1424 (Fed. Cir. 1997)).

83. *See, e.g.*, Noah Sys, Inc. v. Intuit, Inc., 675 F.3d 1302, 1319 (Fed. Cir. 2012) (holding a claim indefinite because there was a "total absence of structure"); Finisar Corp. v. DirecTV Group, Inc., 523 F.3d 1323, 1341 (Fed. Cir. 2008) (holding a claim indefinite because it did not contain "any corresponding structure"); Aristocrat Techs. v. Int'l Game Tech., 521 F.3d 1328, 1338 (Fed. Cir. 2008) (holding the claim indefinite for not "disclosing any algorithm at all").

84. *See In re* Hayes Microcomputer Prods., Inc. Patent Litig., 982 F.2d 1527, 1531–32 (Fed. Cir. 1992).

85. *Id.* at 1531.

86. *Id.* at 1533.

87. *Id.* at 1533–35.

88. *Id.* at 1534.

89. *Id.*

with Ven Tel's contention that to satisfy section 112, a statement as to the specific function of a microprocessor is inadequate."[90] The Federal Circuit held that the means-plus-function claims were not indefinite, as Hayes disclosed sufficient structure by disclosing a programmable microprocessor.[91]

Following the *Hayes* decision, it was widely understood that disclosing a programmable microprocessor to carry out the claimed function was a sufficient disclosure under § 112(b) and (f).[92] "Many thousands—perhaps hundreds of thousands" of patents for computer-implemented functions were written based on this understanding of the law,[93] but these patents may not meet the increasingly heightened disclosure requirements that the Federal Circuit has declared after *Hayes*.[94]

Markedly, in a sharp departure from *Hayes*, the Federal Circuit imposed heightened disclosure requirements in *WMS Gaming Inc. v. International Game Technology* by requiring a disclosed algorithm.[95] The patent in question in *WMS Gaming* disclosed a microprocessor that controlled the operation of a slot machine and contained a claim that employed the phrase "means for assigning."[96] The patentee described the algorithm controlling the assignment of numbers to a stop position as a four-step process diagramed in the specification.[97] The Federal Circuit held that the district court incorrectly construed the "means for assigning" limitation to cover "'any table, formula, or algorithm for determining correspondence between the [randomly selected] numbers and rotational positions of the reel.' "[98] The Federal

90. *Id.*

91. *Id.* at 1534–35.

92. Peter C. Schechter, *U.S. Court of Appeals for the Federal Circuit Adds 'Grievous Unreliability' to 'Hundreds of Thousands' of Patents*, BNA INSIGHTS (Oct. 19, 2012), http://iplaw.bna.com/iprc/display/story_list.adp?mode=ins&frag_id=28420752&prod=ipin ("The meaning and significance of the Hayes Microcomputer decision was clear to both the PTO and patent practitioners alike: naming a suitable programmable microprocessor that could be programmed by a person skilled in the art to carry out the disclosed and claimed method steps was sufficient disclosure under 35 U.S.C. §112[(b),(f)].").

93. *Id.*

94. *Id.* ("[By 2003,] it was no longer sufficient to simply identify a generic programmable microprocessor and the functions that it was to perform after being suitably programmed by an ordinarily skilled software engineer according to known programming techniques.").

95. *See* WMS Gaming Inc. v. Int'l Game Tech., 184 F.3d 1339, 1348 (Fed. Cir. 1999).

96. *Id.* at 1346, 1348.

97. *Id.* at 1348 ("1) [T]he range of single numbers exceeds the number of stop positions; 2) each single number is assigned to only one stop position; 3) each stop position is assigned at least one single number; and 4) at least one stop position is assigned more than one single number.").

98. *Id.* (quoting WMS Gaming Inc. v. Int'l Game Tech., 1996 WL 539112, at *11 (N.D. Ill. Sept. 20, 1996)).

Circuit clarified that the district court's interpretation was "overly broad," as it allowed a "lack of disclosure to indicate that the limitation reads on any means for performing the recited function."[99] Essentially the district court's interpretation would have allowed the party to claim any means for performing the claimed function, but the Federal Circuit found that this was "at odds with the requirements of 35 U.S.C. § 112."[100] Departing from its *Hayes* opinion, the Federal Circuit made clear in *WMS Gaming* that if a patentee chooses to use means-plus-function claiming, he cannot evade the requirement of providing corresponding structure in the specification by simply asserting that the corresponding structure is a computer.[101] The court reasoned that "[a] general purpose computer, or microprocessor, programmed to carry out an algorithm creates 'a new machine, because a general purpose computer in effect becomes a special purpose computer once it is programmed to perform particular functions pursuant to instructions from program software.' "[102] The "new machine" is limited by the algorithm disclosed in the specification.[103] The new rule essentially adopts Ven Tel's unsuccessful argument in *Hayes*,[104] and limits the corresponding structure to the specific algorithm disclosed in the specification.[105]

2. *Definition and Disclosure Requirements for an Algorithm*

The term "algorithm" in computer systems has a broad meaning, "for it encompasses 'in essence a series of instructions for the computer to follow.' "[106] In *Application of Freeman*, the court recognized that the preferred definition of "algorithm" in the computer art is "[a] fixed step-by-step procedure for accomplishing a given result; usually a simplified procedure for solving a complex problem, also a full statement of a finite number of

99. *Id.* at 1348.
100. *Id.*
101. *Id.*
102. *Id.* (quoting In re Alappat, 33 F.3d 1526, 1545 (Fed. Cir. 1994) (en banc)).
103. *Id.*; *see also* Harris Corp. v. Ericsson Inc., 417 F.3d 1241, 1253 (Fed. Cir. 2005) ("A computer-implemented means-plus-function term is limited to the corresponding structure disclosed in the specification and equivalents thereof, and the corresponding structure is the algorithm.").
104. *See In re* Hayes Microcomputer Products, Inc. Patent Litigation, 982 F.2d at 1534 (arguing that "to satisfy section 112, a statement as to the specific function of a microprocessor is inadequate, that the actual program must be disclosed").
105. *See Harris*, 417 F.3d at 1253.
106. Typhoon Touch Techs., Inc. v. Dell, Inc., 659 F.3d 1376, 1384 (Fed. Cir. 2011) (quoting *In re* Waldbaum, 457 F.2d 997, 998 (C.C.P.A. 1972)).

steps."[107] A patentee may "express that algorithm in any understandable terms including as a mathematical formula, in prose . . . or as a flow chart, or in any other manner that provides sufficient structure."[108] The patentee need not disclose specific mathematical formulas or source code,[109] but if the algorithm disclosed in the specification merely provides functional language and does not contain any step-by-step procedure, the court will rule the claim indefinite for lack of corresponding structure.[110] When a patentee claims a function, the specification must disclose how that function is performed,[111] otherwise, the language "describes an outcome, not a means for achieving that outcome."[112]

3. Exception to the Requirement that an Algorithm Must be Disclosed

Recently, the Federal Circuit announced a narrow exception to the rule requiring the disclosure of algorithm for computer-implemented functions.[113] In *In re Katz Interactive Call Processing Patent Litigation*, the court observed that if a claimed function can be performed by "any general purpose computer without special programming . . . it [is] not necessary to disclose more structure than the general purpose processor that performs those functions."[114]

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107. Application of Freeman, 573 F.2d 1237, 1246 n.8 (C.P.P.A. 1978) (quoting C. SIPPL & C. SIPPL, COMPUTER DICTIONARY AND HANDBOOK (1972)); *see also Typhoon Touch*, 659 F.3d at 1385.

108. Finisar Corp. v. DirecTV Group, Inc., 523 F.3d 1323, 1340 (Fed. Cir. 2008).

109. *Typhoon Touch*, 659 F.3d at 1385 ("For computer-implemented procedures, the computer code is not required to be included in the patent specification.").

110. *See, e.g.*, Ergo Licensing, LLC v. CareFusion 303, Inc., 673 F.3d 1361, 1365 (Fed. Cir. 2012) ("The specification merely provides functional language and does not contain any step-by-step process for controlling the adjusting means."); *In re* Keisuke Aoyama, 656 F.3d 1293, 1298 (Fed. Cir. 2011) (citing *Ex parte Aoyama*, No. 2009–6755, slip op. at 5 (B.P.A.I. June 16, 2010) ("*Decision on Rehearing*")) ("Figure 8 only 'presents several results to be obtained, without describing how to achieve those results, and certainly not how to generate transfer data.' "); Blackboard, Inc. v. Desire2Learn, Inc., 574 F.3d 1371, 1383 (Fed. Cir. 2009) (explaining that the disclosure is "simply an abstraction that describes the function"); Aristocrat Techs. v. Int'l Game Tech., 521 F.3d 1328, 1334 (Fed. Cir. 2008) ("But that language simply describes the function to be performed, not the algorithm by which it is performed.").

111. *Blackboard*, 574 F.3d at 1384 ("The ACM is essentially a black box that performs a recited function. But *how* it does so is left undisclosed.") (emphasis added).

112. *Aristocrat*, 521 F.3d at 1334.

113. *See In re* Katz Interactive Call Processing Patent Litigation, 639 F.3d 1303, 1316 (Fed. Cir. 2011).

114. *Id.* at 1316 (citations omitted).

The disputed claims in *Katz* recited the functions of "processing," "receiving," and "storing."[115] The court reasoned that because those functions were "coextensive with the structure disclosed, i.e., a general purpose processor," they did not "run afoul of the rule against purely functional claiming."[116] The court held that the District Court had interpreted *WMS Gaming* too broadly in requiring the disclosure of an algorithm for any computer-implemented function.[117] The rule is limited to when the function is implemented by "programming a general purpose computer to convert it into a special purpose computer capable of performing those specified functions."[118]

B. DETERMINATION OF WHETHER THE SPECIFICATION CONTAINS STRUCTURE THAT IS CLEARLY LINKED TO THE FUNCTION

In *Atmel Corp. v. Info Storage Devices, Inc.*, the Federal Circuit clarified that when looking for the corresponding structure in the specification, "the inquiry asks first whether structure *is* described in the specification, and, if so, whether one skilled in the art would identify the structure from that description."[119] Furthermore, in *Medical Instrumentation & Diagnostics Corp. v. Elekta AB*, the Federal Circuit clarified that a structure must be "clearly linked" with the claimed function in order to meet the requirement of § 112(b) that the specification particularly point out and distinctly claim the invention, and to satisfy the quid pro quo of § 112(f).[120]

In *Medical Instrumentation*, the district court construed the structure for the function in question to be the "framegrabber, the CVP, and '[s]oftware routines for converting digital-to-digital known to those of skill in the art.' "[121] The district court concluded that "because techniques for performing those conversions were known to those of skill in the art at the

115. *Id.*

116. *Id.*

117. *Id.*

118. *Id.* (citing Aristocrat Techs. v. Int'l Game Tech., 521 F.3d 1328, 1333–34 (Fed. Cir. 2008); Harris Corp. v. Ericsson Inc., 417 F.3d 1241, 1253 (Fed. Cir. 2005); WMS Gaming Inc. v. Int'l Game Tech., 184 F.3d 1339, 1349 (Fed. Cir. 1999)).

119. Atmel Corp. v. Info Storage Devices, Inc., 198 F.3d 1374, 1381 (Fed. Cir. 1999).

120. Med. Instrumentation & Diagnostics Corp. v. Elekta AB, 344 F.3d 1205, 1211 (Fed. Cir. 2003) ("The duty of a patentee to clearly link or associate structure with the claimed function is the quid pro quo for allowing the patentee to express the claim in terms of function under section 112[(f)]."') ("The requirement that a particular structure be clearly linked with the claimed function in order to qualify as corresponding structure is also supported by the requirement of 35 U.S.C. § 112 [(b)] that an invention must be particularly pointed out and distinctly claimed.").

121. *Id.* at 1210.

time the application was filed, a person of skill in the art would understand software to be a corresponding structure for the converting function."[122] Elekta's product used software to achieve Medical Instrumentation's claimed function, so the district court held that Elekta was infringing.[123]

On appeal, the Federal Circuit ruled that this was an error, and held that the software should not have been considered a corresponding structure because it was not clearly linked to the claimed function.[124] The Federal Circuit reasoned that it is the patentee's duty "to clearly link or associate [the] structure with the claimed function" in order to take advantage of the functional claiming allowed under § 112(f).[125] Although the claims were not ruled indefinite (because the framegrabber and CVP still constituted sufficient structure), when software was eliminated from the claimed structures, the judgment of infringement was reversed.[126]

The Federal Circuit relied on *Atmel*, declaring that "[i]t is not proper to look to the knowledge of one skilled in the art apart from and unconnected to the disclosure of the patent."[127] The court emphasized that the focus is on the *disclosure* of the patent encompassing software, not merely whether a POSITA would be able to write a software program.[128] Medical Instrumentation pointed to three instances in the disclosure that they argued weighed in favor of holding software to be the corresponding structure. They argued that the "Image Format Conversion" box in a block diagram and a written reference to "image format conversion" disclosed software that corresponded to the conversion function.[129] The court disagreed, finding that this did not describe a structure at all, and could not clearly link software as the corresponding structure.[130] Medical Instrumentation further sought to

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122. *Id.* at 1211.
123. *Id.* at 1209.
124. *Id.* at 1222.
125. *Id.* (citing Budde v. Harley-Davidson, Inc., 250 F.3d 1369, 1377 (Fed. Cir. 2001)).
126. *Id.* at 1222.
127. *Id.* at 1212. The Federal Circuit explained:

> The correct inquiry is to look at the *disclosure* of the patent and determine if one of skill in the art would have understood that *disclosure* to encompass software for digital-to-digital conversion and been able to implement such a program, not simply whether one of skill in the art would have been able to write such a software program . . . . It is important to determine whether one of skill in the art would understand the specification itself to disclose the structure, not simply whether that person would be capable of implementing that structure.

Id.

128. *Id.*
129. *Id.* at 1212–13, 1215.
130. *Id.* at 1213, 1215.

utilize a reference to "image editing" within its specification as a source for disclosing software as the corresponding structure.[131] This part of the specification stated:

> The division for image acquisition enhancement, and manipulation includes modular *software subroutines* for: 1) image capture, storage, and archiving; 2) pixel analysis for an entire image or user-defined areas of interest; 3) zoom and pan functions; 4) contrasting and filtering images with functions for smoothing, sharpening, and pseudocoloring; 5) image comparisons; 6) *image editing*; and 7) various edge detection routines . . . .[132]

The court reasoned that while this portion of the specification did describe software, it was not linked to the function because there was "no evidence that a person of skill in the art would understand the use of the phrase 'image editing' as a reference to the function of converting images into a selected digital format."[133] While ruling on the linkage issue, the court also noted:

> This may be a different case if the specification contained a statement suggesting that digital-to-digital conversion can be performed by software programs known to those of skill in the art. A statement in the specification referring to the knowledge of those skilled in the art specific to the claimed function would put it closer to the lines we have drawn in other cases such as *Atmel*.[134]

However, this dicta does not go to the issue of whether the structure is clearly linked to the function; rather, it speculates that if that linkage were established, then "software programs known to those of skill in the art" could be sufficient disclosure if one skilled in the art would know "the kind of program to use."[135] This is referring to step two of the *Atmel* procedure.[136] As discussed in Section III.A, in *AllVoice Computing PLC v. Nuance Communications, Inc.*,[137] the Federal Circuit later solidifies this concept in an opinion written by Judge Newman.

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131. *Id.* at 1215.
132. *Id.* (citing '684 patent, col. 11, ll. 36–44 (emphases added)).
133. *Id.*
134. *Id.* at 1217.
135. *See id.*
136. *See* Atmel Corp. v. Info. Storage Devices, Inc., 198 F.3d 1374, 1381 (Fed. Cir. 1999) ("whether one skilled in the art would identify the structure from that description").
137. AllVoice Computing PLC v. Nuance Commc'ns, Inc., 504 F.3d 1236 (Fed. Cir. 2007).

In her dissent in *Medical Instrumentation*, Judge Newman emphasized this point further,[138] but claimed that this has been the rule for decades.[139] She scoffed at the court's "inappropriate conditions for computer-based inventions"[140] and asserted that the court now required even more, but that it "it [was] far from clear" what that was.[141]

C. CONSIDERATION OF THE KNOWLEDGE OF A POSITA

When analyzing claims using the *Atmel* procedure, it can be unclear at what point to consider the knowledge of a POSITA. In *Atmel*, the Federal Circuit explained that "the 'one skilled in the art' analysis should apply in determining whether sufficient structure has been disclosed to support a means-plus-function limitation."[142] The court reasoned that the analysis under § 112 is a matter of claim construction, and that claims are construed in "view of the understanding of one skilled in the art."[143]

After highlighting the two-step procedure that courts should take to determine if a specification contains some structure and what that structure is, the court in *Atmel* next explained the difference between looking to (1) the knowledge of a POSITA to identify structure under the § 112(f) analysis and (2) the enablement requirement of § 112(a).[144] The court explained that paragraph (a) has an "expansive purpose" and allows resort to material outside of the specification to satisfy the enablement requirement.[145] The court reasoned that there "it makes no sense to encumber the specification of a patent with all the knowledge of the past concerning how to make and

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138. *Med. Instrumentation*, 344 F.3d at 1223 (Newman, J., dissenting) (citing Minnesota Mining & Manufacturing Co. v. Chemque, Inc., 303 F.3d 1294, 1301 (Fed. Cir. 2002)). Judge Newman asserted:

> The patent specification need not "teach software" and the writing of routine programs in order to teach how to practice the described method. It suffices if one of skill in the art "would have been able to write" a standard program of digital-to-digital conversion. If one of skill in the programming art would have been able to write such a program without undue experimentation, the statutory requirements are met.

Id.

139. *Id.* at 1224.

140. *Id.* at 1223.

141. *Id.* at 1224–25 ("Is this court now requiring a five-foot-shelf of zeros and ones?").

142. Atmel Corp. v. Info Storage Devices, Inc., 198 F.3d 1374, 1379 (Fed. Cir. 1999).

143. *Id.* (citing Personalized Media Commc'ns, LLC v. Int'l Trade Comm'n, 161 F.3d 696, 705 (Fed. Cir. 1998); Chiuminatta Concrete Concepts, Inc. v. Cardinal Indus., Inc., 145 F.3d 1303, 1308 (Fed. Cir. 1998); K2 Corp. v. Salomon S.A., 191 F.3d 1356, 1365 (Fed. Cir. 1999)).

144. *See id.* at 1382. *See supra* note 21.

145. *Atmel Corp.*, 198 F.3d at 1382.

use the claimed invention."[146] However, because § 112(f) sets forth a "simple requirement" of stating "some structure" in order to take advantage of the means-plus-function format, a court may not look to the knowledge of a POSITA *outside of the specification* to determine if structure is disclosed.[147] A slight increase in the amount of written description in the specification to overcome a complete omission of structure is the "trade-off" for taking advantage of the functional claiming allowed under § 112(f).[148] Outside knowledge of a POSITA is only used "in relation to structure that is disclosed in the specification" once it has been determined that structure *is* disclosed.[149]

In *Aristocrat Technologies Australia Pty Ltd. v. International Game Technology*, the court addressed the continued confusion between the enablement requirement of § 112(a)[150] and the role of the POSITA in determining whether sufficient structure is disclosed in analysis of means-plus-function claims under § 112(f).[151] In that case, the disputed claim terms were "game control means" or "control means," and the plaintiffs argued that the corresponding structure in the specification was "any standard microprocessor base [sic] gaming machine [with] appropriate programming."[152] Aristocrat put forward two arguments: first, that "the specification disclosed algorithms sufficient to constitute a qualifying disclosure of structure," and second, that "no disclosure of specific algorithms was necessary in any event."[153] In response to Aristocrat's first argument, the court declared that all of the mathematical formulas that Aristocrat argued were algorithms were merely restatements of the desired outcome, and were not corresponding structure but rather impermissible attempts at functional claiming.[154] In response to Aristocrat's second argument, the court further clarified the role of the knowledge of a POSITA in a means-plus-function claim construction analysis.[155] The court explained

146. *Id.*
147. *Id.*
148. *Id.*
149. *Id.*
150. *See supra* note 21 regarding the nomenclature of § 112.
151. Aristocrat Techs. Australia Pty Ltd. v. Int'l Game Tech., 521 F.3d 1328, 1336 (Fed. Cir. 2008).
152. *Id.* at 1332–33.
153. *Id.* at 1334. The court formulated that "Aristocrat's real point is that devising an algorithm to perform that function would be within the capability of one of skill in the art, and therefore it was not necessary for the patent to designate any particular algorithm to perform the claimed function." *Id.*
154. *Id.* at 1334–35.
155. *Id.* at 1336.

that although the patent may enable a POSITA to make and use the invention, there was still no structure disclosed for the purpose of construing the means-plus-function claim.[156] The court further explained that while it was true that the "sufficiency of the disclosure of algorithmic structure must be judged in light of what one of ordinary skill in the art would understand the disclosure to impart," that concept did not apply when no structure or algorithm was initially disclosed in the specification.[157] The court clarified that the question in this case was whether an algorithm was disclosed *at all*, and that the knowledge of a POSITA did not play a role in that analysis "apart from and unconnected to the disclosure of the patent."[158] Because Aristocrat's disclosed "algorithm" was only a restatement of the claimed function, it was not considered structure at all.[159] Because no algorithm was stated at all, the court refused to look to the knowledge of a POSITA to determine if the algorithm was described with sufficient specificity.[160]

As demonstrated, the doctrine outlining this area of law is incredibly complex, and determinations hinge on very specific details. The courts must follow the procedure set forth and take into consideration the perspective of a POSITA at the relevant points of the analysis. If applied properly, this case law can be used to invalidate many overly broad patent claims and help solve some of the problems associated with software patents.[161]

III. HOW THE FEDERAL CIRCUIT CAN USE EXISTING LAW TO ALLEVIATE PROBLEMS WITH SOFTWARE PATENTS

Attempting to evolve at the pace of rapidly advancing technology, the case law outlining the Federal Circuit's requirements for computer-implemented means-plus-function claims is in a state of disarray. The Federal Circuit's decisions often turn on highly technical facts, making it difficult to

156. *Id.* ("Whether the disclosure would enable one of ordinary skill in the art to make and use the invention is not at issue here. Instead, the pertinent question in this case is whether Aristocrat's patent discloses structure that is used to perform the claimed function.").

157. *Id.* at 1337.

158. *Id.* (quoting Med. Instrumentation & Diagnostics Corp. v. Elekta *AB*, 344 F.3d 1205, 1212 (Fed. Cir. 2003)).

159. *Id.* at 1334–35 ("[T]he description of the embodiments is simply a description of the outcome of the claimed functions, not a description of the structure . . . .").

160. *Id.* at 1337–38 (explaining that although it is true that the "sufficiency of the disclosure of algorithmic structure must be judged in light of what one of ordinary skill in the art would understand the disclosure to impart" that principle is not relevant in this case because "a person of ordinary skill in the art would not recognize the patent as disclosing any algorithm at all").

161. *See* Lemley, *supra* note 9 at 39–43.

discern a clear set of rules about how the court will treat a disputed claim. Mark Lemley explained that courts could alleviate the problems associated with software patents by treating overly broad functional claims (such as "a computer for storing") as means-plus-function claims, despite the fact that they do not state the words "means for" and trigger the presumption that they should be analyzed in this way.[162] He explained that the current law for analyzing means-plus-function claims is capable of narrowly construing the scope of this type of claim and eliminating many overly broad claims that cause patent thickets[163] in the industry.[164] Indeed, as Section III.B will demonstrate, the Federal Circuit has addressed the problem of overly broad scope in computer-implemented functions by tightening its standard of what will constitute corresponding structure for means-plus-function claims. This Part highlights the intricacies of the court's previous applications of the *Atmel* procedure and discusses how the Federal Circuit has recently heightened requirements for computer-implemented inventions. By continuing down the path of heightening requirements, the courts will be able to invalidate overly broad software patents and provide notice to patentees of the requirements that they will have to fulfill in order to obtain ownership rights over a computer-implemented function.

A. THE FEDERAL CIRCUIT'S PREVIOUS APPLICATION OF THE *ATMEL* TWO-STEP PROCEDURE

The first step of the *Atmel* procedure—determining whether the specification contains structure *at all*[165]—is often the determinative point of the court's analysis.[166] The intricacies of the court's decisions and the inconsistencies become clearer with a factual breakdown of what the court has previously deemed to be considered no structure at all and what it has considered to be *some* structure, allowing the court to move to step two of the *Atmel* procedure—looking to outside knowledge of a POSITA to identify what that structure is.[167]

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162. *Id.*

163. A patent thicket is "a complex of overlapping patent rights that simply involves too many rights to cut through." *See* Lemley, *supra* note 9 at 24 (citing Carl Shapiro, *Navigating the Patent Thicket: Cross Licenses, Patent Pools, and Standard-Setting*, *in* 1 INNOVATION POLICY AND THE ECONOMY 119 (Adam Jaffe et al. eds., 2000)).

164. *See* Lemley, *supra* note 9, at 39–43.

165. *See* Atmel Corp. v. Info. Storage Devices, Inc., 198 F.3d 1374, 1381 (Fed. Cir. 1999).

166. *See* cases cited *supra* note 83 and accompanying text.

167. *Atmel*, 198 F.3d at 1381.

1. *No Structure Disclosed—Claims Invalidated in Step 1 of the* Atmel *Analysis*

In *Biomedino, LLC v. Waters Technologies Corp.*, the Federal Circuit rejected the argument that a specification stating that a claimed function can be performed by known methods or using known equipment had sufficient corresponding structure.[168] The court relied on the rule that "the testimony of one of ordinary skill in the art cannot supplant the total absence of structure from the specification."[169] In *Biomedino*, the claim language at issue was a "control means" and the relevant portion of the specification contained a figure with a box labeled "Control," along with a description stating that "the regeneration process may be 'controlled automatically by known differential pressure, valving and control equipment.' "[170] The court distinguished this case from *Atmel*, explaining that in that case there was undisputed expert testimony stating that the article title included in Atmel's specification conveyed the precise structure to a POSITA; the title constituted structure, so "[t]he expert's testimony did not create or infer the structure."[171] Here, conversely, there was nothing in the specification to suggest a structure at all for the control means, and the court would not allow one to be inferred from the knowledge of a POSITA.[172]

A similar result occurred in *Blackboard, Inc. v. Desire2Learn, Inc.*[173] The claims at issue stated "means for storing a plurality of data files" and "means for allowing access to and control of the data file," while the specification recited an "access control manager" as the corresponding structure.[174] Blackboard's argument that the "access control manager manages access control" and their expert testimony that "the name of it pretty much describes what it does" led the court to conclude that the structure was merely a recitation of the function, and that Blackboard was trying to claim "any computer-related device or program that performs the function of access control."[175] The court ruled the claim indefinite because the

168. Biomedino, LLC v. Waters Techs. Corp., 490 F.3d 946, 953 (Fed. Cir. 2007).

169. *Id.* at 950 (quoting Default Proof Credit Card Sys., Inc. v Home Depot U.S.A., Inc., 412 F.3d 1291, 1302 (Fed. Cir. 2005)).

170. *Id.* (quoting '502 patent, col. 11 ll.55–58).

171. *Id.* at 952 (citing Atmel Corporation v. Information Storage Devices, Inc., 198 F.3d 1374, 1382 (Fed. Cir. 1999)).

172. *Id.* at 952–53.

173. Blackboard, Inc. v. Desire2Learn, Inc., 574 F.3d 1371 (Fed. Cir. 2009).

174. *Id.* at 1382–83.

175. *Id.* at 1383.

specification failed to recite *how* the function was achieved.[176] The court reasoned:

> That ordinarily skilled artisans could carry out the recited function in a variety of ways is precisely why claims written in "means-plus-function" form must disclose the particular structure that is used to perform the recited function. By failing to describe the means by which the access control manager will create an access control list, Blackboard has attempted to capture any possible means for achieving that end. Section 112, paragraph 6, is intended to prevent such pure functional claiming.[177]

Likewise, in *Finisar Corp. v. DirecTV Group, Inc*, the claims in question included the limitation "database editing means . . . for generating . . . and for embedding," and the specification recited that "software 132 (executed by CPU 130) generates a hierarchical set of indices referencing all the data in the information database 112 and embeds those indices in the information database."[178] The court determined that this was merely a restatement of the function, and that "simply reciting 'software' without providing some detail about the means to accomplish the function is not enough."[179]

2. *Sufficient Structure Disclosed—Proceed to Step Two of the* Atmel *Analysis*

If the court finds that some structure is disclosed in the specification that is clearly linked to the claimed function, then it will proceed to step two of the *Atmel* procedure where it looks to the knowledge of a POSITA to identify the scope of that structure.[180] *AllVoice* provides a case in point in which the court held in that "[i]n software cases . . . algorithms in the

176. *Id.* at 1385–86.

177. *Id.* at 1385.

178. Finisar Corp. v. DirecTV Group, Inc., 523 F.3d 1323, 1340 (Fed. Cir. 2008) (emphasis omitted).

179. *Id.* at 1340–41. *But see* AllVoice Computing PLC v. Nuance Commc'ns, Inc., 504 F.3d 1236, 1245 (Fed. Cir. 2007) ("In software cases, therefore, algorithms in the specification need only disclose adequate defining structure to render the bounds of the claim understandable to one of ordinary skill in the art."); Med. Instrumentation & Diagnostics Corp. v. Elekta *AB*, 344 F.3d 1205, 1217 (Fed. Cir. 2003) ("This may be a different case if the specification contained a statement suggesting that digital-to-digital conversion can be performed by software programs known to those of skill in the art.").

180. *See* Atmel Corp. v. Info. Storage Devices, Inc., 198 F.3d 1374, 1381 (Fed. Cir. 1999).

specification need only disclose adequate defining structure to render the bounds of the claim understandable to one of ordinary skill in the art."[181]

Specifically, the court interpreted the function for AllVoice's claims in question as "determining positions of the recognized words . . . and for updating word positions after edits."[182] The specification contained a figure reciting steps, along with a written description stating "[t]he speech recognition interface application . . . receives the recognized word at the head of the alternative list shown in FIG. 3 and outputs the word using the dynamic data exchange 'DDE' protocol in the Windows operating system."[183] Uncontested expert testimony revealed that "[a] person skilled in the art reading the . . . specification would know that any of these techniques could be used to determine the position of a recognized word in the third party application, would know the software to use and how to implement it."[184] The court held that this was sufficient algorithmic structure.[185] The court looked to the knowledge of a POSITA at both steps of the *Atmel* analysis: first within the bounds of the specification to determine whether they would find structure at all[186] and then again to outside knowledge to determine what that structure was.[187] Furthermore, even though there was more than one possible known technique, the court did not hold the claim indefinite.[188] A contrary result was reached in a later case,[189] however, and the Federal Circuit appears to be heightening the requirements for means-plus-function claims.

181. *AllVoice*, 504 F.3d at 1245 (citing Med. Instrumentation & Diagnostics Corp. v. Elekta AB, 344 F.3d at 1214).

182. *Id.* at 1244.

183. *Id.* at 1241 (citing '273 Patent col.7 ll. 3–7).

184. *Id.* at 1246 (quoting Second Supplemental Sonnier Decl. ¶ 17).

185. *Id.* at 1245–46.

186. *See id.* at 1240 ("a means-plus-function clause is indefinite if a person of ordinary skill in the art would be unable to recognize the structure in the specification").

187. *See id.* at 1245–46 ("Thus, the record does contain sufficient algorithmic structure to give meaning to the claim terms form the vantage point of an ordinarily skilled artisan.").

188. *Id.* ("[A] person skilled in the art reading the 273 specification would know that any of these techniques could be used to determine the position of a recognized word in the third party application, would know the software to use and how to implement it.") (citations omitted).

189. *See* Ergo Licensing, LLC v. CareFusion 303, Inc., 673 F.3d 1361, 1364 (Fed. Cir. 2012) (holding that a "control device" was not a specific structure because there "were at least three different types of devices commonly available and used at the time to control adjusting means").

B. RECENT WAYS THAT THE FEDERAL CIRCUIT HAS HEIGHTENED REQUIREMENTS IN ORDER TO INVALIDATE CLAIMS AS OVERLY BROAD

Recently, the Federal Circuit has been addressing the problems of functional claiming in computer-implemented functions by strictly enforcing the means-plus-function requirements to invalidate overly broad patents.[190] By focusing on the first part of the *Atmel* analysis, and ruling that no structure has been disclosed *at all*, the court can avoid getting to step two, where it would consider the outside knowledge of a POSITA to identify the structure.[191] Step two of the analysis has the most potential to broaden the scope of the invention, as the structure claimed could be anything known to a POSITA. Recent cases have been successful in invalidating overly broad claims,[192] and have heightened the disclosure requirements in ways discussed below. This may bring the Federal Circuit one step closer to resolving the problem of overly broad functional claiming.

1. Ergo

In *Ergo Licensing, LLC v. CareFusion 303, Inc.*,[193] the court invalidated the claim in question and suggested heightened disclosure requirements in two ways: first, it limited the *Katz* exception to the rule that an algorithm must be disclosed,[194] and second, it implied that if a POSITA could identify more than one structure at step two of the *Atmel* analysis, the claim would be indefinite.[195]

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190. *See, e.g.*, Ergo Licensing, 673 F.3d at 1365 (holding the claim indefinite for having no corresponding structure); Noah Systems, Inc. v. Intuit Inc., 675 F.3d 1302, 1318–19 (Fed. Cir. 2012) (holding that a specification had a "total absence of structure" when the "disclosed algorithm support[ed] some, but not all of the functions"); *In re* Keisuke Aoyama, 656 F.3d 1293, 1298 (Fed. Cir. 2011) (holding that the disclosed flowchart failed to provide any structure).

191. *See* Atmel Corp. v. Info. Storage Devices, Inc., 198 F.3d 1374, 1381 (Fed. Cir. 1999) (knowledge of one skilled in the particular art may be used to understand what structure(s) the specification discloses").

192. *See* cases cited *supra* note 190.

193. *Ergo Licensing*, 673 F.3d at 1361.

194. *Id.* at 1365 ("It is only in the rare circumstances where any general-purpose computer without any special programming can perform the function that an algorithm need not be disclosed.").

195. *Id.* at 1364. The court explained:

> In this case, Ergo's expert testimony illustrates that those skilled in the art would not recognize a "control device" as a known structure. Instead, Ergo's expert explained that there were at least three different types of control devices commonly available and used at the time to control

In *Ergo*, the Federal Circuit declared that the specification contained no corresponding structure.[196] Specifically, Ergo's claim stated "control means," and the court interpreted the function as "controlling the adjusting means."[197] Ergo argued that under *Katz*, "disclosure of an algorithm was not required, because a general-purpose computer [could] perform the function."[198] It pointed to the recitation of "control device" throughout the specification as corresponding structure and argued that a POSITA would find this synonymous with a general-purpose computer.[199] The court disagreed, finding that the "control device" was not the corresponding structure and that it merely replaced the word "means" with the word "device."[200] The court reasoned that a POSITA would not recognize a "control device" as a known structure, as "Ergo's expert explained that there were at least three different types of control devices commonly available and used at the time to control adjusting means: microprocessors, discrete circuits connected to stepper motors, and analog circuits."[201] The court further held that even if a control device was understood to be a general purpose computer, Ergo would still have been required to provide an algorithm and would not fall under the *Katz* exception.[202] Specifically, the court clarified that the *Katz* exception is a "narrow" one and that it is "only in the rare circumstances where any general-purpose computer without any special programming can perform the function that an algorithm need not be disclosed."[203] The court drew the line, requiring an algorithm for any function needing "special programming" or "more than merely plugging in a general-purpose computer."[204]

Judge Newman dissented, arguing that the court was now requiring more disclosure without specifying what more was needed.[205] She claimed that the

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> adjusting means: microprocessors, discrete circuits connected to stepper motors, and analog circuits. (citations omitted).

Id. But see supra note 188 and accompanying text.

196. *Ergo Licensing*, 673 F.3d at 1363–64.

197. *Id.* at 1362–63.

198. *Id.* at 1363.

199. *Id.*

200. *Id.* at 1363–64.

201. *Id.* at 1364.

202. *Id.* at 1365 ("The 'control means' at issue in this case cannot be performed by a general-purpose computer without any special programming.").

203. *Id.* at 1364–65.

204. *Id.* at 1365.

205. *See id.* at 1369–70 (Newman, J., dissenting).

knowledge of a POSITA may be used to "flesh out"[206] a structural reference in the specification and that "precedent does not require a function to be implemented by a single structure."[207] She expressed her concern that "[t]he court's new position simply taints thousands of heretofore innocent patents, adding a further infusion of unreliability to the patent grant."[208]

2. Noah

As discussed, the point in the analysis when the court considers the knowledge of a POSITA is very important in the determination of claim scope. If the court looks to the knowledge of one skilled in the art at step one of the *Atmel* analysis,[209] to determine if the specification contains *some* structure, then the court may not look to outside knowledge beyond what is contained in the specification at this point.[210] Following *Medical Instrumentation & Diagnostics Corp. v. Elekta AB*, "[t]he correct inquiry is to look at the *disclosure* of the patent and determine if a POSITA would have understood that *disclosure*" to encompass structure linked to the claimed function.[211] Once that question is answered in the affirmative, the court may then look to the outside knowledge of a POSITA to identify what that structure is and flesh out the metes and bounds of the specific structure, as allowed in *Atmel* step two.[212] However, if the court does not allow the knowledge of a POSITA to be considered at step one, but instead determines whether the specification contains structure on its own, the court could potentially limit the scope of the patent by determining that the specification does not contain structure at all or by restricting construction to a specific structure.

206. *Id.* at 1371 (citing Creo Prods., Inc. v. Presstek, Inc., 305 F.3d 1337, 1347 (Fed. Cir. 2002)).

207. *Id.* at 1371 (citing Linear Tech. Corp. v. Impala Linear Corp., 379 F.3d 1311, 1322 (Fed. Cir. 2004)).

208. *Id.* at 1372.

209. *See* Atmel Corp. v. Info. Storage Devices, Inc., 198 F.3d 1374, 1381 (Fed. Cir. 1999).

210. Med. Instrumentation & Diagnostics Corp. v. Elekta AB, 344 F.3d 1205, 1212 (Fed Cir. 2003) ("It is not proper to look to the knowledge of one skilled in the art apart from and unconnected to the disclosure of the patent."); *Id.* (citing *Atmel*, 198 F.3d at 1382) ("It is important to determine whether one of skill in the art would understand the specification itself to disclose the structure, not simply whether that person would be capable of implementing that structure.").

211. *Id.*

212. *See Atmel*, at 1381; *see also* AllVoice Computing PLC v. Nuance Commc'ns, Inc., 504 F.3d 1236, 1245 (Fed Cir. 2007) ("[A]lgorithms in the specification need only disclose adequate defining structure to render the bounds of the claim understandable to one of ordinary skill in the art.").

This is the direction that the Federal Circuit took in *Noah Systems, Inc. v. Intuit Inc.*, where it announced the new rule that "where a disclosed algorithm supports some, but not all, of the functions associated with a means-plus-function limitation," the court should then treat the specification as if "no algorithm has been disclosed at all."[213] If no algorithm is disclosed at all, the court will not look to the outside knowledge of one skilled in the art.[214] To this extent, the court refused to allow Noah to introduce expert testimony regarding how a POSITA would view the sufficiency of the disclosure after holding that Noah's partial algorithm bore no structure at all.[215]

In *Noah*, the claim language at issue was "access means," and the parties agreed that the function was:

> providing access to the file of the financial accounting computer for the first entity and/or agents of the first entity so that the first entity and/or the agent can perform one or more of the activities selected from the group consisting of entering, deleting, reviewing, adjusting and processing the data inputs.[216]

The special master denied Noah the opportunity to present expert testimony about how one skilled in the art would view the specification, ruling that no algorithm was disclosed.[217] However, the Federal Circuit held that the district court was incorrect when it ruled that no algorithm had been disclosed, finding sufficient disclosure[218] that clearly linked structure to the function of "providing access to the file."[219] But, because the court construed

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213. Noah Sys., Inc. v. Intuit Inc., 675 F.3d 1302, 1318 (Fed. Cir. 2012).

214. *Id.* at 1313 (citing Aristocrat Techs. Austl. Pty Ltd. v. Int'l Game Tech, 521 F.3d 1328, 1337 (Fed. Cir. 2008); *Atmel*, 198 F.3d at 1382). The court classified means-plus-function claims into two groups: "First, cases in which the specification discloses no algorithm; and second, cases in which the specification does disclose an algorithm but a defendant contends that disclosure is inadequate." *Id.* at 1313. The court explains:

> This distinction is important because we have clarified that, while "[i]t is certainly true that the sufficiency of the disclosure of algorithmic structure must be judged in light of what one of ordinary skill in the art would understand the disclosure to impart," in a situation in which the specification discloses no algorithm, "[t]hat principle . . . has no application . . . ."

Id. (quoting *Aristocrat*, 521 F.3d at 1337).

215. *Id.* at 1319.

216. *Id.* at 1307.

217. *Id.* at 1308.

218. *Id.* at 1313. The court explained the sufficient algorithm: "The specification clearly discloses that authorized agents are provided with passcodes and that agents cannot enter, delete, review, adjust or process data inputs within the master leger unless the passcode is verified." *Id.*

219. *Id.* at 1313–14.

the claim in question as having two distinct functions and held that any disclosed algorithm must address both functions,[220] the court declared that the disclosure was only a partial algorithm,[221] as it only described one of the two functions.[222] The court then categorized Noah's claim as having "no disclosed algorithm" under its new rule,[223] which precluded the court from considering evidence of what one skilled in the art would understand from the specification.[224] Thus, the court held the claim indefinite.[225]

The rule adopted by the court placed heightened disclosure requirements on computer-implemented functions. The Federal Circuit deviated from precedent in two distinct ways when deciding *Noah*, each raising the bar for what patentees must disclose in computer-implemented means-plus-function claims. First, it treated the disclosure of a partial algorithm as if it were no structure whatsoever.[226] Second, in doing so, it did not consider whether a POSITA would find *some* disclosed structure in the specification that was linked to the disclosed function.[227]

While the court was correct to hold that the knowledge of a POSITA cannot be used to flesh out a structure if no structure is disclosed at all, it was out of line with precedent to deny Noah the opportunity to present expert testimony showing that a POSITA would have interpreted the *disclosure* to contain *some* structure.[228] Instead, the Federal Circuit decided as a matter of law that an algorithm corresponding to only one of two claimed functions is

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220. *Id.* at 1314 (citing Default Proof Credit Card Sys. Inc. v. Home Depot U.S.A., Inc., 412 F.3d 1291, 1298 (Fed. Cir. 2005)).

221. *Id.* at 1318.

222. *Id.* at 1313–14.

223. *Id.* at 1318.

224. *See id.* at 1318–19.

225. *Id.* at 1319.

226. *Id.* at 1318.

227. *Id.* at 1313.

228. *See* Finisar Corp. v. DirecTV Group, Inc., 523 F.3d 1323, 1340 (Fed. Cir. 2008) ("Thus the patent must disclose, at least to the satisfaction of one of ordinary skill in the art, enough of an algorithm to provide the necessary structure under § 112[f]."). *See also* Aristocrat Techs. v. Int'l Game Tech, 521 F.3d 1328, 1337–38 (Fed. Cir. 2008) ("[A] person of ordinary skill in the art would not recognize the patent as disclosing any algorithm at all."); Atmel Corp. v. Info. Storage Devices, Inc., 198 F.3d 1374, 1380 (Fed. Cir. 1999) ("However, interpretation of what is disclosed must be made in light of the knowledge of one skilled in the art."); Med. Instrumentation & Diagnostics Corp. V. Elekta AB, 344 F.3d 1205, 1212 (Fed. Cir. 2003) ("The correct inquiry is to look at the *disclosure* of the patent and determine if one of skill in the art would have understood that *disclosure* to encompass software for digital-to-digital conversion and been able to implement such a program.") ("It is important to determine whether one of skill in the art would understand the specification itself to disclose the structure . . . .").

no structure at all.[229] This precluded the court from getting to step two of the *Atmel* procedure. The court relied on *Biomedino, LLC v. Waters Technologies Corp.* in reasoning that allowing the "disclosure as to one function to fill the gaps in a specification as to a different, albeit related, function" would be condoning impermissible functional claiming.[230] Under *Noah*, a partial algorithm is no longer considered *some* structure, and the court may reach the conclusion of a partial algorithm without evidence of whether a POSITA would view a partial algorithm as a structure clearly linked to the claimed functions in light of the specification. Logically, this holding also implies that *some* (partial) structure is no structure, contrary to *Atmel*, which holds that if *some* structure is found, the court should look to the knowledge of a POSITA to identify that structure.[231]

Denying the introduction of expert testimony and allowing the court to determine on its own that the specification contains no structure gives the court broad discretion to determine whether an algorithm is partial or complete. To this extent, it allows the court to be stricter in deciding what constitutes *some* structure and to invalidate overly broad claims, but it does not put forward any specific parameters.

IV. CONCLUSION

Although the state of the law of computer-implemented functions is often highly complex and difficult to discern, it can be applied to invalidate overly broad claims and reduce impermissible functional claiming. As Professor Lemley has described, if this process is applied to software claims that are not written in means-plus-function format, but rather use impermissible functional language to obtain ownership over entire computer-implemented functions, many of the problems with software patents could be alleviated. The recent cases described in this Note take steps toward heightening the standards for construing corresponding structure from the disclosure in the specification. In order to serve the notice function of patents and to reign in the impermissible functional claiming that is responsible for many of the problems in the software industry, the Federal Circuit must continue to apply these rules with consistency and stop

229. *Noah*, 675 F.3d at 1318 (concluding that "where, as here, a claim recites multiple identifiable functions and the specification discloses an algorithm for only one, or less than all, of those functions, we must analyze the disclosures as we do when no algorithm is disclosed").

230. *Id.* at 1319 (citing Biomedino, LLC v. Waters Techs. Corp., 490 F.3d 946, 948 (Fed. Cir. 2007)).

231. *See Atmel*, 198 F.3d at 1381.

patentees from obtaining broad ownership rights over computer-implemented functions.

TRADE SECRET ENFORCEMENT AFTER *TIANRUI*: FIGHTING MISAPPROPRIATION THROUGH THE ITC

Natalie Flechsig†

I. INTRODUCTION

Trade secrets have historically been difficult to enforce, and enforcement is even more difficult for U.S. companies when the violations occur in foreign countries over which the United States may not have jurisdiction. China, for example, has rates of intellectual property ("IP") infringement that are "among the highest in the world," yet provides little recourse for foreign IP owners.[1] Ineffective criminal regulations for IP infringement, as well as a lack of necessary judicial training and a tendency to award insufficient damages, make China a difficult forum in which to litigate.[2] Even when a U.S. court enters a judgment against a Chinese company that misappropriated or infringed a U.S. company's IP, "[t]he prospects are not promising for having a judgment entered by a U.S. court enforced by a court in China."[3]

In a recent significant case, the Court of Appeals for the Federal Circuit upheld the U.S. International Trade Commission's ("ITC") determination that the United States can block goods originating from a respondent that misappropriated trade secrets to make the items, even if the acts of misappropriation occurred entirely abroad and the misappropriated trade secrets are not being practiced by any U.S. entity.[4] This avenue for blocking infringing products from entering the United States, based on the newly announced qualifications for a § 337[5] complaint, has increased the chances

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1. CONGRESSIONAL-EXEC. COMM'N ON CHINA, 109TH CONG., ANNUAL REPORT, at 16 (2006), http://www.cecc.gov/pages/annualRpt/annualRpt06/CECCannRpt2006.pdf.

2. *Id.*

3. Thomas L. Duston, Domestic Trade Secret Enforcement for Foreign Misappropriation, Intellectual Property Owners' Annual Meeting: Trade Secrets and Asian Practice Committees (Sept. 10–12, 2006) (on file with Marshall, Gerstein & Borun LLP).

4. *See* TianRui Group Co. Ltd. v. Int'l Trade Comm'n, 661 F.3d 1322, 1325 (Fed. Cir. 2011).

5. Tariff Act of 1930 § 337, 19 U.S.C. § 1337 (2006).

for domestic trade secret owners to meet the ITC's jurisdictional requirements and prevail in an unfair competition investigation.[6]

Part II of this Note assesses the historical and modern landscape of trade secret enforcement. Section II.A lays out the unique traits of trade secrets that make them difficult to enforce, and Section II.B describes the functions and authority of the ITC that may make it a more viable forum than district courts for enforcing trade secret owners' rights. Part III discusses the facts and significance of the Federal Circuit's decision in *TianRui Group Co. Ltd. v. International Trade Commission*, in which the ITC and, subsequently, the Federal Circuit addressed two important questions of first impression—whether the ITC has authority over the unfair methods of competition caused by the alleged trade secret misappropriation occurring entirely abroad, and whether the importation of infringing goods would injure a domestic industry when the complainant was not using the trade secret domestically.[7] Part IV analyzes the legal environment for trade secret enforcement after *TianRui*. Section IV.A provides a comparison of jurisdictional requirements for district courts versus the ITC, and Section IV.B compares the features and availability of remedies in these two different forums. Part V predicts that trade secret filings before the ITC will increase after *TianRui* due to the ITC's liberal interpretation of the domestic industry requirement.

II. BACKGROUND

A. DIFFICULTIES WITH PROTECTING TRADE SECRETS AND REMEDYING MISAPPROPRIATION

Comment (b) to § 757 of the *First Restatement of Torts* defines a trade secret as "any formula, pattern, device or compilation of information which is used in one's business, and which gives him an opportunity to obtain an advantage over competitors who do not know or use it."[8] Whereas the U.S. Patent and Trademark Office ("USPTO") will grant a patent only if the application describes a new, useful, and novel invention,[9] trade secret protection may extend to information that would not qualify for a patent.[10] For example, negative know-how—that is, what does *not* work—may be protectable as a trade secret, though such information would generally not be

6. TianRui Group Co. Ltd. v. Int'l Trade Comm'n, 661 F.3d at 1325.
7. *Id.* at 1324.
8. RESTATEMENT (FIRST) OF TORTS § 757 (1939).
9. *See* 35 U.S.C. §§ 101–103 (2006).
10. Michael Risch, *Why Do We Have Trade Secrets?*, 11 MARQ. INTELL. PROP. L. REV. 1, 11 (2007).

patentable. Therefore, in some respects, a trade secret may be more desirable than a patent because a trade secret may cover a broad subject matter. Furthermore, there is no formal requirement for obtaining and maintaining a trade secret. Melvin F. Jager explains:

> There are no bureaucratic delays and no multiyear waits for government grants, such as those for patents. Trade secret rights . . . can be established by the explicit conduct or agreement of the interested parties. A trade secret right starts upon the creation of the idea in some concrete form, and continues as long as secrecy is maintained. Trade secret rights thus have immediacy and controllability. They also have the advantage of being perpetual, again, as long as secrecy is maintained.[11]

The caveat to these benefits, however, is the volatility of trade secrets—the requirement that secrecy be maintained means that once a secret gets out, its secrecy status can never be reclaimed and thus the owner loses recourse for the information's use. The danger of losing the secrecy status of a trade secret has increased with the advent of the Internet and a global workforce that has become highly mobile due to the increased collaboration between U.S. and foreign companies:

> A more mobile workforce, increased use of contractors and consultants, and increased outsourcing of infrastructure all provide opportunities for trade secret information to leave the company's control. Information technology itself contributes to the mobility of information. Increasingly, information is stored in easily copied computer files, and Internet connectivity and high-density media such as CD-ROMs make these files easy to transport. A disgruntled employee can literally walk out the door with the company in his pocket.[12]

In the case of a former employee improperly taking trade secrets from the old company to a new one, a trade secret owner may be able to enjoin the new company from using such information, but third parties not in privity with the plaintiff may only be held liable for misappropriation if they "knew or had reason to know" that the trade secret they disclosed or used was acquired by improper means.[13] Innocent users of a misappropriated trade

11. MELVIN F. JAGER, 1 TRADE SECRETS LAW § 1:1 (2012).

12. R. Mark Halligan & Richard F. Weyand, *The Sorry State of Trade Secret Protection*, THE TRADE SECRET OFFICE (Jan. 24, 2013, 11:34 PM), http://www.thetso.com/Info/sorry.html.

13. Robert G. Bone, *A New Look at Trade Secret Law: Doctrine in Search of Justification*, 86 CALIF. L. REV. 241, 250–51 (1998).

secret can only be enjoined from or punished for using a trade secret improperly disclosed to it once such party has been notified of the wrong.[14]

B. OVERSEAS MISAPPROPRIATION PRESENTS ADDITIONAL JURISDICTIONAL HURDLES

Generally, trade secrets are not protected by any federal statutory scheme but are rather a matter of state law. Most states, for example, have codified the Uniform Trade Secrets Act ("UTSA").[15] Depending on the circumstances surrounding misappropriation, a trade secret owner might in addition have standing to make claims under the Computer Fraud and Abuse Act[16] or the Economic Espionage Act.[17] The Computer Fraud and Abuse Act may confer liability if a misappropriator causes damage to a computer involved in interstate commerce,[18] while the Economic Espionage Act explicitly outlaws trade secret misappropriation.[19]

Trade secret misappropriation occurring abroad is more difficult to regulate than cases occurring on U.S. soil. Cases implicating foreign misappropriation usually involve foreign defendants and are generally brought in U.S. district courts based on diversity of citizenship.[20] However, the issue of U.S. jurisdiction over purely foreign acts and entities presents unique challenges to U.S. trade secret owners, who historically have been hard-pressed to find an effective way to prevent the misappropriator from gaining an unfair advantage when a lack of complete diversity precludes a finding of proper subject matter jurisdiction.

Richtek Technology Corp. v. UPI Semiconductor Corp. elucidates the jurisdictional hurdles facing domestic victims of foreign trade secret misappropriation.[21] The Taiwanese company Richtek (and its wholly-owned U.S. subsidiary) alleged that uPI, another Taiwanese company, had hired

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14. *Id.* at 251.

15. Uniform Law Commission, *Acts: Trade Secrets Act*, available at http://www.uniformlaws.org/Act.aspx?title=Trade%20Secrets%20Act.

16. 18 U.S.C. § 1030 (2008); *see* CHARLES DOYLE, CONG. RESEARCH SERV., R42681, STEALING TRADE SECRETS AND ECONOMIC ESPIONAGE: AN OVERVIEW OF 18 U.S.C. 1831 AND 1832 1 (2013).

17. 18 U.S.C. § 1831, *et. seq.* (1996), as amended by PL 112-269, 126 Stat 2442 (2013); *see* DOYLE, *supra* note 16, at 2.

18. *See, e.g.*, Therapeutic Research Faculty v. NBTY, 488 F. Supp. 2d 991, 997 (E.D. Cal. Jan. 25, 2007) (quoting Charles Schwab & Co. v. Carter, 2005 WL 351929, at *3 (N.D. Ill. Feb. 11, 2005)).

19. 18 U.S.C. §§ 1831(a), 1832.

20. *See* 28 U.S.C. § 1332 (2012).

21. Richtek Tech. Corp. v. UPI Semiconductor Corp., No. C 09-05659 WHA, 2011 WL 445509 (N.D. Cal. Feb. 3, 2011).

Richtek's employees, who took with them documents and information containing proprietary trade secrets, and that uPI subsequently imported products incorporating these secrets into the United States.[22]

The district court dismissed all of Richtek's claims for trade secret misappropriation due to a lack of subject matter jurisdiction, in part because the misappropriation did not occur domestically.[23] Had there been complete diversity of citizenship, Richtek could have filed its district court complaint based on 28 U.S.C. § 1332.[24] However, domestic trade secret owners are often precluded from this opportunity to file in district court because many foreign companies have U.S. subsidiaries, and § 1332 requires *complete* diversity of citizenship, such that a U.S. company cannot name both a foreign company and its U.S.-based subsidiary.[25] Such was the problem in *Richtek*, where the Taiwanese plaintiff had a wholly owned U.S. subsidiary in California, and the accused infringers had offices in both foreign countries and California.[26] Fortunately, the ITC does not require complete diversity between the complainant and the respondent because it has *in rem* jurisdiction over goods physically present in the United States.[27] And *TianRui* further confirms the ITC's broad jurisdiction in adjudicating trade secret misappropriation cases against foreign defendants, making it an attractive alternative forum for U.S. trade secret owners.

C. THE ITC AS AN AVENUE FOR ENFORCEMENT OF IP RIGHTS AGAINST FOREIGN INFRINGERS

The Tariff Act of 1930 § 337 (19 U.S.C. § 1337) gave the ITC the authority to investigate alleged acts of unfair competition by entities importing goods into the United States.[28] The ITC is an administrative agency consisting of six administrative law judges ("ALJ") who administer § 337's provisions and work in concert with Customs and Border Protection ("CBP"), the Federal Trade Commission ("FTC"), the Department of Justice

22. *Id.* at *3.

23. Certain DC-DC Controllers and Products Containing the Same, USITC Inv. No. 337-TA-698 (July 13, 2010) (Order No. 39).

24. 28 U.S.C. § 1332 (2006).

25. *See id.*

26. Certain DC-DC Controllers and Products Containing the Same, Inv. No. 337-TA-698 (July 13, 2010).

27. *See, e.g.*, Neil Edward L. Santos, III, Dennis S. Fernandez, & Nilesh D. Patel, *What IP Holders Ought to Know about the ITC and the District Courts*, 7 J. HIGH TECH. L. 173, 174 (2007).

28. 19 U.S.C. § 1337 (2006).

("DOJ"), and the Patent and Trademark Office ("USPTO").[29] After a complaint is filed, the Chief Administrative Law Judge chooses an administrative law judge to hear evidence and issue an initial determination recommending action.[30] A § 337 investigation also entails the involvement of an ITC investigative attorney from the Office of Unfair Import Investigations ("OUII"), who investigates on behalf of the Commission and represents the public interest.[31] Upon issuance of an initial determination by the ALJ, the parties may petition for Commission review of the determination, and then the Commission will have sixty days to decide whether to review and adopt, modify, reverse, or choose not to review the decision.[32] During the course of a § 337 investigation, the respondent has the right to request a stay of parallel litigation in a district court.[33]

Section 337 enumerates illegal practices with regard to infringing a U.S. patent, copyright, trademark, mask word, or boat hull design. For these types of statutorily protected IP, a complainant does not have to prove injury to its industry but must show, pursuant to §§ (2) and (3),that the asserted IP relates to an industry in the United States (the technical prong) and that it has invested significant resources in the exploitation of its IP (the economic prong).[34] Trade secrets, on the other hand, are subject to the provisions of § 1337(a)(1)(A), which defines illegal actions amounting to unfair competition.[35] This section prohibits "[u]nfair methods of competition and unfair acts in the importation of articles" into the United States, or the sale of such articles by the owner, importer, or consignee, the threat or effect of which is (1) to destroy or substantially injure an industry in the United States, (2) to prevent the establishment of such an industry, or (3) to restrain or monopolize trade and commerce in the United States.[36] A complainant bringing this type of claim thus must show that it has a domestic industry which is subject to injury by an infringer's actual or threatened importation of infringing goods.[37]

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29. Michael Bednarek, *IP: A prescription for success in ITC Section 337 proceedings*, INSIDE COUNSEL (Sept. 4, 2012), http://www.insidecounsel.com/2012/09/04/ip-a-prescription-for-success-in-itc-section-337-p.

30. *Section 337 Investigations: Answers to Frequently Asked Questions*, U.S. INT'L TRADE COMM'N, 24 (Mar. 2009), http://www.usitc.gov/intellectual_property/documents/337_faqs.pdf (last visited Nov. 17, 2012).

31. *Id.*

32. *Id.*

33. 28 U.S.C. § 1659(a) (2006).

34. 19 U.S.C. § 1337(a)(1)(B)–(E) (2006).

35. 19 U.S.C. § 1337(a)(1)(A).

36. *Id.*

37. *Id.*

The Commission discussed the meaning of a "domestic industry" for trade secrets in *Certain Floppy Disk Drives and Components Thereof*.[38] The complainant in *Floppy Disk Drives* did not practice its asserted trade secrets in the United States but sought to exclude the respondent's products that used the allegedly misappropriated trade secret.[39] Although the respondent argued that the complainant could not show the existence of a domestic industry without proving that it domestically exploited the trade secrets at issue, the Commission disagreed. In reaching its conclusion, the Commission gave weight to the complainant's assertion that it would have exploited said trade secrets had the respondent not physically misappropriated the documents containing them.[40]

1. Historical Enforcement of Trade Secrets in the ITC

The ITC requires a showing of four elements to prove trade secret misappropriation: (1) existence of a trade secret, (2) ownership of the trade secret or a proprietary interest, (3) disclosure of the trade secret in confidence or acquisition of the trade secret by unfair means, and (4) use or disclosure of the trade secret causing injury to complainant.[41] To establish the first element, the ITC looks to the six factors from comment (b) of § 757 of the *First Restatement of Torts*: (1) extent to which the information is known outside the business, (2) extent to which the information is known inside the business, (3) extent of measures taken to protect the secrecy of the information, (4) value of the information to competitors, (5) amount of time and effort or money expended, and (6) ease or difficulty in proper acquisition or duplication.[42]

The majority of § 337 complaints allege unfair acts of competition relating to patent and trademark infringement—more than ninety percent of § 337 complaints are based upon patents alone.[43] Still, the ITC had been used sparingly to enforce trade secret rights, which led to a limited body of ITC precedent. The Commission's *Sausage Casings* decision in 1984 announced that misappropriation of trade secrets is an act of unfair competition that § 337 is intended to regulate: "There is no question that misappropriation of

38. Certain Floppy Disk Drives and Components Thereof (*Floppy Disk Drives*), USITC Inv. No. 337-TA-203 (Aug. 29, 1985) (commission opinion).

39. *Id.* at 4.

40. *Id.*

41. Certain processes for the Manufacture of Skinless Sausage Casings and Resulting Products, Inv. Nos. 337-TA-85, 1984 ITC LEXIS 137, at *50–51 (Dec. 1984).

42. RESTATEMENT (FIRST) OF TORTS § 757 (1939).

43. *See Section 337 Investigations*, *supra* note 30.

trade secrets, if established, is an unfair competition or unfair act which falls within the purview of § 337."[44]

However, a successful § 337 complaint requires more than just a showing of trade secret misappropriation; a complainant must also prove that it has a domestic industry subject to injury by the importation of infringing articles.[45] In 1989, the Commission in *Certain Grain Oriented Silicon Steel* refused to institute an investigation because the complainant alleged infringement of a process patent, the use of which it had discontinued long before filing the complaint.[46] The facts thus failed to establish a domestic industry based on a lack of domestic exploitation of the IP at issue.[47] Meanwhile, the Commission has defined a trade secret owner's domestic industry as "that portion of complainant's domestic operations devoted to utilization of the confidential and proprietary technology at issue which is the target of the unfair acts or practices."[48] However, it was unclear whether a similar result to *Certain Grain Oriented Silicon Steel* would be reached in a trade secret case when the complainant does not exploit the trade secret in the United States.[49] The Commission's *TianRui* decision is thus very important in this regard because it interprets the domestic industry requirement for trade secret owners more expansively than that for patent owners.

III. THE FEDERAL CIRCUIT'S *TIANRUI* DECISION

Trade secrets are protected by state law, as there is no federal protection scheme.[50] Thus, plaintiffs without completely diverse citizenship must allege a federal question in order to be heard in federal court.[51] A trade secret owner who can neither show complete diversity with a misappropriator nor allege a federal question may turn to the ITC to exercise its statutory right under § 337 against an act of unfair competition.[52] *TianRui* provides both the background and the newest holdings of ITC jurisdiction over unfair

44. Certain Processes for the Manufacture of Skinless Sausage Casings and Resulting Product (*Sausage Casings*), Inv. No. 337-TA-148/169, 1984 ITC LEXIS 137, *165–66 (July 31, 1984).

45. *See* 19 U.S.C. § 1337(a)(1)(A)(i) (2006).

46. Certain Grain Oriented Silicon Steel (*Silicon Steel*), Docket No. 1479.

47. *Id.*

48. *Id.*

49. *See* Gary M. Hnath & James M. Gould, *Litigating Trade Secret Cases at the International Trade Commission*, 19 AIPLA Q. J. 87, 99 (1991).

50. *See* Uniform Law Commission, *Acts: Trade Secrets Act*, *available at* http://www.uniformlaws.org/Act.aspx?title=Trade%20Secrets%20Act.

51. *See, e.g.*, Richtek Tech. Corp. v. UPI Semiconductor Corp., No. C 09–05659 WHA, 2011 WL 445509, at *3 (N.D. Cal. Feb. 3., 2011).

52. *See* 19 U.S.C. § 1337 (2006).

competition. This Section navigates the Commission's Initial Determination and the subsequent Federal Circuit decision in *TianRui*, and highlights the Federal Circuit's holding on two unique questions.

Section 337(a)(1)(A) of the Tariff Act prohibits "[u]nfair methods of competition and unfair acts in the importation of articles . . . into the United States, . . . the threat or effect of which is . . . to destroy or substantially injure an industry in the United States."[53] Pursuant to ITC procedures,[54] the ALJ issued an initial determination recommending action after the complainant Amsted Industries Inc. ("Amsted") filed a complaint alleging a § 337 violation by TianRui Group Co. Ltd. ("TianRui"). The complaint alleged that TianRui hired nine employees with knowledge of Amsted's confidential ABC process from Amsted's Chinese licensee, after failing to obtain a license for the process from Amsted.[55] The majority of the nine employees were bound by contractual agreements not to disclose the process. Amsted further alleged that TianRui then imported wheels incorporating the misappropriated process into the United States.[56]

Relying on the ITC's past use of tort or commercial law in investigating trade secret misappropriation, the ALJ in this case applied Illinois trade secret law to find a violation by TianRui.[57] TianRui's first defense was that Congress intended for § 337 to apply only domestically, and though TianRui admitted that it had used the trade secrets, the alleged misappropriation occurred in China. TianRui thus argued that the ITC had no jurisdiction over the matter.[58] The ALJ disagreed, holding that extraterritorial acts were relevant to the extent that they revealed a domestic injury with a domestic remedy.[59]

Secondly, TianRui argued that since Amsted had discontinued its use of the ABC process in the United States, there was no domestic industry to be injured and thus this § 337 requirement was not fulfilled.[60] The ALJ rejected this argument and ruled that the misappropriation need only cause injury to Amsted's domestic operations, whether or not Amsted actually *used* the

53. 19 U.S.C. § 1337(a)(1)(A)(i).

54. *Section 337 Investigations: Answers to Frequently Asked Questions*, U.S. INT'L TRADE COMM'N 24 (Mar. 2009), *available at* http://www.usitc.gov/intellectual_property/documents/337_faqs.pdf (last visited Nov. 17, 2012).

55. *See* TianRui Group Co. Ltd. v. Int'l Trade Comm'n, 661 F.3d 1322, 1324 (Fed. Cir. 2011).

56. *Id.* at 1325.

57. *Id.*

58. *Id.*

59. *See id.*

60. *Id.*

misappropriated process.[61] The initial determination thus explicitly rejected the "technical prong" requirement for § 337(a)(1)(A), showing the ALJ's willingness to find the existence of a domestic industry even when a domestic complainant is not practicing its asserted trade secrets in the United States.[62] The ALJ found complainant Amsted's U.S. manufacturing plants that used a different secret process (the "Griffin" process) to be a domestic industry (in the manufacture of cast steel railway wheels) subject to injury.[63]

The Commission declined to review the ALJ's finding that TianRui had violated § 337, adopting this part of the initial determination into the Commission's final opinion.[64] The Commission then decided that the appropriate remedy was a limited exclusion order "prohibiting the entry of unlicensed cast steel railway wheels or products containing same manufactured using the ABC Trade Secrets, by or on behalf of Respondents, or their affiliated companies, parents, subsidiaries, licensees, contractors, or other related business entities, or successors or assigns."[65] Respondent TianRui then appealed to the Federal Circuit, but to no avail.[66]

The ALJ's Initial Determination looked to statutory history to determine the requirements for showing a domestic industry subject to injury, and the Federal Circuit opinion echoes this analysis. The Initial Determination noted:

> The Commission has a long history that predates the *Sausage Casings* investigation, and which extends beyond it, of looking to "the realities of the marketplace," when determining the domestic industry in a trade secrets investigation or other investigation based on unfair acts other than traditional forms of intellectual property (such as patents).[67]

The opinion rehearses the 1988 statutory amendments to § 337 that came after *Sausage Casings*. These amendments created the "relation back" requirement of statutory IP to the domestic industry,[68] yet also created a

61. *Id.* at 1327.

62. Certain Cast Steel Railway Wheels, Certain Processes for Manufacturing or Relating to Same and Certain Products Containing Same, USITC Inv. No. 337-TA-655, at 79 (Nov. 20, 2001) (initial determination).

63. *Id.* at 80.

64. *Id.*

65. Certain Cast Steel Railway Wheels, Certain Processes for Manufacturing or Relating to Same and Certain Products Containing Same, USITC Inv. No. 337-TA-655, at 1 (Nov. 20, 2001) (exclusion order).

66. *See TianRui*, 661 F.3d at 1337.

67. Certain Cast Steel Railway Wheels, Certain Processes for Manufacturing or Relating to Same and Certain Products Containing Same, USITC Inv. No. 337-TA-655, Initial Determination at 77 (Nov. 20, 2001).

68. Tariff Act of 1930 § 337(a)(1)(A), 19 U.S.C. § 1337(a)(1)(B)–(E) (2006).

provision without this requirement for other acts of unfair competition.[69] The opinion thus explains:

> While injury need no longer be shown in an investigation based on [statutory IP], the complainant must prove a domestic industry related to the asserted intellectual property right. Such a specific domestic industry showing *need not be made in an investigation instituted under section (a)(1)(A)*, yet, the complainant must still prove that there is a domestic industry subject to injury.[70]

Thus in *TianRui*, the Federal Circuit found that Amsted had shown a domestic industry subject to injury despite the fact that it no longer used the misappropriated ABC process domestically because Amsted submitted evidence that TianRui's railway wheels could compete with Amsted's wheels in the United States.[71]

A. *TIANRUI* ON APPEAL IN THE FEDERAL CIRCUIT

Amsted is a U.S. company that manufactures steel railway wheels.[72] Although it owns two secret processes for making these wheels—the "ABC process" and the "Griffin process"—it no longer uses the ABC process in its domestic manufacturing.[73] TianRui manufactures steel railway wheels in China and sought but failed to obtain a license from Amsted to use the ABC process.[74] Subsequently, TianRui hired nine employees trained in the ABC process from Datong, one of Amsted's licensees in China.[75] Datong's employee code of conduct had advised all nine of these employees that the ABC process was proprietary and confidential information that they had a duty not to disclose, and all but one of these employees had signed confidentiality agreements with Datong.[76] TianRui then marketed and imported TianRui wheels made using the ABC process into the United States. Amsted filed a complaint before the ITC, alleging that the new TianRui employees misappropriated Amsted's trade secrets by disclosing to TianRui information and documents pertaining to the secret ABC process.[77]

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69. *Id.*

70. Certain Cast Steel Railway Wheels, Certain Processes for Manufacturing or Relating to Same and Certain Products Containing Same, USITC Inv. No. 337-TA-655, Initial Determination at 79 (emphasis added).

71. *TianRui*, 661 F.3d at 1324.

72. *Id.*

73. *Id.*

74. *Id.*

75. *Id.*

76. *Id.*

77. *Id.* at 1326.

On appeal, the Federal Circuit analyzed two issues—(1) whether the ITC has § 337 statutory authority over the unfair acts of competition caused by the alleged trade secret misappropriation that occurred in China; and (2) whether the importation by TianRui of wheels manufactured using the trade secrets would injure a domestic industry, even though Amsted discontinued the ABC manufacturing process in its United States operations.[78]

1. Extraterritoriality Analysis

Citing *EEOC v. Arabian Am. Oil Co.*,[79] the Federal Circuit acknowledged that there has traditionally been a presumption against extraterritorial application of U.S. laws, absent a contrary Congressional intent.[80] However, the court rejected TianRui's argument that the ITC may not apply § 337 extraterritorially for three reasons.[81] First, the court reasoned that importation, the activity being regulated in § 337, is "an inherently international transaction," since by definition it necessarily takes place between different countries.[82] Second, the court held that since the alleged activity that took place in China is only relevant to the extent that it caused injury to a domestic industry, the ITC did not apply § 337 to purely extraterritorial conduct but rather to conduct that affects a domestic industry and has a domestic remedy.[83] Finally, the court found that § 337's legislative history is consistent with the ITC's initial interpretation of the statute as allowing a consideration of foreign conduct.[84] Congress intended to honor the ITC's recommendation from a 1919 report and enacted § 337 to remedy the lack of enforcement authority or remedies for unfair competition through importation when such practices occur abroad.[85] Through this reasoning, the court legitimized the Commission's examination of the alleged acts occurring in China for purpose of finding a § 337 violation.[86]

2. Domestic Industry Analysis

The Federal Circuit held in *TianRui* that a plaintiff alleging injury of its domestic injury need not practice the misappropriated trade secret at issue.[87]

78. *Id.* at 1325.
79. EEOC v. Arabian Am. Oil Co., 499 U.S. 244, 248 (1991).
80. *TianRui*, 661 F.3d at 1328.
81. *Id.* at 1329.
82. *Id.*
83. *Id.*
84. *Id.* at 1330.
85. *Id.* at 1331.
86. *Id.* at 1332.
87. *See id.* at 1335.

Looking to the language of the § 337 provision itself, the court noted that "there is no express requirement in the general provision that the domestic industry relate to the intellectual property involved in the investigation."[88] Although TianRui emphasized the Senate's proposal to require trademarks and trade secrets to link the injured domestic industry to the protected intellectual property, the court found that this proposal was retracted and never became law, rendering this legislative intent argument ineffective.[89] Instead, the court decided that only "statutory intellectual property" (e.g., patents) had to be related to a domestic industry under a § 337 unfair competition claim, but that trade secret misappropriation claims could fulfill the injury requirement upon a showing that the misappropriation harmed a domestic industry, whether or not the plaintiff used such misappropriated trade secret domestically.[90]

3. Discussion

The *TianRui* decision was both the ITC's and the Federal Circuit's first ruling on whether a complainant must practice an asserted trade secret in the United States in order to establish the existence of a domestic industry, and whether the ITC has § 337 jurisdiction over a complaint alleging trade secret misappropriation that occurred entirely overseas.

An important difference between the facts of *TianRui* and the previous case of *Floppy Disk Drives* is that the complainant in *Floppy Disk Drives* alleged that it *would* have practiced its trade secrets domestically if not for respondent's alleged misappropriation of the actual documents containing them, whereas Amsted in the *TianRui* case had not manifested any current or future intention to practice its trade secrets domestically (although it had in the past).[91] Amsted had licensed out its ABC process trade secret to several Chinese firms.[92] Absent actual use of the asserted IP, significant licensing activities for statutory IP may establish the existence of a domestic industry[93] under § 337(a)(2), but the Federal Circuit in *TianRui* did not consider whether Amsted's trade secret licensing activities constituted exploitation of its ABC process for purpose of establishing domestic industry for non-statutory IP.

88. *Id.*
89. *Id.* at 1336.
90. *Floppy Disk Drives*, *supra* note 38.
91. *Id.*; *TianRui*, 661 F.3d at 1324.
92. *TianRui*, 661 F.3d at 1324.
93. 19 U.S.C. § 1337(a)(3)(C) (2006).

IV. LEGAL ENVIRONMENT FOR TRADE SECRET ENFORCEMENT AFTER *TIANRUI*

The *TianRui* decision signals the ITC's willingness to acknowledge the existence of a domestic industry, even in the absence of a domestic company practicing the asserted trade secrets, so long as the domestic industry is harmed by the use of that trade secret. Further, *TianRui* marks a favorable atmosphere for domestic plaintiffs who had previously been unable to establish jurisdiction over foreign misappropriators in state or district courts. In addition, the possibility of obtaining a general exclusion order at the ITC, which excludes accused products regardless of source, rather than only the products of the named respondents, may provide recourse for a trade secret owner whose information has become public and cannot be reclaimed as secret.[94] Although foreign misappropriators can argue forum non conveniens as a reason for the ITC to dismiss the case, the ITC still presents domestic complainants with a better chance of at least overcoming the jurisdictional hurdles, and the case will not be subject to transfer since the ITC is the sole agency with the authority to regulate imported products that infringe IP.[95] Respondents may have difficulties trying to prove that a foreign venue provides a better alternative forum, especially where the suggested foreign venue has insufficient expertise or willingness to punish trade secret violations, as in China. The following Sections illuminate jurisdictional hurdles present in any trade secret case involving a foreign defendant and then reassess these hurdles in light of *TianRui*.

A. JURISDICTION

The *TianRui* ruling was a novel declaration of the breadth of the ITC's power to look to acts of misappropriation occurring entirely abroad. In holding that the Commission has jurisdiction over a defendant who performed all the acts of misappropriation abroad—or, more precisely, over accused products imported into the United States made by such a defendant—the Federal Circuit created a favorable environment in the ITC for domestic trade secret holders seeking to establish both personal jurisdiction and subject matter jurisdiction over foreign defendants who typically argue that a U.S. court lacks one or both of these jurisdictional powers.

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94. *See* 19. U.S.C. § 1337(d)(2)(A).

95. Dorothy R. Auth & R. Trevor Carter, *Selecting Forum and Venue for your Patent Litigation*, PATENT LAW CENTER (March 2011), *available at* http://patentlawcenter.pli.edu/wp-content/uploads/2011/03/SELECTING-FORUM-AND-VENUE-FOR-YOUR-PATENT-LITIGATION.pdf (last viewed Jan. 30, 2013).

1. *District Court Jurisdiction*

a) District Court Subject Matter Jurisdiction

In cases where a trade secret was misappropriated abroad, obtaining subject matter jurisdiction in a district court proves more onerous than showing subject matter jurisdiction in the ITC. Trade secret matters are most commonly heard in federal court when they are adjudicated simultaneously with a federal claim under the court's supplemental jurisdiction, such as in cases where the plaintiff alleges not just trade secret misappropriation but also patent or copyright infringement.[96] Since trade secrets are protected by state rather than federal law, plaintiffs without complete diversity of citizenship with defendants must allege a federal question in their complaint—such as patent infringement—and then convince the district court to exercise its supplemental jurisdiction over trade secret claims.[97] This discretional nature of supplemental jurisdiction creates uncertainty for plaintiffs in district court.

In *Richtek*, Richtek, a Taiwanese company, alleged facts similar to those alleged by TianRui.[98] Richtek alleged that its former employees had stolen Richtek's documents and information containing "invaluable trade secret and confidential information," which aided the Taiwanese defendant, uPI, in designing power-management products that directly competed with Richtek's products.[99] Richtek further alleged that uPI sold these products, based on Richtek's misappropriated trade secrets, to customers in the United States.[100] The defendants moved to dismiss based on the district court's lack of personal jurisdiction and subject matter jurisdiction.[101]

Although Richtek argued that the district court had federal question jurisdiction over its patent and copyright claims and supplemental jurisdiction over its trade secret claims, the district court dismissed Richtek's trade secret claims.[102] The court held that exercising jurisdiction over the trade secret claims would be improper since the "contract and trade secret claims predominate over the infringement claims in the pleadings," and this predominance would become "more overwhelming" by forcing the court to

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96. JAMES POOLEY, TRADE SECRETS, § 10.07(2) (1997).

97. *See, e.g.*, Richtek Tech. Corp. v. UPI Semiconductor Corp., No. C 09–05659 WHA, 2011 WL 445509, at *3 (N.D. Cal. Feb. 3, 2011).

98. *Id.* at *1.

99. *Id.*

100. *Id.*

101. *Id.*

102. *Id.*

undertake the "nightmarish task" of supervising foreign discovery over claims residing in the realm of state rather than federal law.[103]

The fact that the alleged misappropriators were Taiwanese and allegedly misappropriated the trade secrets while living in Taiwan weighed heavily in the court's decision to deny supplemental jurisdiction and suggested instead that the parties litigate in Taiwan.[104] However, the fact that the misappropriation happened overseas was not the sole reason for the court's conclusion that it lacked subject matter jurisdiction over the trade secret claims; rather, the court emphasized the fact that relevant evidence was written in Chinese and, as such, discovery would be "a time- and resource-intensive undertaking."[105] Since *Richtek* was decided before *TianRui*, the Federal Circuit's *TianRui* decision is that much more significant, since it chose not to dismiss a case with similar facts but rather to uphold the ITC's exercise of subject matter jurisdiction over TianRui[106] despite the potential discovery burden.

b) District Court Personal Jurisdiction

Richtek, discussed in Section II.B, *supra*, did not fare any better in its attempt to show personal jurisdiction over defendants. The district court stated that it lacked personal jurisdiction over fourteen Taiwanese citizens because Richtek had failed to establish specific jurisdiction based on the Ninth Circuit's three-prong test.[107] The three prongs include:

> (1) the non-resident defendant must purposefully direct his activities or consummate some transaction with the forum or resident thereof; or perform some act by which he purposefully avails himself of the privilege of conducting activities in the form, thereby invoking the benefits and protections of its laws; (2) the claim must be one which arises out of or relates to the defendant's forum-related activities; and (3) the exercise of jurisdiction must comport with fair play and substantial justice.[108]

A major advantage of filing a § 337 complaint in the ITC is that it need not employ such tests to ascertain personal jurisdiction over foreign importers or manufacturers of accused goods. The ITC's *in rem* jurisdiction over imported products is analogous to a district court's personal jurisdiction over a defendant, discussed in Section II.B, *infra*.

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103. *Id.* at *4.
104. *Id.* at *4–5.
105. *Id.* at *4.
106. *TianRui*, 661 F.3d. at 1332.
107. *Richtek Tech. Corp.*, 2011 WL 445509, at *7.
108. Lake v. Lake, 817 F.2d 1416, 1421 (9th Cir. 1987).

2. *ITC Jurisdiction*

a) ITC Subject Matter Jurisdiction

The ITC generally has jurisdiction over unfair trade practices in the course of importation into the United States.[109] However, the Commission has interpreted "importation" broadly, finding that the ITC has jurisdiction even in cases where the unfair acts did not directly occur in the course of importation, so long as a "nexus" exists between the alleged unfair practice and importation. In *Certain Welded Stainless Steel Pipe and Tube*,[110] eight domestic complainants alleged that eleven Japanese respondents were violating § 337 by selling imported welded steel pipe and tube at unreasonably low prices, with the intent to restrain or monopolize trade and commerce in the United States.[111] The foreign manufacturers argued that the Commission lacked jurisdiction over their activities.[112] In the respondents' view, they were not involved "in the importation of articles into the United States, or in their sale by the owner, importer, consignee, or agent of either" since they sold the accused articles not directly to U.S. consumers but rather to foreign trading companies who then exported the products to the United States.[113] The Commission rejected this argument and instead found the requisite nexus between the unfair act and importation since the manufacturers *intended* for their accused products to enter and be sold in the United States.[114]

Conversely, Saxon and Newhouse note that "[a]n owner of property about to be imported into the United States can still 'turn the ship around' at the last minute and take his property home, or to anyplace else in the world."[115] Thus, Hnath and Gould posit that the Commission would have subject matter jurisdiction over a foreign company that both manufactures an accused product *and* sells that product to another foreign company while intending the product to enter and be sold in the United States.[116] If this interpretation is correct, then the Commission's subject matter jurisdiction could extend even to "innocent" importers that had no hand in or even

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109. *See* 19 U.S.C. § 1337 (2006).

110. Certain Welded Stainless Steel Pipe and Tube, USITC Inv. No. 337-TA-29 (Feb. 22, 1978).

111. *Id.* at 1.

112. *Id.* at 3.

113. *Id.*

114. *Id.* at 11–12.

115. Janet Saxon and Paul Newhouse, *Section 337 Jurisdiction and the Forgotten Remedy*, 9 CAMPBELL L. REV. 45, 50 (2012).

116. *See* Hnath & Gould, *supra* note 49, at 91.

knowledge of a seller's incorporation of misappropriated trade secrets into a product. The ITC's wide-ranging subject matter jurisdiction is particularly advantageous to domestic entities whose trade secrets were misappropriated entirely abroad and disclosed to other foreign entities.

TianRui clarified § 337's applicability to foreign acts of trade secret misappropriation. Both the complainant TianRui and dissenting Judge Kimberly Moore argued that the Commission had overstepped its subject matter jurisdiction by looking to acts of misappropriation occurring entirely in China; they alleged that § 337 was being incorrectly applied to purely extraterritorial conduct.[117] However, the Federal Circuit clarified that the ITC has power to examine and grant relief based on foreign conduct, to the extent it must do so to shield domestic industries from unfair competition.[118] The foreign conduct that took place in China is only relevant to the extent that it harmed a complainant's domestic industry, so the ITC would not apply § 337 to purely extraterritorial conduct but rather to domestically relevant factors.[119]

b) ITC "Personal" Jurisdiction

Whereas a trade secret plaintiff filing in a district court faces the possibility that the court will dismiss the case due to a lack of personal jurisdiction over a foreign defendant, the nature of a § 337 investigation focuses on goods for import, rather than the manufacturer of those goods. Thus, a foreign company that imports goods into the United States need not have any presence or other contacts with the United States in order to be subject to its jurisdiction; the *in rem* nature of § 337 investigations and remedies means that an exclusion order operates against the goods, so getting the goods to the U.S. border automatically confers jurisdiction over them.

Whereas district court litigation requires certain "minimum contacts" with the forum state,[120] complainants in a § 337 investigation may name as a respondent an entity whose contacts with the United States would not be sufficient under the district court test for personal jurisdiction.[121] Trade secret liability may even be imposed on an initially unaware respondent if it receives notice that the secret information was misappropriated yet still continues to use or disclose the information, or to import or sell an article incorporating

117. *TianRui*, 661 F.3d at 1325, 1338.
118. *See Richtek Tech. Corp.*, *supra* note 21.
119. *Id.*
120. Burger King v. Rudzewicz, 471 U.S. 462, 478 (1985).
121. Certain Composite Diamond Coated Textile Machinery Components, USITC Inv. No. 337-TA-160, Commission Memorandum Opinion at 2 (Feb. 6, 1984).

that information.[122] Section 758 of the Restatement (First) of Torts limits a respondent's obligations and provides that an innocent party, who in good faith paid value for the trade secret or relied on the secret such that imposing liability would be inequitable, would not be subject to liability under § 337.[123] The ALJ in *TianRui* looked to § 757 of the Restatement (First) of Torts to define a trade secret according to Illinois state law;[124] however, the Federal Circuit disagreed with the ALJ's application of Illinois law, so it is unclear whether the Restatement is a proper source for determining liability for innocent trade secret users.[125]

c) The Related Jurisdictional Requirement of Domestic Industry

Although the ITC does not need to analyze questions of personal jurisdiction due to the *in rem* nature of imported goods, the Commission's authority to issue a § 337 remedy is still contingent upon a trade secret owner's showing that it has a domestic industry subject to injury by acts of unfair competition.[126] In the recent decision *Certain DC-DC Controllers*,[127] the ITC, citing to *TianRui* , agreed with the ALJ that Richtek had successfully shown the existence of a domestic industry as defined in § 337(a)(1)(A). The ALJ based this finding on Richtek's significant investment in physical facilities in the United States, personnel costs for U.S. employees, and the devotion of research and development time related to the DC-DC controllers at issue.[128] Ultimately, however, Richtek failed to demonstrate that said domestic industry was subject to injury—an additional requirement of § 337(a)(1)(A)—which resulted in the ALJ denying its motion for summary judgment.[129] To ascertain whether a respondent has caused substantial injury, the Commission considers lost sales, underselling by respondents, a drop in complainant's profits or workforce, and declining profitability and revenue.[130] Complainants may also fulfill the injury requirement upon showing that the

122. RESTATEMENT (FIRST) OF TORTS § 758 (1939).
123. *Id.*
124. *TianRui*, 661 F.3d at 1325.
125. *See id.* at 1327.
126. *See* 19 U.S.C. § 1337(a) (2006).
127. Certain DC-DC Controllers and Products Containing the Same, USITC Inv. No. 337-TA-698.
128. Certain DC-DC Controllers and Products Containing the Same, USITC Inv. No. 337-TA-698, at 7–8 (July 13, 2010) (Order No. 39).
129. *Id.* at 9.
130. *Id.* at 6–7 (citing Certain Electric Power Tools, Battery Cartridges and Battery Chargers, USITC Inv. No. 337-TA-284, at 246 (July 9, 1989) (unreviewed initial determination)).

imported infringing products will cause *future* injury, if there are, for example, foreign cost advantages, production capacity, and underselling potential.[131]

This broad interpretation of the definition of a domestic industry increases the chance for trade secret owners to successfully establish subject matter jurisdiction before the ITC, rather than having to engage in multi-part jurisdictional tests and convince a district court judge to exercise jurisdiction over a foreign defendant having performed illegal acts abroad. Generally, any imported goods that compete with domestic goods will invoke the ITC's authority, and "the traditional prerequisites of establishing a nexus between the foreign conduct and United States trade sufficient to find personal and subject matter jurisdiction in a United States tribunal over the foreign entity are unnecessary."[132]

While a complainant alleging trade secret misappropriation must still show that an established domestic industry is subject to injury, this requirement appears to be a low bar under *TianRui*. In *TianRui*, the Commission, and subsequently the Federal Circuit, found that Amsted had fulfilled the injury requirement by simply submitting evidence indicating that the imported TianRui wheels could directly compete with wheels domestically produced by Amsted.[133] "That type of competition" is sufficient to show a domestic industry subject to injury,[134] indicating that injury is a somewhat trivial hurdle for complainants alleging standard fact patterns of trade secret misappropriation and subsequent importation of products incorporating them.

B. REMEDIES

In district courts, a trade secret owner may seek monetary damages for the actual loss caused by the misappropriation, any additional unjust enrichment by the misappropriator,[135] and in exceptional cases (e.g., where the plaintiff can show malice), punitive damages or attorney's fees.[136] By contrast the ITC does not grant monetary damages, so § 337 complainants seeking recompense must file a complaint in a state or district court. Colleen

131. *Id.* at 248.

132. Kerry L. Bundy & Timothy J. Cruz, *Should US Trade Secret Laws Extend to Foreign Countries*, LAW360, http://www.faegrebd.com/webfiles/Should%20US%20Trade%20Secret%20Laws%20Extend%20To%20Foreign%20Countries.pdf (last visited Feb. 5, 2013).

133. *TianRui*, 661 F.3d at 1337.

134. *Id.*

135. Uniform Trade Secrets Act § 3(a) (1985).

136. *See, e.g.*, Roton Barrier, Inc. v. Stanley Works, 79 F.3d 1112, 1120 (Fed. Cir. 1996).

Chien notes that parallel litigation is not uncommon in patent cases.[137] Her 2008 empirical study showed that at least sixty-five percent of ITC cases involved patents that were also at issue in district court litigation between the same parties.[138] She notes that her findings "undermine to some degree the argument for the necessity of the ITC: that without it, parties would not have their cases heard."[139] However, she acknowledges that the ITC's remedies may serve part of a "broader enforcement strategy"[140] and may also be more popular with complainants naming foreign respondents. In fact, eighty-five percent of ITC patent cases involved at least one foreign respondent, compared to only sixty-seven percent of district court cases.[141]

After a finding of a § 337 violation, the ITC may issue a general exclusion order or limited exclusion order against foreign entities and a cease and desist order against illegal activities by U.S. entities.[142] A limited exclusion order is the default remedy for a finding of a § 337 violation.[143] The duration of a limited exclusion order in a trade secret investigation is based upon a "reasonable research and development period," or an "independent development time" for the trade secret(s) at issue.[144] A limited exclusion order is only useful for preventing infringing products from entering the United States if they are manufactured by the respondent named in a § 337 complaint, and a cease and desist order is only valid against U.S. entities.

The ITC's appeal to domestic IP owners wronged by foreign entities is not unique to patent holders; after *TianRui*, the gateway to the benefits of a § 337 investigation has been opened to cases involving trade secret misappropriation that occurs entirely abroad and where a complainant is not exploiting the trade secret at issue. Despite the unavailability of damages in the ITC, the Commission's authority to issue exclusion orders offers perhaps an even more attractive injunctive remedy than what is available in district courts.

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137. Colleen V. Chien, *Patently Protectionist? An Empirical Analysis of Patent Cases at the International Trade Commission*, 50 WM & MARY L. REV. 63, 92 (2008).

138. *Id.*

139. *Id.* at 93.

140. *Id.* A broader enforcement strategy may include filing multiple suits in both district courts and the ITC, enhancing IP protections at the manufacturing stage, and establishing local enforcement mechanisms.

141. *Id.* at 94.

142. 19 U.S.C. § 1337(d) (2006).

143. McDermott Will & Emery, FAQ RE § 337 ACTIONS (Jan. 1, 2010), http://www.itc337update.com/other-topics/337-background/faq-re-337-actions/.

144. Certain Apparatus for the Continuous Production of Copper Rod, Inv. No. 337-TA-52, at 67 (Nov. 1979) (commission opinion).

1. *District Court Injunctions and ITC Exclusion Orders*

A trade secret owner whose secret has been misappropriated and incorporated into products competing with its own must strive to eliminate the competing products from the market as soon as possible to avoid substantial losses of revenue.[145] James Pooley notes that "[b]ecause exclusivity is the hallmark of value, and because damages are difficult to identify and measure (and sometimes to collect), a victim's most effective remedy is to prevent violation of its rights."[146]

At the ITC, while a limited exclusion order excludes products only from respondents, a general exclusion order is a swift way to prevent offending products made by other manufacturers from entering the U.S. market.[147] In order to obtain a general exclusion order, however, a complainant must show either that there is a risk that the respondent would circumvent a limited exclusion order, or that the source of the infringing products is too difficult to determine.[148] The Commission's decision to issue a general exclusion order must be founded upon "substantial, reliable, and probative evidence."[149]

In a recent § 337 patent-based case, the Commission issued Crocs a general exclusion order preventing knockoffs of its shoes from entering the country. This order "effectively eliminated the infringing shoes overnight and preserved the market for Crocs."[150] True to the heightened standards for getting a general as opposed to limited exclusion order, Crocs had shown that the infringing shoes were being exported from untraceable sources located in numerous countries, making circumvention of a limited exclusion order quite likely.[151]

District court injunctions may be limited or general as well. Courts have the discretion to issue one of two types of injunctions: a use injunction or a production injunction.[152] A use injunction would permanently enjoin a defendant from using the misappropriated information, noting that a process "substantially derived" from plaintiff's trade secrets would also constitute an impermissible "use" under such an injunction.[153] The alternative to a use

145. JAMES POOLEY, TRADE SECRETS, § 7.02(2)(a) (1997).

146. *Id.*

147. *See* 19 U.S.C. § 1337(d) (2006).

148. *See FAQ re § 337 Actions*, *supra* note 143.

149. 19 U.S.C. § 1337(g)(2)(B).

150. Donald R. Dinan, *The ITC remains hot for IP protection*, LEXOLOGY (Feb. 13, 2012), http://www.lexology.com/library/detail.aspx?g=e64ced60-2888-4e2a-86c9-57725971c23f.

151. Certain Foam Footwear, USITC Inv. No. 337-TA-567, 71 Fed Reg 27,514–27,515 (May 11, 2006) (notice of decision not to review initial determination).

152. *See, e.g.*, Wyeth v. Natural Biologics, Inc., 395 F.3d 897 (8th Cir. 2005).

153. *Id.*

injunction is a production injunction, which enjoins a defendant from manufacturing certain products for a certain amount of time. However, district courts are resistant to granting such a broad remedy, such that "normally the misappropriator is only barred from using the particular secrets he or she has taken" rather than being slapped with an "extreme" production injunction.[154]

For example, in *General Electric v. Sung*, a jury found that Iljin, the defendant, misappropriated 487 pages of General Electric's documents containing trade secrets.[155] The court noted that "[t]rade secret protection, however, extends not only to the misappropriated trade secret itself but also to materials 'substantially derived' from the trade secret."[156] Thus, the court was tasked with determining whether an injunction should be limited to the misappropriated documents or extended to cover Iljin's process developed through using those documents.[157]

Courts must also determine whether an injunction should encompass all of a defendant's manufacturing activities or only those related to the use of a misappropriated trade secret. Pooley states that "[w]here the defendant has shown defiance or evaded prior court orders, a court may enter a broad order shutting down the business."[158] However, "in practice these 'product injunctions' are relatively rare, and imposed only in the extreme circumstances noted."[159] A production injunction is appropriate "in circumstances where a use injunction would be ineffective in eliminating the competitive advantage gained by the misappropriator."[160] The court elaborated on the rationale behind this test, explaining that "where the misappropriated trade secrets are 'inextricably connected' to the defendant's manufacture of the product, a use injunction is ineffective because the misappropriator cannot be relied upon to 'unlearn' or abandon the misappropriated technology."[161] An "inextricable connection" is found "where the trade secrets form such an integral and substantial part of a comprehensive manufacturing process or technology that, absent the misappropriated trade secrets, the defendant would not be able independently to manufacture or design a comparable product."[162] In *Sung*,

154. O2 Micro v. Monolithic Power Sys., 399 F. Supp. 2d 1064, 1070 (N.D. Cal. 2005).
155. General Electric Co. v. Sung, 843 F. Supp. 776, 778 (D. Mass. 1994).
156. *Id.*
157. *Id.* at 779.
158. JAMES POOLEY, TRADE SECRETS, § 10.07(2) (1997).
159. *Id.* at § 7.02(2)(d).
160. General Electric Co. v. Sung, 843 F. Supp. 776, 779 (D. Mass. 1994).
161. *Id.* at 780.
162. *Id.*

the court found this type of inextricable connection. Iljin had received from Sung stolen documents, including "a veritable blueprint of [General Electric's ("GE")] saw grade diamond process, a process that took GE over twenty years to develop."[163] The evidence further indicated that Iljin would not have been able to manufacture any saw grade diamond absent these stolen documents, thus inextricably connecting Iljin's manufacture of saw grade diamond to the stolen GE trade secrets and warranting a production injunction.[164] In addition, the Eighth Circuit held that "[t]he defendant's demonstrated untrustworthiness can . . . be a factor in issuing a product injunction."[165] Thus, the concern that a defendant will violate a narrower form of injunctive relief may lead both the ITC and district courts to issue a broader injunctive relief, i.e., a general exclusion order at the ITC and a production injunction at district courts, respectively.

An ITC limited exclusion order is analogous to the district court production injunction. By enforcing a limited exclusion order at the border and preventing a product from entering the U.S. market at all, the ITC effectively issues a production injunction by excluding any product made by the named respondent which incorporates the infringed or misappropriated IP.[166] The advantage of filing an initial complaint with the ITC as opposed to a district court is that the "inextricable connection" test is not required for the issuance of a limited exclusion order. Rather, a limited exclusion order requires only a showing of a § 337 violation.[167] In addition, even the more favorable district court injunctive relief—a production injunction—is comparable only to the less desirable ITC remedy, a limited exclusion order. Both a limited exclusion order and a production injunction act only against a specific manufacturer.[168] A general exclusion order, on the other hand, prohibits entry of a certain offending product, regardless of its manufacturer.[169] A general exclusion order thus provides an immensely useful remedy for domestic trade secret owners, because a general exclusion order would work against third parties having no involvement or even knowledge

163. *Id.*

164. *Id.*

165. *See* Wyeth v. Natural Biologics, Inc., 395 F.3d 897 (8th Cir. 2005) (issuing a post-trial product injunction since the court did not trust defendant to stop using the misappropriated process nor to obey a court order allowing it to exercise discretion).

166. 19 U.S.C. § 1337(g)(2) (2006).

167. *See id.* § 337(d)(1).

168. *Id.*; 19 U.S.C. § 1337(d)(2).

169. *Id.* § 337(g)(2).

of the complainant's trade secret, even after the information has lost its secrecy status.[170]

Hnath and Gould may be understating the power of a general exclusion order when they call the provisions of this remedy "attractive" to complainants.[171] However, potent as a general exclusion order may be, no complainant has ever been able to meet the standards for obtaining one in a trade secret misappropriation case.[172] Hnath and Gould speculate that a complainant might need to provide a unique feature through which its products could be identified, as U.S. Customs and Border Protection ("CBP") would otherwise have difficulties determining whether a certain import was made using a misappropriated process.[173] A complainant may also have difficulty proving potential circumvention of a limited exclusion order or establishing a pattern of violation that makes it difficult to identify the infringing products' origin, especially in cases where the alleged misappropriator is a foreign company and evidence may be impractical to obtain or interpret if in a different language. This difficulty may be partially offset by the accelerated proceeding at the ITC, which generally also translates into accelerated discovery periods and shortens the duration a complainant must wait for relief from the alleged unfair acts of competition. However, as detailed *infra*, conducting foreign discovery remains a daunting task.

2. *Foreign Discovery at the ITC May Affect the Attainability of Remedies*

District courts and the ITC share essentially the same modes of discovery—interrogatories, requests of admissions, requests for documents, and depositions.[174] However, one advantage of the ITC is its nationwide service of ITC subpoenas for deposition or trial testimony, as well as testimony, documents, and plant inspections of third parties.[175] Furthermore, the ITC may prove more effective than a district court with respect to overseas discovery, as § 337 respondents have a greater incentive to comply with discovery requests. Commission Interim Rule 210.36 provides:

> (b) *Failure to comply with order compelling discovery.* If a party or an officer of a party fails to comply with an order including, but not limited to, an order for the taking of a deposition or the production

170. *Id.* § 337(g)(2).
171. *See* Hnath & Gould, *supra* note 49.
172. *Id.* at 111.
173. *Id.* at 111–13.
174. *See id.*
175. See Certain Apparatus for the Continuous Production of Copper Rod, USITC Inv. No. 337-TA-52 (Mar. 23, 1979) (commission order).

> of documents, an order to answer interrogatories, an order issued pursuant to a request for admissions, or an order to comply with a subpoena, the administrative law judge, for the purpose of permitting resolution of relevant issues and disposition of the investigation without unnecessary delay despite the failure to comply, may take such action in regard thereto as is just.[176]

The rule then provides examples of sanctions available to the ALJ, which include construing the evidence adversely to the offending party, taking certain matters as established, limiting the evidence the offending party may present, or rendering an initial decision against the offending party.[177] These major repercussions for non-compliance provide compelling reasons for even foreign companies to tender the requested information. Thus, the ITC is likely to see more cases where a foreign respondent performed all the acts of misappropriation abroad because of the potential dire consequences resulting from non-compliance of a discovery order in combination with *TianRui*'s cementation of the ITC's jurisdiction over such cases.

After *TianRui*, complainants may also rely on the ITC's efficacy in obtaining foreign discovery to achieve—for the first time—the higher showing required for a general exclusion order. *TianRui* expanded the ITC's authority to look at purely foreign conduct to determine whether there was an unfair act of competition (such as trade secret misappropriation). In looking for acts of unfair competition abroad, perhaps domestic complainants will also be able to uncover evidence that a respondent plans to evade a limited exclusion order, a factor which helps sway the court in favor of a general exclusion order. The chance of uncovering evidence of evasion is greatly increased merely by the fact that an ITC complainant can discover information from a party over which a district court would not even have the jurisdiction to require any compliance with discovery.

3. ITC Cease and Desist Orders

Aside from exclusion orders, the Commission can also order a § 337 violator to "cease and desist from engaging in the unfair methods or acts involved," which may include manufacture and sale of infringing articles.[178] The ITC enumerated two requirements for issuing a cease and desist order in *Certain Large Video Matrix Display Systems and Components Thereof*, which include "(1) a finding of jurisdiction over the subject matter . . . and (2) a finding of in personam jurisdiction over the persons whose acts are sought to be

176. 19 C.F.R. § 210.36(b) (1994).
177. Genentech, Inc. v. Int'l Trade Comm'n, 122 F.3d 1409, 1418 (Fed. Cir. 1997).
178. 19 U.S.C. § 1337(f) (2006).

enjoined."[179] This remedy is useful in cases where a respondent has already stockpiled a significant number of accused articles in the United States, perhaps at one of its subsidiary companies. Since an exclusion order is enforced at the border, it would be ineffective to prevent unfair competition by articles already having entered the United States. However, the *in personam* requirement for cease and desist orders makes this remedy unavailable in cases where foreign companies are engaging in manufacturing activities abroad.

C. ENFORCEMENT OF REMEDIES

When the ITC issues an exclusion order, enforcement is carried out by CBP agents, at no expense to plaintiffs.[180] Conversely, plaintiffs in district courts are not afforded such free service. In *Sung*, the district court provided GE with the right to appoint an auditor to ensure Sung's compliance with the ITC's order not to manufacture saw grade diamond for seven years,[181] with the caveat that this right of audition came at GE's expense.

On the other hand, the Government Accountability Office ("GAO") has identified some weaknesses in the enforcement of exclusion orders. A March 2008 report by the GAO identified "procedural weaknesses" with CBP's enforcement of issued exclusion orders.[182] To enforce an exclusion order, CBP posts "Trade Alerts" informing ports about new orders and also creates electronic alerts about incoming shipments potentially containing infringing goods that should be examined.[183] The GAO reported that CBP's enforcement of exclusion orders has been "limited and declining."[184] U.S. companies and their attorneys have expressed frustration at the lack of rigorous enforcement:

> Representatives said companies spend millions of dollars in legal fees to win a U.S. International Trade Commission ruling for their products, but that the effectiveness of the ruling is weakened by poor enforcement at CBP. Private sector representatives also stated that CBP's enforcement of the orders is not transparent because

179. Certain Large Video Matrix Display Systems, USITC Inv. No. 337-TA-75, 213 U.S.P.Q. 475, 488 (June 19, 1981).

180. 19 C.F.R. § 12.39 (2007).

181. General Electric Co. v. Sung, 843 F. Supp. 776, 782 (D. Mass. 1994).

182. U.S. GOV'T ACCOUNTABILITY OFFICE, GAO-08-157, INTELLECTUAL PROPERTY: FEDERAL ENFORCEMENT HAS GENERALLY INCREASED, BUT ASSESSING PERFORMANCE COULD STRENGTHEN LAW ENFORCEMENT EFFORTS 23 (2008).

183. *Id.* at 23–24.

184. *Id.* at 25.

> CBP does not notify companies of any exclusions that have occurred, impeding their ability to follow through on the matter.[185]

The GAO has identified further problems with enforcement procedures, noting a lack and delay of Trade Alert postings and updates.[186]

The deficiency of CBP's enforcement efforts has led some attorneys to suggest methods of aiding CBP officials with enforcement.[187] Such affirmative steps include providing officials with information identifying the ports and expected entry times likely to be used by violating importers and creating "advanced testing methods" for recognizing violating imports in collaboration with CBP officials.[188] Inevitably, engaging in these enforcement activities will have a cost to the plaintiff, so in deciding whether the ITC or district court will provide the most favorable remedy, the level of supplemental enforcement activities should factor into that decision.

Despite the shortcomings of CBP's enforcement of ITC exclusion orders, potential trade secret complainants are unlikely to be deterred from using the ITC as a forum for investigating foreign misappropriators since trade secret owners are likely to face similar jurisdictional or enforcement problems with district court injunctions.[189] U.S. courts have taken care in their decisions to explain that no remedies are intended to regulate purely extraterritorial conduct or to intrude on the sovereignty of foreign states to enforce their own laws.[190] A court lacking jurisdiction over a defendant would not be able to effectively enforce a remedy, even if it allowed litigation to get to that stage. Indeed, the presumption against U.S. laws regulating sovereign foreign conduct is what necessitated the Federal Circuit's extraterritoriality analysis in *TianRui*.[191] The Federal Circuit acknowledged that U.S. laws typically apply "only within the jurisdiction of the United States,"[192] yet *TianRui* acknowledged that unfair competition claims under § 337 may rebut

185. *Id.*

186. *Id.* at 26.

187. Christopher F. Corr & Monisha Deka, *Avoiding 3 Problems With ITC Section 337 Remedies*, LAW360 (Feb. 2009), http://www.whitecase.com/files/Publication/36cdb811-8316-4614-a38d-2f3b331c0bcb/Presentation/PublicationAttachment/6f3066ac-3cd1-4440-a7a8-57951d1ce620/article_Avoiding_3_problems.pdf.

188. *Id.*

189. *See, e.g.*, General Electric Co. v. Sung, 843 F. Supp. 776, 782 (D. Mass. 1994) (putting the financial responsibility on plaintiff General Electric to ensure defendant's compliance with an injunction).

190. *See, e.g.*, TianRui Group Co. Ltd. v. Int'l Trade Comm'n, 661 F.3d 1322, 1330 (Fed. Cir. 2011).

191. *Id.* at 1328.

192. *Id.* (quoting EEOC v. Arabian Am. Oil Co., 499 U.S. 244, 248 (1991)).

this presumption and allow the ITC to scrutinize foreign conduct and choose to implement a domestic remedy against foreign unfair conduct.

Meanwhile, federal courts that issued IP-related injunctions may also start enforcing a more hardline stance with regard to foreign entities. In May 2012, the Federal Circuit in *Merial Ltd. v. Cipla, Ltd.* upheld a district court's contempt finding against an India-based company that failed to appear for a court proceeding, despite the defendant Cipla's allegation that the district court lacked personal jurisdiction over it.[193] Cipla violated a district court injunction prohibiting "any act that . . . *causes or induces* infringement" of the '329 patent."[194] Judge Lourie ruled that "where a foreign party, with the requisite knowledge and intent, employs extraterritorial means to actively induce acts of direct infringement that occur within the United States, such conduct is not categorically exempt from redress under [35 U.S.C.] § 271(b)."[195] Although this case involved patent infringement rather than trade secret misappropriation, it is perhaps indicative of the trend of injunction enforcement. The Federal Circuit's ruling may signal to foreign companies that they must contest U.S. jurisdiction over their actions sooner in the course of litigation, rather than electing not to appear and relying on an *ex post* finding of a lack of jurisdiction, since an incorrect prediction can lead to contempt charges after the fact.[196]

Similarly, a U.S. District Court for the Eastern District of New York indicated its strong stance against overseas violations of U.S. court-issued injunctions in an antitrust case, which prompted the first ever settlement by a Chinese company in a U.S. cartel case.[197] In *In Re Vitamin C Antitrust Litigation*, U.S. plaintiffs alleged violations of U.S. antitrust law by Chinese corporate defendants. The defendants had fixed the price (allegedly per the Chinese government's requirements) of Vitamin C exported from China to the United States at above market prices.[198] Although the defendants argued that the court could not enforce injunctive relief against a foreign corporation, Judge Brian Cogan ruled that a U.S. district court can (and will) enforce such injunctions:

193. Merial Ltd. v. Cipla Ltd., 681 F.3d 1283, 1303 (Fed. Cir. 2012).

194. Merial Ltd. v. Cipla Ltd., No. 3:07–CV–125 (CDL), 2011 WL 2489753, at *12 (M.D. Ga. June 21, 2011) (contempt order).

195. Merial Ltd. v. Cipla Ltd., 681 F.3d 1283, 1302–03 (Fed. Cir. 2012).

196. *See id.*

197. *See, e.g.*, In re Vitamin C Antitrust Litig., Nos. 06–MD–1738 (BMC)(JO), 05–CV–0453, 2012 WL 2016824 (E.D.N.Y. June 4, 2012).

198. *Id.* at *6.

> In this case, however, plaintiffs are not asking this Court to enjoin uniquely foreign behavior or to force China to change its domestic policies with respect to price-fixing. Instead, plaintiffs ask this Court to enjoin private companies from engaging in behavior that takes place on foreign soil but is directed toward the United States. This is indisputably permissible.[199]

Subsequent to this ruling, the plaintiffs settled with Aland, the defendant. Note that the *TianRui* court used similar language in its extraterritoriality analysis, concluding that importation is an inherently international act and that the court looks to foreign conduct only to the extent that such activities are directed toward the United States.[200]

Notwithstanding this favorable case for domestic plaintiffs, the terrain for district court enforcement of injunctions abroad is by no means firm, and U.S. companies may still have more luck with enforcement by CBP. As discussed *supra*, whereas complainants that have prevailed in the ITC have the advantage of having CBP enforce an exclusion order at the U.S. border, district courts have either imposed the costs of auditing compliance on the plaintiff, or worse, have left the plaintiff with no mechanism for enforcement because of extraterritoriality problems. Additionally, to comply with an exclusion order, the respondent bears the burden to show that it is not attempting to import products that use a misappropriated trade secret, whereas the burden to ensure compliance with a district court injunction lies with the plaintiff, as shown in *Sung*.

Finally, to disincentivize circumvention of injunctions, a district court may punish a violation of an injunction by issuing monetary penalties or imprisonment.[201] Similarly, the ITC may deter repeated attempts to violate an exclusion order by issuing a seizure and forfeiture order, whereby the articles in violation of § 337 are seized, forfeited to the United States, and disposed of under Customs laws.[202] Enforcement of injunctive remedies in both the ITC and district court is far from seamless, but the remedies in theory provide domestic trade secret owners with strong recourse against wrongful misappropriation.

199. *Id.*
200. *TianRui*, 661 F.3d at 1329.
201. 19 C.F.R. § 210.75(b)(6) (2008).
202. 19 U.S.C. § 1337(i) (2006), as implemented by 19 C.F.R. § 12.39(c) (2007).

V. WILL THERE BE AN UPSWING IN TRADE SECRET MISAPPROPRIATION COMPLAINTS AT THE ITC?

The *TianRui* court clarified that a complainant could show the existence of a domestic industry even without exploiting the asserted trade secret in the United States and established that the ITC has § 337 jurisdiction over a complaint alleging trade secret misappropriation that occurred entirely overseas.[203] These newly announced standards may disrupt the status quo by inviting a relatively larger volume of trade secret cases in the ITC, just as changing standards in the past disturbed the balance of venue choices for non-practicing entities.

After the 2006 *eBay v. MercExchange* decision, patentees had a more difficult standard for obtaining a permanent injunction in district court.[204] Prior to *eBay*, the Federal Circuit automatically issued permanent injunctions against patent infringers, absent extraordinary circumstances.[205] In the *eBay* decision, the Federal Circuit announced a four-part test for courts to consider before issuing a permanent injunction. From then on, a patent holder must show: "(1) that it has suffered an irreparable injury; (2) that remedies available at law, such as monetary damages, are inadequate to compensate for that injury; (3) that, considering the balance of hardships between the plaintiff and defendant, a remedy in equity is warranted; and (4) that the public interest would not be disserved by a permanent injunction."[206]

By undermining a patentee's ability to obtain a permanent injunction in district court, the Federal Circuit made the ITC a comparatively more attractive venue for non-practicing entities, since they could obtain exclusion orders—having the same effect as a permanent injunction—without submitting to this four-part test and instead showing a technical prong and an economic prong (including licensing activities) of the plaintiff's IP.[207] As may be expected, complaints filed in the ITC by patent holders increased in the years following *eBay*.[208] The percentage of complainants relying on licensing to establish ITC jurisdiction grew from thirteen percent of § 337

203. *Id.*

204. eBay Inc. v. MercExchange, L.L.C., 547 U.S. 388, 391 (2006).

205. Benjamin Petersen, *Injunctive Relief in the Post-eBay World*, 23 BERKELEY TECH. L.J. 193, 194 (2008).

206. *eBay*, 547 U.S. at 391.

207. Petersen, *supra* note 205, at 194.

208. USITC, FACTS AND TRENDS REGARDING USITC SECTION 337 INVESTIGATIONS (June 18, 2012), http://www.usitc.gov/press_room/documents/featured_news/337facts.pdf.

complainants in 2000, to twenty-six percent in 2009, and to thirty-five percent in the first eight months of 2010.[209]

A historical high of sixty-nine § 337 investigations were instituted in 2011.[210] However, even prior to *eBay* and *TianRui*, the ITC was an attractive forum for IP holders for numerous reasons. The span of an entire ITC investigation is usually just twelve to eighteen months, compared to forty-four months for a district court case.[211] Further, as long as a complaint complies with ITC rules and has an adequate basis for further investigation, the Commission has a statutory obligation to institute an investigation upon the filing of a complaint and certification under oath.[212] Although this means that an investigation is not automatically commenced upon filing of a complaint, the standard for successfully starting an investigation is not particularly high. The relative ease with which a complainant can cause the Commission to institute an investigation is another advantage of the ITC over a district court. Discovery may begin once a § 337 is instituted and before respondent has even been given a chance to answer, whereas a district court may throw out a plaintiff's trade secret claim and preclude any discovery on the matter.

1. *Cases Similar to* TianRui *Are Already Being Filed*

Although the Federal Circuit handed down its *TianRui* decision fairly recently, two U.S. companies have already filed § 337 complaints based on a foreign entity's misappropriation of trade secrets outside of the United States. In January 2012, the ITC instituted an investigation based upon a complaint by Twin-Star, which alleged that its former employee in China had misappropriated its trade secrets (entirely abroad), formed a new company based upon them, and imported and sold electric fireplaces that directly competed with those of Twin-Star.[213]

Similarly, the New York-based company SI Group filed a § 337 complaint in May 2012, alleging trade secret misappropriation and

209. *See* Robert Farm & Ashley Miller, THE RISE OF NON-PRACTICING ENTITY LITIGATION AT THE ITC: THE STATE OF THE LAW AND LITIGATION STRATEGY, 2 (Nov. 8, 2010), *available at* http://www.utcle.org/eLibrary/preview.php?asset_file_id=27870.

210. USITC, NUMBER OF INVESTIGATIONS INSTITUTED BY CALENDAR YEAR, http://www.usitc.gov/intellectual_property/documents/cy_337_institutions.pdf (last visited Feb. 1, 2013).

211. U.S. Courts, FEDERAL COURT MANAGEMENT STATISTICS, www.uscourts.gov/fcmstat/index.html (last visited Jan. 18, 2013).

212. 19 U.S.C. § 1337(b)(1) (2006).

213. Certain Electric Fireplaces, Components Thereof, Manuals for Same, and Products Containing Same, Certain Processes for Manufacturing or Relating to Same, and Certain Products Containing Same, USITC Inv. No. 337-TA-826.

subsequent importation to the United States of offending products by multiple companies based both domestically and abroad. In particular, the complaint stated that Sino Legend "deliberately poached a key employee" from SI Group (Shanghai) Co. in China.[214] Sino Legend then imported into the United States tackifiers made using SI Group's trade secrets, which would compete directly with SI Group's domestic tackifier market.[215] SI Group thus sought an exclusion order for "all products imported, sold for importation, and/or sold after importation, into or within the United States, comprising or made with tackifiers manufactured by or on behalf of Sino Legend using a process that included SI Group Trade Secrets."[216] In view of these allegations and demand for relief, the ITC launched an investigation on June 20, 2012, with trial scheduled to start in February 2013.[217]

Notably, SI Group stated that it had already sought relief from the Chinese government by filing a "report for crime" in 2008 and commencing Chinese civil proceedings in 2010. However, SI Group alleged in its ITC complaint that the Chinese courts "have not taken action to stop the misappropriation."[218] Thus, this case exemplifies how U.S. plaintiffs frustrated with a lack of foreign options for relief may turn to the ITC for a more certain domestic remedy. The ITC's willingness to look to foreign conduct in determining whether to issue an exclusion order—a standard made clear by the *TianRui* ruling—offers another legal option for U.S. companies who have been unsuccessful in their efforts to engage the legal systems of foreign countries, which may not enforce IP rights as rigorously as the U.S. government. Already, attorneys have recommended the ITC as the "best, fastest, and easiest tool" to prevent unfair competition by foreign entities.[219] Trade secret misappropriation cases will likely take up a more substantial portion of the ITC's docket, as it becomes clear that the ITC is an appropriate adjudicative body for such disputes.[220]

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214. Certain Rubber Resins and Processes for Manufacturing Same, Inv. No. 337-TA-849.

215. *Id.*

216. *Id.*

217. *Id.*

218. *Id.*

219. *See, e.g.*, Daniel Quick, *OESA Legal Corner: Using the ITC to Stop Trade Secret Misappropriation at the Border*, OESA (Feb. 2012), http://www.oesa.org/Publications/OESA-News/February-2012/OESA-Legal-Corner.html.

220. Daniel C. Winston & Margaret E. Ives, *Strategies For Fighting Global Trade Secret Theft*, LAW360, http://www.choate.com/uploads/113/doc/ives-winston-law360-strategies-for-fighting-global-trade-secret-theft.pdf/ (last visited Feb. 1, 2013).

VI. CONCLUSION

The Federal Circuit in *TianRui* widened the avenues for domestic victims of foreign trade secret misappropriations by explicitly allowing the examination of entirely foreign conduct, and concurrently rejecting the contention that a § 337 claimant must domestically exploit the asserted trade secrets. Not only can domestic trade secret owners now block the importation of products made using misappropriated trade secrets that they are not currently exploiting in the United States, but the ITC may issue general exclusion orders to be enforced by CBP against a type of product made by foreign companies besides the named respondent. This makes the ITC an immensely important forum where complainants may reclaim control over their market share even after a trade secret has lost its secrecy status. In some cases, an ITC exclusion order may be the *only* remedy to prevent a misappropriator from unfairly competing with domestic goods. The effectiveness and availability of ITC remedies for U.S. companies may make domestic companies more willing to continue their collaboration with foreign companies, especially in China, since they should now be more secure in their ability to combat and prevent trade secret misappropriation when a foreign entity with unscrupulous motives seeks to gain an unfair advantage.

ACCIDENTALLY ON TARGET: THE *MSTG* EFFECTS ON NON-PRACTICING ENTITIES' LITIGATION AND SETTLEMENT STRATEGIES

Alex S. Li†

By making settlement-related documents discoverable, the *In re MSTG*[1] decision may lessen the sting of non-practicing entity ("NPE")-related litigation. Over the past decade, the rise of NPEs has had a profound impact on the patent ecosystem.[2] Growing at an "alarming" rate, NPE-related litigation has become a significant percentage of all patent lawsuits filed.[3] Recognizing the problem, both the United States Supreme Court and the Federal Circuit have taken steps to control NPE-related litigation through a series of landmark decisions.[4] These judicial doctrines have limited the reach

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1. *In re* MSTG, Inc., 675 F.3d 1337, 1348 (Fed. Cir. 2012), *reh'g denied*, 468 Fed. App'x. 994 (Fed. Cir. 2012).

2. *See* Daniel P. McCurdy, *Patent Trolls Erode the Foundation of the U.S. Patent System*, SCIENCE PROGRESS 78–79, *available at* http://www.scienceprogress.org/wp-content/uploads/2009/01/issue2/mccurdy.pdf [hereinafter *Erode Foundation*] ("By far, the most significant and destabilizing change in the patent environment since 2003 has been the dramatic increase in the growth, financing, and patent acquisitions of so called non-practicing entities."); *see also President Obama Admits that Patent Trolls Just try to 'Extort' Money; Reform Needed*, TECHDIRT (Feb. 14, 2013, 2:45PM), http://www.techdirt.com/articles/20130214/14351821988/president-obama-admits-that-patent-trolls-just-try-to-extort-money-reform-needed.shtml (President Obama, during a "Fireside Hangout" on Google+, noted that patent trolls, a specific type of NPEs, "don't actually produce anything themselves. They're just trying to essentially leverage and hijack somebody else's idea and see if they can extort some money out of them.").

3. *See Erode Foundation*, *supra* note 2, at 79 ("From October 1, 1994 through September 30, 2002, 527 Patent lawsuits were filed by or against the 219 NPEs . . . represent[ing] 2.7 percent of patent lawsuits filed in the United States during that 8-year period. From October 1, 2003 through September 30, 2007, there were 1,210 lawsuits filed by or against these entities, representing approximately 8.4 percent of all patent lawsuits filed in that period, and exceeding 10 percent in 2006 and 2007."); Sara Jeruss, Robin Cooper Feldman & Joshua Walker, *The America Invents Act 500: Effects of Patent Monetization Entities on US Litigation*, DUKE L. & TECH. REV. (forthcoming) at 38, *available at* http://ssrn.com/abstract=2158455 [hereinafter *AIA 500*] ("A random sample of 500 cases from 2007–2011 suggests that the impact of patent monetization entities on patent litigation is both dramatic and growing across time.").

4. PETER S. MENELL ET AL., PATENT CASE MANAGEMENT JUDICIAL GUIDE, § 1.1.2.2 (2d ed. 2012).

of NPEs by "tighten[ing] the non-obviousness requirement . . . , [modifying] the standard for obtaining injunctive relief . . . [, and raising] the bars for proving willful infringement . . . and reasonable royalty."[5] The *MSTG* decision represents the Federal Circuit's latest attempt to subdue NPEs' negative effects on the judiciary.

Ever since the *eBay*[6] decision, which severely curtailed NPEs' ability to obtain injunctive relief in a federal court,[7] NPEs have been forced to turn to the reasonable royalty damages standard for their infringement remedy.[8] While many courts traditionally excluded settlement licenses in the reasonable royalty calculation,[9] in *ResQNet.com, Inc. v. Lansa, Inc.*, the Federal Circuit reversed this rule and allowed for the consideration of settlement licenses in the reasonable royalty calculation because "the most reliable license in [the] record arose out of litigation."[10] In reaching this conclusion, the court held that the most "reliable" measure of damages for patent infringement may be the settlement licenses of the patents-in-suit from other related third-party litigations.[11]

Following *ResQNet*, the discoverability of the negotiation documents underlying settlement licenses became uncertain,[12] and many courts issued conflicting rulings on the topic.[13] This debate over the privileged nature of

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5. *Id.* (internal citations omitted).

6. eBay Inc. v. MercExchange, L.L.C., 547 U.S. 388 (2006).

7. *See, e.g.*, Daniel E. Valencia, *Celebrating Twenty-Five Years of a Liberal Domestic Industry Requirement in Section 337 Cases: Would A Qualitative Analysis of Statutory "Exploitation" Activities Put the Trade Back in International Trade Commission?*, 40 AIPLA Q.J. 267, 271 (2012) ("[The eBay] decision substantially decreased the likelihood of a party receiving a permanent injunction from a district court where the patentee does not itself practice the asserted patent.").

8. *See, e.g.*, Layne S. Keele, *Res"Q"Ing Patent Infringement Damages After ResQNet: The Dangers of Litigation Licenses as Evidence of a Reasonable Royalty*, 20 TEX. INTELL. PROP. L.J. 181, 188 (2012) [hereinafter *After ResQNet*] ("The addition of the reasonable royalty standard portended big business for non-practicing entities (NPEs), who, by definition could not prove lost profits, and who may have lacked sufficient non-litigation licenses to show an established royalty.").

9. *See infra* Section I.B for the two primary reasons: (1) policy grounds and (2) lack of probative value.

10. ResQNet.com, Inc. v. Lansa, Inc., 594 F.3d 860, 872 (Fed. Cir. 2010).

11. *See id.*

12. *See* E. Danielle Thompson Williams and Leslie T. Grab, *Contemporary Issues in Patent Royalty Damages; TMI: How Much Settlement Information is Too Much Settlement Information?*, PRACTICING LAW INSTITUTE (Oct. 13, 2010), http://patentlawcenter.pli.edu/2010/10/13/contemporary-issues-in-patent-royalty-damages/ [hereinafter *Contemporary Issues*]. ("Other courts have even gone further to allow discovery related to the negotiations behind the settlement agreements.")

13. *See infra* Section I.D.

settlement-related communications has made it difficult for patent practitioners to determine the limits of discovery.[14] To clear up this confusion, through a *Jaffee* factors analysis,[15] the Federal Circuit held in *MSTG* that "settlement negotiations related to reasonable royalties and damage calculations are not protected by a settlement negotiation privilege."[16]

The discoverability of settlement-related documents could have a significant impact on the behavior of NPEs. Because NPEs tend to sue multiple defendants over the same set of patents and force individualized settlement licenses with each party,[17] defendants who hold out the longest might be able to obtain more advantageous settlements based on their discovery of the NPEs' settlement-related documents with the earlier settling defendants. Therefore, this decision could fundamentally alter the strategies that NPEs and their defendants take toward patent litigation.

This Note examines how *MSTG* might alter NPEs' strategies toward both litigation and settlement and, in light of this, whether the decision was correctly analyzed under the *Jaffee* factors. Part I identifies eight different types of NPEs and groups them into three categories according to their litigation characteristics. It surveys the evidentiary and procedural laws governing the discoverability and admissibility of settlement-related documents and licenses, and assesses how recent developments in patent law have confused these areas. Part II reviews the facts and procedural history of the *MSTG* case and discusses the rationale behind the Federal Circuit's decision not to create a privilege for settlement negotiations. Part III critiques the Federal Circuit's analysis of the *Jaffee* factors and suggests that only two of the factors, "Advisory Committee's Recommendations" and "Advancement of a Public Good," should have been dispositive to the case. Part III continues by constructing a decision tree framework for an in-depth examination of the "Advancement of a Public Good" *Jaffee* factor and explores, through that framework, how *MSTG* could influence NPEs' litigation and settlement strategies.

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14. *See* Tejas N. Narechania & Jackson Taylor Kirklin, *An Unsettling Development: The Use of Settlement-Related Evidence for Damages Determinations in Patent Litigation*, U. ILL. J.L. TECH. & POL'Y 1, 22 (2012) [hereinafter *Unsettling Development*].

15. This is a list of key factors, identified by the U.S. Supreme Court in *Jaffee v. Redmond*, 518 U.S. 1 (1996), for a court to consider when establishing a new privilege. *See infra* Sections I.C, II.B.

16. In re MSTG, Inc., 675 F.3d 1337, 1348 (Fed. Cir. 2012), *reh'g denied*, 468 Fed. App'x. 994 (Fed. Cir. 2012).

17. *See* Colleen V. Chien, *Of Trolls, Davids, Goliaths, and Kings: Narratives and Evidence in the Litigation of High-Tech Patents*, 87 N.C.L. REV. 1571, 1579 (2009) [hereinafter *Of Trolls*].

This Note argues that *MSTG* will only affect the strategy of a specific subset of NPEs, those that are pejoratively known as "patent trolls," by potentially making them less litigious toward smaller companies and more willing to settle with those larger companies that they do litigate against. Furthermore, as the recently enacted Leahy-Smith America Invents Act ("AIA")[18] brings a more restrictive joinder rule, NPEs may be forced to file even more individual cases; thus, *MSTG* might also deter this behavior and help to reduce the strain on judicial resources. This "Advancement of a Public Good" factor analysis, along with the fact that the settlement negotiations privilege is not one of the original "Advisory Committee's Recommendations," indicate that, even though the Federal Circuit might have erred in its *Jaffee* analysis, the court's decision to not establish a settlement negotiations privilege may well help to reduce abusive NPE lawsuits.

I. BACKGROUND

Over the past decade, the percentage of all patent litigation cases associated with NPEs has risen dramatically.[19] With the total number of patent actions filed on the rise as well,[20] NPE-related litigation will continue to have a serious impact on judicial effectiveness which is a major public concern.[21] To this extent, judicial decisions that incentivize a reduction in either the length or the quantity of NPE-related litigation could significantly benefit the public by helping to unclog the judiciary. Before analyzing *MSTG* under this perspective, this Note provides some relevant background on NPEs and their relationship to patent law.

An NPE is any entity that does not actively practice the patents that it owns.[22] While most individuals commonly associate the term "patent trolls" with NPEs, only a subset of NPEs own their patents for the express purpose of profiting from infringement litigation.[23] Therefore, Section I.A first

18. Leahy-Smith America Invents Act, Pub. L. No. 112-29, sec. 19(d), § 299, 125 Stat. 284, 332–33 (2011).

19. *See supra* note 3.

20. PricewaterhouseCoopers, 2011 PATENT LITIGATION STUDY: PATENT LITIGATION TRENDS AS THE "AMERICA INVENTS ACT" BECOMES LAW, at 8 (2011) [hereinafter Patent Study].

21. *See Erode Foundation*, *supra* note 2, at 78–81.

22. *See, e.g.*, Colleen V. Chien, *From Arms Race to Marketplace: The Complex Patent Ecosystem and Its Implications for the Patent System*, 62 HASTINGS L.J. 297, 326–33 (2010) [hereinafter *Arms Race*].

23. *See, e.g.*, Holly Forsberg, *Diminishing the Attractiveness of Trolling: the Impacts of Recent Judicial Activity on Non-Practicing Entities*, 12 U. PITT. J. TECH. L. & POL'Y 1, 5 (2011)

completes the broader NPE classification picture by identifying the different types of NPEs in the patent ecosystem. Section I.B then examines the type of remedies these NPEs rely on. Following this discussion, Section I.C outlines the pertinent evidentiary and procedural laws that govern the admissibility and discoverability of settlement-related licenses and documents. Finally, Section I.D describes how the *ResQNet* decision has both shaped and muddled these areas of law.

A. THE DIFFERENT TYPES OF NPES

This Note identifies eight types of NPEs and organizes them into three groups based on their litigation characteristics: (1) litigation-at-all-costs NPEs, (2) litigation-as-a-business-model NPEs, and (3) non-litigious NPEs.

1. Litigation-at-all-costs NPEs

Litigation-at-all-costs NPEs are composed solely of individuals. The U.S. Patent System was established for the individual, "the lone worker who follows the fleeting inspiration of a moment and finally does something that has not been done before."[24] Today, however, many of these individuals are now NPEs, as they "have turned their focus away from the active development or practice of their patents and have moved towards patent enforcement."[25] When individual inventors exhibit this behavior, they tend to be the most litigious of all NPEs.[26] One of the prominent causes of this extreme litigious nature is these individuals' inability to secure pre-litigation licensing agreements from the allegedly infringing companies.[27] The other explanation for this behavior is that these NPEs are primarily motivated by public vindication and justice.[28] For these individuals, the trial court is their showroom, a place where they can describe to the public their "flash of

[hereinafter *Diminishing Trolling*] ("This is because the term NPE can also be used to describe entities that choose to not actively practice their patents for legitimate, non-litigation-based reasons . . . .").

24. *See* John Seabrook, The Flash of Genius, NEW YORKER, Jan. 11, 1993, *available at* http://www.newyorker.com/archive/1993/01/11/1993_01_11_038_TNY_CARDS_000363341 [hereinafter Flash of Genius] (quoting Nikola Tesla).

25. *Arms Race*, *supra* note 22, at 330.

26. *See id.* at 330–31 ("Independent inventors are among the most litigious actors in the patent system.").

27. *See* Wei Wang, *Non-practicing Complainants at the ITC: Domestic Industry or Not?*, 27 BERKELEY TECH. L.J. 409, 426–27 (2012) [hereinafter *Non-practicing Complainants*] (noting that companies may be unwilling to negotiate with individual inventors).

28. *See* Flash of Genius, *supra* note 24 (describing how Robert Kearns, the inventor of the intermittent windshield wiper, turned down a thirty million dollars settlement offer from Ford because he believed "[t]o accept money from Ford would have been like admitting it was O.K. for them to do what they did").

genius."[29] As Robert Kearns, the inventor of the intermittent windshield wiper, famously said, "I want [the public] to understand that I am wearing a little badge here, and that badge says that I am an inventor, and it says I am a net contributor to society . . . , and I don't think anybody is going to be able to see the badge until *my trial is finished in this courtroom* and I will find out whether I am wearing the badge or not."[30]

These individuals are more likely to work with contingency-fee lawyers and are more selective in choosing whom they sue because of their generally limited financial resources.[31] Their trials also tend to last the longest not only because they are more personally invested in their patents but also because they receive more favorable verdicts: juries tend to favor individuals over the defending companies at a rate of three to one.[32]

2. *Litigation-as-a-Business-Model NPEs*

This group of NPEs is the most recognized because it includes the notorious "patent trolls."[33] These NPEs rely on the enforcement rather than the development or commercialization of the patents they own as their primary income stream.[34] They also tend to sue multiple defendants and to "rely on litigation and settlement to extract value from their patents."[35] Most of these litigation-as-a-business-model NPEs do not actively practice or develop any form of technology, and thus, they have lower litigation risk due to the defending alleged infringers' inability to countersue by asserting their own patents.[36] However, like any other business, these NPEs only litigate

29. *See* Flash of Genius, *supra* note 24 (" 'The cardinal rule for any patent attorney representing an independent inventor is to tell the invention story. You know—how he got the idea. It comes to him in a dream, or when he's in the shower or mowing the lawn.' ").

30. Flash of Genius, *supra* note 24 (emphasis added).

31. *See Arms Race*, *supra* note 22, at 331; *Of Trolls*, *supra* note 17, at 1587.

32. *See Of Trolls*, *supra* note 17, at 1586–87, 1605.

33. *See, e.g.*, *Diminishing Trolling*, *supra* note 23; Tracie L. Bryant, *The America Invents Act: Slaying Trolls, Limiting Joinder*, 25 HARV. J.L. & TECH. 673, 676 (2012) [hereinafter *Slaying Trolls*] ("In invoking an image of a mythological creature that lies under a bridge and waits to impose a toll on unsuspecting travelers, the term "patent troll" was popularized in 2001 by Peter Detkin, then Intel's general counsel.").

34. *See, e.g.*, Walter O. Alomar-Jiménez, *Harmonizing Ebay*, 1 U. PUERTO RICO BUS. L.J. 17, 23 (2010); *Arms Race*, *supra* note 22, at 328.

35. *Unsettling Development*, *supra* note 14, at 38; *see Of Trolls*, *supra* note 17, at 1601 ("When they sue, NPEs typically name multiple defendants, each of whom faces the prospect of being part of an ongoing litigation.").

36. *Of Trolls*, *supra* note 17, at 1579 ("Because NPEs have no products of their own, they cannot be countersued for patent infringement.").

when they believe they can generate a profit.[37] Because their primary concern is with the monetization of their patents, these NPEs tend to be less litigious than the litigation-at-all-costs NPEs and are willing to settle if the price is right.[38] Within this group, five distinct types of NPEs stand out: (1) small portfolio patent holders, (2) massive patent aggregators, (3) practicing entities with non-practiced patents, (4) private research & development companies, and (5) offensive patent funds.

a) Small Portfolio Patent Holders

Relative to the other four types of NPEs in this category, small portfolio patent holders tend to be more selective in their patent purchases.[39] Because of the limited number of patents these NPEs purchase, their patents tend to be of a higher quality.[40] Small portfolio patent holders are highly litigious because their patents are also more likely to be valid and, therefore, valuable.[41] As they do not practice the patents they own, they have low litigation risk and can coerce a significant settlement out of an allegedly infringing company.[42]

b) Massive Patent Aggregators

Massive patent aggregators are large-scale patent holders. Some well-known examples are Intellectual Ventures, Acacia Research Corporation, and Round Rock Research LLC. Massive patent aggregators have the financial wealth to "aggregate" a significant number of patents.[43] For example, Intellectual Ventures is estimated to have "a worldwide portfolio of 30,000–60,000 patents and applications as of May 2011."[44] They are distinct from

37. *See id.* at 1587; *see generally* Mark Liang, *The Aftermath of Ts Tech: The End of Forum Shopping in Patent Litigation and Implications for Non-Practicing Entities*, 19 TEX. INTELL. PROP. L.J. 29, 33–36 (2010) [hereinafter *Forum Shopping*].

38. *Cf. Of Trolls*, *supra* note 17, at 1587 ("First, some independent inventors are perceived as seeking not only money, the main objective of licensing shops, but also justice or vindication by a court.").

39. *Arms Race*, *supra* note 22, at 330 (noting firms such as Stragent LLC and Synchrome Technologies hold about sixty and ten patents, respectively).

40. *Arms Race*, *supra* note 22, at 318 (noting these patent holders "tend to have a higher proportion of 'crown jewel'").

41. *Non-practicing Complainants*, *supra* note 27, at 421.

42. *See Arms Race*, *supra* note 22, at 319 ("Many patent-assertion entities . . . lack websites that describe what they do. . . . This secrecy serves a 'troll' business model, in which patentees wait until companies are already practicing an invention to 'surprise' them with a suit."); *Non-practicing Complainants*, *supra* note 27, at 421.

43. Robin Feldman & Tom Ewing, *The Giants Among Us*, 2012 STAN. TECH. L. REV. 1, 1 (2012) [hereinafter *The Giants*].

44. *Id.* at 5.

small portfolio patent holders in that they have patent portfolios that span many different areas of technology and types of innovation.[45] They are also unique in that they do not just litigate; these massive patent aggregators also license, develop, and sell their own patents.[46] However, because they have so many patents, massive patent aggregators are more likely to assert patents that are weaker in quality than those asserted by small portfolio patent holders.[47]

c) Practicing Entities with Non-Practiced Patents

By definition, it seems illogical that a practicing entity could be an NPE. However, when a practicing entity owns patents in an area "in which the company no longer operates or never did," it becomes an NPE with respect to those patents.[48] In this era, it has become more common for practicing entities to enforce these patents to recover research and development expenses.[49] Because practicing entities have products of their own, they need to be more selective about whom they sue in order to avoid potential countersuits.[50] Although patent enforcement could generate a lot of revenue for these practicing entities, it does not function as their primary revenue source.[51] Their core business model remains focused on product merchandising and distribution.

d) Private Research & Development Companies

Along with universities,[52] private research & development companies ("R&D companies") are sometimes referred to as "Idea Shops."[53] These NPEs tend to possess patents that cover emerging technologies developed

45. *Id.* at 1–2.

46. *See Arms Race*, *supra* note 22, at 330 ("In addition to litigating, IV has sold patents to companies . . . ."); *Non-practicing Complainants*, *supra* note 27, at 423.

47. *See Of Trolls*, *supra* note 17, at 1580 ("This follows form a business model based on generating licensing revenue rather than getting an injunction to prevent defendants from making or selling their products.").

48. *See Arms Race*, *supra* note 22, at 322.

49. *See id.*

50. *See Of Trolls*, *supra* note 17, at 1579.

51. *See generally Arms Race*, *supra* note 22, at 322–24 (While practicing companies could generate a substantial amount of revenue from patents in areas they no longer practice, it is still described as a line of business within the company and rather than being a part of the company's core business model.).

52. *See infra* Section I.A.3.

53. Robert P. Merges, *The Trouble with Trolls: Innovation, Rent-Seeking, and Patent Law Reform*, 24 BERKELEY TECH. L.J. 1583, 1599 (2009) [hereinafter *Trolls Trouble*] (defining a pure idea shop as "one that sells its innovations in disembodied form").

from their own cutting-edge research.[54] These R&D companies often use a hybrid business model and seek to both license and litigate their patents.[55] Due to their hybrid practice, these NPEs are less litigious than the other litigation-as-a-business-model NPEs described above.[56] However, like small portfolio patent holders, they are more concerned with the quality rather than the quantity of their patents, focusing mainly on whether they have appropriate patent coverage for their specific technology area.[57]

e) Offensive Patent Funds

Similar to massive patent aggregators, patent funds are also large-scale patent holders that seek to collect a myriad of different types of patents to cover a wide range of technologies.[58] However, offensive patent funds are distinguishable from massive patent aggregators in that most offensive patent funds began as defensive patent funds, whose primary purpose is to license their patents back to their members, thereby defensively protecting their members from potential infringement actions.[59] One famous defensive patent fund is RPX Corporation, which spent more than $490 million to acquire the ownership rights or sublicenses to 2,900 patents worldwide.[60] Their strategy involves buying patents, licensing these patents out to their members, and then selling these patents, with the licenses attached, to generate additional revenue.[61]

Patent funds only play a role in NPE-related litigation when they transform themselves from defensive patent funds into offensive patent funds that actively seek the enforcement of their patents.[62] Here, their strategy becomes very similar to that of massive patent aggregators, with one key difference. While the patents they acquire still tend to be "high volume, low cost, and [of] uneven quality . . . ," the patents are encumbered with cross-licensing agreements that the patent funds entered into while they were

54. *See Arms Race*, *supra* note 22, at 327.
55. *Non-practicing Complainants*, *supra* note 27, at 425.
56. *See Arms Race*, *supra* note 22, at 327.
57. *Non-practicing Complainants*, *supra* note 27, at 425–26.
58. *See Arms Race*, *supra* note 22, at 331–32.
59. *See id.* at 332.
60. *See Fast Facts*, RPX CORPORATION, http://www.rpxcorp.com/index.cfm?pageid=39 (last visited Nov. 4, 2012).
61. *AIA 500*, *supra* note 3, at 12.
62. However, the transformation of a patent fund from defensive to offensive is "neither easy nor automatic." *Arms Race*, *supra* note 22, at 326 ("Even if the patents are being practiced, a company may have neither the means nor the inclination to pursue infringers or possible technology partners.").

still acting in a defensive manner.[63] This usually makes the offensive patent funds' patents worth less than those of massive patent aggregators, as the former has less litigation value because of limits in litigable parties.[64]

3. Non-Litigious NPEs

Because their business model is not based on the monetization of their patents through legal enforcement actions, non-litigious NPEs are the least litigious of all types of NPEs.[65] The patents that these NPEs own tend to cover emerging technologies.[66] This group includes: (1) universities and (2) start-ups.

a) Universities

Like R&D companies, universities are frequently perceived as "Idea Shops."[67] Universities do not generally practice or enforce the patents they develop. Rather, they generate revenue through the licensing of these patents through their technology transfer offices.[68] The majority of these licenses are exclusive in nature primarily because licensees tend to prefer exclusive licenses.[69]

Recently, some universities have become more vigilant in the legal enforcement of their patents,[70] but two studies suggest that this is still the exception rather the norm.[71] Because these universities that display litigious tendencies are very similar to R&D companies, they could be analyzed under the litigation-as-a-business-model NPEs' framework.[72] However, it is worth noting that even when they litigate, universities sometimes seek out litigation

63. *Non-practicing Complainants*, *supra* note 27, at 424.

64. *See* John R. Allison et al., *Valuable Patents*, 92 GEO. L.J. 435, 436–37 (2004) (noting that the most valuable patents are the ones that tend to be litigated the most).

65. *See Arms Race*, *supra* note 22, at 327.

66. *See id.*

67. *See Trolls Trouble*, *supra* note 53.

68. *See Arms Race*, *supra* note 22, at 327.

69. *See* Mark A. Lemley, *Are Universities Patent Trolls?*, 18 FORDHAM INTELL. PROP. MEDIA & ENT. L.J. 611, 616 (2008) [hereinafter *Universities Trolls*].

70. *See id.* at 618 (describing recent litigations facilitated by universities such as University of California in Eolas Technologies, Inc. v. Microsoft Corp.); Elizabeth A. Rowe, *The Experimental Use Exception to Patent Infringement: Do Universities Deserve Special Treatment?*, 57 HASTINGS L.J. 921, 936–37 (2006).

71. *See AIA 500*, *supra* note 3, at 5 (noting that universities only represented 0.2% of the NPE-initiated lawsuits in a sample of 500 recent cases); Patent Study, *supra* note 20, at 33 (University & Non-profit represented about 5% of all NPE-initiated lawsuits from a list of 1,617 district court patent decisions from 1995 to 2010.).

72. *See supra* Section I.A.2.

partners rather than acting alone.[73] Also, unlike "patent trolls," universities tend not to purposefully wait until an industry has been developed before "popping up and demanding a disproportionate share of royalties based on irreversible investments."[74]

b) Start-ups

This Note categorizes start-ups as NPEs largely because start-ups are still in the process of preparing to practice their patents.[75] According to a 2008 Berkeley patent survey, start-ups accumulate patents primarily to "prevent others from copying [their] products or services," and to "improve chances of securing investment."[76] In fact, "obtaining licensing revenues" is by far the least important reason.[77] Because litigious activity is not their primary business driver, start-ups are the least litigious of all NPEs identified in this Note.

B. REASONABLE ROYALTIES AS A FORM OF PATENT DAMAGES

For all patent trials, including NPE-related litigation, once the patent-in-suit is found valid and infringement is proven, the case then shifts to the patent holder's remedies. While NPEs can technically still threaten an alleged infringer with an injunction, the bar has been set very high in the wake of *eBay*, and NPEs are unlikely to succeed in requests for injunctive relief.[78] Realistically, there are only three types of damages that are available to NPEs: (1) lost profits, (2) established royalty, and (3) reasonable royalty.[79] For NPEs, the most important measure of damage is reasonable royalty because, by definition, they do not practice the patent and, therefore, have no lost

73. *See, e.g.*, *Universities Trolls*, *supra* note 69, at 618 ("University of California licensed a software patent to a company . . . and then shared with that company a jury award of $520.6 million against Microsoft."); Brian Kladko, *Araid, Research Institutes win Patent-Infringement Case against Eli Lilly*, Boston Bus. J., May 4, 2006, available at http://boston.bizjournals.com/boston/stories/2006/05/01/daily48.html; Press Release, University of Colorado Technology Transfer Office, University of Colorado Health Sciences Center Faculty Patent Upheld by Federal Circuit Court (June 18, 2004) (on file with author) (noting that Competitive Technologies represented University of Colorado and Columbia University).

74. *Universities Trolls*, *supra* note 69, at 629.

75. *See Arms Race*, *supra* note 22, at 332.

76. Stuart J.H. Graham et. al., *High Technology Entrepreneurs and the Patent System: Results of the 2008 Berkeley Patent Survey*, 24 BERKELEY TECH. L.J. 1255, 1299, figure 2 (2009).

77. *Id.*

78. *See supra* note 7.

79. *After ResQNet*, *supra* note 8, at 184–85.

profits;[80] also, NPEs rarely can prove established royalty as they usually do not seek pre-litigation licenses.[81]

With respect to the calculation of a reasonable royalty, the Patent Act provides that once infringement is found, a "court shall award . . . damages adequate to compensate for the infringement but *in no event less than* a reasonable royalty for the use made of the invention by the infringer."[82] Therefore, a reasonable royalty sets the minimum amount of damages that a patent holder should receive;[83] it is "the royalty upon which the parties would have agreed had they successfully negotiated an agreement just before infringement began."[84] But, because such a calculation is based on a "legal fiction," court frequently struggle in assigning damages.[85] Nevertheless, reasonable royalty has become "the most frequent kind of damages awards in patent cases and comprise a greater share with each passing year."[86]

The seminal case for the determination of a reasonable royalty is *Georgia-Pacific Corp. v. U.S. Plywood Corp*,[87] in which the Southern District of New York developed a list of fifteen factors for a court to consider when determining the damages amount.[88] The Federal Circuit has repeatedly

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80. *See, e.g.*, Poly-America, L.P. v. GSE Lining Tech., Inc., 383 F.3d 1303, 1311 (Fed. Cir. 2004) ("[T]he patentee needs to have been selling some item, the profits of which have been lost due to infringing sales, in order to claim damages consisting of lost profits.").

81. *See, e.g.*, Studiengesellschaft Kohle, m.b.H v. Dart Indus., Inc., 862 F.2d 1564, 1572 (Fed. Cir. 1988) ("[O]ffers to license made at a time when 'litigation was threatened or probable' should not be considered evidence of an established royalty.").

82. 35 U.S.C. § 284 (2006) (emphasis added) (The AIA left this section unchanged).

83. *See Unsettling Development*, *supra* note 14, at 5.

84. Lucent Techs., Inc. v. Gateway, Inc, 580 F.3d 1301, 1324 (Fed. Cir. 2009).

85. Panduit Corp. v. Stahlin Bros. Fibre Works, Inc., 575 F.2d 1152, 1159 (6th Cir. 1978).

86. Patent Study, *supra* note 20, at 14.

87. 318 F. Supp. 1116 (S.D.N.Y. 1970).

88. Georgia-Pacific Corp. v. U.S. Plywood Corp., 318 F.Supp. 1116, 1120 (S.D.N.Y. 1970). The fifteen factors are:

> 1. The royalties received by the patentee for the licensing of the patent in suit, proving or tending to prove an established royalty. 2. The rates paid by the licensee for the use of other patents comparable to the patent in suit. 3. The nature and scope of the license, as exclusive or non-exclusive; or as restricted or non-restricted in terms of territory or with respect to whom the manufactured product may be sold. 4. The licensor's established policy and marketing program to maintain his patent monopoly by not licensing others to use the invention or by granting licenses under special conditions designed to preserve that monopoly. 5. The commercial relationship between the licensor and licensee, such as, whether they are competitors in the same territory in the same line of business; or whether they are inventor and promoter. 6. The effect of selling the patented specialty in promoting sales of other products of the

approved of this approach.[89] These factors are intended to simulate the hypothetical negotiation that would have taken place between the patent holder and the infringer and ascertain the royalty amount to which they would have agreed.[90] Within these fifteen factors, some generally carry more weight than others with "*[t]he most influential factor* [being] that of prior and existing licenses negotiated under the patent in suit."[91] However, many courts

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> licensee; that existing value of the invention to the licensor as a generator of sales of his non-patented items; and the extent of such derivative or convoyed sales. 7. The duration of the patent and the term of the license. 8. The established profitability of the product made under the patent; its commercial success; and its current popularity. 9. The utility and advantages of the patent property over the old modes or devices, if any, that had been used for working out similar results. 10. The nature of the patented invention; the character of the commercial embodiment of it as owned and produced by the licensor; and the benefits to those who have used the invention. 11. The extent to which the infringer has made use of the invention; and any evidence probative of the value of that use. 12. The portion of the profit or of the selling price that may be customary in the particular business or in comparable businesses to allow for the use of the invention or analogous inventions. 13. The portion of the realizable profit that should be credited to the invention as distinguished from non-patented elements, the manufacturing process, business risks, or significant features or improvements added by the infringer. 14. The opinion testimony of qualified experts. 15. The amount that a licensor (such as the patentee) and a licensee (such as the infringer) would have agreed upon (at the time the infringement began) if both had been reasonably and voluntarily trying to reach an agreement; that is, the amount which a prudent licensee—who desired, as a business proposition, to obtain a license to manufacture and sell a particular article embodying the patented invention—would have been willing to pay as a royalty and yet be able to make a reasonable profit and which amount would have been acceptable by a prudent patentee who was willing to grant a license.

Id.

89. *See, e.g.*, Hanson v. Alpine Valley Ski Area, Inc., 718 F.2d 1075, 1080 (Fed. Cir. 1983) (affirming the lower court's decision based on an analysis of the Georgia-Pacific factors); D. Christopher Holly, *The Book of Wisdom: How to Bring a Metaphorical Flourish into the Realm of Economic Reality by Adopting A Market Reconstruction Requirement in the Calculation of a Reasonable Royalty*, 92 J. PAT. & TRADEMARK OFF. SOC'Y 156, 165 (2010) ("The Federal Circuit has repeatedly confirmed the use of the 15 *Georgia-Pacific* factors as a methodology of exploring what royalty would have been agreed upon at the hypothetical negotiation.").

90. *See, e.g.*, Michael R. O'Neill, *Lucent v. Gateway: Federal Circuit Provides Guidance on Patent Damages Issues*, 22 Intell. Prop. & Tech. L.J. 1, 1 (2010). ("The Georgia-Pacific factors are geared toward ascertaining the amount of the royalty the parties would have agreed to in a so-called hypothetical negotiation just before the alleged infringement began.").

91. 1 DONALD S. CHISUM, CHISUM ON PATENTS § 20.07 (Matthew Bender 2012) (emphasis added).

have excluded settlement-related licenses in consideration of this factor,[92] primarily on "lack of probative value" grounds or for "evidentiary or policy" reasons.[93] Courts have noted that settlement licenses lack probative value because " '[m]any considerations other than the value of the improvements patented may induce the payment in such cases. The avoidance of the risk and expense of litigation will always be a potential motive for a settlement.' "[94] In support of their policy and evidentiary findings, courts have pointed to the Advisory Committee's notes accompanying Rule 408 of the Federal Rules of Evidence ("FRE")[95] that states this form of "evidence is irrelevant, since the offer may be motivated by a desire for peace rather than from any concession of weakness of position."[96] Before discussing how *ResQNet* uprooted this area of law, the following section first examines the evidentiary and procedural rules that govern these settlement-related licenses and their underlying documents.

C. EVIDENTIARY AND PROCEDURAL LAWS UNDERLYING SETTLEMENT NEGOTIATIONS

The Federal Rules of Civil Procedure ("FRCP") provide for "a broad and liberal treatment" of the discovery process.[97] The purpose of this policy is to enable "parties to obtain the fullest possible knowledge of the issues and facts before trial."[98] However, the discovery process is not without boundaries, and a federal "court must limit the frequency or extent of discovery otherwise allowed . . . if it determines that . . . the burden or expense of the proposed discovery outweighs its likely benefit."[99] FRCP Rule

92. *See, e.g.*, Rude v. Westcott, 130 U.S. 152, 164 (1889) ("It is clear that a payment of any sum in settlement of a claim for an alleged infringement cannot be taken as a standard to measure the value of the improvements patented, in determining the damages sustained by the owners of the patent in other cases of infringement."); American Original Corp. v. Jenkins Food Corp., 774 F.2d 459, 464 (Fed. Cir. 1985) ("A royalty at which a patentee offers to license his invention, particularly when coupled with a claim of infringement, is not necessarily the same rate as that upon which a hypothetical willing licensee and willing licensor would agree."); Hanson v. Alpine Valley Ski Area, Inc., 718 F.2d 1075, 1078–79 (Fed. Cir. 1983) ("[S]ince the offers were made after the infringement had begun and litigation was threatened or probable, their terms 'should not be considered evidence of an 'established royalty' . . . .'") (internal citations omitted).

93. *See Contemporary Issues*, *supra* note 12.

94. Spreadsheet Automation Corp. v. Microsoft Corp., 587 F. Supp. 2d 794, 800 (E.D. Tex. 2007) (quoting Rude v. Westcott, 130 U.S. 152, 164 (1889)).

95. Fed. R. Evid. 408.

96. *See Contemporary Issues* (quoting Fed. R. Evid. 408 Advisory Committee Notes), *supra* note 12.

97. Hickman v. Taylor, 329 U.S. 495, 507 (1947).

98. *Id.* at 501.

99. Fed. R. Civ. P. 26(b)(2)(C).

26[100] also restricts the discovery process to "any *nonprivileged* matter that is relevant to any party's claim or defense."[101] Because discovery is restricted to nonprivileged items, the characterization of material information as *privileged* or *nonprivileged* represents a significant concern for litigants.

Affecting the applicability of FRCP Rule 26, FRE Rule 501[102] enables a court to "define new privileges by interpreting 'common law principles . . . in the light of reason and experience.'"[103] Expounding on this statement, the United States Supreme Court, in *Jaffee v. Redmond*, identified several key factors that should be considered when a court seeks to establish a new privilege.[104] These five factors are: (1) whether there is a consensus in the policy decisions of the states over the privilege;[105] (2) whether there are Congressional considerations for the privilege;[106] (3) whether the privilege is a part of "the list of evidentiary privileges recommended by the Advisory Committee of the Judicial Conference in its proposed Federal Rules of Evidence;"[107] (4) whether the privilege would introduce numerous exceptions that "would distract from the effectiveness, clarity, and certainty of the privilege;"[108] and (5) whether the privilege would " 'advance a public good.'"[109]

Relatedly, FRE Rule 408 specifically states that settlement-related documents are not admissible.[110] The Federal Circuit has indicated that Rule 408 promotes "the policy in favor of protecting settlement negotiations from being admitted as evidence, thus serving to encourage settlements."[111] As the Advisory Committee's Notes indicate, Rule 408 aims to decrease the strain on judicial resources by promoting "the public policy favoring the compromise and settlement of disputes."[112] Despite this seemingly straightforward legislative intent, courts have often limited the exclusionary scope of Rule 408 by holding it inapplicable to third-party settlement

100. Fed. R. Civ. P. 26.
101. Fed. R. Civ. P. 26(b)(1) (emphasis added).
102. Fed. R. Evid. 501.
103. Jaffee v. Redmond, 518 U.S. 1, 8 (1996) (quoting Fed. R. Evid. 501).
104. *See id.* at 10–19.
105. In re MSTG, Inc., 675 F.3d 1337, 1343 (Fed. Cir. 2012), *reh'g denied*, 468 Fed. App'x. 994 (Fed. Cir. 2012) (citing *Jaffee*, 518 U.S. at 12–13).
106. *Id.* (citing Univ. of Pa. v. EEOC, 493 U.S. 182, 189 (1990)).
107. *Id.* at 1345 (citing *Jaffee*, 518 U.S. at 13–14).
108. *Id.* at 1345–46 (citing *Jaffee*, 518 U.S. at 18).
109. *Id.* (citing In re Sealed Case, 148 F.3d 1073, 1076 (D.C. Cir. 1998)).
110. Fed. R. Evid. 408.
111. Advanced Cardiovascular Systems, Inc. v. Medtronic, Inc., 265 F.3d 1294, 1308 (Fed. Cir. 2001).
112. Fed. R. Evid. 408 Advisory Committee Notes.

documents.[113] Furthermore, courts have also noted that Rule 408 only blocks the admissibility of settlement-related documents and does not play a role in the discoverability of these same documents.[114]

The rise of expert testimony has further complicated this landscape by blurring the line between the discoverability and admissibility of settlement-related documents, therefore reducing the applicability of FRE Rule 408.[115] The role of expert witnesses has become significant and common in patent litigation, especially for the calculation of damages.[116] While Rule 408 prevents the admissibility of settlement-related documents, so long as they were discoverable, "these very same settlement documents may be compiled, analyzed, and then discussed at trial by an expert."[117] In such cases, the distinct line in the sand separating the discoverability and admissibility of these documents is washed away. Rule 408 is further weakened by the fact that an expert's reliance on settlement-related documents for patent damages calculations could allow the other party to introduce these documents to

113. 7 ROBERT A. MATTHEWS, JR., ANNOTATED PATENT DIGEST § 44:94 (2012) (citing Century Wrecker Corp. v. E.R. Buske Mfg. Co., Inc., 898 F. Supp. 1334, 1341 (N.D. Iowa 1995) (settlement agreement reached with a third party may be relevant to establishing a reasonable royalty and may be admissible despite 408).

114. *Id.* § 44:94.50 (2012) (citing Folb v. Motion Picture Indus. Pension & Health Plans, 16 F. Supp. 2d 1164, 1171 (C.D. Cal. 1998) ("Rule 408 only protects disputants from disclosure of information to the trier of fact, not from discovery by a third party."); Computer Assocs. Intern., Inc. v. American Fundware, Inc., 831 F. Supp. 1516, 1531 (D. Colo. 1993) (FRE 408 "is a preclusionary rule, not a discovery rule. It is meant to limit the introduction of evidence of settlement negotiations at trial and is not a broad discovery privilege. . . . Information which may not be admissible at trial under the rule is still discoverable so long as that information may lead to the discovery of other admissible evidence."); U.S. v. American Soc. of Composers, Authors and Publishers, 1996 WL 157523, at *1 (S.D.N.Y. 1996) ("Rule 408 is not, by definition, the source of a privilege. The rule limits the admissibility of settlement terms or proposals and of other representations made in the course of settlement discussions, but it does not purport to preclude discovery of such agreements or statements. Indeed, it could scarcely do so in view of the fact that it authorizes the use of such information at trial for a number of purposes. It also follows that the substance of settlement negotiations is not per se irrelevant to a proceeding in federal court.").

115. *See Unsettling Development*, *supra* note 14, at 39–40.

116. *See* Dolly Wu, *Patent Litigation: What About Qualification Standards for Court Appointed Experts?*, 2010 B.C. INTELL. PROP. & TECH. F. 91501, at *48 (2010); Michael H. King & Steven M. Evans, *Selecting An Appropriate Damages Expert in a Patent Case: An Examination of the Current Status of Daubert*, 38 AKRON L. REV. 357, 367; *see, e.g.*, i4i Ltd. P'ship v. Microsoft Corp., 598 F.3d 831, 854–56 (Fed. Cir. 2010) (allowing the expert to testify what a reasonable royalty would be as long as it meets "minimum standards of relevance and reliability").

117. *Unsettling Development*, *supra* note 14, at 39.

rebut the expert.[118] Therefore, the discoverability of settlement negotiation documents has a major impact on patent litigation. The next section shows that, while the *ResQNet* decision held that settlement licenses are admissible, it has further hindered Rule 408's effectiveness.

D. THE *RESQNET* REFORMULATION AND SUBSEQUENT CONFUSION

In *ResQNet*, instead of excluding settlement licenses based on evidentiary or probative grounds, the Federal Circuit disrupted this equilibrium and held instead that the most "reliable" measure of damages for patent infringement may be the settlement licenses of the patent-in-suit from other related third-party litigations.[119] In coming to this decision, the Federal Circuit noted that the district court, in calculating the damages, had "relied on speculative and unreliable evidence divorced from proof of economic harm linked to the claimed invention [which] is inconsistent with sound damages jurisprudence."[120] While the Federal Circuit acknowledged "that litigation itself can skew the results of the hypothetical negotiation," the court nevertheless held that the district court should not have "rel[ied] on unrelated licenses" and "that the most reliable license in [the] record arose out of litigation."[121] While some courts have distinguished themselves from *ResQNet* by emphasizing the "in this record" language,[122] the case has led many other courts to reverse course and consider settlement licenses in the context of the *Georgia-Pacific* factors.[123]

More significantly, *ResQNet* left unanswered the question of whether the settlement-related documents underlying these licenses should be discoverable.[124] On this issue, courts, even in the same district, have reached conflicting and competing conclusions. In *Software Tree, LLC v. Red Hat, Inc.*, Magistrate Judge Love of the Eastern District of Texas noted that "*ResQNet*

118. *Id.*; *see, e.g.*, Century Wrecker Corp. v. E.R. Buske Mfg. Co., Inc., 898 F. Supp. 1334, 1340–41 (N.D. Iowa 1995) (allowing the presentation of otherwise inadmissible settlement agreements to rebut an expert's conclusions about reasonable royalty).

119. ResQNet.com, Inc. v. Lansa, Inc., 594 F.3d 860, 872 (Fed. Cir. 2010).

120. *Id.* at 868.

121. *Id.* at 872.

122. *See, e.g.*, Fenner Investments, Ltd. v. Hewlett-Packard Co., No. 6:08-CV-273, 2010 WL 1727916, at *3 (E.D. Tex. Apr. 28, 2010) (noting that ResQNet court's decision is based on the first Georgia-Pacific factor and that "litigation-related licenses were part of the record" unlike the facts of its case); Bascom Global Internet Servs. v. AOL LLC, No. CV 08-1765, 2011 U.S. Dist. LEXIS 100609, at *7 (E.D.N.Y. Sept. 8, 2011) ("Unlike the settlement agreement at issue in the instance matter, in ResQNet.com, Inc., the litigation-related license agreements were voluntarily produced, were part of the record and their admissibility was not before the court.").

123. *After ResQNet*, *supra* note 8, at 194.

124. *See supra* note 12.

has not upset this district's case law regarding discoverability of settlement negotiations" and held settlement-related negotiation documents as privileged.[125] Meanwhile in *Tyco Healthcare Group LP v. E-Z-EM, Inc.*, Judge Ward, also of the Eastern District of Texas, indicated that "*ResQNet* suggests that the underlying negotiations are relevant to the calculation of a reasonable royalty using the hypothetical negotiation damages model," and because of this, he ordered the defendant to produce the settlement negotiation documents.[126] Finally in *Clear with Computers, LLC, v. Bergdorf Goodman, Inc.*, Judge Davis of the Eastern District of Texas came down in the middle by noting that "allowing discovery will be the exception, not the rule, and in most cases discovery of the negotiations will not be warranted."[127] With three separate positions that essentially span the entire spectrum coming from the same district,[128] the discoverability of settlement negotiations became a quagmire for patent practitioners and litigants.

The only higher court decision that provided some guidance on whether settlement-related documents are privileged came from a non-patent case from the Sixth Circuit. In *Goodyear Tire & Rubber Co. v. Chiles Power Supply, Inc.*,[129] the Sixth Circuit held that these types of document should be privileged. In establishing a privilege, the court heavily relied on the "public interest" prong of the *Jaffee* factors.[130] The court indicated that "there exists a strong public interest" in "[t]he ability to negotiate and settle a case without trial [which] fosters a more efficient, more cost-effective, and significantly less burdened judicial system."[131] Furthermore, the court explained that "[w]ithout a privilege, parties would more often forego negotiations for the relative formality of trial. Then, the entire negotiation process collapses upon itself, and the judicial efficiency it fosters is lost."[132] Therefore, the court concluded that "any communications made in furtherance of settlement are privileged."[133] While significant, *Goodyear* was not uniformly accepted by the

125. Software Tree, LLC v. Red Hat, Inc., No. 6:09-CV-097, 2010 WL 2788202, at *4 (E.D. Tex. June 24, 2010).

126. Tyco Healthcare Group LP v. E-Z-EM, Inc., No. 2:07-CV-262 (TJW), 2010 WL 774878, at *2 (E. D. Tex. Mar. 2, 2010).

127. Clear With Computers, LLC v. Bergdorf Goodman, Inc., 753 F. Supp. 2d 662, 664 (E.D. Tex. 2010).

128. This lack of uniformity in approach is perhaps especially troubling given the Eastern District of Texas' well-known patent-heavy docket.

129. Goodyear Tire & Rubber Co. v. Chiles Power Supply, Inc., 332 F.3d 976 (6th Cir. 2003).

130. *Id.* at 980.

131. *Id.*

132. *Id.*

133. *Id.* at 983.

district courts in patent cases because the underlying issue was not patent-related.[134] In response, the Federal Circuit finally cleared up the confusion in *MSTG* by holding that settlement negotiations related to patent damages and reasonable royalty are discoverable.[135] As the following sections will show, while the Federal Circuit may have erred in its *Jaffee* analysis, it came to the right conclusion in *MSTG*.

II. THE *IN RE MSTG* DECISION

Although the recent *MSTG* decision provided much needed certainty, how it will affect NPE-related litigation remains to be seen. Before constructing a decision tree framework to analyze the effects of *MSTG* on the patent ecosystem, this Note first provides, in Section II.A, the facts and procedural history of the *MSTG* case and then explains, in Section II.B, the rationale behind the Federal Circuit's *Jaffee* analysis.

A. FACTS AND PROCEDURAL HISTORY

In 2008, MSTG Inc. ("MSTG") filed patent lawsuits against AT&T Mobility, LLC ("AT&T") and several other cellular phone manufacturers and service providers for the alleged infringement of U.S. Patent Nos. 5,920,511, 6,198,936, and 6,438,113 (collectively "patents-in-suit"), covering third-generation mobile telecommunications technologies.[136] MSTG eventually settled with all of the defendants except for AT&T.[137] As a part of these settlements, most defendants were provided with licenses for the patents-in-suit as well as other MSTG-owned patents.[138]

Subsequently in the lawsuit, disagreement over the evidence needed for the calculation of reasonable royalty arose between MSTG and AT&T.[139] Based on *ResQNet*, AT&T sought discovery into the settlement agreements MSTG had reached with the other defendants.[140] In response, MSTG provided AT&T with the licensing and option agreements (collectively

134. *See supra* notes 125–127 and accompanying text.
135. *In re MSTG*, 675 F.3d 1337, 1348 (Fed. Cir. 2012).
136. *Id.* at 1339.
137. *Id.*
138. *Id.* (With one defendant, MSTG entered into an option agreement that enabled the defendant to license the patents for a specific rate in the future. During the lawsuit, MSTG also entered into a licensing agreement with a technology consortium, providing the consortium with sub-licensing rights to all of its members, some of whom were defendants in the lawsuit.).
139. *Id.*
140. *Id.*

"settlement agreements") it had entered into with the other defendants.[141] However, when AT&T sought additional information regarding the negotiations for these settlement agreements, MSTG objected, reasoning that the negotiation documents were irrelevant to the reasonable royalty analysis.[142]

When AT&T filed a motion to compel the production of these documents, a magistrate judge initially rejected the motion.[143] However, MSTG subsequently served an expert report that, in part, stated the royalty rates within these settlement agreements could not be comparable to the reasonable royalty between AT&T and MSTG.[144] Although there was no evidence suggesting that the expert had access to the negotiation documents, he did, however, "rel[y] on deposition testimony of an MSTG executive that [stated] the agreements reflected litigation-related compromises."[145] Thereafter, AT&T sought reconsideration of its motion to compel.[146] In light of the expert's reliance on an MSTG executive's testimony, the magistrate judge granted AT&T's reconsideration motion and noted "that the negotiation documents 'might contain information showing that the grounds [the expert] relied on to reach his conclusion are erroneous.'"[147]

The district court subsequently affirmed the reconsideration order, agreeing with the magistrate judge's analysis.[148] The district court explained that, because MSTG's expert had relied—even if only indirectly—on these negotiation documents, it would only be fair if MSTG made these documents available for further analysis.[149] MSTG then petitioned the Federal Circuit for a writ of mandamus to block the district court's affirmation.[150]

B. THE FEDERAL CIRCUIT'S ANALYSIS

On petition for writ of mandamus, the Federal Circuit considered whether "communications related to reasonable royalties and damages are protected from discovery based on a settlement negotiation privilege."[151] The

141. *In re MSTG*, 675 F.3d at 1339.
142. *Id.*
143. *Id.* at 1339–40.
144. *Id.* at 1340.
145. *Id.*
146. *Id.*
147. *In re MSTG*, 675 F.3d at 1340 (quoting MSTG, Inc. v. AT&T Mobility LLC, No. 08 C 7411, slip op. at 4, 2011 WL 841437 (N.D. Ill. Mar. 8, 2011)).
148. *Id.*
149. *Id.*
150. *Id.* at 1341.
151. *Id.* at 1339.

court also considered whether "the district court clearly abused its discretion by ordering [the production of the negotiation documents.]"[152] The court ultimately denied the petition by holding that negotiation "communications are not privileged, and that the district court did not clearly abuse its discretion."[153]

In its analysis, the Federal Circuit first noted that the "[d]iscovery of privileged material is not permissible," but that "Rule 501 of the Federal Rules of Evidence authorizes federal courts to define new privileges."[154] The court further explained that in order to assert a new privilege under Rule 501, the United States Supreme Court in *Jaffee*, "ha[d] identified several factors to be considered."[155] The Federal Circuit proceeded to analyze the settlement negotiation privilege under these factors and ultimately found that the factors "do not support recognition of a settlement privilege."[156] Furthermore, the court indicated that the discoverability of settlement negotiation documents would be better governed by FRCP Rule 26 because it " 'limit[s] the frequency or extent of discovery otherwise allowed.' "[157] The following sections provide a detailed explanation of the Federal Circuit's *Jaffee* analysis in *MSTG*.

1. *The First* Jaffee *Factor: A Survey of States' Policy Decisions*

First, the Federal Circuit explained that " 'the policy decisions of the States bear on the question whether federal courts should recognize a new privilege or amend the coverage of an existing one.' "[158] The court indicated that when a "broad consensus" exists among the States for a privilege, a federal court should also recognize that privilege or else it " 'would frustrate the purpose of the state legislation . . . .' "[159] Here, the court found that while a mediation privilege exists broadly in the states, it should not be confused with a settlement negotiation privilege.[160] The court distinguished mediation from settlement negotiations by noting the latter operates "between two sides without the assistance of a third-party mediator."[161] Therefore, because the court indicated that "there is no state consensus as to a settlement

152. *Id.*
153. *In re MSTG*, 675 F.3d at 1339.
154. *Id.* at 1342.
155. *Id.* (citing *Jaffee v. Redmond*, 518 U.S. 1 (1996)).
156. *Id.*
157. *Id.* (quoting Fed. R. Civ. P. 26(b)(2)(C)).
158. *Id.* at 1343 (quoting Jaffee v. Redmond, 518 U.S. 1, 12–13 (1996)).
159. *In re MSTG*, 675 F.3d at 1343 (quoting Jaffee v. Redmond, 518 U.S. 1, 13 (1996)).
160. *Id.*
161. *Id.*

negotiation privilege," this factor weighed against implementing a privilege, as the "failure to recognize a federal settlement privilege will not 'frustrate the purposes' of any state legislation."[162]

2. *The Second* Jaffee *Factor: Congressional Considerations*

Second, the Federal Circuit indicated that courts must take Congressional considerations into account when creating a new privilege.[163] With respect to the settlement negotiation privilege, the court found that "[i]n adopting Rule 408 . . . , Congress directly addressed the admissibility of settlements and settlement negotiations but in doing so did not adopt a settlement privilege."[164] The Federal Circuit further explained that "[t]he rule is clear by its text and history that it covers . . . settlements and negotiations involving a third party."[165] Moreover, in rejecting such a privilege under Rule 501, the court also quoted the Supreme Court in noting that " 'Congress has considered the relevant competing concerns but has not provided the privilege itself.' "[166] Therefore, the Federal Circuit found that "[a]dopting a settlement privilege would . . . strike [a] balance differently from the one Congress has already adopted."[167]

3. *The Third* Jaffee *Factor: Advisory Committee's Recommendations*

Third, the Federal Circuit examined whether the settlement negotiation privilege is one listed in the recommendations made by the Advisory Committee of the Judicial Conference in formulating the FRE.[168] The court found that the privilege is not included within "the nine specific privileges recommended by the Advisory Committee, cutting against MSTG's argument [in favor of finding a privilege.]"[169]

4. *The Fourth* Jaffee *Factor: The Existence of Exceptions*

Fourth, the court focused on whether the settlement negotiation privilege would unnecessarily create too many exceptions.[170] Here, the court found that Rule 408 itself describes many situations in which settlement negotiations would be admissible.[171] Therefore, the court noted that this

162. *Id.* (quoting Jaffee v. Redmond, 518 U.S. 1, 13 (1996)).
163. *Id.*
164. *Id.*
165. *In re MSTG*, 675 F.3d at 1344.
166. *Id.* (quoting University of Pennsylvania v. E.E.O.C., 493 U.S. 182, 189 (1990)).
167. *Id.*
168. *Id.* at 1345.
169. *Id.*
170. *Id.*
171. *In re MSTG*, 675 F.3d at 1345–46.

privilege would be encumbered by "numerous exceptions," which "would distract from the effectiveness, clarity, and certainty of the privilege,"[172] thus weighing against the creation of a privilege.

5. The Fifth Jaffee *Factor: The Advancement of a Public Good*

Fifth, the Federal Circuit found that a new privilege must "effectively advance a public good."[173] Here, the Federal Circuit essentially rejected the argument made in *Goodyear*.[174] The court indicated that the "need for confidence and trust alone . . . is an insufficient reason to create a new privilege."[175] The court noted that "the Supreme Court has rejected new privileges under Rule 501 even though recognition of a privilege would foster a relationship based on trust and confidence."[176] The court further indicated that "disputes are routinely settled without the benefit of a settlement privilege."[177] Therefore, "an across-the-board recognition of a broad settlement negotiation privilege is not necessary to achieve settlement."[178]

6. Alternative Method: Using Rule 26 to Limit Discovery

Apart from the *Jaffee* factors, the Federal Circuit also indicated that FRCP Rule 26 may be a more suitable way of limiting the discoverability of settlement negotiation documents.[179] The court noted that discovery is not unlimited and that courts must balance the benefits against the burdens of the process.[180] Citing the Advisory Committee notes to Rule 26, the court explained, "discovery could be limited [by the district courts] where competing confidentiality interests are at stake."[181] Although this consideration was provided in the context of a tax return as a hypothetical, the court indicated that "[u]nder this authority, discovery in other areas has been limited [when] broad discovery would undermine other important interests in confidentiality."[182] Therefore, the court reasoned that the discoverability of settlement negotiations "can more appropriately be achieved by limiting the scope of discovery" rather than by adding a new

172. *Id.* at 1346.
173. *Id.* at 1345.
174. *See supra* notes 129–133 and accompanying text.
175. *In re MSTG*, 675 F.3d at 1345.
176. *Id.*
177. *Id.*
178. *Id.*
179. *Id.* at 1346.
180. *Id.*
181. *In re MSTG*, 675 F.3d at 1346–47 (citing Fed. R. Civ. P. 26 Advisory Committee Notes).
182. *Id.* at 1347.

privilege.[183] However, the court left unanswered the question of what limits "can appropriately be placed on discovery of settlement negotiations."[184]

III. DISCUSSION

While *MSTG* provided some much needed certainty to the discoverability of settlement-related documents, it is still too early to tell from an empirical standpoint what effects the case will have on NPE-related litigation. However, because of the serious strain that NPE-related litigation puts on the judicial system,[185] it is essential to understand how *MSTG* might affect NPEs' future litigation strategies. Among the *Jaffee* factors, the "Advancement of a Public Good" factor provides the best lens for the analyzing whether *MSTG* will advance the judicial public good by either reducing the number of NPE-related filings or shortening the process of NPE-related litigation.

Through the use of a decision tree framework, this Part analyzes how *MSTG* might alter NPEs' strategies. Section III.A discusses why the Federal Circuit erred in its *Jaffee* analysis and should have only considered the "Advisory Committee's Recommendations" and the "Advancement of a Public Good" factors in making its decision. Section III.B then constructs a decision tree framework to analyze *MSTG*'s potential "Public Good" impact. Using this decision tree framework, Section III.C demonstrates how the discoverability of settlement-related documents may affect NPEs' strategies in three different ways, depending on the litigious behavior of the NPE. Finally, Section III.D summarizes this analysis and argues why the "Advancement of a Public Good" factor, like the "Advisory Committee's Recommendations" factor, should have weighed toward the discoverability of settlement negotiation documents in NPE-related litigation.

A. A CRITIQUE OF THE FEDERAL CIRCUIT'S *JAFFEE* ANALYSIS IN *MSTG*

Given that not all of the *Jaffee* factors are dispositive to patent law or the issue being addressed in the case, the Federal Circuit should have only relied on the "Advisory Committee's Recommendations" and the "Advancement of a Public Good" factors in making its decision.

1. The First Jaffee *Factor: A Survey of States' Policy Decisions*

Because issues related to patent damages and royalty disputes fall within the jurisdiction of Federal law, only Federal decisions and policies should

183. *Id.*
184. *Id.*
185. *See supra* notes 2 and 3.

have any bearing on the question of whether settlement-related documents should be privileged in a patent case.[186] Furthermore, FRE Rule 501's Advisory Committee notes indicate that "a federally developed common law based on modern reason and experience shall apply *except where the State nature of the issues renders deference* to State privilege law."[187] Therefore because the "nature" of patent damages is based on Federal law,[188] the court's survey of States' policies should not have been dispositive to the patent case at hand.[189]

2. *Second* Jaffee *Factor: Congressional Considerations*

Contrary to the Federal Circuit's analysis, a close reading of FRE Rule 408's Advisory Committee notes reveals a narrow rationale for Congress' decision in allowing the discoverability of settlement-related documents. Specifically, the 1974 Advisory Committee Enactment notes explain that "[t]his amendment adds a sentence to insure that evidence . . . is not rendered inadmissible merely because it is presented in the course of compromise negotiations if the evidence is otherwise discoverable. A party should not be able to immunize from admissibility documents *otherwise discoverable* merely by offering them in a compromise negotiation."[190] Considered redundant, the second sentence above containing the words "otherwise discoverable" was deleted by the 2006 amendment to Rule 408.[191] The Advisory Committee notes indicated that its "intent . . . to prevent a party from trying *to immunize admissible information* . . . through the pretense of

186. *See generally* Christopher A. Cotropia, *"Arising Under" Jurisdiction and Uniformity in Patent Law*, 9 MICH. TELECOMM. & TECH. L. REV. 253, 257 (2003) ("If regional circuits and state courts begin to apply their own patent law . . . certain patent law issues that were once decided by the Federal Circuit will be reopened. Such reopened patent law issues may not even be decided at the federal level . . . [, and t]he Supreme Court will be placed, as it was before the creation of the Federal Circuit, in the position of being the only Court that can assure uniformity in the field of patent law, a field Congress has already recognized is uniquely suited for, and indeed needy of, homogeneity."); *see Aero Prods. Int'l, Inc. v. Intex Recreation Corp.*, 466 F.3d 1000, 1016 (Fed. Cir. 2006) (noting that Federal Circuit law applies when it "involves a matter unique to patent law"); *see, e.g.*, *Fiskars, Inc. v. Hunt Mfg. Co.*, 279 F.3d 1378, 1381 (Fed. Cir. 2002) ("Because resolution of this issue necessarily requires an understanding of the distinctive characteristics of patent damages law, we apply Federal Circuit law in our review.").

187. Fed. R. Evid. 501, 1974 Advisory Committee Enactment Notes (emphasis added).

188. This is not to say there are not patent issues that are rooted in state law, but those issues are not at risk in *MSTG*. *See, e.g.*, Robert A. Matthews, Jr., Annotated Patent Digest, § 35:7 (2012) (noting that "[s]tate contract law, not federal patent law, governs the enforcement of agreements assigning patents . . .").

189. *See supra* Section II.B.1.

190. Fed. R. Evid. 408, 1974 Advisory Committee Enactment Notes (emphasis added).

191. Fed. R. Evid. 408, 2006 Advisory Committee Notes.

disclosing it during compromise negotiations" is operable even without the sentence.[192]

These statements suggest that Congress allowed the discoverability of settlement negotiations-related documents because it was afraid that litigants would prevent access to certain critical information by disguising otherwise admissible documents as negotiations documents, even if these documents were unrelated to a settlement negotiation.[193] The Federal Circuit took these statements to mean that Congress did not want to protect *any* information, including those that *are* pertinent to a settlement, from discovery.[194] A close reading of the Advisory Committee Notes reveals that this is simply not the case, as Congress did not consider the question of whether *pertinent* information to a settlement negotiation should be discoverable.[195] Because Congress focused narrowly on the discoverability of documents that *are not relevant* to settlement negotiations, this factor should not have been dispositive to the *MSTG* case because MSTG alleged that the documents AT&T sought *were relevant* to MSTG's prior settlement negotiations.

3. *Third* Jaffee *Factor: Advisory Committee's Recommendations*

The Federal Circuit properly analyzed this factor because the settlement privilege is not one of the Advisory Committee's nine recommended privileges.[196]

4. *Fourth* Jaffee *Factor: The Existence of Exceptions*

While it is true that privileging settlement-related documents might lead to some exceptions, the Federal Circuit's alternative method of using FRCP Rule 26 to limit the scope of discovery would also undoubtedly create numerous exceptions as well. If Rule 26 is used to determine what settlement negotiation documents should be discoverable, each district court would be required to perform its own case-dependent inquiry.[197] As district courts come to different conclusions, it could lead to a complicated landscape that makes it impractically difficult for litigants to figure out when these documents might become discoverable. In fact, it was this type of court-to-court confusion caused by *ResQNet* that led the Federal Circuit to rule on the

192. Fed. R. Evid. 408, 2006 Advisory Committee Notes (emphasis added).

193. Fed. R. Evid. 408, 2006 Advisory Committee Notes ("A party should not be able to immunize from admissibility documents otherwise discoverable merely by offering them in a compromise negotiation.").

194. *See supra* Section II.B.2.

195. *See* Fed. R. Evid. 408, 1974 Advisory Committee Enactment Notes.

196. *See supra* Section II.B.3.

197. *See supra* Section II.B.6.

settlement-related documents privilege in the first place.[198] Because the proposed Rule 26 solution would be no better at minimizing exceptions, this *Jaffee* factor should not have been dispositive either.

5. *Fifth* Jaffee *Factor: The Advancement of a Public Good*

In *MSTG*, the Federal Circuit dismissed this *Jaffee* factor by noting that the "need for confidence and trust alone . . . is an insufficient reason to create a new privilege."[199] However, the Supreme Court in *Jaffee* emphasized that "an asserted privilege must also 'serv[e] public ends.' "[200] The Supreme Court then carefully analyzed this factor from two different angles: the advancement of a public good that would result from the establishment as well as the denial of the privilege.[201] In *MSTG*, while the Federal Circuit explained that "disputes are routinely settled without the benefit of a settlement privilege,"[202] unlike the Supreme Court in *Jaffee*, it never carefully analyzed the public good benefits that would result from the denial of the privilege. Therefore the Federal Circuit should have performed a more in-depth analysis of this factor similar to what the Supreme Court did in *Jaffee*.

6. *The Relative Importance of the* Jaffee *Factors to the* MSTG *decision*

As the above analysis shows, only the "Advancement of a Public Good" and the "Advisory Committee's Recommendations" *Jaffee* factors should have been dispositive to the *MSTG* decision. Because the settlement negotiations privilege is not among the nine privileges that were contemplated by the Advisory Committee, the Recommendations factor would indicate that the privilege should not be established. However, it is less clear whether the privilege should have been established under the "Advancement of a Public Good" analysis. While the Federal Circuit concluded that "confidence and trust" is not enough to establish a privilege, it did not address how the denial of the privilege would advance a public good. By setting up a decision tree framework, the following section expounds on this *Jaffee* "public good" analysis in relation to the NPE-style of litigation present in the *MSTG* case. Through this process, this Note seeks to understand if the absence of a settlement negotiations privilege can benefit the judicial system.

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198. *See supra* Section I.B.

199. In re MSTG, 675 F.3d at 1345.

200. Jaffee v. Redmond, 518 U.S. 1, 12 (1996) (quoting Upjohn Co. v. United States, 449 U.S. 383, 389 (1981)).

201. *See id.*

202. In re MSTG, 675 F.3d at 1345.

B. DECISION TREE FRAMEWORK FOR ANALYZING *MSTG'S* EFFECTS ON NPES' STRATEGIES[203]

In order to analyze the effects of *MSTG*, this Note constructs a decision tree framework that models the typical enforcement path that an NPE may take.[204] Within this framework, there are three critical decision points: (1) an alleged infringer's decision on whether to negotiate and accept a pre-litigation licensing agreement with an NPE, (2) an NPE's decision on whether to sue an alleged infringer, and (3) a "joint-decision" between an NPE and an alleged infringer on whether to settle. However, because the scope of this Note is limited to the NPE's perspective, *MSTG* is primarily analyzed to see how it would affect the NPE's strategies related to the second and third decisions: (1) whom to sue and (2) when to settle.

1. *Overview of the Model*

Figure 1: Decision Tree Framework

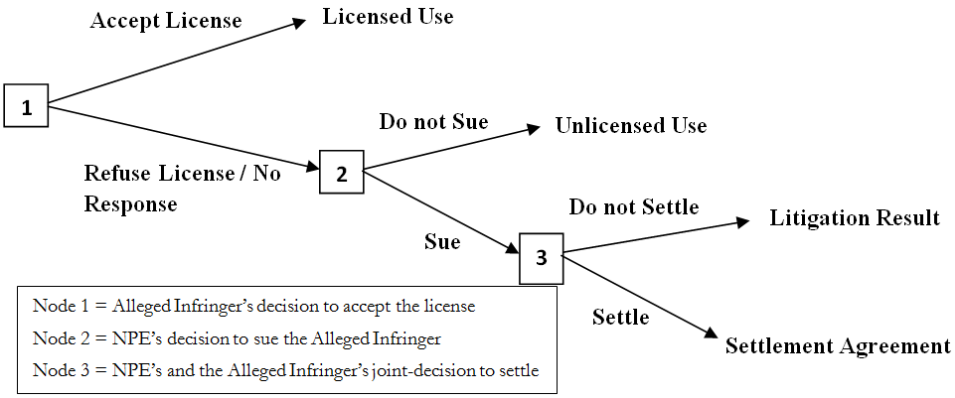

Figure 1 presents this Note's decision tree framework. An NPE usually begins an enforcement action by demanding a licensing agreement from the alleged infringer under the threat of litigation.[205] At this point ("Decision Node 1"), the alleged infringer has two choices: (1) it could respond to the demand letter and negotiate with the NPE for a license to the patent, or (2) it

203. *Cf.* This Author was inspired by the framework set forth by Peter S. Menell & Ben Depoorter, *Copyright Fee Shifting: A Proposal to Promote Fair Use and Fair Licensing*, 102 CALIF. L. REV. (forthcoming) at 21, *available at* http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2159325.

204. *See Forum Shopping*, *supra* note 37; Anders Sundelin, *Business Models of Non-Practicing Entities*, THE BUSINESS MODEL DATABASE (May 15, 2011), http://tbmdb.blogspot.com/2011/05/business-models-of-non-practicing.html.

205. *See* Victoria E. Luxardo, *Towards a Solution to the Problem of Illegitimate Patent Enforcement Practices in the United States: An Equitable Affirmative Defense of "Fair Use" in Patent*, 20 EMORY INT'L L. REV. 791, 794 (2006) [hereinafter *Illegitimate Patent*].

could ignore the demand letter and refuse a licensing agreement. If the parties reach an agreement, the NPE would receive some payoff amount, and the alleged infringer could continue to practice the patent without having to worry about potential litigation costs.

If the alleged infringer chooses to ignore the demand letter or does not come to an agreement with the NPE, then it would be up to the NPE to decide ("Decision Node 2") whether it should initiate a lawsuit against this particular alleged infringer. If the NPE chooses not to initiate a lawsuit against the alleged infringer, both the NPE and the alleged infringer would absorb some minimal costs associated with the process up until this point, but neither would have to expend any litigation costs.

However, if the NPE decides to sue this particular alleged infringer, then eventually in the litigation process, there would be a joint decision between the NPE and the alleged infringer on whether they should settle the lawsuit ("Decision Node 3"). While this is a joint decision, either side could unilaterally drive the settlement process, such as by proposing better terms.[206] Therefore, this Note strictly analyzes this decision node from the NPE's perspective. If the NPE successfully induces the settlement with the alleged infringer, the NPE would receive, and the alleged infringer would pay, a settlement value.

If the NPE does not, or fails to, incentivize the settlement process, the payoff for the NPE would depend on whether the patent is valid and whether there was infringement. If both questions are answered in the affirmative, then the damages phase would begin.

2. *Decision Node 2: The NPE's Decision on Whether to Sue*

The NPE's decision on whether to sue a particular alleged infringer is largely a monetary one, based on cost considerations for current and future litigations. Like any business, most NPEs[207] seek to maximize their profit by minimizing their costs. Therefore, the two key questions that an NPE would have to address at this node are: (1) whether the revenue generated by this particular litigation would be greater than the costs associated with that litigation and (2) whether this particular litigation would adversely affect any future lawsuits against other possible infringers.

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206. *See* PETER S. MENELL ET AL., PATENT CASE MANAGEMENT JUDICIAL Guide § 2.7.8 (2d ed. 2012) (Chart 2.10 lists other considerations including "the amount demanded," the possibility of "strategic alliances," and others.).

207. *See supra* Section I.A.1 for a discussion of why certain individual patent holders are driven more by a desire for recognition and justice than profits.

This framework suggests that if the expected cost for a specific litigation is greater than the predicted revenue, then the NPE should not proceed with that particular lawsuit. However, if a particular litigation seemed likely to improve the NPE's outcomes in future lawsuits, the NPE should continue with the lawsuit against that particular infringer.

3. *Decision Node 3: The NPE and the Alleged Infringer's Joint-Decision on Whether to Settle*

As previously noted,[208] while Decision Node 3 is a joint decision between the NPE and the alleged infringer, this Note limits its analysis of this node to the NPE's perspective of whether to settle. In deciding whether to settle, parties to a patent litigation generally consider two primary factors: (1) litigation costs and complexity and (2) the existence of prior licensing agreements.[209]

a) Litigation Costs and Complexity

Normally, the more complex the case is, the more costly the litigation would be, and the more likely it is for both sides to reach a settlement.[210] Because patent cases tend to be very complicated,[211] both the discovery process—to understand the technologies at issue—and the litigation process—to simplify the technology to a level that a lay jury can understand—can be extraordinarily expensive.[212] Therefore, even if an NPE

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208. *See supra* Section III.B.1.

209. *See* Jonathan L. Moore, *Particularizing Patent Pleading: Pleading Patent Infringement in a Post-Twombly World*, 18 TEX. INTELL. PROP. L. J. 451, 460 (2010) [hereinafter *Patent Pleading*]; Damon C. Andrews, *Why Patentees Litigate*, 12 COLUM. SCI. & TECH. L. REV. 219, 226, 229–30, 232 (2011) [hereinafter *Why Litigate*]; John R. Allison et al., *Patent Quality and Settlement Among Repeat Patent Litigants*, 99 GEO. L.J. 677, 705 (2011) [hereinafter *Patent Quality*]; Deepak Somaya, *Strategic Determinants of Decisions Not to Settle Patent Litigation*, 24 STRATEGIC MGMT. J. 17, 19–20 (2003); Telephone Interview with Roger Chin, Partner, Latham & Watkins (Oct. 7, 2012); Telephone Interview with Julie Holloway, Partner, Latham & Waktins (Oct. 5, 2012).

210. *Cf. Patent Pleading*, *supra* note 209, at 463–64 ("The significant costs associated with patent infringement litigation have several real-world effects on the behavior of both patentees and alleged infringer. Because of these costs, an alleged infringer has an incentive to quickly settle an infringement claim, typically by purchasing a license to use the patented technology, rather than take the case to trial.").

211. *See Patent Pleading*, *supra* note 209 ("[Patent cases] involve two layers of complexity: highly technical legal doctrines and procedures, plus the application of these substantive principles to complex technologies. . . . Such underlying complexity, both procedurally and substantively, is pervasive throughout patent litigation.").

212. *Cf.* PETER S. MENELL ET AL., PATENT CASE MANAGEMENT JUDICIAL GUIDE § 2.7 (2d ed. 2012) ("The vast majority of patent cases (about 96 percent) settle, but typically not until late in the case. In the meantime, the litigation can be extremely expensive for the

has a "watertight case" against an alleged infringer, it will still settle if the potential costs of litigation outweigh the expected damages award.[213] However, there is one caveat. Because NPEs litigate the same set of patents against several defendants,[214] they are also concerned with each lawsuit's impact on potential future litigations. Therefore, even if the expected value of the litigation at hand is negative, if the current litigation can make future litigations more profitable, then the NPE may not settle.

b) The Existence of Prior Licensing Agreements

The more pre-litigation licensing agreements that the patent holder has on the patent-in-suit, the more likely the patent holder will settle the case.[215] This result comes from the asymmetrical harm that the patent holder might suffer if the patent were found to be invalid in trial.[216] Here, the *Medimmune, Inc. v. Genentech, Inc.*[217] decision makes it difficult for patent holders to prevent invalidity challenges against the licensed patent.

In *Medimmune*, the Supreme Court held that a licensee is "not required . . . to break or terminate its . . . licensing agreement before seeking a declaratory judgment in federal court that the underlying patent is invalid, unenforceable, or not infringed."[218] This decision effectively shifted the litigation risk away from the licensees; they do not have to breach the licensing terms in order to

parties. According to an industry survey, each side can expect to spend from $1.5 to $3 million in fees through the close of discovery, and between $2.5 and $5 million in total through trial.").

213. *See Why Litigate*, *supra* note 209, at 226 ("Even if a [NPE] believes [it] has a watertight case against an alleged infringer and is able to proceed beyond the dismissal phase of a lawsuit, there are nevertheless numerous reasons that [it] might be better off settling a patent dispute. . . . Whether directly or indirectly, these several reasons boil down to one fundamental, underlying factor—cost.").

214. *See Of Trolls*, *supra* note 17, at 1579 ("NPEs also typically target multiple defendants and seek settlements.").

215. *Cf.* Rochelle Cooper Dreyfuss & Lawrence S. Pope, *Dethroning Lear? Incentives to Innovate After Medimmune*, 24 BERKELEY TECH. L.J. 971, 982 (2009) [hereinafter *Dethroning Lear*].

216. *See* Lear, Inc. v. Adkins, 395 U.S. 653, 667 ("It is generally the rule that licensees may avoid further royalty payments, regardless of the provisions of their contract, once a third party proves that the patent is invalid."); John W. Schlicher, *Patent Licensing, What to Do After Medimmune v. Genentech*, 89 J. PAT. & TRADEMARK OFF. SOC'Y 364, 386 (2007) ("[T]he law has said that a licensee is excused from its royalty obligation if the patent under which it is licensed, and for which it is paying royalties, is found invalid in a final judgment in any action between the patent owner and some other entity."); *Dethroning Lear*, *supra* note 215 ("[A] declaration of patent invalidity is good against the world, and not just against the challenger. Accordingly, an adverse decision will destroy the entire income stream flowing from the patent.").

217. Medimmune, Inc. v. Genentech, Inc., 549 U.S. 118 (2007).

218. *Id.* at 136.

get standing for a declaratory judgment action, thus incentivizing licensees to challenge a patent's validity.[219] An invalidity ruling could destroy all payment obligations that licensees have to a patent holder for that specific patent.[220] Additionally, even if a particular licensee chose not to challenge a patent, it might still be relieved of its payment obligations if another plaintiff prevailed on a showing of invalidity because such a finding is "good against the world."[221] Therefore, if a patent holder's licensing agreements to a particular patent-in-suit were to increase substantially, this could lead the patent holder to become more concerned with an invalidity finding and more willing to favor a definitive settlement outcome that would not endanger the patent's validity status.[222]

While the mere presence of multiple licensing agreements may appear to indicate the strength of a patent's validity, this is not necessarily true. NPEs' enforcement models are dependent on alleged infringers' fear of costly, dragged-out litigation.[223] To this end, NPEs often acquire "promising patent[s], regardless of whether the firm believes the patent[s are] actually valid."[224] In fact, many licensing agreements are the result of "nuisance fee economics in the patent system: where defendants pay not because of the economic value of the patent but in order to avoid the cost of determining liability and resolving a patent demand."[225]

C. APPLICATION OF THE DECISION TREE FRAMEWORK ON DIFFERENT TYPES OF NPES

Section III.C applies the decision tree framework to the three different groups of NPEs previously identified in Section I.A, *supra*. As the analysis shows, *MSTG* will only affect the behavior of "patent troll" NPEs by potentially making them less litigious and more willing to settle with those against whom they litigate.

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219. *See Dethroning Lear*, *supra* note 215.

220. *Patent Quality*, *supra* note 209.

221. *See supra* note 216.

222. *See Dethroning Lear*, *supra* note 215 ("Knowing the risk, patent holders are much more likely to settle improvidently.").

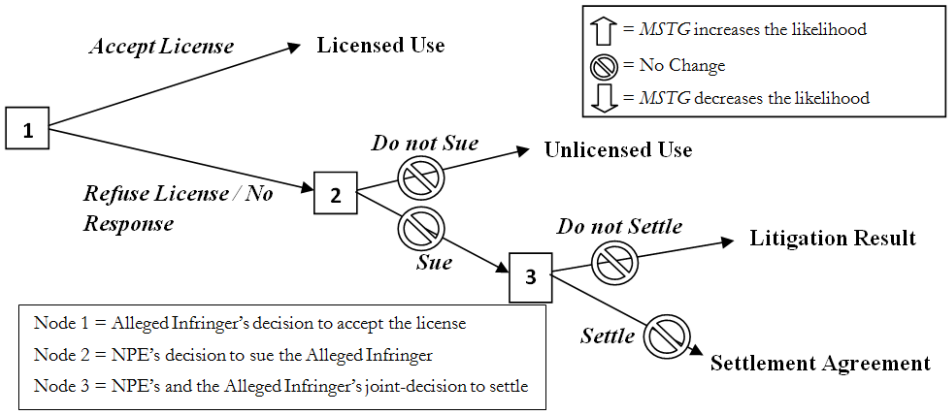
223. *See, e.g.*, *Illegitimate Patent*, *supra* note 205.

224. *Illegitimate Patent*, *supra* note 205.

225. Colleen V. Chien, *Startups and Patent Trolls*, at 6 (September 2012) (Santa Clara Univ. Legal Studies Research Paper No. 09-12), *available at* http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2146251 [hereinafter *Startups*].

1. *Litigation-at-all-costs NPEs*

Figure 2: *MSTG*'s Influence on Litigation-at-all-costs NPEs



For this group of NPEs, as Figure 2 shows, *MSTG* is unlikely to influence their strategies on whether to sue or settle, primarily because they are motivated by public vindication and justice more than money.[226]

a) Node 2: Litigation-at-all-costs NPEs' Decision on Whether to Sue

MSTG is unlikely to influence the decision of these NPEs on whether to sue a particular alleged infringer. As noted previously,[227] prior to *MSTG*, NPEs in this category were already highly litigious and selective in determining whom they sue. Although the decision to sue a particular alleged infringer is largely a monetary one, these NPEs see litigation not just as a process to obtain revenues, but also as a forum to vindicate their role as the rightful owner of the patent.[228] Moreover, the discoverability of settlement negotiation documents is unlikely to affect these NPEs' decision of whom to sue because they tend to target a few specific companies that have "wronged" them[229] and usually push all of their litigations to trial verdicts.[230] Thus, *MSTG* is unlikely to change these NPEs' litigation strategies.

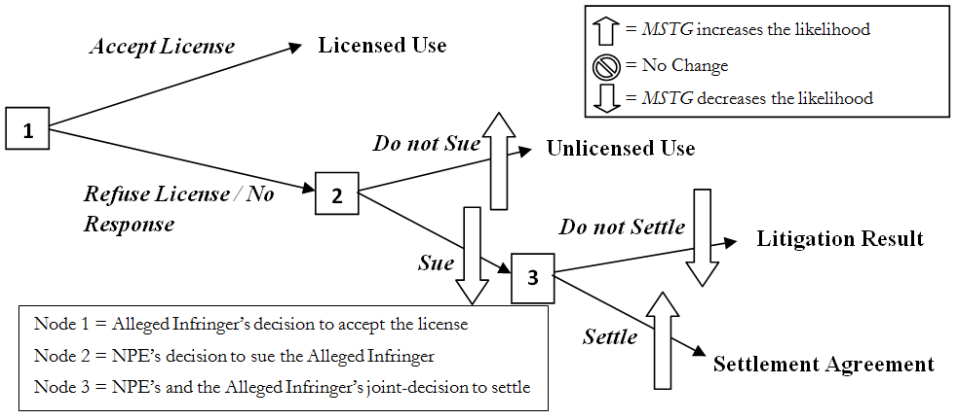
226. *See supra* Section I.A.1.
227. *See id.*
228. *See id.*
229. *See, e.g.*, Flash of Genius, *supra* note 24 (describing Robert Kearns as an inventor who was "not particularly interested in money. He want[ed] justice.").
230. *See supra* Section I.A.1.

b) Node 3: Litigation-at-all-costs NPEs' Decision on Whether to Settle

Because these NPEs see the trial process as a way of vindicating their patent rights for reason unrelated to monetary compensation, they most likely had relatively few settlement agreements even prior to *MSTG*.[231] Therefore, while *MSTG* might increase these NPEs' litigation costs in terms of additional discovery requests, these individuals are still unlikely to alter their settlement strategy.

2. *Litigation-as-a-Business-Model NPEs*

Figure 3: *MSTG*'s Influence on Litigation-as-a-Business-Model NPEs



These NPEs tend to see their patent enforcement actions as part of a revenue-generating business model.[232] Because monetary considerations play a significant role in their strategic decisions,[233] *MSTG*, as Figure 3 shows, is likely to make these NPEs less willing to sue small-scale alleged infringers and more willing to settle with those large-scale alleged infringers that they do sue.[234]

a) Node 2: Litigation-as-a-Business-Model NPEs' Decision on Whether to Sue

Prior to *MSTG*, the only settlement-related documents that these NPEs' opponents could discover were settlement licenses.[235] Even then, NPEs could have a court deny the defendants' request by focusing on the "in this

231. *See id.*
232. *See supra* Section I.A.2.
233. *See id.*
234. *See infra* Section III.C.2.
235. *See supra* Section I.D.

record" language from *ResQNet*.[236] Therefore, the risk that one of the NPEs' defendants could uncover another defendant's settlement details was minimal.[237] However, *MSTG* increased this risk by unambiguously concluding that these settlement-related documents are not privileged.[238] Hence, these NPEs are likely to become more selective in their litigation strategies, possibly forgoing lawsuits against small-scale alleged infringers, as small settlements are likely to result from those lawsuits. Additionally, and perhaps more importantly, if large-scale allegedly infringing defendants uncover these settlement-related documents, they could drive down their own reasonable royalty per the first *Georgia-Pacific* factor.[239]

Since these NPEs rely on patent enforcement as a part of their business strategy,[240] these NPEs might try to monetize their patents through pre-litigation licenses rather than suing smaller alleged infringers. However, per the first *Georgia-Pacific* factor, these licensing agreements could still play a role in the calculation of a reasonable royalty.[241] But, NPEs could obscure the negotiated value of a given patent by bundling that patent with an assortment of other patents that it owns and licensing that bundle.[242] Because their business model is driven by patent ownership,[243] it would not be difficult for these NPEs to come up with additional patents needed for bundling purposes. Then, by the logic of *ResQNet*, if NPEs ensure that this bundle of patents differs significantly from the allegedly infringing product they would

236. *See supra* note 122 and accompanying text.

237. *See* Philip Green & Rachel Clark Hughey, *Evaluating Reasonable Royalties After* ResQNet, LAW360 (Oct. 14 2010), http://www.merchantgould.com/resources/images/1273.pdf ("Nowhere did the Federal Circuit indicate that past litigation settlements are automatically considered in connection with evaluating reasonable royalties. Nevertheless, language in the court's decision created sufficient uncertainty that district courts have struggled with issues surrounding the relevance or admissibility of litigation settlement agreements.").

238. In re MSTG, Inc., 675 F.3d 1337, 1348 (Fed. Cir. 2012), *reh'g denied*, 468 Fed. App'x. 994 (Fed. Cir. 2012).

239. *See supra* note 88 (stating that the first *Georgia-Pacific* factor is "[t]he royalties received by the patentee for the licensing of the patent in suit, proving or tending to prove an established royalty."); here, the assumption is that these royalties are lump-sum agreements, which is most likely the case. *See infra* Notes 255–56 and accompanying text.

240. *See supra* Section I.A.2.

241. *See, e.g.*, ROBERT A. MATTHEWS, JR., ANNOTATED PATENT DIGEST § 30:104.25 (2012) ("The first and second *Georgia Pacific* factors consider comparable licenses the patentee or accused infringer may have had with others.").

242. *See infra* Notes 244–45 and accompanying text.

243. *See supra* Section I.A.2.

be litigating against, these licenses would not be considered in the reasonable royalty calculation.[244]

Judge Newman alluded to this possibility in her *ResQNet* dissent, noting that the majority "create[d] a new rule whereby no licenses involving the patented technology can be considered, in determining the value of the infringement . . . if the licenses include subject matter in addition to that which was infringed by the defendant."[245] Therefore, *MSTG* is likely to cause this group of NPEs to become more selective in the alleged infringers that they choose to sue, while also encouraging these NPEs to come up with bundled licenses to offer smaller alleged infringers.

b) Node 3: Litigation-as-a-Business-Model NPEs' Decision on Whether to Settle

Prior to *MSTG*, this group's settlement strategy was purely a profit maximizing exercise between reducing litigation costs and increasing settlement revenue.[246] However, because *MSTG* could cause this group of NPEs to sue significantly fewer defendants and to enter into more pre-litigation licensing agreements, litigation-as-a-business-model NPEs now have a much stronger incentive to protect their patents' validity than before.[247] Therefore, these NPEs would be more likely to engage in the settlement process and thereby avoid the risk of an invalidity finding, which could destroy the net value of all of their established pre-litigation licensing agreements.[248] Furthermore, these NPEs would worry less about the discoverability of these settlement-related documents in the future as they would be targeting large-scale alleged infringers that are of similar stature, making all of the settlement data rather similar and creating a relatively consistent reasonable royalty calculation.[249]

On the other hand, these NPEs might be less willing to settle because each settlement they enter into would create additional litigation costs for subsequent litigations.[250] However, as explained above, the discoverability of these settlement negotiations is not as significant of a concern as before, since the alleged infringers that NPEs would be litigating against are likely to

244. *See* ResQNet.com, Inc. v. Lansa, Inc., 594 F.3d 860, 871 (Fed. Cir. 2010) ("The re-bundling licenses simply have no place in this case.").

245. *Id.* at 876 (Newman, J., dissenting).

246. *See supra* Section I.A.2.

247. *See supra* Section III.B.3.

248. *See id.*

249. *See supra* Section III.C.2.

250. *See supra* Section III.B.3.

be similar in financial status.[251] Furthermore, because NPEs would likely initiate fewer lawsuits than before,[252] their overall litigation costs would likely decrease.[253] Moreover, NPEs would be motivated to settle to avoid the litigation risk of an invalidity finding of the patent-in-suit because such a finding would jeopardize all pre-existing licensing deals the NPE had negotiated with other entities.[254]

Conversely, *MSTG* might not affect NPEs' settlement strategies because NPEs could contract for pre-litigation lump-sum agreements instead of licensing agreements. Because of the one-time payment nature of lump-sum agreements, NPEs utilizing this strategy would not have to worry about an invalidity finding that might stop continued payment obligations.[255] However, it is unlikely that these NPEs would be able to convince all small-scale alleged infringers to enter into lump-sum licensing agreements. Some of these alleged infringers might attempt to minimize their production of products associated with the patent-in-suit and would therefore prefer a royalty-bearing licensing agreement over a lump-sum agreement. Furthermore, some smaller companies might lack the upfront capital needed to pay a lump-sum settlement.[256] In these situations, NPEs have been known to make "zero dollar settlement with an escalating royalty upon meeting a certain revenue threshold."[257]

Thus, the discoverability of settlement-related documents is likely to encourage these NPEs into negotiating bundled pre-litigation licenses with smaller alleged infringers rather than suing them. In turn, an increase in the number of pre-litigation licenses might incentivize these NPEs to favor the settlement process more than before to avoid jeopardizing their patents' validity.

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251. *See supra* Section III.C.2.

252. *See supra* Section III.C.2.

253. This prediction is contingent on the assumption that all of the monetary resources that would have been used on smaller infringers are not redirected in litigation against larger infringers.

254. *See supra* Section III.B.3.

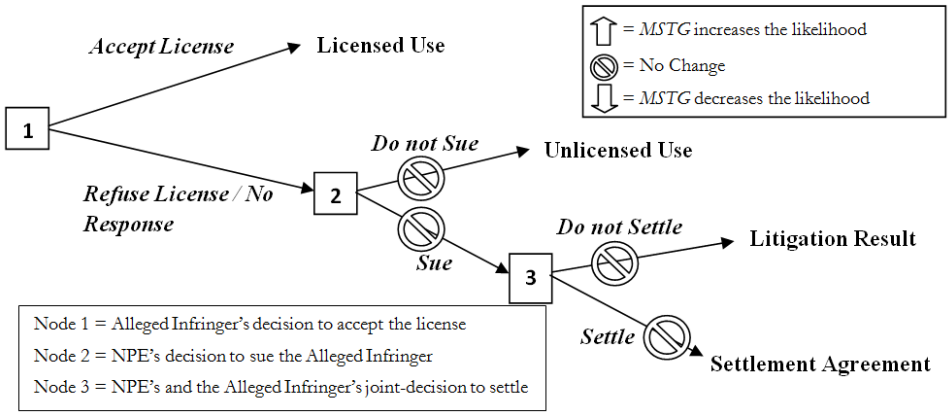
255. *See Patent Quality*, *supra* note 209 ("[O]ur experience has been that settlements of patent lawsuits more commonly involve lump-sum payments rather than ongoing royalties. As a result, a serial patent plaintiff that has settled a number of its cases may feel more comfortable litigating the rest because it probably will not be forced to give the money back even if it loses.").

256. *See Dethroning Lear*, *supra* note 215, at 992 ("Small companies, and especially startups, will often not be in a position to pay out the full cost of the license at the beginning of the relationship.").

257. *Startups*, *supra* note 225, at 11.

3. *Non-Litigious NPEs*

Figure 4: *MSTG*'s Influence on Non-Litigious NPEs



For this group of NPEs, as Figure 4 shows, the *MSTG* decision is unlikely to affect their decision on whether to sue or to settle. This group of NPEs is not very litigious to begin with because they are not dependent on the legal enforcement of their patents.[258] Because *MSTG* deals with evidentiary law,[259] it would mainly impact NPEs' litigation and settlement strategies, which is generally inapplicable to this group of NPEs.

D. IMPLICATIONS OF *MSTG* AND RELATED AIA JOINDER RULE DEVELOPMENTS

As discussed above,[260] the discoverability of settlement-related documents will likely only affect the behavior of the specific subset of NPEs known as "patent trolls" by discouraging them from suing smaller infringers and by encouraging them to settle with those larger alleged infringers against whom they do litigate. As patent troll-related litigation has become one of the major problems facing the patent legal system today,[261] *MSTG* could be a helpful tool in freeing judicial resources and reducing overly expansive litigation practices by incentivizing litigation-as-a-business-model NPEs to seek profits outside of the judicial system through private licensing discussions and agreements.[262] By making settlement negotiations-related

258. *See supra* Section I.A.3.

259. *See* In re MSTG, Inc., 675 F.3d 1337, 1339 (Fed. Cir. 2012), *reh'g denied*, 468 Fed. App'x. 994 (Fed. Cir. 2012) ("We are asked to decide first, as a matter of first impression, whether such communications related to reasonable royalties and damages are protected from discovery based on a settlement negotiation privilege . . . .").

260. *See supra* Section III.C.

261. *See, e.g.*, *Diminishing Trolling*, *supra* note 23.

262. *See supra* Section III.B.3.

documents discoverable, *MSTG* is also likely to decrease the number of defendants that the litigation-as-a-business-model NPEs would sue.[263] Furthermore, *MSTG* is also advantageous in that it is a selective remedy: specifically targeting the strategies of patent troll-like NPEs, while leaving the other types of NPEs untouched.[264]

Currently, the majority of these NPE-related lawsuits are against small companies.[265] Due to these defendants' small size and limited resources, these lawsuits often threaten companies' survival while also causing emotional and other non-monetary harm to its founders and employees.[266] Small companies play a major role in the economy, and these types of lawsuits can hinder job growth and prevent new innovations from reaching the marketplace.[267] Therefore by reducing this type of litigation, *MSTG* may also indirectly lead to additional public good advancements outside of the legal system.[268]

Hence, returning to the *Jaffee* factors, this analysis demonstrates that the "Advancement of a Public Good" factor strongly supports the discoverability of settlement negotiations-related documents. Because this factor and the "Advisory Committee's Recommendations" factor are the only dispositive *Jaffee* factors in the case[269] and because both factors support the same outcome, the Federal Circuit, while in error in its analysis, nevertheless came to the right conclusion by not establishing a settlement negotiations privilege under FRE Rule 501.

Moreover, the new joinder restrictions, a result of the AIA's passage, further support the "Advancement of a Public Good" analysis in favor of the *MSTG* decision. Under the new AIA joinder rule, a patent holder may not join a group of alleged infringers in the same enforcement action based only on the claim that they infringed on the same patent.[270] This modification might have significant consequences for NPEs, whose typical enforcement

263. *See id.*

264. *See supra* Section III.C.

265. *See Startups*, *supra* note 225, at 1–2 ("Although large companies tend to dominate patent headlines, most unique defendants to troll suits are small. Companies with less than $100M annual revenue represent at least 66% of unique defendants and the majority of them make much less than that: at least 55% of unique defendants . . . make under $10M per year.").

266. *See Startups*, *supra* note 225, at 2 ("The characteristics of small companies can make it harder to absorb a [patent troll] demand.").

267. *See, e.g.*, *Startups*, *supra* note 225, at 1 ("How patent demands impact startups is critical because they are a vital source of innovation and new jobs.").

268. *See supra* Section III.C.2.

269. *See supra* Section III.A.

270. Leahy-Smith America Invents Act, Pub. L. No. 112-29, sec. 19(d), § 299, 125 Stat. 284, 332–33 (2011).

model involves the joining of several alleged infringers to the same lawsuit based solely on the allegation that they infringed on the same patent-in-suit.[271] This result could lead NPEs to file more lawsuits than they would have before,[272] leading to additional strain on judicial resources. However, each new case that they file would increase the risk that their patents might be found invalid, which could in turn lead to collateral estoppel effects.[273] With the discoverability of settlement-related documents likely to lead these litigation-as-a-business-model NPEs to enter into more pre-litigation licensing agreements than before,[274] *MSTG* will heighten the litigation risk of engaging in multiple lawsuits. Therefore, in the new AIA world, *MSTG* could help to deter NPEs from congesting the judicial system, leading to an additional "Advancement of a Public Good."

IV. CONCLUSION

In *MSTG*, the Federal Circuit cleared up the confusion caused by its *ResQNet* decision and held that "settlement negotiations related to reasonable royalties and damage calculations are not protected by a settlement negotiation privilege."[275] Through a decision tree analysis, this Note suggests that *MSTG* will have the most impact on the strategies of a subset of NPEs, pejoratively known as "patent trolls," by potentially making them less litigious and more willing to settle. Furthermore, with the AIA bringing a more restrictive joinder rule that could force NPEs to file even more individual cases, *MSTG* might also lessen this filing incentive and further help to reduce the strain on judicial resources. This "Advancement of a Public Good" factor analysis, along with the fact that the settlement negotiations privilege is not one of the original "Advisory Committee's Recommendations," indicate that, even though the Federal Circuit might have erred in its *Jaffee* analysis, the court's decision to not establish a

271. *Diminishing Trolling*, *supra* note 23, at 4.

272. Mark A. Lemley, *Things You Should Care About in the New Patent Statute*, at 3 (September 2011) (Stanford Public Law Working Paper No. 1929044), *available at* http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1929044.

273. *See Slaying Trolls*, *supra* note 33, at 690 ("Thus if a patent is found invalid, the patentee may be estopped from claiming that the patent is valid in a later suit against a different defendant so long as the patentee had a full and fair opportunity to litigate the claim in the earlier suit and collateral estoppel is fair given the circumstances.").

274. These pre-litigation licensing agreements' payment obligations would stop at a finding of invalidity. *See supra* Section III.C.2.

275. In re MSTG, Inc., 675 F.3d 1337, 1348 (Fed. Cir. 2012), *reh'g denied*, 468 Fed. App'x. 994 (Fed. Cir. 2012).

settlement negotiations privilege may well help to reduce abusive NPE lawsuits.

PATENT AGGREGATION: MODELS, HARMS, AND THE LIMITED ROLE OF ANTITRUST

Justin R. Orr†

In what the Wall Street Journal called "the largest intellectual property auction of all time," a consortium of technology rivals including Apple, Microsoft, Sony, and Research in Motion outbid Google for a portfolio of 6,000 patents auctioned as part of Nortel Networks' liquidation for $4.5 billion in July 2011.[1] One month later, Google dwarfed the Nortel deal with its purchase of Motorola Mobility for $12.5 billion, a deal that many believe was directed toward acquiring Motorola's 17,000 existing patents and 7,500 pending patent applications.[2] Although practicing technology companies like the household names listed above own some of the world's largest patent portfolios, large non-practicing entities ("NPEs")[3] like Intellectual Ventures,

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1. Sven Grunberg & Don Clark, *Phone Rivals Gang Up, Outbid Google*, WALL ST. J. Jul. 21, 2011, http://online.wsj.com/article/SB10001424052702304584004576418962301518284.html.

2. When announcing the Motorola acquisition, Larry Page stated, "Our acquisition of Motorola will increase competition by strengthening Google's patent portfolio, which will enable us to better protect Android from anti-competitive threats from Microsoft, Apple and other companies." Larry Page, *Supercharging Android: Google to Acquire Motorola Mobility*, GOOGLE OFFICIAL BLOG (Aug. 15, 2011), http://googleblog.blogspot.com/2011/08/supercharging-android-google-to-acquire.html. *See also, e.g.*, Marguerite Reardon, *Google Just Bought Itself Patent Protection*, C-NET (Aug. 15, 2011), http://news.cnet.com/8301-30686_3-20092399-266/google-just-bought-itself-patent-protection/; Matt Richtel & Jenna Wortham, *Motorola's Identity Crisis*, N.Y. TIMES, Aug. 21, 2011, http://www.nytimes.com/2011/08/22/technology/after-google-motorola-to-face-identity-crisis.html; Shira Ovide, *Google-Motorola: It's All About the Patents*, WALL ST. J., Aug. 15, 2011, http://blogs.wsj.com/deals/2011/08/15/google-motorola-its-all-about-the-patents/.

3. The term "NPE" generally encompasses all patent owners who seek to monetize their patents without practicing the technologies themselves—a group that includes singular inventors as well as research universities and companies specializing in research. *See* Mark A. Lemley, *Are Universities Patent Trolls?*, 18 FORDHAM INTELL. PROP. MEDIA & ENT. L.J. 611, 629–31 (2008). This Note, however, is primarily concerned with NPEs that serve as intermediaries, particularly those which aggregate patents invented by others. *See* Allen W. Wang, *Rise of the Patent Intermediaries*, 25 BERKELEY TECH. L.J. 159, 165–82 (2010) (separating intermediary activities into three categories: brokers, defensive aggregators, and offensive aggregators). The Federal Trade Commission has adopted the term "patent assertion entity" ("PAE") to refer to "firms whose business model primarily focuses on purchasing and asserting patents." FED. TRADE COMM'N, THE EVOLVING IP MARKETPLACE: ALIGNING

Acacia Technologies, Round Rock Research, and RPX Corporation have become active purchasers from patent producers as well as at open auction.[4] The largest of these NPEs, Intellectual Ventures, has acquired more than 70,000 patents, making it the fifth largest patent holder worldwide.[5]

Aggregating patents, whether by practicing or non-practicing entities, seems at first like a strange strategy: buyers often purchase or license a patent portfolio without analyzing the strength and validity of most of the individual patents within that portfolio,[6] and they often have no intention of practicing the technologies underlying the patents.[7] Although different entities aggregate patents for vastly different reasons, unique features of the current patent ecosystem are responsible for both encouraging and facilitating this aggregation strategy. In particular, due to the difficulty of evaluating the scope and validity of any given patent claim, an aggregated patent portfolio provides a stronger patent position than the sum of its patent parts—a kind of "super-patent."[8] Practicing entities thus enter a virtual "arms race" under which they seek to build portfolios that will deter potential infringement claims by signaling their ability to bring strong infringement counterclaims, thus encouraging would-be complainants to cross-license or settle disputes rather than resorting to costly and potentially disruptive litigation.[9]

PATENT NOTICE AND REMEDIES WITH COMPETITION 8 n.5 (2011), *available at* www.ftc.gov/os/2011/03/110307patentreport.pdf. PAEs represent a subset of NPEs that primarily seek to monetize patents on inventions that they themselves did not invent, and would therefore encompass offensive aggregators. However, because this Note also considers NPE activities not based around assertion, particularly defensive aggregation models, the term "NPE" will be continued throughout.

4. Robin Feldman & Tom Ewing, *The Giants Among Us*, 2012 STAN TECH. L. REV. 1, 2, 5 (2012) (describing patent aggregators generally, with special focus on explaining the activities of Intellectual Ventures, and estimating that the company amassed 30,000 to 60,000 patents over the span of five years). Intellectual Ventures has been estimated to have purchased three-quarters of all patents sold at auctions run by Ocean Tomo, the intellectual property auctioneer. *Publicly Auctioned Patent Buyers: Intellectual Ventures & Others*, AVANCEPT, LLC (Mar. 2010), http://avancept.com/iv-report-auction.html.

5. *Our Patent Portfolio*, INTELLECTUAL VENTURES, http://www.intellectualventures.com/index.php/inventions-patents/patent-portfolio (last visited Dec. 19, 2012); *see also* Feldman & Ewing, *supra* note 4, at 5.

6. *See infra* note 76 (discussing the "ruler method" of valuing patent portfolios by the relative height of patent stacks).

7. By definition, NPEs do not actually make anything, and many practicing companies purchase patents not for technology transfer, but in order to deter against litigations from competitors, as discussed *infra* Section II.A.

8. *See infra* Part III; *see also* Gideon Parchomovsky & R. Polk Wagner, *Patent Portfolios*, 154 U. PA. L. REV. 1, 7 (2005).

9. *See* Colleen Chien, *From Arms Race to Marketplace: The Complex Patent Ecosystem and Its Implications for the Patent System*, 62 HASTINGS L.J. 297, 308–10 (2010); Tom Ewing, *Indirect*

Patent-asserting NPEs may decrease transaction costs by offering licenses to entire patent portfolios, compressing costly negotiation processes for many related patents into a more efficient process. On the other hand, when patent aggregation confers a stronger right to exclude than the underlying patents should convey, and when it does not actually promote the transfer of technology, then patent aggregation represents a net tax on consumers, distracting from real innovation rather than promoting it.[10] Expanding a patent's limited right to exclude may raise costs throughout highly patented industries, and concentrations of patent rights in single entities may offer competitors the ability to collude on prices and raise the intellectual property costs of current or future competitors to an extent that could harm the industry for innovation. In this context, antitrust analysis provides insights into the relationship between patent aggregation and the markets for innovation and technology goods. Applying antitrust scrutiny to patent aggregators' activities—both in the context of patent acquisitions and attempted assertions—might help to discourage wasteful and anticompetitive activity.

This Note considers the benefits and the harms of patent aggregation and explores the possible roles and likely limits of antitrust law in providing a regulatory role. Part I explores how patent law and the patent prosecution process encourage and facilitate patent aggregation. Part II describes how practicing and non-practicing entities aggregate patents to exploit the aspects of the patent system described in Part I to either defend against assertion, draw revenue from other practicing entities, or both. Part III describes the potential benefits of the aggregation activities described in Part II as well as the harms that such activities may pose as understood through the prism of antitrust law. Part IV considers various remedies to determine the role that antitrust law can play to limit the social costs of aggregation while promoting its possible efficiencies.

I. BACKGROUND: THE PATENT ECOSYSTEM

Before considering the development of patent aggregation and its competitive possibilities, this Part briefly describes: the purpose and contours

Exploitation of Intellectual Property Rights By Corporations and Investors: IP Privateering and Modern Letters of Marque and Reprisal, 4 HASTINGS SCI. & TECH. L.J. 1, 15–17 (2011).

10. *See* Carl Shapiro, Fed. Trade Comm'n: Patent Assertion Entity Activities Workshop (Dec. 10, 2012), *available at* http://www.ftc.gov/video-library/index.php/ftc-events/patent-assertion-entity-activities-session-14/2028431448001.

of the patent right; how that right encourages patent aggregation; and the ways in which those rights are granted, asserted, and contested.

A. THE PURPOSE AND CONTOURS OF PATENT RIGHTS

In the most basic sense, patents are property rights granted to stimulate innovation. By granting an inventor the right to exclude others from using her invention—the theory goes—a patent rewards her for the money, time, energy, and creative energies she puts into the inventive process, thus encouraging inventive behavior throughout society.[11] Innovation, therefore, lies at the very heart of the patent right. Article I of the Constitution provides Congress the power to "promote the progress of science and useful arts, by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries."[12] The Patent Act states that "whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor," subject to certain conditions.[13] Specifically, the Patent Act's requirements for novelty,[14] utility,[15] and non-obviousness[16] seek to ensure that a patent is granted only in exchange for an invention that is new and useful and which represents more than a trivial advance on existing technology.

But thinking of a patent right simply as a property right, or as a "monopoly" over a certain technology, oversimplifies the matter. A valid patent grants "the right to exclude others from making, using, offering for sale, or selling the invention."[17] It conveys a *negative* right to keep others from

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11. *See* Peter S. Menell & Michael J. Meurer, *Notice Failure and Notice Externalitites*, J. Legal Analysis (forthcoming 2013), *available at* http://ssrn.com/abstract=1973171 (analogizing patent law to property law in an agricultural context, where "the right to exclude encourages farmers to cultivate crops by ensuring that they, and not interlopers, will be able to reap the harvest").

12. U.S. CONST. art. I, § 8, cl. 8.

13. 35 U.S.C. § 101 (2011).

14. *See id.* § 102.

15. *See id.* § 101; Brenner v. Manson, 383 U.S. 519 (1966) ("The basic quid pro quo contemplated by the Constitution and the Congress for granting a patent monopoly is the benefit derived by the public from an invention with substantial utility.").

16. *See* 35 U.S.C. § 103 (2012) ("[A] patent may not be obtained . . . if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art.").

17. *Id.* § 154(a)(1). Note, although § 154(a)(1) is still valid, it may be more accurate to say that a patent confers a right to exclude *in some cases*, and in other cases confers only a right to license. *See* eBay, Inc. v. MercExchange, L.L.C., 547 U.S. 388, 391–94 (2006) (holding that patent infringement plaintiffs must satisfy the traditional four-factor test to be granted injunctive relief).

using an inventor's idea, but it does not convey any corresponding *positive* right to actually practice, make, or sell the invention.[18] For instance, someone who invents some never-before imagined self-cleaning sofa might nevertheless be prevented from building her invention—even if she holds a valid patent for it—because someone else owns a patent on the sofa's reclining system. Indeed, an infinite number of "blocking patents" might apply to any given invention, effectively blocking a patentee from legally using the invention without first securing licenses to all of the valid patents covering the product or process.[19]

Furthermore, although patent infringement is—like trespass onto real property—an absolute liability offense, patent rights are intangible and often amorphous.[20] Anyone who "without authority makes, uses, offers to sell, or sells any patented invention . . . infringes a patent" whether or not they know that any relevant patent exists or that their actions might infringe any such patent.[21] Unlike tangible property that can be touched and clearly defined in space, it is a patent's claims—intangible and often confusingly worded—that determine what the patent holder owns.[22] Thus inventors, manufacturers, vendors, and even consumers can infringe a patent despite ignorance, good faith efforts to search for and avoid infringement, and even efforts to obtain licenses to all relevant patents in the field.[23]

B. BASIC PROBLEMS IN THE PATENT SYSTEM: HIGH QUANTITY, LOW QUALITY, AND NOTICE FAILURE

The complexities of the patent right and the processes through which patents are created and litigated result in certain basic problems that encourage patent aggregation for both offensive and defensive purposes. In

18. *See* ROBERT P. MERGES & JOHN F. DUFFY, PATENT LAW AND POLICY: CASES AND MATERIALS 48–49 (5th ed. 2011) (explaining that, for example, a patent for a radar gun does not permit an inventor to use the invention in states where such use is illegal).

19. *Id.* at 49.

20. *See* Menell & Meurer, *supra* note 11, at 2 ("Unlike tangible assets, the nonrivalrous nature of intangibles enables many people to possess them simultaneously without interfering with others' use of the resource. It can be exceedingly difficult and costly to even identify 'neighboring' intangible property rights owners.").

21. 35 U.S.C. § 271(a) (2011).

22. The boundaries of the property right often remain unclear until a patent is actually litigated in federal court. Courts determine the meaning of a patent's claims, and thereby the boundaries of the property right therein, as a matter of law in pretrial hearings commonly referred to as "*Markman*" hearings. *See* Markman v. Westview Instruments, Inc., 517 U.S. 370, 374, 388 (1996).

23. *See* In re Seagate Tech. LLC, 497 F.3d 1360, 1368 (Fed. Cir. 2007) (en banc) ("Because patent infringement is a strict liability offense, the nature of the offense is only relevant in determining whether enhanced damages are warranted.").

particular, notice failure and patent thickets encourage patent aggregation by creating opportunities to exploit—or to defend against—the assertion of amorphous patent rights.

1. Too Many Bad Patents and the Creation of "Patent Thickets"

Many commentators believe that the patent system creates too many bad patents.[24] The Patent and Trademark Office (the "PTO")—experts have observed—sometimes overlooks obvious examples of prior art when issuing patents that appear invalid on their face.[25] Resource constraints likely limit the effectiveness of the patent prosecution process.[26] In 2011, the PTO employed 6,785 patent examiners, received 536,604 patent applications, and issued 244,430 patents.[27] Although the PTO has already made significant strides in working through its own backlog, more than 600,000 patents remained unexamined as of September 2012.[28] Examiners have a limited amount of time to devote to each patent, and must therefore study the underlying invention, analyze claims, search for prior art, and determine

24. *See, e.g.*, Richard A. Posner, *Why There Are Too Many Patents in America*, THE ATLANTIC (Jul. 12, 2012), http://www.theatlantic.com/business/archive/2012/07/why-there-are-too-many-patents-in-america/259725/ (questioning the need for patents in the high-tech industry and lamenting that most industries have too many patents); Joshua L. Sohn, *Can't the PTO Get a Little Respect?*, 26 BERKELEY TECH. L.J. 1603, 1630–32 (2011) (surveying common criticisms of the PTO's examination process, including the criticism that examinations are "insufficiently rigorous," that examiners are incentivized to grant rather than reject patent applications, and that examiners lack sufficient expertise); Jay P. Kesan, *Carrots and Sticks to Create a Better Patent System*, 17 BERKELEY TECH. L.J. 145, 147 (2002); Robert P. Merges, *As Many as Six Impossible Patents Before Breakfast: Property Rights for Business Concepts and Patent System Reform*, 14 BERKELEY TECH. L.J. 577, 589–91 (1999).

25. *See* Merges, *supra* note 24, at 590.

26. *See id.* at 602–05 (discussing the PTO's budget constraints and suggesting a cost-benefit analysis for assessing the value of expending additional resources on the examination process).

27. *Performance and Accountability Report: Fiscal Year 2011*, U.S. PATENT & TRADEMARK OFFICE, at 159, 187 (2011) [hereinafter *2011 PTO Report*], *available at* http://www.uspto.gov/about/stratplan/ar/USPTOFY2011PAR.pdf.

28. *Data Visualization Center, Patents Dashboard*, THE U.S. PATENT AND TRADEMARK OFFICE, http://www.uspto.gov/dashboards/patents/kpis/kpiBacklogDrilldown.kpixml (last visited Apr. 4, 2013). Unexamined patents fell to 590,000 as of April 2013. *Id.* These numbers represents a tremendous improvement over the past several years. In March 2010, the backlog of unexamined patents was more than 720,000. *See* Dennis Crouch, *The USPTO Patent Backlogs: Falling and Rising*, PATENTLY-O, (May 9, 2012), http://www.patentlyo.com/patent/2012/05/the-uspto-patent-backlogs-falling-and-rising.html.

validity in a fraction of the amount of time that patent lawyers may devote during prosecution or subsequent litigation.[29]

Because so few patents are ever litigated, it is difficult to know how many of the hundreds of thousands of patents that are granted annually are valid, but a number of studies suggest that the economic value of most issued patents is very low. One 2001 study estimated that the PTO eventually grants approximately 85% of all patent applications.[30] Studies suggest it is unlikely that such a high percentage of patent applications actually represent worthwhile contributions.[31] Indeed, a 1998 study estimates that nearly half of all litigated patents are eventually found to be invalid.[32] Another study found that U.S. corporations allow nearly half of their patents to expire after twelve years.[33] Non-corporate inventors allow their patents to expire at even higher rates.[34]

Of greater concern, however, are the patents that are renewed, never litigated, and thus never invalidated. Because patents are intangible, and because many patents may apply to the technology behind a single finished product or process, practicing entities must be vigilant in certain areas of highly patented technology. "Patent thickets" occur where a very large number of overlapping blocking patents apply to a given product or area of innovation, making it difficult for practicing companies and innovators to operate without engaging in costly licensing negotiations or litigation.[35] The most frequently discussed patent thicket is in the smartphone industry, where

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29. In 2001, Mark Lemley estimated that patent examiners spend an average of eighteen hours reviewing each patent throughout the entirety of the examination process. Mark A. Lemley, *Rational Ignorance at the Patent Office*, 95 NW. U. L. REV. 1495, 1496 (2001).

30. Cecil D. Quillen, Jr., Ogden H. Webster & Richard Eichmann, *Continuing Patent Applications and Performance of the U.S. Patent and Trademark Office—Extended*, 12 FED. CIR. B.J. 35, 38 (2002). The study takes into account "final rejections" that later receive continuation applications which the USPTO eventually approves. *Id.*

31. *See* John R. Allison and Mark A. Lemley, *Empirical Evidence on the Validity of Litigated Patents*, 26 AIPLA Q.J. 185, 201 (1998) (finding that 46% of litigated patents were later found to be invalid).

32. *Id.*

33. Kimberly A. Moore, *Worthless Patents*, 20 BERKELEY TECH. L.J. 1521, 1535 (2005) (measuring patent value (or lack of value) based on patentees' decisions to forego patent renewal prior to the end of the patent term).

34. *See id.* at 1531–35 (showing that 53.71% of all patents expire in twelve years, and that all other categories of inventors allow their patents to expire before twelve years more than 50% of the time).

35. *See* Carl Shapiro, *Navigating the Patent Thicket: Cross Licenses, Patent Pools, and Standard Setting*, *in* INNOVATION POLICY AND THE ECONOMY 119, 120 (Adam B. Jaffe, Josh Lerner, & Scott Stern eds., 2001) (defining a "patent thicket" as a "dense web of overlapping intellectual property rights that a company must hack its way through in order to actually commercialize new technology").

as many as 250,000 active patents might apply to a single working phone once one considers its hardware, software, and methods of communication.[36]

2. *Notice Failure*[37]

Patent infringement is an absolute liability offense, yet the patent right is intangible, meaning that someone can easily practice a patented process without knowing they are infringing. In contrast, physical property rights are more easily defined and discerned. For example, a home-builder can check her deed or pay a land surveyor to determine where she can build because her deed provides a positive right. Negative rights in the form of easements or other encumbrances might complicate her ability to build, but knowing the boundaries of her neighbors' rights should provide notice as to the parties with whom she must negotiate before she builds.[38] If a neighbor owns a right to a part of the property, the builder will either make an agreement with that person beforehand or try to build in such a way that does not infringe the neighbor's right. Not knowing the extent and ownership of neighbors' property rights drastically increases the chance that a builder will infringe inadvertently.

Two basic notice challenges increase the difficulty and cost of identifying competing patent rights: first, the complexity and costs of searching for intangible property, and second, the difficulty of determining the boundaries of a competing patent's claim. First, a developer cannot seek a license for or design around a patent of which she is unaware. The PTO maintains a searchable registry containing all issued patents and published applications, and recommends a seven-step process for finding potentially relevant patents

36. *See* Steve Lohr, *Apple-Samsung Patent Battle Shifts to Trial*, N.Y. TIMES (July 29, 2012), http://www.nytimes.com/2012/07/30/technology/apple-samsung-trial-highlights-patent-wars.html?pagewanted=all (citing estimation by RPX); RPX Corporation, Registration Statement (S-1) (Sep. 2, 2011) at 59, *available at* http://www.sec.gov/Archives/edgar/data/1509432/000119312511240287/ds1.htm. *But see* Paul Melin, Chief Intellectual Property Officer for Nokia, Fed. Trade Comm'n: Patent Assertion Entity Activities Workshop (Dec. 10, 2012) *available at* http://www.ftc.gov/video-library/index.php/ftc-events/patent-assertion-entity-activities-session-24/2028431449001 (expressing doubt that so many patents could apply to mobile phones, noting that even at $0.01 per patent per phone, licenses to all 250,000 patents would create a minimum price of $2,500 per device).

37. Menell & Meurer, *supra* note 11, at 1–2; JAMES BESSEN & MICHAEL J. MEURER, PATENT FAILURE: HOW JUDGES, BUREAUCRATS, AND LAWYERS PUT INNOVATORS AT RISK 19, 46–72 (2008) (concluding that the failure of the patent system in late 1990s, when profits from litigation first began to consistently exceed profits made directly from patent licensing and production, is attributable to the fuzzy boundaries of patent claims).

38. *See id.* at 4 (employing the analogy of a resource developer).

based mainly on searching for relevant keywords.[39] But hiring a lawyer to search for relevant patents is costly, and where patents employ ambiguous titles and avoid obvious keywords,[40] even a diligent lawyer might miss something. And patent applications can remain secret for the first eighteen months after filing, meaning that a developer might begin investing without knowing that a patent for her technology has already been filed by someone else.[41] When dealing with real property, searching through one's own title registry and those of one's neighbors will probably reveal any relevant negative rights or encumbrances affecting that property. But when any of millions of issued patents might apply, the likelihood of missing a relevant patent increases dramatically.

In the case of patents, "notice externalities" exacerbate the problem.[42] A patentee only benefits from providing notice of her property right to the extent that she can extract licensing fees or deter competition. However, if she waits until a potential infringer has invested heavily into an infringing product or process, she will enjoy far greater bargaining power and will have the potential to inflict far greater damage on the infringer.[43] Notice externalities may thus encourage patentees to essentially hide their patents from future targets until those targets have already invested in an infringing technology.[44]

Second, even when a developer does know of a potentially relevant patent, she may reasonably but incorrectly believe that her product does not infringe upon the patent's amorphous claims.[45] Professors Bessen and Meurer provide the example of E-Data's patent from 1985 entitled "System

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39. *See Seven Step Strategy*, U.S. PATENT & TRADEMARK OFFICE, http://www.uspto.gov/products/library/ptdl/services/step7.jsp (last visited Dec. 19, 2012).

40. *See* Menell & Meurer, *supra* note 11, at 12; Thomas Chen, *Patent Claim Construction: An Appeal for* Chevron *Deference*, 94 VA. L. REV. 1165, 1177–78 (2008).

41. *See* 35 U.S.C. § 122(b) (2011).

42. *See* Menell & Meurer, *supra* note 11, at 7. Professors Menell and Meurer define a notice externality as a situation where "the private returns to providing notice information are less than the social value." *Id.*

43. *See id.* at 7–8 (providing the example of NTP's patent assertion against RIM, discussed *infra*); *see also* Robert P. Merges, *The Trouble with Trolls: Innovation, Rent-Seeking, and Patent Law Reform*, 24 BERKELEY TECH. L.J. 1584, 1590–91 (2009) (describing the strategy as one that takes advantage of "lock-in" that occurs once a company has invested significantly into a patented technology).

44. Note, money damages can only be recovered for the period after which there exists proof that an infringer has been notified of the infringement and continued to infringe after notice was received. *See* 35 U.S.C. § 287(a). A party asserting a patent therefore does not directly profit from delaying notice except by improving its bargaining position by waiting until the infringer has become "locked-in" to an infringing technology.

45. *See* Menell & Meurer, *supra* note 11, at 2, 4–5.

for Reproducing Information in Material Objects at a Point of Sale Location," which E-Data later asserted successfully against more than 100 parties in the e-commerce space.[46] When the patent issued, a "point of sale location" was commonly understood to refer to in-store payment terminals, but in 2001 the Court of Appeals for the Federal Circuit determined that sales from the bedroom, offices, or anywhere with an Internet connection also constituted infringement.[47] Hundreds of companies suddenly learned that their basic services directly infringed a patent issued sixteen years before.[48] The doctrine of equivalents, which may expand the scope of a patent claim to cover activities that do not literally infringe every element of the claim, further obscures the boundaries of claimed property rights in a given field.[49]

3. Outcome Potential: Inadvertent Infringement and a High Compliance Costs

High-patent quantity, low-patent quality, and high information costs combine to dramatically increase the cost of avoiding infringement for developers and inventors. Acquiring licenses to every relevant patent in a heavily patented sector of technology may be extremely expensive, and in some instances essentially impossible.[50] When combined with high information costs and notice failure, patent thickets may form "patent minefields" for practicing companies.[51] The sheer quantity of issued patents in some technology sectors and the difficulty of identifying relevant patent claims means that even after a diligent search, some other valid patent might spring up once a company has already invested in a technology, possibly leading to imbalances in bargaining power and excessive litigations that combine to tax current production and future innovation.[52]

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46. BESSEN & MEURER, *supra* note 37, at 1–2, 8–9.

47. *Id.* at 9; Interactive Gift Exp., Inc. v. Compuserve Inc., 256 F.3d 1323, 1333–35, 1340 (Fed. Cir. 2011).

48. BESSEN & MEURER, *supra* note 37, at 9.

49. *See* Menell & Meurer, *supra* note 11, at 8. The doctrine of equivalents developed to capture activities that do not literally infringe a patent only because of some unimportant or insubstantial change that avoids infringement as a technicality while substantially fulfilling all of the elements of the patented invention. *See* Festo v. Shoketsu Kinzoku Kogyo Kabushiki Co., Ltd., 535 U.S. 722, 731–32 (2002) ("It is true that the doctrine of equivalents renders the scope of patents less certain.").

50. If 250,000 relevant patents apply to the mobile phone industry, see *supra* note 36, even well-resourced, diligent companies will likely infringe some patents.

51. *See* Shapiro, *supra* note 35, at 126.

52. *See* Merges, *supra* note 43, at 1600–02; Feldman & Ewing, *supra* note 4, at 25–28.

II. THEORY AND MODELS OF PATENT AGGREGATION

Many of the basic problems in the patent ecosystem that spawn high compliance costs also create an environment in which patent aggregation has flourished, both as a means of defending against those costs and as a means of exploiting them. Both practicing and non-practicing entities may aggregate patents, but often for different purposes. For practicing entities, rather than attempt to negotiate or litigate patents under a one-off scenario, aggregating negative rights to technologies practiced by other practicing entities encourages those practicing entities to cross-license their patent portfolios rather than asserting their own patents. Thus, patent aggregation can create the efficiency of compressing several one-off negotiations for many smaller portfolios into a single negotiation for licensing a larger portfolio, and create leverage that deters assertion. But patent portfolios can also serve offensive, revenue generating purposes, increasing the patent monetizer's negotiating power and rent-seeking capabilities.

NPEs that act primarily as intermediaries neither practice nor directly innovate, but rather purchase patent rights or assert the rights of others, developing and exploiting a comparative advantage in monetizing those patents through licensing or litigation.[53] Because NPEs do not practice any technology, they are practically invulnerable to the threat of patent counterclaims and have no need to cross-license. All NPEs, including research universities, research groups, and individual inventors share this invulnerability to infringement counterclaims, and therefore threaten practicing portfolios in a way that other practicing companies cannot.[54] However, only those patent intermediaries whose primary source of profit is to leverage the inventions of others generally receive the "troll" moniker.[55]

Just as practicing entities might aggregate patents for either or both defensive and offensive purposes, NPE aggregators can practice either or both offensive aggregation and defensive aggregation.[56] Offensive aggregators seek to monetize their portfolios rather than create freedom to operate. Defensive aggregators build portfolios to help their clients or members decrease their defensive patent litigation costs, for example, by identifying and purchasing or licensing patents that could be asserted against

53. *See* Wang, *supra* note 3, at 165.

54. *But see* Lemley, *supra* note 3 (recognizing that universities are sometimes called trolls, and sometimes exhibit behavior similar to trolling).

55. *See id.*; Merges, *supra* note 43, at 1611–12.

56. These larger aggregators receive particular attention because their activities likely have a greater effect on the patent ecosystem and because their size means they are more likely to attract antitrust scrutiny, as discussed *infra* Parts III and IV.

their members. Each entity-type raises its own potential anticompetitive concerns, which will be discussed further in Part III, *infra*.

A. PRACTICING ENTITIES AND PATENT AGGREGATION

1. *Aggregation for Mutually Assured Infringement: The Patent Arms Race*

Although a right to exclude does not directly convey a right to practice a technology, it can act as a bargaining chip to dissuade infringement suits. For example, if Company A threatens to assert its patents against Company B, the fact that Company B owns patents over its own technology does not constitute a defense against Company A's assertions. However, if Company B's patents might realistically cover Company A's product, then Company B can threaten to bring a countersuit for infringement, creating an incentive for the two companies to drop their suits or enter into a cross-licensing agreement, providing both companies protection from the negative rights of the other's patents.

But Company B need not have actually been the first to patent a technology, much less invent the technology behind a patent, in order to assert that patent against Company A, as the aborted patent litigation between Facebook and Yahoo! illustrates. On March 12, 2012,[57] Yahoo! asserted ten patents against Facebook, claiming that "Facebook's entire social network model . . . is based on Yahoo!'s patented social networking technology."[58] On April 3, Facebook counterclaimed against Yahoo! with ten of its own patents:[59] two of which it acquired December 8, 2011; two of which it acquired on February 1, 2012; and four of which it acquired on March 30, 2012—eighteen days after Yahoo! asserted its ten patents.[60]

57. In March 2012, Facebook was preparing to issue its initial public offering. Yahoo! may have believed that Facebook would be more likely to settle the lawsuit in order to avoid a drawn out battle that might affect the IPO or may have been directly trying to affect Facebook's public offering price. Tom Ewing discusses this sort of behavior and the concerns it might raise in the context of patent privateering. *See* Ewing, *supra* note 9, at 70–72.

58. Complaint for Patent Infringement ¶ 26, Yahoo! Inc. v. Facebook, Inc., No. CV12-01212 (N.D. Cal. Mar. 12, 2012), 2012 WL 764479.

59. Defendant Facebook, Inc.'s Answer; Counterclaim Against Yahoo! Inc. for Patent Infringement, Yahoo! Inc. v. Facebook, Inc. No. CV-12-01212 (N.D. Cal. 2012 Apr. 3, 2012), 2012 WL 1094169.

60. *Id.* The December patents came from a San Diego based aggregator called IPG Electronics 503 Limited; the February patents came from an aggregator called Cheah Intellectual Property Licensing. One of the March 30th patents came from an aggregator called Right Point LLC, and three others came from New York University. *See* Jon Brodkin, *Facebook countersues Yahoo with patent acquired* after *being sued by Yahoo*, ARS TECHNICA (Apr. 3, 2012), http://arstechnica.com/tech-policy/2012/04/facebook-countersuing-yahoo-with-patent-acquired-after-being-sued-by-yahoo/.

Yahoo! then added five more of its patents in a counter-counterclaim on April 27,[61] just days after Facebook purchased 650 patents from Microsoft—patents which Microsoft had purchased from AOL earlier that same month.[62] The infringement suit ended abruptly on July 6, 2012 when Yahoo! and Facebook announced a deal to settle and cross-license their patents in a "strategic alliance."[63] Although it is difficult to know the degree to which the threat of Facebook's counterclaims with its newly acquired patents convinced Yahoo! to drop its suit, those patents certainly provided a good bargaining chip.

Professors Parchomovsky and Wagner have developed a theory of patent portfolios positing that the size and diversity of a portfolio makes the whole greater than the sum of its parts, creating a "super-patent."[64] If one patent creates space to operate by preventing some rivals from asserting their patents, then more patents are more likely to deter more rivals, encouraging potential patent asserters to settle and cross-license or forego action in the first place. By aggregating many patents into a "strategic collection of distinct-but-related individual patents," a portfolio's scale and diversity offers a stronger threat over a broader range of activity.[65]

The scale of a portfolio offers several advantages. Its redundancy increases the likelihood that even if some of the patents within it are found to be invalid or contain claim construction too limited to impart any value,[66] the valid claims of some other patent will cover at least some activity of a

61. *See* Brodkin, *supra* note 60.

62. Shira Ovide & Geoffrey A. Fowler, *Facebook Buys AOL Patents from Microsoft for $550 Million*, WALL ST. J. (Apr. 23, 2012), http://online.wsj.com/article/SB10001424052702303592404577361923087607762.html. Note, some believe that Facebook's acquisition of the AOL patents was geared toward strengthening itself against the prospect of future conflicts with Google over competition with Google+ and mail-related features, rather than social advertising-related conflicts with companies like Yahoo!. *See, e.g.*, Leonid Kravets, *Facebook's Patent Acquisitions? They're More About Google Than Yahoo*, TECHCRUNCH (Apr. 27, 2012), http://techcrunch.com/2012/04/27/facebook-google-patents/.

63. *Yahoo! and Facebook Launch Strategic Alliance and Resolve Patent Dispute*, FACEBOOK (July 6, 2012), http://newsroom.fb.com/News/387/Yahoo-and-Facebook-Launch-Strategic-Alliance-and-Resolve-Patent-Dispute; John Letzig, *Facebook, Yahoo Kiss and Make Up*, WALL ST. J. (July 6, 2012), http://online.wsj.com/article/SB10001424052702303684004577511132642631606.html.

64. Parchomovsky & Wagner, *supra* note 8, at 5, 7. A patent portfolio, Professors Parchomovsky and Wagner explain, is "a strategic collection of distinct-but-related individual patents that, when combined, confer an array of important advantages upon the portfolio holder. *Id.* at 27.

65. *Id.* at 27–29.

66. *See* Mark A. Lemley & Carl Shapiro, *Probabilistic Patents*, 19 J. OF ECON. PERSPECTIVES 75, 85–86 (2005).

target entity. A large portfolio thus exploits the high information costs involved with valuing patents.[67] If a party has only a few patents, a target may carefully examine the claims of those patents and decide that it can invalidate or avoid those claims through careful design.[68] If, however, the party owns a portfolio containing hundreds or thousands of patents, then the target's cost of determining the credibility of the portfolio's threat increases dramatically, encouraging the target to forego or settle its claim, or pay the portfolio-owner for a blanket license.[69] In short, patent quantity makes a portfolio stronger than the sum of its parts because, even if unpatented spaces exist within a technological field, finding those spaces becomes more difficult with each patent added to the portfolio.

The diversity of a portfolio creates additional value not only by widening the range of the portfolio's scope, but also by hedging against uncertainties in the future direction that technologies might develop.[70] For instance, a holder of ten valid patents specific to Betamax technology probably does not receive much value if consumers stop using that technology, but a portfolio covering many formats of recording and viewing technology will likely retain some value.[71] A diverse portfolio also provides flexibility to assert against or bargain with a wider range of other patent-holding parties, providing broader protection in the present, as well as the ability to enter new areas of technology as technologies shift.[72]

Taken together, the patent aggregation strategy, as Parchomovsky & Wagner explain, shifts value away from the strength of an individual patent toward the marginal benefit of increasing the size and diversity of a portfolio.[73] This "superadditivity" places a higher value on the aggregated effect of many patents, rather than the quality of the individual patents

67. *See supra* Section I.B.2 (discussing notice failure and information costs); Parchomovsky & Wagner *supra* note 8, at 73.

68. *See* Parchomovsky & Wagner *supra* note 8, at 73–74.

69. *See id.*

70. *See id.* at 37–38.

71. Betamax preceded VHS as the first technology behind the home VCR. Although it had been recognized as a "superior" format to VHS, it ultimately lost out to VHS as the dominant home-recording technology. *See generally*, Marc Wielage & Rod Woodcock, *The Rise and Fall of Beta*, VIDEOFAX, Mar. 2003, *available at* http://www.betainfoguide.net/RiseandFall.htm (last visited Jan. 22, 2013) (providing a history of the rise and fall of Sony's Betamax technology).

72. *See* Parchomovsky & Wagner *supra* note 8, at 39–41.

73. *See id.* at 42. This marginal benefit also includes the added information costs to one's rival of evaluating a portfolio's strength based on the patent claims added to the portfolio.

therein,[74] and thus explains the "patent paradox," where the volume of patent filings and the value of patent portfolio acquisitions climb despite the falling average value of newly issued patents.[75] The theory also begins to explain how companies may rationally evaluate portfolios of patents based on the amount of paper on which they are printed rather than the substance behind them.[76] The rapid aggregation of large portfolios, as evinced by Facebook's patent acquisitions, can bestow defensive strength by discouraging competing practicing entities from asserting their patents, and by encouraging cross-licensing rather than royalty-based licensing payments.[77]

2. Portfolio Monetization for Practicing Companies

Patent assets are expensive both to acquire and to maintain, and companies with large portfolios may seek to monetize their patent assets.[78] Monetization strategies often take two forms: (1) direct licensing campaigns and assertion campaigns, and (2) monetization through third party companies, sometimes referred to as privateering.[79]

a) Direct Monetization

Companies may offset the costs of their patent portfolios, and may even turn their patent portfolios into major sources of revenue, by directly asserting or licensing those portfolios. For example, in the mid-1980s, Texas Instruments saved itself from bankruptcy through an "all-out patent licensing and litigation effort," eventually earning the company more than $4 billion in

74. *See id.* at 58 n.198 (explaining that "superadditivity" exists when $f(x+y) > f(x) + f(y)$).

75. *See id.* at 16–19.

76. This "ruler" method of evaluating patents is apparently practiced widely in the technology field. *See* Ewing, *supra* note 57, at 19 n.62 (quoting Ron Epstein, Chief Executive Officer of Ipotential, describing the "infamous 'ruler' methodology" in his remarks before the FTC, where "you would bring your stack [of patents] and you'd bring a ruler, and you'd put each stack next to each other and you'd take a ruler and you measure the relative heights of the stack and some algorithm would tell you the [relative values of the stacks]."); Chien, *supra* note 9, at 308.

77. *See, e.g.*, Joseph N. Hosteny, *Litigator's Corner: Is IBM a Patent Troll?*, INTELL. PROP. TODAY, May 2006, at 26, 27 (relating a story where representatives of a large company seeking a license settlement "walked into the negotiation, put a box of patents on the table, and announced: 'You must be infringing one of these.' ").

78. *See* Chien, *supra* note 9, at 303–17 (describing the monetization of patent portfolios).

79. *See* Ewing, *supra* note 9, at 5 (defining "privateering" as "the assertion of [intellectual property rights] by an entity (the privateer) . . . against a target company for the direct benefit of the privateer and the consequential benefit of a sponsor, where the consequential benefits are significantly greater than the direct benefits.").

patent licenses by the year 2000.[80] American Express and General Electric both evolved strategies that began by building patent portfolios largely for defensive purposes, but later built separate licensing and assertion divisions to generate royalties based on those patent portfolios.[81] Intel, IBM, and Texas Instruments have each declared annual licensing revenues exceeding $1 billion per year.[82]

These licensing and assertion campaigns help to offset the expense of building large patent arsenals and offer a return on research and development that can feed directly back into a company's budget for innovation.[83] Whatever the purpose, portfolios aggregated for licensing or assertion exploit the same weaknesses within the patent system as portfolios aggregated for defense and cross-licensing, and thus provide similar advantages.[84] However, a number of constraints will often limit a practicing company's ability to directly monetize its patents, not least of which may be the threat of a target's own patent portfolio.[85] Practicing companies hesitate to bring infringement claims against competitors who they credibly believe will assert counterclaims against them, and they may not wish to develop a reputation as an aggressive patent asserter.[86]

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80. KEVIN G. RIVETTE & DAVID KLINE, REMBRANDTS IN THE ATTIC: UNLOCKING THE HIDDEN VALUE OF PATENTS 125–26 (2000); Chien, *supra* note 9, at 304.

81. Chien, *supra* note 9, at 322–24. Professor Chien provides further examples of aggressive monetization strategies of existing patent portfolios by technology-centric companies such as Xerox Corporation, Lucent, Harris Corporation, Kodak, Thompson, and Philips, which earn significant patent royalties as major parts of their revenue streams. *Id.* at 323–24.

82. GORDON V. SMITH & RUSSELL L. PARR, INTELLECTUAL PROPERTY: VALUATION, EXPLOITATION, AND INFRINGEMENT DAMAGES 606 (2005).

83. Chien, *supra* note 9, at 325–26.

84. This strategy has also been referred to as the "IBM strategy," where a portfolio holder seeks to persuade a target company to pay licensing fees by exposing its portfolio to the target in small but seemingly endless batches of potentially infringed patents. *See* Hanno Kaiser, Remarks, Fed. Trade Comm'n: Patent Assertion Entity Activities Workshop (Dec. 10, 2012) *available at* http://www.ftc.gov/video-library/index.php/ftc-events/patent-assertion-entity-activities-session-44/2028431451001. The strategy demonstrates the strength of the asserting company's portfolio, but also exploits the information costs of assessing each patent's worth to convince the target that even if most of the patents are individually too weak to be of any value, at least some patents will probably be found valid and infringed, and the cost of assessing each patent will likely exceed the potential savings from avoiding infringement or licensing payments.

85. See the example of the Yahoo! and Facebook litigation provided in Section II.A.1, *supra*.

86. *But see* Chien, *supra* note 9, at 334–35 (finding that suits between companies with annual revenue above $100 million represented a high proportion of high-tech litigations overall, and tended to last longer than suits involving NPEs).

b) Indirect Monetization: Patent Privateering Through NPEs

Indirect monetization through privateering does not always involve aggregating patents,[87] but it does exploit the aggregated portfolios of the practicing companies, and sometimes involves aggregating related portfolios from multiple practicing companies.[88] By selling full or partial interests in their patents to NPEs under revenue sharing arrangements, practicing companies may be able to monetize their patent portfolios indirectly, avoiding barriers to direct monetization like the risk of expensive retaliation and reputational harms.[89] Although these indirect privateering models differ, the basic approach involves a practicing entity transferring patent rights to an NPE under some agreement to share licensing and assertion royalties.[90]

Even without the benefits of avoiding retaliatory or reputational harm, this outsourced litigation and licensing model represents a rational business strategy that allows the practicing entity to focus on its core business.[91] Philips and 3Com Corporation respectively formed Sisvel and US Ethernet Innovations specifically to assert and license their patents and have done so openly and publicly.[92]

Privateering arrangements become more complicated, however, where multiple practicing entities with related or competing technologies and products sell to the same NPE to assert against others in a given technology field.[93] Nokia and Sony, for example, have each sold patents to an NPE called MobileMedia LLC, which has since asserted those patents against Apple.[94] Similar sales from Nokia and Microsoft to Mosaid Technologies, a Canadian NPE, drew regulatory scrutiny after Google filed an antitrust complaint over the deal, alleging that the two companies were using the NPE

87. The practicing company is generally breaking up its portfolio, thus *dis*aggregating.

88. Chien, *supra* note 9, at 326.

89. *See* Ewing, *supra* note 9 (providing a detailed overview of the privateering model).

90. *See id.* at 6.

91. *See id.* at 14 (noting that such a specialization strategy fits well into classical management theory).

92. *See* Chien, *supra* note 9, at 324 (citing the websites of both Sisvel and US Ethernet Innovations, which explain the origin of their respective patent portfolios). Note, however, that Ewing's definition of modern privateering—activity that may bring the added benefits of covertly changing the competitive position or stock price, or to provide plausible deniability to avert reputational harm or infringement retaliation—depends on secrecy with regard to the relationship between the practicing entity and the privateering NPE. *See* Ewing, *supra* note 9, at 5–6, 28–39.

93. *See* Ewing, *supra* note 9, at 6.

94. *See* Phil Milford & Dawn McCarty, *Apple Infringes Three Patents With the IPhone, Jury Says*, BLOOMBERG (Dec. 13, 2012), http://www.bloomberg.com/news/2012-12-13/apple-infringes-three-patents-with-the-iphone-jury-says.html.

as a proxy to harm Google's Android software.[95] Nokia claims that the patent portfolios it sold to Mosaid and MobileMedia covered antiquated technology that the company was looking to pivot away from, and that it directs the revenue generated by those agreements back into research and development.[96] However, as discussed *infra* in Part III, the revenue that privateering generates for practicing entities will often implicate increased levels of patent assertion and, in some instances, may raise anticompetitive concerns.

B. NPE AGGREGATORS: OFFENSIVE AGGREGATION

Offensive aggregators acquire large portfolios of patents to generate revenue from licensing and litigation. Their strategies are similar to the activities of other patent asserting NPEs, but at much greater scale. Large patent aggregators include companies like Acacia Research,[97] Round Rock Research,[98] and Intellectual Ventures. Intellectual Ventures ("IV") is the largest patent aggregator and therefore serves as a useful example for discussing offensive aggregation.[99] IV funded its early activities through large investments from both practicing entities and investment funds.[100] Robin

95. Discussed further *infra* Part III. *See* John Letzig, *Google Points Finger at Microsoft, Nokia*, WALL ST. J. (May 31, 2012), http://online.wsj.com/article/SB10001424052702304821304577438740232322350.html. The sale of Nokia's and Microsoft's patents were made under the agreement that Nokia and Microsoft share revenue from the licensing and assertion activities of those patents, and the rights to those patents revert back to Nokia and Microsoft if certain thresholds are not met. *See also* Chien, *supra* note 9, at 344.

96. Paul Melin, Chief Intellectual Property Officer for Nokia, Fed. Trade Comm'n: Patent Assertion Entity Activities Workshop (Dec. 10, 2012), *available at* http://www.ftc.gov/video-library/index.php/ftc-events/patent-assertion-entity-activities-session-24/2028431449001.

97. Acacia Research is a publicly traded company that, together with its many subsidiaries, generates revenues by licensing the patented technologies it owns. *See* Acacia Research Corporation, Quarterly Report (Form 10-Q) (July 30, 2012).

98. Round Rock Research—a private company founded by prominent patent litigator John Desmarais—now owns a large portfolio of patents apparently originating from the practicing company Micron Technology. *See* Feldman & Ewing, *supra* note 4, at 17–18.

99. *See* Feldman & Ewing, *supra* note 4, at 2, 7–8.

100. *See id.* Early investors include Microsoft, Intel, Apple, and Google, as well as institutional investors and endowments like the William and Flora Hewlett Foundation and the Bill and Melinda Gates Foundation, as well as university endowments from schools like Notre Dame and the University of Pennsylvania. *Id.* Feldman and Ewing look extensively into IV and the patent holdings of its many shell companies to shed light on its activities. *See id.* Despite their research, IV retains a high degree of secrecy. *Id. See also* Mike Masnick, *Nathan Myrhvold's Intellectual Ventures Using Over 1,000 Shell Companies To Hide Patent Shakedown*, TECHDIRT (Feb. 18, 2010, 7:44AM), http://www.techdirt.com/articles/20100217/1853298215.shtml (likening IV to a "pyramid scheme" because it promises early investors the fruits of early investment). Other projects have sought to shed light on IV and

Feldman and Tom Ewing have estimated that IV holds between 30,000 and 60,000 patents and patent applications divided between more than 1,300 patent shell companies.[101] Although IV maintains a division dedicated to research and development, the vast majority of its patents come from acquisition agreements it makes with research entities like universities, as well as from patent portfolio sales from practicing entities.[102]

Offensive aggregators like IV benefit from many of the same advantages that an aggregated portfolio brings to practicing entities, but with a few key differences. First, because offensive aggregators do not practice any technology, they are not vulnerable to countersuits and therefore are not inhibited from employing more aggressive licensing and litigation campaigns.[103]

Second, NPEs' invulnerability to infringement suits means they have different incentives with regard to secrecy and signaling. Signaling the strength of a practicing company's portfolio will help it deter infringement claims and may even help discourage competitors from implementing competing technologies that might infringe, but aggregating NPEs share neither of these interests.[104] Instead, offensive aggregators have a greater incentive to exploit the possibility that their targets become locked into a technology to maximize their bargaining power and rent-seeking ability.[105] Thus, offensive aggregators benefit from signaling the strength of their portfolios to the extent that such signaling convinces target licensees to pay licensing fees, but may also benefit from concealing their patent interests

its patent holdings. *See, e.g.*, IP CHECKUPS, http://www.ipcheckups.com/ (last visited Jan. 16, 2013).

101. *See* Feldman & Ewing, *supra* note 4, at 4–5. In their 2011 study on IV, Feldman & Ewing have found 954 shell companies they believe to belong to IV. *See id.* As of February 2013, IV's website claims that the company owns more than 70,000 "intellectual property assets" spread between "nearly 40,000 active monetization programs." INTELLECTUAL VENTURES, http://www.intellectualventures.com/index.php/license (last visited Feb. 20, 2013).

102. *See* Feldman & Ewing, *supra* note 4, at 7–9. *See also* Glyn Moody, *Don't Feed the Super-Troll*, COMPUTERWORLDUK, (June 30, 2009, 11:31AM), http://blogs.computerworld uk.com/open-enterprise/2009/06/dont-feed-the-supertroll/index.htm; Alex Blumberg & Laura Sydell, *This American Life: When Patents Attack*, NATIONAL PUBLIC RADIO, (July 22, 2011), http://www.npr.org/blogs/money/2011/07/26/138576167/when-patents-attack (suggesting that IV's research lab is mostly just for show).

103. This point represents one major source of distaste among practicing entities for "patent trolls."

104. *See* Chien, *supra* note 9, at 319–20 (describing patent signals versus patent secrecy).

105. *See* discussion of the "lock in" problem, discussed *supra* Section I.B.2 and *infra* Section III.C.

until after a technology has been accepted and locked in within an industry.[106] IV's use of shell companies to hide its patent assets helps IV strategically reveal only limited segments of its portfolio, while keeping other areas of its portfolios secret.[107]

A third difference between the portfolios of practicing entities and offensively aggregating NPEs relates to patent quality. Despite criticisms that nuisance patent suits brought by patent trolls are generally based on low quality patents, a number of studies suggest that the opposite is true, and that NPEs generally focus on acquiring a higher percentage of high quality patents.[108]

Offensive aggregator NPEs, however, also benefit from many of the same advantages that aggregating brings to practicing companies. Specifically, an offensive aggregator exploits the same information costs associated with evaluating the scope and validity of patents within a portfolio to induce target licensees to pay rather than fight. Therefore, while offensive aggregators may look to acquire higher percentage of "crown jewel" patents that they could directly assert, they still benefit from an increased quantity of patents regardless of their quality.[109]

C. NPE AGGREGATORS: DEFENSIVE PATENT AGGREGATION

Defensive aggregators are NPEs that seek to lower the costs of patent defense and avoid patent assertions against their members or clients by essentially removing nuisance patents from the market, and thus have very different goals from those of offensive aggregators. For example, in 2008, RPX Corporation introduced a new service it termed "Defensive Patent Aggregation," which aimed to reduce the costs associated with defending against patent litigation.[110] Similarly to offensive aggregators like IV, RPX does not practice any technology, but instead purchases patents from other entities to provide its clients with licenses to the purchased patents. Unlike

106. *See* Chien, *supra* note 9, at 319–20 (noting that secrecy serves a "troll" business model such that PAEs are more likely to "speak softly and wield a big stick," but noting that practicing companies may also have some incentive to hide information to avoid public scrutiny over the costs of IP maintenance).

107. *See* Feldman & Ewing, *supra* note 4, at 3–4.

108. *See* Michael Risch, *Patent Troll Myths*, 42 SETON HALL L. REV. 457, 478–81 (2012); *see also* Timo Fischer & Joachim Henkel, *Patent Trolls on Markets for Technology—An Empirical Analysis of Trolls' Patent Acquisitions* 1 (unpublished manuscript) (Apr. 28, 2011) *available at* http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1523102.

109. *See* Chien, *supra* note 9, at 318–19.

110. *See* RPX Corporation, Registration Statement (S-1) (Sept. 2, 2011).

IV, however, RPX has committed itself to never asserting its patents and thus carries no direct patent infringement threat to practicing entities.[111]

RPX behaves differently from litigation-minded practicing entities. Uninterested in offensive litigation, RPX has no use for the "superadditivity" provided by a strategically built patent portfolio.[112] Instead, RPX focuses more specifically on "nuisance value"[113] patents that are likely to be litigated.[114] Once RPX acquires a patent and provides licenses to its members, the company may sell the patent back into the patent market in what has been dubbed a "catch and release" method.[115]

Defensive aggregation models vary between companies. RPX generates revenue on an annual subscription basis, where each member pays a rate based on that member's operating income.[116] RPX conducts its own market research, which it provides to clients, and independently decides which patents to target for acquisition and license.[117] Some defensive aggregators, however, decide which patents to acquire differently. Instead of independently choosing which patents to acquire, Allied Security Trust utilizes a process under which individual members determine which patents

111. *See id.* However, as RPX itself points out, it often purchases only licenses for its members rather than full patent rights, which may therefore be asserted against non-RPX members. *See The "Free Rider" Fallacy*, RPX CORPORATION, http://www.rpxcorp.com/index.cfm?pageid=14&itemid=8 (last visited Dec. 18, 2012).

112. *Cf.* Parchomovsky & Wagner, *supra* note 8, at 7.

113. Nuisance patents are generally weak patents, but ones that may apply to a broad range of activities. Nuisance suits are brought to inflict the cost of legal defense, and take advantage of the high information costs discussed in Part I. The goal of a nuisance suit is not necessarily to prove infringement at trial, but to induce a target to settle rather than litigate. *See* Merges, *supra* note 43, at 1600; Colleen Chien, *Reforming Software Patents*, 50 HOUS. L. REV. 101, 150–51 (2012).

114. *See* Feldman & Ewing, *supra* note 4, at 17.

115. David Hetzel, *Embracing the new IP reality*, INTELL. ASSET MGMT. MAG. 32, May/June 2010. RPX may sell its patents to more litigious patent trolls after it has retained a license. This practice has led one company to claim RPX is guilty of "extortion" and "racketeering" after a practicing technology company was sued by a patent troll soon after RPX unsuccessfully tried to sell a subscription to its patent services. *See* Patrick Andersen, *Patent Aggregator RPX Accused of Extortion, Racketeering & Wire Fraud*, GAMETIME IP, *available at* http://gametimeip.com/2011/05/31/patent-aggregator-rpx-accused-of-extortion-racketeering-wire-fraud/ (last visited Dec. 18, 2012).

116. The rates are subject to change, but as of December 2012, annual subscription rates spanned from $5.38 million plus 0.05% of annual income for companies with revenues above $2 billion per year, down to 1% of annual income (but not less than $65,000) for companies with annual incomes under $100 million per year. *See Annual Rate Calculator*, RPX CORPORATION,) http://www.rpxcorp.com/index.cfm?pageid=85 (last visited Dec. 18, 2012).

117. Hetzel, *supra* note 115, at 34. Allied Security Trust is structured as a member-owned trust. *Id.* at 33.

to acquire and each member decides on whether they will contribute financially to purchase the target patent or portfolio.[118]

D. AGGREGATION MODELS IN SUMMARY

Patent aggregation represents a strong tool for practicing entities and NPEs alike, but with some important differences based on the interests of the parties.

For practicing entities, aggregated portfolios provide a "mutually assured infringement" defense, encouraging other practicing entities to cross-license or forego assertion altogether. Aggregation is a response to the high costs associated with identifying patents that might apply to a given technology and determining the value of those patents. Practicing entities may also choose to monetize their patent portfolios, directly through licensing and assertion campaigns, or indirectly by selling their patents under revenue sharing arrangements with NPEs specializing in patent assertion.

Offensive aggregators, NPEs whose primary source of revenue comes from licensing and litigating patents acquired from others, exploit the same aspects of the patent system that encourage practicing entities to aggregate, but do not face retaliatory risks because they do not practice any technology. Defensive aggregators, NPEs whose revenue relies on subscription fees from practicing entities for whom they acquire patent rights, but who do not themselves assert patents, seek to identify and remove patent-threats from the patent market by purchasing rights to those threats and licensing to their members.

III. THE EFFECTS OF AGGREGATION AND THE ROLE OF ANTITRUST

Each of the aggregation models above provides direct benefits to its practitioners, but they may also present certain costs to particular targets and to the technology universe as a whole. Many of these models display anticompetitive potential or present anticompetitive externalities.

Antitrust and patent law share the goal of maximizing society's wealth by encouraging output and innovation, but the two strive toward this goal through means that are often in tension.[119] Patent law grants patent holders

118. *Id.*

119. *See, e.g.*, Atari Games Corp. v. Nintendo of Am., 897 F.2d 1572, 1576 (Fed. Cir. 1990) ("[T]he aims and objectives of patent and antitrust laws may seem, at first glance, wholly at odds. However, . . . both are aimed at encouraging innovation, industry and competition."); WARD BOWMAN JR., PATENT AND ANTITRUST LAW: A LEGAL AND

the right to exclude competitors from practicing certain patented activities.[120] Antitrust law assumes the premise that the public benefits most from a competitive marketplace,[121] and thus generally condemns activities that decrease competition.[122] The concern of antitrust law, however, is harm to the competitive process, not harm to individual competitors.[123] This Part therefore considers the potential benefits and concerns that patent aggregation presents to society as a whole in an effort to identify both procompetitive and anticompetitive effects of patent aggregation strategies.

A. GENERAL IMPLICATIONS OF AGGREGATION

Patent aggregation, without regard to the entities practicing it, affects the patent system in ways that skew patenting incentives and thus the balance between innovation and competition. The focus on quantity over quality presents two immediate concerns. First, as patent aggregation spreads as a strategy both for offensive and defensive purposes, more value will be placed on patents regardless of quality, incentivizing patent filings for small innovations or inventions that would be unlikely to hold up on their own under litigation.[124] This increase will likely further strain the PTO's resources, which in turn may result in the issuance of more low-quality patents.[125] The result, as Professor Wagner explains, is a "feedback effect, whereby low-quality patents (organized into ever-larger portfolios) beget even more low-quality patents."[126]

Second, the focus on patent quantity within a portfolio over the substance of its parts divorces a patent's value from the innovative contribution underlying it.[127] The patent portfolio's "super-patent" effect, providing a stronger ability to exclude than the sum of its patent-parts, may

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ECONOMIC APPRAISAL (1973) ("Both antitrust law and patent law have a common central economic goal: *to maximize wealth by producing what consumers want at the lowest cost*.").

120. *See* 35 U.S.C. § 154.

121. Standard Oil Co. v. United States, 221 U.S. 1, 58 (1911); SCM Corp. v. Xerox Corp., 645 F.2d 1195, 1203 (2d Cir. 1981).

122. Robin Feldman, *Patent and Antitrust: Differing Shades of Meaning*, 13 VA. J.L. & TECH. 1, 1–3 (2008); *SCM*, 645 F.2d at 1203.

123. Brown Shoe Co. v. United States, 370 U.S. 294, 320 (1962) (stating that antitrust law concerns "the protection of competition, not competitors").

124. *See* Parchomovsky & Wagner, *supra* note 864, at 61.

125. *Id.*

126. R. Polk Wagner, *Understanding Patent Quality Mechanisms*, 157 U. PA. L. REV. 2135, 2155 (2009).

127. Note, separating patent rights from the innovations they represent defeats the purpose of the patent system in the first place and produces a phenomenon that Professor Merges describes as reducing patent "market-making" to mere rent-seeking. *See* Merges, *supra* note 43, at 1588–91.

thus grant the portfolio holder more exclusionary power than its underlying innovations are worth. As a result, patent portfolios may tax practicing entities—and therefore production—to a greater degree than society benefits from the inventions behind the patents, providing an obvious opportunity for wasteful rent seeking.

These implications represent costs as well as opportunities for exploitation. Whether or not aggregation is used for anticompetitive purposes, however, depends on the way that a given entity uses its aggregated portfolio.

B. PRACTICING ENTITIES

As discussed in Section II.A, patent aggregation affords practicing entities protection against the patent assertions of other practicing entities, because "mutually assured infringement" encourages would-be asserters to cross-license rather than sue.[128] The Department of Justice ("DOJ") and Federal Trade Commission ("FTC") generally consider licensing schemes to be procompetitive because they facilitate more efficient exploitation of intellectual property and remove barriers to the use and development of patented technologies.[129] This Section explores the effects of practicing entity aggregation with regard to the market for innovation.

1. *Effects of Aggregation by Practicing Entities: Defense and Direct Monetization*

Aggregation can facilitate cross-licensing related efficiencies by combining separate but related patents into large portfolios and thus decreasing transactions costs by combining many smaller licensing negotiations into fewer larger ones. However, direct monetization by practicing entities, as discussed in greater detail *infra* Section III.C in the context of NPEs that aggregate for offensive purposes, may also force licensees to pay for licenses to portfolios containing patents for which they have no use and would not otherwise seek to obtain, thus imposing unnecessary costs.[130] Thus, when calculating the net competitive effect of

128. *See supra* Section II.A.1.

129. *Antitrust Guidelines for the Licensing of Intellectual Property*, U.S. DEP'T OF JUSTICE AND FED. TRADE COMM'N, §§ 2.0, 2.3. (1995) *available at* http://www.justice.gov/atr/public/guidelines/0558.htm [hereinafter 1995 IP Guidelines].

130. This scenario might implicate the doctrine of patent misuse, which provides an affirmative defense to infringement claims if an alleged infringer can "show that the patentee has impermissibly broadened the physical or temporal scope of the patent grant with anti-competitive effect." Virginia Panel v. MAC Panel, 133 F.3d 860, 868 (Fed. Cir. 1986). However, the Federal Circuit has cut back on the scope of patent misuse, creating a bright line rule stating that "In the cases in which the restriction is reasonably within the patent

aggregation for practicing entities, the costs of obtaining rights to unneeded patents must be offset by the cost savings of conducting a single licensing agreement instead of many.[131] Even defensive portfolios might facilitate unfair outcomes if they allow practicing entities to avoid obtaining licenses to technologies that they knowingly infringe by using their portfolios to intimidate the rightful inventors of a technology from asserting their patents.[132]

2. The Effects of Indirect Monetization by Privateering

As discussed *supra* Section II.A.2, indirect monetization by privateering through patent-asserting NPEs is a form of specialization that provides practicing entities the benefit of being able to focus on their core business while generating revenue from their patents. However, privateering raises a number of possible concerns. First, privateer NPEs are far more likely to assert or license their patents because they do not face the same retaliatory or reputational barriers to assertion.[133]

Second, "unpooling" aggregated patents held by practicing entities and selling portions to NPEs for privateering purposes may create additional costs for entities with existing licenses to the previously whole portfolios, especially if that portfolio contains patents encumbered with reasonable and nondiscriminatory ("RAND") licensing agreements.[134] For example, Practicing Entity X ("PEX") might agree as part of its RAND commitment that it will not charge above a 2% royalty rate for licenses to its WiFi-related

grant, the patent misuse defense can never succeed." Monsanto Co. v. McFarling, 363 F.3d 1336, 1341 (Fed. Cir. 2004). Patent misuse is discussed in greater detail *infra* Part IV.

131. *See* Automatic Radio Mfg. Co. v. Hazeltine Research, 339 U.S. 827, 834 (1950) ("Sound business judgment could indicate that such payment represents the most convenient method of fixing the business value of the privileges granted by the licensing agreement.").

132. Judge Rader has termed entities that refuse to pay licensing fees "IP Grasshoppers." Chief Judge Randall R. Rader, The State of Patent Litigation, 17 *available at* http://www.patentlyo.com/files/raderstateofpatentlit.pdf ("A grasshopper is any entity which refuses to license even the strongest patent at even the most reasonable rates.").

133. *See supra* Section II.A.2.

134. RAND and F/RAND (fair, reasonable and nondiscriminatory) terms are common licensing requirements set by standard setting organizations ("SSOs") to facilitate interoperability across a given industry. *See Statement of the Department of Justice's Antitrust Division on its Decision to Close Its Investigations of Google Inc.'s Acquisition of Motorola Mobility Holdings Inc. and the Acquisitions of Certain Patents by Apple Inc., Microsoft Corp, and Research in Motion Ltd.*, U.S. DEP'T OF JUSTICE, (Feb. 13, 2012), *available at* http://www.justice.gov/opa/pr/2012/February/12-at-210.html.

patent portfolio.[135] If PEX then split its RAND-encumbered portfolio by selling half to another company "NPEX" (Non-Practicing Entity X) while retaining the other half of the portfolio, then both PEX and NPEX might be able to extract more licensing fees than what PEX's RAND agreement originally outlined.[136] Specifically, NPEX could argue that it cannot be bound to any 2% royalty cap because it was never party to PEX's original RAND agreement, which would have taken the form of a contract between PEX and a member-based standard-setting organization for WiFi technology.[137] And even if NPEX's portfolio was still bound, both PEX and NPEX could argue that they each should be allowed to charge up to a 2% royalty rate, since PEX's original agreement never specified how much each RAND-encumbered patent contributed to the agreed upon maximum royalty rate.[138] This arrangement could facilitate double-rents being extracted for the patented technologies if others in the industry have already invested in the standard, ultimately increasing costs for consumers.[139]

Third, a scenario under which two or more companies practicing in the same or related technology spaces transfer their patent rights to the same NPE to assert under revenue sharing privateering relationships may facilitate horizontal collusion among competitors to raise rivals' costs.[140] This scenario raises serious concerns if the combined patents of the practicing competitors represent a large share of the market which other competitors in the industry are likely to infringe, because the privateering arrangement might allow them to asymmetrically raise costs for competitors or new entrants, which may effectively exclude new companies from successfully competing in the industry, directly decreasing competition in that industry.[141]

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135. *See* Iain Cockburn, Fed. Trade Comm'n: Patent Assertion Entity Activities Workshop (Dec. 10, 2012), *available at* http://www.ftc.gov/video-library/index.php/ftc-events/patent-assertion-entity-activities-session-34/2028431452001.

136. *See id.*

137. *See id.*

138. *See id.*

139. Google filed an antitrust complaint with the European Union against Nokia in May 2012, under a similar scenario, claiming that Microsoft's and Nokia's transfers of patent rights to the PAE Mosaid Technologies were made with the purpose of avoiding Nokia's RAND commitments, and in order to threaten manufacturers of products using Google's Android operating system. *See* Letzig, *supra* note 95; Ilene Knable Gotts & Scott Sher, *The Particular Antitrust Concerns with Patent Acquisitions*, COMPETITION L. INT'L 30, 36 (Aug. 2012) *available at* http://www.wsgr.com/publications/PDFSearch/sher-august-12.pdf.

140. *See supra* note 139 and accompanying text.

141. The DOJ has recognized such a scenario as possibly creating particular anticompetitive concerns. *See* Fiona M. Scott Morton, Deputy Assistant Attorney Gen., Dep't of Justice, Patent Portfolio Acquisitions: An Economic Analysis, *available at* http://www.justice.gov/atr/public/speeches/288072.pdf.

C. IMPLICATIONS OF OFFENSIVE AGGREGATION

NPEs that aggregate patents for licensing and assertion combine many of the same market benefits and market costs associated with the effects of aggregation by practicing entities, discussed in the previous Part, and of NPE activity commonly associated with "trolling." Patent intermediaries often claim to represent the interests of small inventors who, for lack of financial resources, market knowledge, or access to the American legal system, turn to others to enforce their patents.[142] In this regard, intermediaries act as brokers between technology suppliers and technology buyers, removing asymmetries in bargaining power and information.[143] By allowing inventors to more easily monetize their patents, the theory goes, inventors will have more capital to invest in further innovation, thus increasing the efficiency of the patent system on the whole.[144] This may be especially true in the context of failing startups, where startup employees wish to sell off their assets to move on to other businesses. In this sense, patent intermediaries may even facilitate entry into technology fields by providing assurance to investors that should a startup ultimately fail, the liquid market for patents which patent intermediaries help to create will compensate bondholders and other early investors.[145] IV has cast itself in a similar light, emphasizing its role in supporting a market maker for innovation.[146]

Like other patent intermediaries, offensive aggregators may help support a well-functioning market for technology transfer,[147] but trolling activities tax innovation.[148] Two activities present particular concern. First, trolls often wait to assert patents until practicing entities are "locked in" to a

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142. *See, e.g.*, Complaint and Demand for Jury Trial, Cascade Computer Innovation LLC v. RPX Corp., No. CV-12-1143, (N.D. Cal. Mar. 7, 2012), 2012 WL 753910, ¶ 17 [hereinafter "Cascades Complaint"]. The NPE plaintiff's complaint stemmed from an alleged refusal to negotiate for licenses to patents that were originally owned by a Russian inventor. *Id.* The plaintiff explained that individual inventors "turn[] to an NPE for financial or strategic assistance in asserting his or her patent rights, since inventors oftentimes lack the financial wherewithal or experience to do so themselves." *Id.*

143. *See* Wang, *supra* note 3, at 167.

144. *See id.*

145. *See id.*

146. *Intellectual Ventures Fact Sheet*, INTELLECTUAL VENTURES, http://www.intellectualventures.com/assets_docs/IV_Corporate_Fact_Sheet.pdf (last visited Dec. 19, 2012) ("We are building a market for invention by making invention a profitable activity.").

147. *See* Wang, *supra* note 3, at 182–83; Robert P. Merges, *A Transactional View of Property Rights*, 20 BERKELEY TECH. L.J. 1477 (2005).

148. *See* Merges, *supra* note 43, at 1587–88 (stating that strategies that seek rents from manufacturers through "inefficient, socially wasteful patent transactions" tax innovation and should be curbed).

technology.[149] This strategy exploits the patent system's notice failure and high information costs, allowing the troll to extract higher payments than if the party asserted against was able to identify and either bargain ex ante or design around the patented process before investing in means of production.[150]

Especially notable in this context is the notorious secrecy with which IV maintains its patent holdings.[151] If IV's primary purpose were to encourage the transfer of technology from inventors to manufacturing entities, one might argue, then it would focus its activities on facilitating ex ante technology transfers, and would seemingly have little reason to keep its patent holdings secret. Instead, secrecy likely helps IV to spring its patents on companies once they are locked in to the underlying technology.[152] IV's use of non-disclosure agreements with its licensees has received significant criticism.[153] IV has responded to such criticisms by noting that secrecy is a "common practice for asset management firms," and claims that its secrecy merely helps to avoid tactical declaratory judgments, reexaminations, and competing investments.[154]

The second concern relates to the sheer quantity of patents that offensive aggregators purchase and the bad incentives that quality-divorced purchases

149. *Id.* at 1590–91.

150. *See* Menell & Meurer, *supra* note 11. The FTC has recognized that encouraging ex ante transactions while reducing the frequency of ex post transactions should be a goal of patent remedies law. *The Evloving IP Marketplace: Aligning Patent Notice and Remedies with Competition*, FED. TRADE COMM'N (2011), *available at* www.ftc.gov/os/2011/03/110307 patentreport.pdf. ("An important goal in aligning the patent system and competition policy is to facilitate *ex ante* transactions while making *ex post* transactions less necessary or frequent.").

151. *See* Feldman & Ewing, *supra* note 4, at 3 n.6; *Caution! Shallow water in the "blind" patent pools: Intellectual Property Analysis of the DOJ review of Google and Motorola Mobility*, M-CAM, (Oct. 7, 2011), http://www.m-cam.com/patently-obvious/caution-shallow-water-blind-patent-pools-intellectual-property-analysis-doj-review- (suggesting that the DOJ turn its attention to the "blind" patent pool IV has created and its potential to "shakedown" practicing companies).

152. This practice is similar to "submarine patenting," to which the equitable defense of prosecution delay laches can now be applied. Jerome Lemelson famously perfected submarine patenting, exploiting the patent continuance system to keep his patents from publishing until the underlying technologies had been widely adopted within an industry. *See* Mark A. Lemley & Kimberly A. Moore, *Ending Abuse of Patent Continuations*, 84 B.U. L. REV. 63, 76–77 (2004).

153. *See Nathan Myrhvold's Intellectual Ventures Using Over 1,000 Shell Companies to Hide Patent Shakedown*, TECHDIRT (Feb. 18, 2010), http://www.techdirt.com/articles/20100217/1853298215.shtml.

154. *See* Peter Detkin, *The Red Herring of Transparency*, INTELLECTUAL VENTURES, (Dec. 6, 2012), http://www.intellectualventures.com/index.php/insights/archives/the-red-herring-of-transparency.

create in the patent system as a whole. Professor Merges contends that social waste occurs where a troll asserts a patent that does not represent true innovation,[155] an activity he describes as similar to those of blackmailers or rent-seeking personal injury lawyers.[156] If an aggregator purchases its portfolios for the "superadditivity," leveraging the added strength of its portfolio, then it exploits the difficulty and expense of assessing the validity and value of an identified patent, hoping that its targets will simply settle rather than expending the cost of mounting a defense.[157] As with the defensive portfolios of practicing entities, an NPE aggregator's portfolio may allow it to seek greater rents on the practicing entities against which it asserts its patents than the underlying patents are worth.[158] However, unlike the portfolios of practicing entities, offensive aggregators assert their portfolios not to encourage cross licensing, but solely for the ability to assert patents, extending their ability to exclude or seek rents.

NPEs that aggregate patents in order to monetize them through licensing and assertion campaigns may do so for procompetitive and anticompetitive reasons. By offering licenses to large portfolios and creating market liquidity for patent assets, offensive aggregators decrease transaction costs and promote innovation and competition. However, by aggressively asserting their portfolios and taking advantage of notice failure and lock-in effects, they also create substantial costs for the technology industries.

D. IMPLICATIONS OF DEFENSIVE AGGREGATION

NPEs that specialize in defensive aggregation do not assert their patents and thus serve very different market functions than those of offensive aggregators. Although the defensive NPE aggregation model is fairly new, practicing companies have participated in defensive patent pools for some time.[159] As discussed in Section III.B, *supra*, cross-licensing schemes are generally considered procompetitive because they facilitate the transfer of technology and remove barriers to production, lowering costs across the

155. *See* Merges *supra* note 148, at 1601.

156. *See id.* at 1599–01.

157. Note, although studies suggest that NPE-owned patents are generally of higher quality than practicing companies' defensive patents, NPEs may still leverage information costs to seek reward for low-value patents *See* Chien, *supra* note 3; Risch, *supra* note 108, at 478–81; Fischer & Henkel, *supra* note 108.

158. As discussed *supra* Sections III.A and III.B, this superadditivity may raise concerns of patent misuse.

159. *See* HERBERT HOVENKAMP ET AL., IP AND ANTITRUST: AN ANALYSIS OF ANTITRUST PRINCIPLES APPLIED TO INTELLECTUAL PROPERTY LAW § 32.2 (2009) (providing the examples of patent pools over MPEG technology of the 1990s and the Ford patent pools from the early 20th century).

technology field.[160] However, like patent pools, defensive aggregation may provide an avenue for competitors to collude on price,[161] or to collude to raise rivals' costs.[162]

In addition to the anticompetitive price information sharing practices associated with patent pools, the strategies utilized by defensive aggregators such as RPX and Allied Security Trust may raise additional concerns. Because these aggregators seek to strategically acquire patent assets to lower their members' licensing and litigation costs, the deliberations by their members about which assets to purchase may represent a form of anticompetitive collusion. For example, if an inventor receives a patent on a technology practiced by only three competing companies, those three companies could agree to boycott negotiations to license that patent to keep the price of a license low. If all three companies are members of a single defensive aggregator, then that defensive aggregator may be able to purchase rights to the patent at a sub-competitive price and license those rights to all three competitors. In effect, defensive aggregators may facilitate agreements between competitors to collude on the purchase of patent assets, thus creating a buyer-side price control mechanism.[163]

In summary, by removing barriers to practicing and developing patented technologies for their members and reducing transaction costs, defensive aggregation provides clear procompetitive benefits. However, by creating a hub for potential hub-and-spoke arrangements between competitors, defensive aggregation can facilitate anticompetitive conduct.

IV. POSSIBILITIES AND LIMITS TO SOLUTIONS IN ANTITRUST

Antitrust law focuses on competitive harms, but because the Patent Act expressly confers the right to exclude some competition, most uses for patents are presumed legal even when they directly decrease competition.[164] Thus, many of the problems in the patent system can only be solved through patent law. The PTO can best address issues of patent quality through better

160. *See id.* § 34.4; 1995 IP Guidelines, *supra* note 129.

161. As with trade associations, patent pools provide a venue for competitors to share pricing information, and thus may help facilitate price collusion. *See* United States v. U.S. Gypsum, 438 U.S. 422, 439–40 (1978) (applying a rule of reason analysis to information sharing, noting that sharing price information facilitates price fixing).

162. HOVENKAMP ET AL., *supra* note 159, § 34.4b3.

163. This scenario served as the basis for antitrust claims recently asserted against RPX by a self-described "patent troll," and is discussed further *infra* at Part IV. *See* Cascades Complaint, *supra* note 142.

164. *See* MERGES & DUFFY, *supra* note 18, at 1245–46.

examination process, which already appears to be improving.[165] Courts are already addressing patent holdup problems through heightened injunction standards[166] and reasonable damages measures.[167] Standard-setting bodies can help address notice failure through disclosure requirements,[168] and courts can do the same by enjoining assertions by companies they find to exploit secrecy inequitably.[169] Chief Judge Rader of the Federal Circuit has suggested a number of discovery and fee redistribution reforms to curb exploitation of litigation costs.[170] Prudential standing requirements requiring any parties with "substantial rights" to a patent to join as parties in an infringement litigation may allow courts to address privateering arrangements.[171] The PTO, FTC, and DOJ are currently exploring ways to improve patent ownership transparency by requiring that owners and "real parties in interest" of patent rights record their interests with the PTO periodically or whenever significant patent rights are transferred.[172] However, barring radical change to

165. 2011 PTO Report, *supra* note 27 (showing dramatic increases in the number of PTO examiners and examiner retention, and a decrease in the patent backlog); Carl Shapiro, Fed. Trade Comm'n: Patent Assertion Entity Activities Workshop (Dec. 10, 2012) *available at* http://www.ftc.gov/video-library/index.php/ftc-events/patent-assertion-entity-activities-session-14/2028431448001 (noting improvements to PTO under direction of current Director, David Kappos).

166. *See* eBay, Inc. v. MercExchange, L.L.C., 547 U.S. 388 (2006) (ruling that injunctive relief for patent assertion must satisfy four-part test for equitable relief).

167. *See* Lucent Technologies v. Gateway, Inc., 580 F.3d 1301, 1330, 1336–38 (Fed. Cir. 2009) (rejecting damages holding based on entire market value of gateway product where infringed portion of software found only to make up a small portion of infringing products value).

168. *See* Menell & Meurer, *supra* note 11.

169. For example, courts might apply laches where they find evidence that a company has intentionally waited for a target to lock in to a technology in order to gain bargaining power. *See* Symbol Techs., Inc. v. Lemelson Med., Educ. & Research Found., 422 F.3d 1378, 1386 (Fed. Cir. 2005) (affirming application of prosecution delay laches, rendering unenforceable fourteen patents inequitably delayed through prosecution).

170. *See* Rader, *supra* note 132.

171. *See, e.g.*, A10 Networks, Inc. v. Brocade Commc'ns Sys., Inc., No. 5:11 CV 05493 LHK, 2012 WL 1932878 at *1 (N.D. Cal. May 29, 2012) (finding counter-infringement claim because party owned "fewer than all substantial rights" to patent and dismissing with leave to join other parties with retained interest in patent); Intellectual Prop. Dev., Inc. v. TCI Cablevision of Cal., 248 F.3d 1333, 1347–48 (Fed. Cir. 2011).

172. *See In the Matter of Notice of Roundtable on Proposed Requirements for Recordation of Real-Party-in-Interest Information Throughout Application Pendency and Patent Term, Comments of the Antitrust Division of the U.S. Dep't of Justice and Fed. Trade Comm'n*, U.S. DEP'T OF JUSTICE AND FED. TRADE COMM'N, (Feb. 1, 2013) *available at* http://www.ftc.gov/os/2013/02/130201pto-rpi-comment.pdf. Such a system could conceivably address some of the costs associated with notice failure if practicing companies can use the information to track the patent acquisitions of active patent asserting entities and use that information to design around highly patented technologies or bargain for licenses before investing in those

the patent system,[173] patent aggregation will likely remain a rational means for maximizing the value of one's patent assets and for defending against assertions.

Antitrust law can, however, help restrain some anticompetitive exploitations of patent aggregation. This Part will consider the legality of aggregation strategies currently in place from an antitrust perspective, as well as how antitrust laws might be employed by courts to encourage the beneficial, procompetitive uses of aggregation while discouraging activities that tax innovation or impair competition.[174]

A. BARRIER: CONTEMPORARY ANTITRUST AND THE ROLE OF MARKET POWER

Contemporary antitrust law provides a number of possibilities for regulating potentially harmful activities of patent aggregation, but these remedies must be weighed against the potential for further complicating the already complex patent ecosystem. The DOJ and FTC expressly state that they "apply the same general antitrust principles to conduct involving intellectual property that they apply to conduct involving any other form of tangible or intangible property."[175] Section 1 of the Sherman Act addresses concerted actions by competitors that create unreasonable restraints on trade. Section 7 of the Clayton Act allows the DOJ and FTC to regulate patent portfolio acquisitions that have the potential "substantially to lessen competition."[176] Section 5 of the FTC Act provides a broad prohibition against "unfair or deceptive acts or practices in or affecting commerce."[177] Although section 2 of the Sherman Act may also apply to patent arrangements, the unlikelihood of finding monopoly power in most patent markets under modern antitrust law makes it an unlikely candidate for successful regulation.[178]

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technologies. The potential benefits of such a system, as well as its costs, require further study.

173. Such as the elimination of patents for high-technology products, as proposed by some critics of the patent system, including Judge Posner. *See* Posner, *supra* note 24.

174. Merges, *supra* note 43.

175. 1995 IP Guidelines, *supra* note 129.

176. 15 U.S.C. § 18 (2000).

177. *Id.* § 45.

178. Finding monopoly power in a market for patents, as opposed to a market for technology-related products, is unlikely because there is generally no limit to the number of patents that can apply to a given sector and nothing to stop any independent inventor from patenting a related technology and thus entering the market for patents, meaning that entry barriers to a patent market would be considered very low. *But see* Kobe, Inc. v. Dempsey Pump Co., 198 F.2d 416 (10th Cir. 1952) (upholding jury verdict that plaintiff violated

The market power requirement for most causes of action under current antitrust law presents a significant hurdle for most claims related to aggregation.[179] Courts determining market power must first define a relevant geographic market and "product market."[180] Defining the market in cases related to patent aggregation, the court must consider two types of product markets: (1) a market for patents, and (2) a market for the products and services covered by those patents.[181] After identifying relevant markets, courts assess market power by looking to direct evidence[182] and circumstantial evidence.[183] A patent alone does not convey market power for the purposes of antitrust law,[184] and courts generally assume that because any inventor can innovate and receive a patent, firms rarely possess market power in a market for patents themselves.

Sherman Act §§ 1, 2, finding that plaintiff who acquired more than seventy patents over hydraulic oil pump technologies violated patent laws could be found to have willfully acquired a monopoly).

179. *See* HOVENKAMP ET AL., *supra* note 159, § 3.3. This would not be true of actions brought under the Sherman Act that implicate naked restrictions on price and would therefore be illegal per se. *See* United States v. Socony-Vacuum Oil Co., 310 U.S. 150, 223 (1940) ("Under the Sherman Act a combination formed for the purpose and with the effect of raising, depressing, fixing, pegging, or stabilizing the price of a commodity in interstate or foreign commerce is illegal per se."). Tying claims under Sherman Act §§ 1, 2, or Clayton Act § 3 technically receive per se treatment, but generally receive rule of reason analysis where the allegedly anticompetitive conduct takes place within an industry with unfamiliar consequences. *See* United States v. Microsoft Corp., 253 F.3d 34, 84 (D.C. Cir. 2001) ("rule of reason, rather than per se analysis, should govern the legality of tying arrangements involving platform software products."). Even the nominally "per se" analysis of tying arrangements requires some showing of market power by asking whether a purchaser of a tied product is "forced" to purchase the tied product. *See* Jefferson Parish Hosp. Dist. No. 2 v. Hyde, 466 U.S. 2, 16 (1984). Market power is defined as the power to raise prices in a specific market.

180. *See* United States v. E. I. du Pont de Nemours & Co., 351 U.S. 377, 395 (1956) (defining a relevant market, stating that "commodities reasonably interchangeable by consumers for the same purposes make up that 'part of the trade or commerce' "). The DOJ and FTC define a product market as a as a set of products over which a hypothetical monopolist "likely would impose at least a small but significant and non-transitory increase in price ('SSNIP')." *Horizontal Merger Guidelines*, U.S. DEPT. OF JUSTICE AND FED. TRADE COMM'N, § 4.1.1 (Aug. 19, 2010), *available at* http://www.ftc.gov/opa/2010/08/hmg.shtm [hereinafter "Merger Guidelines"].

181. *See* HOVENKAMP ET AL., *supra* note 159, § 4.3c.

182. Direct evidence includes measures of demand elasticity as well as evidence that parties have been able to exclude competitors or control prices in the identified market. *See* Merger Guidelines, *supra* note 180.

183. Circumstantial evidence includes evidence of persistently high market shares in a relevant market, the existence of barriers to entry, etc. *See id.*

184. *See* Illinois Tool Works Inc. v. Indep. Ink, Inc., 547 U.S. 28, 45 (2006) ("Congress, the antitrust enforcement agencies, and most economists have all reached the conclusion that a patent does not necessarily confer market power upon the patentee.").

Other aspects of patent law further constrain the reach of antitrust. Patent rights convey a lawful means for excluding others, and a "patent holder is permitted to maintain his patent monopoly through conduct permissible under the patent laws."[185] As for the acquisitions of patents themselves, the Supreme Court has held that the "mere accumulation of patents, no matter how many, is not in and of itself illegal."[186] The *Noerr-Pennington* doctrine protects private entities from antitrust liability for attempting to influence the passage or enforcement of laws, and thus immunizes parties from liability for lobbying for relief from the courts by bringing patent infringement litigation.[187]

However, not all uses of patents are immune to antitrust scrutiny, as discussed in the remainder of this Part. Patent misuse[188] provides a narrow exception to *Noerr-Pennington*.[189] And a handful of cases have held that acquiring a large number of patents in a particular technology field might violate antitrust laws and constitute patent misuse.[190] A patent asserter may also be liable under antitrust law where courts determine that a patent has been "acquired illegally" based on the circumstances of the acquiring party and the "status of the relevant product and geographic markets at the time of acquisition."[191] Certain uses of patent rights, such as tying,[192] violate antitrust laws.[193]

185. SCM Corp. v. Xerox Corp., 645 F.2d 1195, 1204 (2d Cir. 1981).

186. Automatic Radio Mfg Co. v. Hazeltine Research, 339 U.S. 827, 834 (1950).

187. *See* E. R.R. Presidents Conference v. Noerr Motor Freight, Inc., 365 U.S. 127 (1961); United Mine Workers v. Pennington, 381 U.S. 657 (1965).

188. Patent misuse is a common law defense to claims of patent infringement that "limits a patentee's right to impose conditions on a licensee that exceed the scope of the patent right" by making unenforceable patents held to have been misused. Princo Corp. v. Int'l Trade Comm'n, 616 F.3d 1318, 1321 (Fed. Cir. 2010) (en banc).

189. *See* Kobe, Inc. v. Dempsey Pump Co., 198 F.2d 416, 426–27 (10th Cir. 1952) (upholding jury verdict that plaintiff violated Sherman Act §§ 1, 2, finding that plaintiff who acquired more than seventy patents over hydraulic oil pump technologies violated patent laws could be found have willfully acquired a monopoly); *see also* Tom Ewing, *Practical Considerations in the Indirect Deployment of Intellectual Property Rights By Corporations and Investors: Limitations on Letters of Marque and Reprisal for Latter Day Sea Dogs*, 4 HASTINGS L. J. 109, 141 (2011) (suggesting that the patent misuse exception to *Noerr-Pennington* should be applied to targets of privateering activities).

190. *See Kobe*, 198 F.2d at 422.

191. SCM Corp. v. Xerox Corp., 645 F.2d 1195, 1206–07 (2d Cir. 1981).

192. *See infra* note 195 and accompanying text (explaining "tying").

193. Int'l Salt Co. v. United States, 332 U.S. 392 (1947); 1995 IP Guidelines, *supra* note 129.

B. SHERMAN ACT SECTION 1: REGULATING COLLUSIVE BEHAVIOR

Section 1 of the Sherman Act addresses concerted actions that might create unreasonable restraints to trade.[194] Aside from tying claims,[195] which can also be addressed under Sherman Act § 2 and Clayton Act § 3, § 1 violations generally involve agreements between competitors to collude on price or raise rivals' costs. Thus, courts and the antitrust enforcement agencies could apply § 1 to ensure that arrangements between aggregators and practicing entities, whether under privateering or defensive aggregation relationships, do not create exclusionary harms beyond what the Patent Act confers as a reward for innovation.[196]

1. Regulating Collusive Harms in Depressing Patent Prices

As discussed *supra* Part III, defensive aggregators could serve as a "hub" through which competitors could collude to restrain competition and prices. For example, in March 2012, Cascades Computer Innovation ("Cascades"), a patent asserting NPE, filed claims under section 1 and section 2 of the Sherman Act alleging that RPX and several of its members formed a group boycott not to license Cascades' patents.[197] In January 2013, a Northern District federal judge granted the defendants' motions to dismiss those claims on several bases, all with leave to amend.[198] The court found Cascades had failed to allege with sufficient specificity any "agreement between antitrust co-conspirators."[199] It also found that Cascades had failed to present

194. *See* 15 U.S.C § 1 (2004) ("Every contract, combination in the form of trust or otherwise, or conspiracy, in restraint of trade or commerce . . . is declared illegal.").

195. Tying occurs where a supplier conditions the sale of one product, the "tying" product, on the purchaser's agreement to some other "tied" product. *See* Illinois Tool Works Inc. v. Indep. Ink, Inc., 547 U.S. 28, 31 (2006). A successful tying claim requires that, among other things, the plaintiff prove that the defendant had market power in the tying product to sufficient to compel the sale of the tied product. *Id.* (holding that patents do themselves create a presumption of market power in a given product).

196. Exclusionary harms are activities that foreclose rivals' access to a given market, which often facilitates monopolist prices or collusive arrangements to raise prices in the long term. *See* Thomas G. Krattenmaker and Steven C. Salop, *Anticompetitive Exclusion: Raising Rivals' Costs to Achieve Power over Price*, 96 YALE L.J. 209, 214; RICHARD A. POSNER, ANTITRUST LAW 194 (2d ed. 2001).

197. *See* Cascades Complaint, *supra* note 142 (bringing complaint against RPX and, HTC, Motorola, Samsung, LG for Dell for refusing to negotiate for license owned by plaintiff Cascades).

198. *See* Cascades Computer Innovation LLC v. RPX Corp., No. 12-CV-001143 YGR, 2013 WL 316023, at *6–7, *15 (N.D. Cal. Jan 24, 2013).

199. *Id.* at *6–7 (finding only the "sort of generic pleading—alleging misconduct against various defendants without specifics as to the role each played—that was rejected by [Bell Atl. Corp. v. Twombly, 550 U.S. 544 (2007)]").

a "coherent market definition" by equivocating between a market defined as a "market for patented technology" and the market for the devices incorporating the patented technology.[200] It found that Cascades' allegations were too "vague" to "plausibly infer" it suffered harms "due to a conspiracy in a particular market, rather than due to individual business disputes between independent actors."[201] And, the court found that Cascades failed to provide specific facts to show that it was "economically irrational" for RPX's members to decline Cascades' licensing offers.[202] The dismissal of Cascades' complaint perhaps most directly demonstrates the difficulty of bringing conspiracy-related claims in the post-*Twombly* and *Iqbal* era,[203] but it also demonstrates the general skepticism with which courts will likely view such claims, and provides a useful lens through which to consider how courts might address antitrust allegations against defensive aggregators in future cases.

Agreements between competitors to restrain competition or fix prices are per se illegal under the Sherman Act section 1. To establish a prima facie case, a plaintiff must prove that competitor-defendants (1) entered an agreement (2) with the intent or effect to restrain competition or control price.[204] For example, Cascades claimed that RPX's actions constituted illegal buyer boycotts where RPX negotiated as an agent for its members, who in turn refused to compete for patent licenses.[205] The court expressly declined to address whether it would apply a per se rather than a rule of reason analysis to Cascades' claims, finding insufficient facts to make a determination as a matter of law.[206] It seems clear, however, that courts should not apply per se analysis to defensive aggregation activities. Because RPX purchases patents independently of its members, its purchases do not require horizontal agreements between competitors to choose patents. The agreements between defensive aggregators and their members are in fact vertical agreements, which courts view as having procompetitive purposes

200. *Id.* at *9–10 (emphasis omitted) (granting leave to amend to provide "sufficient specificity of each alleged violation in each alleged market or sub-market").

201. *Id.* at *11.

202. *Id.* at *12.

203. *See generally* Bell Atl. Corp. v. Twombly, 550 U.S. 544 (2007); Ashcroft v. Iqbal, 556 U.S. 662 (2009).

204. *See* United States v. Socony-Vacuum Oil Co., 310 U.S. 150, 223 (1940).

205. *See* Cascades Complaint, *supra* note 142.

206. *Cascades*, 2013 WL 316023, at *9 n.14.

more often than horizontal agreements, and thus generally receive the more relaxed rule of reason analysis.[207]

However, defensive aggregation models like that of Allied Security Trust ("AST") may have a more difficult time avoiding per se analysis.[208] Because AST does not acquire patents as an independent entity, but rather facilitates direct agreements among its members to decide which patents to acquire and how much to pay for them, plaintiffs may be able to more easily satisfy the agreement requirement of per se analysis.[209] Still, defensive aggregation models are not traditional restraints on trade that courts are accustomed to assessing,[210] and courts would likely find that defensive aggregators create a wholly new service (defensive aggregation) with substantial procompetitive attributes that should not be considered illegal per se.[211]

Under a rule of reason analysis, a plaintiff must make a prima facie showing that an agreement constitutes an unreasonable restraint of trade, which requires proof of competitive harm as well as proof of the defendant's market power in the relevant market.[212] As discussed *supra* Section IV.A, proof of market power can pose a significant hurdle under a rule of reason analysis. If, however, the defensive aggregator represents many members in a given product market, as is the case with RPX, the plaintiff may succeed in showing the competitors collectively have market power. A rule of reason analysis, therefore, will likely come down to weighing the anticompetitive potentials of such arrangements against the procompetitive effects of defensive aggregation. In most cases, courts will likely decide that the ability of competitors to clear barriers to production through cross-licensing arrangements, discussed *supra* Part III, outweigh the anticompetitive harms. Defendants could persuasively argue that plaintiff patent holding inventors or NPEs are free to refuse licenses to defensive aggregators and instead sue for patent infringement. Thus, only nakedly anticompetitive conduct would

207. *See, e.g.*, Continental T.V., Inc. v. GTE Sylvania Inc., 433 U.S. 36, 58 (applying rule of reason analysis to non-price vertical restrictions); Leegin Creative Leather Products, Inc. v. PASKS, Inc., 551 U.S. 877, 881 ("[V]ertical price restraints are to be judged by rule of reason."). This is not to say that all vertical agreements avoid antitrust scrutiny, but that they do not receive per se analysis.

208. See discussion of Allied Security Trust *supra* Section II.C.

209. *See* Hetzel, *supra* note 115, at 34.

210. *Cf.* United States v. Topco Assocs., Inc., 405 U.S. 596, 607–08 (1972) ("[I]t is only after considerable experience with certain business relationships that courts classify them as *per se* violations . . . .").

211. *Cf.* Broadcast Music, Inc. v. Columbia Broad. Sys., 441 U.S. 1, 24–25 (1979) (holding that procompetitive virtues of blanket license services requires application of rule of reason analysis rather than per se analysis).

212. *See* Standard Oil Co. v. United States, 221 U.S. 1, 58 (1911).

likely prevail under rule of reason analysis when considering collusive refusals to deal in the context of defensive aggregation.[213]

2. *Regulating Collusive Arrangements to Raise Rivals' Costs*

As discussed *supra* Part III, aggregation models under which multiple competing entities direct the activities of an NPE present the potential for illegal arrangements between competitors to raise rivals' costs. For example, Mosaid's acquisition of patents formerly belonging to Microsoft and Nokia under revenue sharing arrangements with each company has raised exactly these concerns.[214] Mosaid purchased the Nokia and Microsoft patents, which had been aggregated into a company called CoreWireless, under an arrangement where Nokia and Microsoft would receive a percentage of revenues from the portfolio's assertion and licensing.[215] However, the agreement also stated that the patents would revert back to Nokia and Microsoft if Mosaid failed to meet certain revenue targets on the portfolio.[216] Critics of the deal note that the reversion stipulation incentivizes Mosaid to assert aggressively against companies practicing the Nokia and Microsoft patents, which are most likely to include the competitors of those two companies. In effect, critics might argue, Nokia and Microsoft have entered into vertical arrangements with Mosaid, facilitating their ability to raise the costs of rivals who wish to compete in the technology markets covered by Mosaid's Nokia- and Microsft-originated patents.[217]

Because antitrust law concerns the protection of competition rather than competitors, exclusionary harms such as raising rivals' costs generally receive

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213. For example, if a plaintiff could show that competing entities were conspiring through a defensive aggregator to refuse licenses or depress license prices while also deterring infringement litigation through some otherwise illegitimate means (for example, by refusing membership to the defensive aggregator itself or by threatening to withhold business from the plaintiffs), then courts would likely find anticompetitive conduct on the part of the competing entities.

214. *See* Letzig, *supra* note 95.

215. *See supra* note 139 and accompanying text.

216. *See* Letzig, *supra* note 95.

217. Such a claim would likely require a plaintiff showing that Mosaid used its portfolio either to refuse licenses to certain competitors of Microsoft and Nokia, or that it granted licenses to certain competitors at much greater costs, or that the portfolio was being misused by targeting certain competitors with nuisance actions. A plaintiff might claim that such activities are analogous to vertical agreements policing a cartel, where Mosaid was policing a cartel arrangement. *Compare with* JTC Petroleum Co. v. Piasa Motor Fuels, Inc., 190 F.3d 775, 779–81 (7th Cir. 1999) (Posner, J.) (reversing summary judgment for defendants, finding sufficient evidence for a jury to infer that asphalt suppliers were withholding asphalt supply from competing applicator in order to enforce applicator cartel).

a rule of reason rather than per se treatment.[218] Courts and antitrust enforcement agencies would likely have difficulty determining the market power conferred by competitors' patents in a privateering context. Because patent holdings do not necessarily correspond to market share in a product market and because competitors generally will not provide complete details of their patent holdings to a privateer or offensive aggregator, determining the market power of a privateer based on its patent holdings cannot accurately reflect the market shares of the competing entities with which it has reached agreements.

Instead, courts might choose to measure the market power of the practicing entities by aggregating their respective market shares. Thus, if the multiple practicing entities party to a privateering arrangement with a single NPE possessed market power collectively, a court would weigh the procompetitive and anticompetitive effects of their arrangement. As discussed *supra* Part III, privateering provides efficiencies for companies by using the specialized abilities of NPEs to assert patents. However, if the privateering arrangement significantly raises costs for rivals so as to exclude competitors from the market with the effect of weakening competition, then courts may find a party to the arrangement to have impermissibly expanded its exclusionary power, thus creating liability under section 1 of the Sherman Act.

Ultimately, section 1 of the Sherman Act can provide plaintiffs with the tools to regulate the anticompetitive activities of aggregating NPEs and their partner practicing entities. However, it does not fully address the supracompetitive rents that high information costs place on product markets, which is one of the primary concerns regarding patent aggregation activities. This Note finds that although the FTC may be able to use section 5 of the FTC Act to address rents associated with information costs,[219] current antitrust law does not seem well suited to solve the problem.

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218. *See* Brown Shoe Co. v. United States, 370 U.S. 294, 320 (1962) (stating that antitrust law concerns "the protection of competition, not competitors"); HOVENKAMP ET AL., *supra* note 159. The exclusionary harm of "tying" represents one exception to this rule, but even tying arrangements rarely receive actual per se treatment. *See, e.g.*, Jefferson Parish Hosp. Dist. No. 2 v. Hyde, 466 U.S. 2, 12–18 (1984) (enunciating four-elements test to "per se" tying violations); United States v. Microsoft Corp., 253 F.3d 34, 84 (D.C. Cir. 2001) ("We hold that rule of reason, rather than per se analysis, should govern the legality of tying arrangements involving platform software products.").

219. *See infra* Section IV.D.

C. CLAYTON SECTION 7: REGULATING PORTFOLIO ACQUISITIONS

Under section 7 of the Clayton Act, the DOJ and FTC have the power to prohibit a patent acquisition if the acquisition's likely effect "may be substantially to lessen competition."[220] Patent sales are considered vertical mergers and are therefore subject to FTC or DOJ approval under section 7 of the Clayton Act when reaching a certain value-threshold.[221] Section 7 promotes greater regulatory reach than the more restrictive theories of liability available under the Sherman Act by directly inhibiting acquisitions that *may* lead to anticompetitive effects. However, weighing the anticompetitive effects of an acquisition of patents will likely be too uncertain and indefinite to create a viable cause of action in most instances.

In a traditional merger situation, a plaintiff must first make a prima facie case showing undue concentration in a particular market, which creates a presumption that the transaction will substantially harm competition.[222] In the context of patent acquisitions, identifying which patents are implicated by a relevant market definition would be quite difficult.[223] If a plaintiff can show substantial concentration, a defendant may rebut the presumption of competitive harm by showing either that the plaintiff's theory inaccurately predicts concentration or harm, or that the acquisition provides significant procompetitive effects.[224] A defendant will likely respond with the argument discussed in Section IV.A, *supra*, that entrants may easily access the market for patents simply by inventing competing technologies and patenting those inventions, then adding those patents to the patent market.[225]

To be successful under Clayton Act section 7 in the context of patent acquisitions, a plaintiff will therefore need to focus more directly on potential

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220. 15 U.S.C. § 18 (1996).

221. *Id.* Mergers reaching a certain value threshold, which is adjusted annually with inflation, are subject to ex ante approval by the DOJ and FTC. The threshold set for 2012 was $68.2 million. *See FTC Announces Revised Thresholds for Clayton Act Antitrust Reviews*, FED. TRADE. COMM'N, (Jan. 24, 2012). Any merger is subject to liability under section 7 of the Clayton Act ex post.

222. *See* United States v. Baker Hughes, 908 F.2d 981, 982–83 (D.C. Cir. 1990).

223. *But see* Kobe, Inc. v. Dempsey Pump Co., 198 F.2d 416 (10th Cir. 1952). Another difficulty in defining a patent market lies in weighing validity of the other patents that might be relevant to that market.

224. *See Baker Hughes*, 908 F.2d at 983.

225. *Cf. id.* at 988–99 (finding defendants had successfully rebutted government's prima facie case by showing that entry into defendants' market for specialized drilling equipment "would likely avert anticompetitive effects" of the acquisition); United States v. Waste Mgmt., Inc., 743 F.2d 976, 983 (2d Cir. 1984) (finding that ease of entry into Fort Worth's waste management market would defeat any anticompetitive impact of defendants' merger).

harms rather than market concentrations.[226] Antitrust officials from both agencies have recognized the potential for anticompetitive harms from trolling activities.[227] In a speech delivered in September 2012 at Northwestern University, Fiona Scott Morton, Deputy Assistant Attorney General for Economic Analysis in the DOJ's Antitrust Division, considered the potential harms that patent transactions between different types of entities might pose, distinguishing among transactions between practicing entities, sales from a practicing entity to an NPE, and sales from multiple practicing entities to the same NPE.[228] The potential harms and benefits of such transactions, discussed *supra* Part III, are discussed below through the lens of Clayton Act section 7.

1. *Acquisitions by Practicing Entities Generally*

Although portfolio acquisitions by practicing entities implicate concerns related to the "superadditivity" that portfolios provide for both offensive and defensive purposes,[229] the strong procompetitive effects of cross licensing must be weighed against any anticompetitive potential. Furthermore, determining ex ante the purposes for which a practicing entity will use its patent portfolio presents tremendous difficulties. Acquiring patents is a legal and desirable activity if it promotes technology transfer. Overregulation of general acquisitions would deter the transfer of patent rights, stagnating liquidity and encouraging infringement. Of course, plaintiffs could bring section 7 actions against a transaction ex post when evidence of anticompetitive conduct surfaced, but then the conduct itself, not the acquisition, would constitute the harm. Thus, although Clayton section 7 may

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226. However, a departure from focusing on market concentration may sit uneasily with courts considering market concentration is what is most directly affected by a merger. Focusing instead on "potential harms" would require a high degree of speculation and assumption with regard to an entity's future harmful activities.

227. Brent Kendall & Ashby Jones, *Regulators Take Look at Patent Firms' Impact*, WALL ST. J., (Nov. 18, 2012), http://online.wsj.com/article/SB10001424127887324595904578123493335950754.html (quoting former Justice Department antitrust chief Joseph Wayland stating that the DOJ is focusing "huge energy, particularly at a senior level" toward patent and antitrust issues related to trolls," and FTC Chairman Jon Leibowitz stating "there has been a great deal of controversy and disagreement about whether [patent trolls] stifle innovation and whether they are an anticompetitive problem").

228. Morton, *supra* note 141. Although the speech does not directly identify any particular companies, its description seems to be that of an offensive aggregator. Morton describes an NPE that "buys large quantities of patents from others, and [whose] business model is to monetize intellectual property," and that "by combining weak patents into large groups, the troll increases the likelihood that the licensee has infringed at least one valid patent in the portfolio." *Id.* at 3.

229. *See supra* Section II.A.

provide a strong regulatory tool against anticompetitive behaviors, courts are unlikely to apply them ex ante to transactions between practicing entities.[230]

2. *NPE Acquisitions of Practicing Entity Patents*

A portfolio sale between a practicing entity and an NPE, as discussed *supra* Part III, likely increases the likelihood that the underlying patents will be asserted against competitors, raising costs across an industry. Indeed, enjoining acquisitions by non-practicing entities based on powers provided by the Clayton Act would severely constrain the ability of NPEs to place costs on the patent system. However, a blanket proscription against sales from practicing entities to NPEs would constrain liquidity in the market for patents. Such a proscription would leave practicing entities as the only buyers of patents from other practicing entities, which may potentially reduce liquidity in the patent market and remove the efficiencies that specializing patent intermediaries bring to the patent system. The reduced liquidity emanating from intellectual property assets might reduce competition from startup companies whose investors rely on the ability to sell off patents as a way of mitigating losses after a startup's ultimate failure. Furthermore, the lack of a liquid market might also reduce income from the sale of patent assets, which in turn might make it more difficult for companies to offset the costs of research and development.[231]

There may be middle-ground solutions available. For example, courts might find that the anticompetitive effects of NPE aggregation deserve a high degree of scrutiny under the Clayton Act, but that the procompetitive effects that NPEs provide by injecting liquidity into the market in certain circumstances outweigh those anticompetitive effects. Under such a scenario, the antitrust agencies and the courts might recognize different levels of procompetitive outcomes for different types of sales, and apply different levels of scrutiny to sales accordingly. Courts might find, for example, that permitting NPEs to acquire the patents of bankrupt entities provides strong

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230. Fiona M. Scott Morton suggests that patent sales to practicing entities that practice in the field of technology underlying those patents ("PPEs") create greater competitive concerns than sales to practicing entities that do not practice the technologies underlying the patents ("PEs") because PPEs will demand higher rates from competitors practicing the underlying technologies. Morton, *supra* note 141. Although this may be true, it is unlikely that courts would punish a company for obtaining patents to technologies they practice or might potentially practice without an obvious risk of such a transaction granting a company monopoly power, considering that is the most direct form of technology transfer. Without the ability to buy and sell patent rights, a patent would no longer behave as a property right.

231. As discussed *supra* Section II.A.2.b), Nokia has defended its sale of patents to PAEs by stating that such sales allow it to pivot away from older technologies and reinvest in research and development. *See* Melin, *supra* note 96.

procompetitive effects, whereas sales creating privateering relationships deserve higher scrutiny.

3. A Competition-Focused Approach

Rather than focus on the type of entity party to a patent transaction, antitrust agencies should focus, on a case-by-case basis, on the type of parties to a given transaction and the specific details of their agreements. Shared purchases by competing companies present a clear opportunity for collusion among competitors to raise rivals' costs, as do sales by competitors under revenue sharing arrangements to patent-asserting NPEs. The DOJ and FTC already investigate such transactions.[232] If, for example, entities party to large patent transactions also made agreements explicitly involving the targeting of certain competitors to raise costs, or implicitly by incentivizing such activity, enforcement bodies might apply greater scrutiny. Of particular significance in this context might be agreements between transferring parties that created undue secrecy with regard to who might maintain some property interest or control over patents after they are transferred to a second party.

D. FTC ACT SECTION 5

Perhaps the broadest tool available to regulators are the investigative and regulating powers given to the FTC under section 5 of the FTC Act, which empower the FTC to prohibit practices that it deems "unfair."[233] The standard of unfairness encompasses activities that would otherwise constitute violations under other antitrust laws but also includes any practices that the FTC determines are "against public policy."[234] For example, the FTC has prohibited certain unilateral activities facilitating collusion for anticompetitive activities, even where the action lacks an explicit agreement between competitors and would therefore not raise liability under section 1 of the Sherman Act.

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232. For example, the DOJ investigated Google's acquisition of Motorola Mobility Holdings and its 17,000 patents, as well as the combined purchase of Nortel's 6,000 patents by the Rockstar Bidco consortium consisting of Apple, Sony, Microsoft, RIM, EMC, and Ericsson. *See Statement of the Department of Justice's Antitrust Division on its Decision to Close Its Investigations of Google Inc.'s Acquisition of Motorola Mobility Holdings Inc. and the Acquisitions of Certain Patents by Apple Inc., Microsoft Corp, and Research in Motion Ltd.*, DEPT. OF JUSTICE (Feb. 13, 2012) *available at* http://www.justice.gov/opa/pr/2012/February/12-at-210.html. *See also* Cockburn, *supra* note 135.

233. *See* 15 U.S.C. § 45 (2006).

234. *See* F.T.C. v. Indiana Fed'n of Dentists, 476 U.S. 447, 454 (1986) ("The standard of "unfairness" under the FTC Act is, by necessity, an elusive one, encompassing not only practices that violate the Sherman Act and the other antitrust laws, but also practices that the Commission determines are against public policy for other reasons.") (internal quotations omitted).

Likewise, the FTC might use its broad powers under section 5 to loosen a plaintiff's burden of showing market power under rule of reason analyses involving patent transactions from multiple competitors to a single NPE, or agreements between competitors involving the use of patents. A loosened standard for market power would help capture practices that have the effect of raising rivals' costs under a privateering model. Rule of reason analysis would then focus on anticompetitive intent or on its effects on the market rather than direct findings of market power.

If the collection of supracompetitive rents based on aggregated portfolios could directly fall under section 5's proscription against "unfair practices," then it might indeed address many of the harms associated with the direct exploitation of flaws within the patent system. Such claims might focus on whether aggregators were either intentionally exploiting the high information costs associated with evaluating their portfolios or deliberately leveraging notice failure to extract unwarranted licensing revenues. Still, courts might justifiably refrain from expanding liability too liberally to either the accumulation of portfolios or the licensing of those portfolios out of fear of chilling legitimate, procompetitive activity. Finding the line between legitimate licensing activities and the compulsion of supracompetitive rents may simply be too difficult in most instances. Thus, although the broad language of section 5 might conceivably apply to "unfair" uses of aggregated portfolios, as well as the accumulation or transfer of patent portfolios that could facilitate unfair uses, courts are unlikely to use section 5 to substantially alter the antitrust law with respect to patent portfolios.

V. CONCLUSION

Patent aggregation presents potential competitive harms that largely result from flaws within the patent system. Many of those harms will be best addressed using principles of patent law or through reforms of the patent system. Companies aggregate patents both to exploit information costs and to defend against those information costs. Patent aggregation is often wasteful because it values quantity of patents over the quality of the underlying innovation, and it can allow entities to tax production more than they benefit innovation. Antitrust law may provide useful tools to curb the negative consequences of certain patent aggregation strategies—particularly the collusive opportunities presented by vertical arrangements between NPEs and multiple practicing entities, both under privateering arrangements and under defensive aggregation arrangements. However, antitrust law is not well-suited to address the harms inherent in the current patent system that patent aggregation simply exacerbate.

THE EYE OF THE STORM: SOFTWARE PATENTS AND THE ABSTRACT IDEA DOCTRINE IN *CLS BANK V. ALICE*

Dina Roumiantseva†

In October 2012, the Federal Circuit voted to face a long-brewing storm surrounding the patentability of computer programs by granting a petition for a rehearing en banc in *CLS Bank International v. Alice Corp.*[1] The Court posed two questions on rehearing:

> a. What test should the court adopt to determine whether a computer-implemented invention is a patent ineligible "abstract idea"; and when, if ever, does the presence of a computer in a claim lend patent eligibility to an otherwise patent-ineligible idea?
>
> b. In assessing patent eligibility under 35 U.S.C. § 101 of a computer-implemented invention, should it matter whether the invention is claimed as a method, system, or storage medium; and should such claims at times be considered equivalent for § 101 purposes?[2]

The answers to these questions have eluded the patent system since the first computer program patent applications began appearing at the U.S. Patent and Trademark Office ("USPTO"), leaving stakeholders in the vast number of software-related patents that have issued to date on shaky ground.[3] For some time, the meteoric rise in the number of issued software patents appeared to relegate the issue of software patent eligibility to the

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1. CLS Bank Int'l v. Alice Corp. Pty. Ltd., 484 F. App'x 559, 560 (Fed. Cir. 2012).

2. *Id.* at 559–60. Section 101 states: "Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title." 35 U.S.C. § 101 (2006).

3. USPTO records indicate a total of 551,789 patents were granted between 1977 and December 2011 in the 700–726 class range that includes data processing and computer systems, with 30,429 patents in Class 705: "Data Processing: Financial, Business Practice, Management, or Cost/Price Determination" typically associated with business methods software. *Patent Counts By Class By Year*, U.S. PATENT & TRADEMARK OFFICE, http://www.uspto.gov/web/offices/ac/ido/oeip/taf/cbcby.htm (last visited Jan. 31, 2013).

annals of history,[4] yet recent cases demonstrate a fundamental divide in the courts about which computer-implemented inventions should be eligible for patent protection. The Federal Circuit's decision to vacate its original panel opinion in *CLS Bank* follows a controversy stirred by an apparently inconsistent outcome in *Bancorp Services v. Sun Life*, decided only a few weeks later.[5] In May 2012, the Supreme Court vacated the Federal Circuit's decision on the same issue in *Ultramercial v. Hulu*, and remanded for further consideration in light of its recent ruling in *Mayo Collaborative Services v. Prometheus Laboratories*.[6] Petitions for rehearing en banc have been filed in both *Bancorp* and *Ultramercial*; thus, the Federal Circuit must now reconcile its patent eligibility jurisprudence, which it has likened to the subtle art of wine-tasting.[7] The present en banc rehearing is an opportunity for the Circuit to lend clarity to a long-unsettled area of the law, resolving several key inconsistencies in past approaches that are examined in this Note.

The tempest surrounding software patents gathered intensity when the Supreme Court rejected the Federal Circuit's most recent attempt at articulating a definitive patentable subject matter test in *Bilski v. Kappos*, finding that "the machine-or-transformation test is a useful and important clue, an investigative tool. . . . [but] not the sole test for deciding whether an invention is a patent-eligible 'process.' "[8] The Supreme Court declined to provide further guidance, noting that "nothing in [*Bilski*] should be read as

4. Julie E. Cohen & Mark A. Lemley, *Patent Scope and Innovation in the Software Industry*, 89 CAIF. L. REV. 1, 4 (2001) (describing software patents as "a matter for the history books").

5. CLS Bank Int'l v. Alice Corp. Pty. Ltd., 685 F.3d 1341 (Fed. Cir. 2012), *reh'g en banc granted, opinion vacated*, 484 Fed. App'x. 559 (decided July 9, 2012); Bancorp Servs., L.L.C. v. Sun Life Assurance Co. of Canada (U.S.), 687 F.3d 1266 (Fed. Cir. 2012) (decided July 26, 2012).

6. Ultramercial, L.L.C. v. Hulu, L.L.C., 657 F.3d 1323 (Fed. Cir. 2011) *cert. granted, judgment vacated sub nom.* WildTangent, Inc. v. Ultramercial, L.L.C., 132 S. Ct. 2431 (2012) (remanding for further consideration in light of Mayo Collaborative Servs. v. Prometheus Labs., Inc., 132 S. Ct. 1289 (2012)).

7. MySpace, Inc. v. GraphOn Corp., 672 F.3d 1250, 1259 (Fed. Cir. 2012). The Federal Circuit noted:

> This effort to descriptively cabin § 101 jurisprudence is reminiscent of the oenologists trying to describe a new wine. They have an abundance of adjectives—earthy, fruity, grassy, nutty, tart, woody, to name just a few—but picking and choosing in a given circumstance which ones apply and in what combination depends less on the assumed content of the words than on the taste of the tongue pronouncing them.

Id.

8. Bilski v. Kappos, 130 S. Ct. 3218, 3227 (2010). Under the "machine-or-transformation" test, a "process is patent eligible if: (1) it is tied to a particular machine or apparatus, or (2) it transforms a particular article into a different state or thing." *Id.* at 3221.

endorsing interpretations of § 101 that the Court of Appeals for the Federal Circuit has used in the past," without "foreclos[ing] the Federal Circuit's development of other limiting criteria that further the purposes of the Patent Act and are not inconsistent with its text."[9] In the two years after *Bilski*, the Federal Circuit issued nearly a dozen opinions on software patent eligibility, grappling with other formulations of limiting criteria and revealing a growing rift among the court members.[10] The Supreme Court's *Prometheus* decision further exacerbated this rift, as the Court once again declined to articulate a bright-line rule for patentable subject matter, and yet confirmed the importance of § 101 as an initial determination of patentability.[11] The origins of the current crisis with software patents lie much deeper, however, beginning with the tenuous acceptance of method patents, and the divergence of software patents from other technical fields as the USPTO experienced a boom in information technology without adequate administrative or judicial guidance.

This Note examines the current split regarding software patentability in the Federal Circuit in the context of the turbulent history of software and method patents. Part I presents the recent divide over the patent-eligibility of software by examining the claims at issue in *CLS Bank* and *Bancorp*, and the Federal Circuit's motivation for granting the rehearing en banc. Part II describes the diverging philosophies of the current Federal Circuit judges behind the inconsistent case outcomes of the past several decades. Part III traces the doctrinal developments that led to the uncertain validity of software patents, the analytical problems that must be addressed in reconciling Federal Circuit and Supreme Court jurisprudence, and the administrative responses to the growth of information technology that will provide alternate avenues for challenging questionable patents. History

9. *Id.* at 3231. *See also* Peter S. Menell, *Forty Years of Wondering in the Wilderness and No Closer to the Promised Land: Bilski's Superficial Textualism and the Missed Opportunity to Return Patent Law to Its Technology Mooring*, 63 STAN. L. REV. 1289, 1291 (2011) ("[T]he failure of the *Bilski* majority to elucidate the basis--constitutional, statutory, and/or jurisprudential--for deciphering the boundaries of patentable subject matter leaves other important industries and decisionmakers in the wilderness.").

10. *See* Part II, *infra*, describing the rift among court members and the recent Federal Circuit patentability cases: *Research Corp. Technologies, Inc. v. Microsoft Corp.*, 627 F.3d 859 (Fed. Cir. 2010); *SiRF Technology, Inc. v. International Trade Commission*, 601 F.3d 1319 (Fed. Cir. 2010); *Classen Immunotherapies, Inc. v. Biogen IDEC*, 659 F.3d 1057 (Fed. Cir. 2011); *CyberSource Corp. v. Retail Decisions, Inc.*, 654 F.3d 1366 (Fed. Cir. 2011); *Fort Properties, Inc. v. American Master Lease L.L.C.*, 671 F.3d 1317 (Fed. Cir. 2012); Dealertrack, Inc. v. Huber, 674 F.3d 1315 (Fed. Cir. 2012); *CLS Bank*, 685 F.3d at 1341; *Bancorp Services*, 687 F.3d at 1266; *Ultramercial*, 657 F.3d at 1323; *MySpace*, 672 F.3d at 1259.

11. Mayo Collaborative Servs. v. Prometheus Labs., Inc., 132 S. Ct. 1289, 1304–05 (2012). The implications of the *Prometheus* ruling are discussed in detail in Section III.B, *infra*.

suggests that the Federal Circuit is unlikely to have the final say on patent protection for software in this case, as the questions before the court go to the very heart of institutional tensions within the patent system.

I. THE CURRENT CONTROVERSY OVER SOFTWARE PATENTS: *CLS BANK* AND *BANCORP*

The contradictory outcomes of *CLS Bank* and *Bancorp* are symptomatic of the underlying philosophical division within the Federal Circuit, as the two cases extended diverging lines of precedent to conclude with radically different tests of patent eligibility for software. This Section describes the statutory categories of patentable subject matter and the patented inventions at issue in both cases in order to illustrate the analytical challenges that computer-implemented inventions pose for the U.S. patent system.

Section 101 of the 1952 Patent Act sets forth the four categories of patentable subject matter and defines eligibility broadly: "[w]hoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title."[12] Sections 102, 103, and 112 enumerate the conditions and requirements for obtaining a patent: § 102 addresses novelty, § 103 describes the requirement of nonobviousness, and § 112 sets forth the written description, best mode, and "enablement" requirements, calling for disclosure in "such full, clear, concise, and exact terms as to enable any person skilled in the art . . . to make and use the same."[13] Patent eligibility is further limited by the judicially-created exceptions for "laws of nature, physical phenomena, and abstract ideas" that fall outside the scope of § 101 and must remain in the public domain.[14]

The invention in *CLS Bank* concerned a system that manages "settlement risk" inherent in transactions, where one party may fail to meet its obligation, leaving the other party without its principal.[15] The system acts as an escrow

12. 35 U.S.C. § 101 (2006).

13. 35 U.S.C. §§ 102, 103, 112.

14. Bilski v. Kappos, 130 S. Ct. 3218, 3225 (2010) (describing the exceptions as "statutory *stare decisis* going back 150 years" (citing Le Roy v. Tatham, 55 U.S. 156, 173 (1852))). *See also* Diamond v. Chakrabarty, 447 U.S. 303, 309 (1980) (such discoveries are "manifestations of . . . nature, free to all men and reserved exclusively to none." (quoting Funk Bros. Seed Co. v. Kalo Inoculant Co., 333 U.S. 127, 130 (1948))). A history of the abstract idea doctrine is provided in Section III.A, *infra*.

15. CLS Bank Int'l v. Alice Corp. Pty. Ltd., 685 F.3d 1341, 1343–44 (Fed. Cir. 2012) *reh'g en banc granted, opinion vacated*, 484 F. App'x 559 (Fed. Cir. 2012). Claim 33 of U.S. Patent No. 5,970,479 recited:

agent by ensuring that both parties' obligations will be met, or else the entire transaction will not take place.[16] The system maintains "shadow" credit and debit records with an independent third party, updating the shadow records with daily balances from each institution, and approving only those transactions where both institutions can meet their obligations.[17] The patentee attempted to claim the invention under three separate patent-eligible subject matter categories: (1) process—claiming the invention as a method composed of steps; (2) machine—as a data processing system comprising data storage devices configured to carry out specified functions; and (3) manufacture—as a computer readable storage medium containing program code.[18]

The *CLS Bank* majority view was rooted in the position that the judicial exceptions to patentable subject matter should be exercised infrequently.[19] Judges Linn and O'Malley disapproved of the "abstract idea" exception as a "serious problem, leading to great uncertainty and to the devaluing of

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> A method of exchanging obligations as between parties, each party holding a credit record and a debit record with an exchange institution, the credit records and debit records for exchange of predetermined obligations, the method comprising the steps of:
>
> (a) creating a shadow credit record and a shadow debit record for each stakeholder party to be held independently by a supervisory institution from the exchange institutions;
>
> (b) obtaining from each exchange institution a start-of-day balance for each shadow credit record and shadow debit record;
>
> (c) for every transaction resulting in an exchange obligation, the supervisory institution adjusting each respective party's shadow credit record or shadow debit record, allowing only these [sic] transactions that do not result in the value of the shadow debit record being less than the value of the shadow credit record at any time, each said adjustment taking place in chronological order; and
>
> (d) at the end-of-day, the supervisory institution instructing one of the exchange institutions to exchange credits or debits to the credit record and debit record of the respective parties in accordance with the adjustments of the said permitted transactions, the credits and debits being irrevocable, time invariant obligations placed on the exchange institutions.

Id.

16. *Id.* at 1343.
17. *Id.*
18. *Id.*
19. *Id.* at 1347 ("[I]n practice, these three exceptions should arise infrequently and should not be understood to subvert the patent's constitutional mandate '[t]o promote the Progress of Science and useful Arts.' " (citing U.S. Const. art. I, § 8, cl. 8)).

inventions of practical utility and economic potential."[20] The majority adopted the approach of another post-*Bilski* Federal Circuit opinion, *Research Corporation Technologies v. Microsoft*, holding that the "disqualifying characteristic of abstractness must exhibit itself manifestly to override the broad statutory categories of patent-eligible subject matter."[21] Accordingly, the majority evaluated the claims at issue for a manifest showing of abstractness and held that the claims, when considered as a whole, contained sufficient limitations to avoid the preemption of a fundamental idea.[22] The majority also swept away the distinction between method, system, and storage media claims, focusing on the implementation of the invention in real-time updating of shadow records described in a specific chronological sequence.[23] The court phrased its conclusion in the negative: the claims were not ineligible subject matter because it was "difficult to conclude that the computer limitations . . . d[id] not play a significant part in the performance of the invention or that the claims [we]re not limited to a very specific application of the concept."[24] The majority then significantly expanded the "manifest" abstraction approach, adopting its own test for patent eligibility:

> Unless the single most reasonable understanding is that a claim is directed to nothing more than a fundamental truth or disembodied concept, with no limitations in the claim attaching that idea to a

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20. *Id.* at 1348–49 (citing Donald S. Chisum, *Weeds and Seeds in the Supreme Court's Business Method Patents Decision: New Directions for Regulating Patent Scope*, 15 LEWIS & CLARK L. REV. 11, 14 (2011) ("Because of the vagueness of the concepts of an 'idea' and 'abstract,' . . . the Section 101 abstract idea preemption inquiry can lead to subjectively-derived, arbitrary and unpredictable results. This uncertainty does substantial harm to the effective operation of the patent system.")).

21. *Id.* at 1347 (citing Research Corp. Techs., Inc. v. Microsoft Corp., 627 F.3d 859, 868 (Fed. Cir. 2010)).

22. *Id.* at 1352, 1355–56 (citing Bilski v. Kappos, 130 S. Ct. 3218, 3225 (2010) ("It would undermine the intent of Congress to extend a judicially-crafted exception to the unqualified statutory eligibility criteria of § 101 beyond that which is "implicitly" excluded as a "fundamental truth" that is "free to all men and reserved exclusively to none.")).

23. *Id.* at 1352–53 (citing CyberSource Corp. v. Retail Decisions, Inc., 654 F.3d 1366, 1374 (Fed. Cir. 2011) ("Regardless of what statutory category . . . a claim's language is crafted to literally invoke, we look to the underlying invention for patent eligibility purposes.")).

24. *Id.* at 1354–55. The majority looked to the specification language for evidence of computer implementation that was lacking in the claims themselves:

> shadow debit/credit records are electronically stored in a system called 'INVENTICO' . . . [E]ach [participating] entity electronically notifies the applicable CONTRACT APP of the 'opening balances' of all the debit and credit INVENTICO accounts it maintains. . . . Upon receipt of [these] notifications, the applicable CONTRACT APP updates/confirms its stakeholder shadow balances.

Id. (internal citations and quotations omitted).

> specific application, it is inappropriate to hold that the claim is directed to a patent ineligible 'abstract idea' under 35 U.S.C. § 101.[25]

Thus, the *CLS Bank* majority adopted an effective presumption of patent-eligibility for computer software that can be rebutted with a showing that the invention is nothing more than a bare concept, noting that it is preferable to "leave the question of validity to the other provisions of Title 35."[26]

Judge Prost's dissent in *CLS Bank* rejected the manifest abstraction approach as contrary to the holding of *Prometheus*, which Judge Prost read to require an analysis of the "inventive concept" of the claims.[27] Judge Prost also pointed to the Supreme Court's explicit refusal to dispose of the *Prometheus* claims on § 102 and § 103 grounds, holding that § 101 must be approached as a "threshold" test.[28] Even under the standard adopted by the majority, however, Judge Prost found that the patent did not disclose sufficient computer-requiring limitations because it did not describe how to implement the invention on a computer.[29]

In *Bancorp*, a unanimous panel of Judges Prost, Lourie, and Wallach held that a method for administering and tracking the value of life insurance policies was not patent-eligible subject matter, employing a contrary principle to the majority in *CLS Bank*.[30] Using the doctrine of claim differentiation, the

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25. *Id.* at 1352.

26. *Id.* at 1355.

27. *Id.* at 1356–57 (Prost, J., dissenting); a detailed discussion of *Prometheus* is provided in Section III.B, *infra*.

28. *Id.* at 1356–57; an analysis of *Prometheus* and statutory requirements is provided in Section III.B.1, *infra*.

29. *See id.* at 1360 (stating that the specification is "devoid of any teaching for how one must implement computer systems. For example, there is no instruction for connecting various components of the system and no discussion of how existing systems need be modified or improved in order to implement the one that is claimed").

30. Bancorp Servs., L.L.C. v. Sun Life Assur. Co. of Canada (U.S.), 687 F.3d 1266, 1269, 1281 (Fed. Cir. 2012). A representative claim of U.S. Patent 5,926,792 recited:

> A method for managing a life insurance policy on behalf of a policy holder, the method comprising the steps of:
>
> generating a life insurance policy including a stable value protected investment with an initial value based on a value of underlying securities;
>
> calculating fee units for members of a management group which manage the life insurance policy;
>
> calculating surrender value protected investment credits for the life insurance policy;
>
> determining an investment value and a value of the underlying securities for the current day;
>
> calculating a policy value and a policy unit value for the current day;

court found that the independent claims at issue did not require a computer, because the dependent claims explicitly included a computer limitation by adding the words "performed by a computer."[31] The panel then arrived at its own formulation of the patent-eligibility test for software applications: "[t]o salvage an otherwise patent-ineligible process, a computer must be integral to the claimed invention, facilitating the process in a way that a person making calculations or computations could not."[32]

The court relied on another recent opinion, *SiRF Technology v. International Trade Commission*, for the proposition that in order to provide a meaningful limit on claim's scope, a computer must play "a significant part in permitting the claimed method to be performed, rather than function solely as an obvious mechanism for permitting a solution to be achieved more quickly."[33] The *Bancorp* court did not apply the manifest abstraction analysis of *Research Corp.*, but instead distinguished the claims at issue from the invention in that case, where a computer was used to render a halftone image through the use of a two-dimensional array.[34] The court identified two differences that it deemed critical: (1) the method in *Research Corp.* represented improvements to computer technologies in the market; and (2) "required the manipulation of computer data structures (the pixels of a digital image and the mask) and the output of a modified computer data structure (the halftoned image)."[35] In *Bancorp*, however, the court found that the computer was "employed only for its most basic function, the performance of repetitive calculations," and the panel stressed that it was the non-technical management of the life insurance policy that was central to each of Bancorp's claims at issue, not the computer machinery used to accomplish it.[36] The court also acknowledged its recent opinion in *CLS Bank*, finding its outcome "not inconsistent" because the claims in the present case were not directed to a "very specific application"

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storing the policy unit value for the current day; and

one of the steps of:

removing the fee units for members of the management group which manage the life insurance policy, and

accumulating fee units on behalf of the management group.

Id. at 1270–71.

31. *Id.* at 1275.

32. *Id.* at 1278.

33. *Id.* at 1278 (citing SiRF Tech., Inc. v. Int'l Trade Comm'n, 601 F.3d 1319, 1333 (Fed. Cir. 2010)).

34. *See id.* at 1279 (citing Research Corp. Techs., Inc. v. Microsoft Corp., 627 F.3d 859, 863–69 (Fed. Cir. 2010)).

35. *Id.*

36. *Id.* at 1278–79 (Fed. Cir. 2012) (internal quotations omitted).

of the inventive concept; but the broad concept of managing a stable value protected life insurance policy.[37]

While both the *CLS Bank* and *Bancorp* courts agreed that mere implementation of an algorithm on a computer does not resolve the question of patent eligibility, the distinction drawn by the court between the methods is elusive because both inventions obtain numerical financial data in real time, perform a set of calculations, and apply the results to particular financial transactions. The specificity-of-application distinction glosses over the fundamental difference in approach advocated by the two panels. In *CLS Bank*, the majority extended *Research Corp.* and adopted a virtual presumption of patent eligibility for software applications, leaving little room for the "abstract idea" exception in cases where there is some evidence of computer implementation. In contrast, the *Bancorp* court extended *SiRF Technology* and adopted a new test of the computer's necessity that could significantly limit patent eligibility of computer applications. Taken to one logical conclusion, the *Bancorp / SiRF Technology* test requiring a computer "facilitating the process in a way that a person making calculations or computations could not" would bar all computer-implemented inventions, since all computer operations can be reduced to logical operations on binary digits that could, theoretically, albeit slowly, be performed by a human mind.[38] In practice, however, a human mind cannot store matrices of insurance policy balances updated in real time with any more ease than it can track shadow credit records of numerous transaction partners.

II. THE SPLIT IN THE FEDERAL CIRCUIT

The underlying philosophical divide in the Federal Circuit is evident in the increasingly divergent approaches to § 101 that different panels have applied over the last two decades. Because of these internal divisions, it is

37. *Id.* at 1280.

38. *See id.* at 1278 (citing *SiRF Tech.*, 601 F.3d at 1333); *see also* Marc Macenko, Bentley J. Olive, *That's Easy! I Can Do That With Pen And Paper!: Why The Mental Steps Doctrine Could Bring An End To Patent Protection For Software*, 13 N.C. J.L. & TECH. ON. 61, 62 ("By inquiring whether or not a claim could be completed using only pen and paper and purely mental steps, any software can be found to be so abstract that it is no longer eligible for patent protection."); *see also Patent Law—Patentable Subject Matter—Federal Circuit Holds That Mental Processes That Do Not, As A Practical Matter, Require A Computer To Be Performed Are Unpatentable.*—CyberSource Corp. v. Retail Decisions, Inc., *654 F.3d 1366 (Fed. Cir. 2011)*, 125 HARV. L. REV. 851, 851, 858 (2012) ("Substantively, the test's fundamental inquiry—determining complexity as a function of computing power—likely fails to further the goals of the patent system. . . . [Because] a computing-power requirement creates an artificial distinction between programs of possibly equal inventiveness.").

instructive to examine the evolution of the underlying philosophies within the Federal Circuit, rather than the recent holdings in chronological order, which reveal significant inconsistencies. On one side, some members of the Federal Circuit adhere to a "coarse filter" approach, characterizing § 101 as an initial filter meant to disqualify only the most bare abstract ideas that are not tied to any useful application. Section II.A describes the evolution of the strongest statement of this approach: the "manifest" abstraction standard adopted in *CLS Bank*. On the other side of the divide are judges who favor a "limiting test" approach, seeking to replace the machine-or-transformation test with a new formulation that would invalidate a significant number of overbroad patents under § 101 and the abstract idea exception. Section II.B analyzes the holdings that adhere to the latter approach, and demonstrates that a workable formulation of such a test remains elusive. Section II.C traces the changes in judges' views over time, and notes the judges who have not yet adopted a position, remaining as significant arbiters in the balance of the court. Section III.B further describes doctrinal challenges facing both sides of this debate in reconciling the existing lines of Federal Circuit jurisprudence with the *Prometheus* ruling.

A. THE COARSE FILTER APPROACH

Judges Plager, Rader, and Newman are the chief proponents of the view that § 101 should rarely act as a bar to patent eligibility. Under the "coarse filter" approach, only a facial showing that the invention is a process, machine, manufacture, or composition of matter is sufficient for patent eligibility, with further limits provided by the novelty, non-obviousness, and written description requirements of § 102, § 103, and § 112.[39] Judges Plager, Rader, and Newman were the joint architects of the manifest abstraction test in *Research Corp.*, which provides the strongest statement of their position.[40] Judge O'Malley, who joined the Federal Circuit in 2010, adopted the coarse filter approach in two patent eligibility decisions.[41]

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39. *See Research Corp.*, 627 F.3d at 869 ("[A] patent that presents a process sufficient to pass the coarse eligibility filter may nonetheless be invalid as indefinite because the invention would not provide sufficient particularity and clarity to inform skilled artisans of the bounds of the claim." (internal quotations omitted)).

40. *Id.* ("[T]his court also will not presume to define 'abstract' beyond the recognition that this disqualifying characteristic should exhibit itself so manifestly as to override the broad statutory categories of eligible subject matter and the statutory context that directs primary attention on the patentability criteria of the rest of the Patent Act.").

41. *See* CLS Bank Int'l v. Alice Corp. Pty. Ltd., 685 F.3d 1341, 1356 (Fed. Cir. 2012) *reh'g en banc granted, opinion vacated*, 484 F. App'x 559 (Fed. Cir. 2012); Ultramercial, L.L.C. v. Hulu, L.L.C., 657 F.3d 1323, 1325 (Fed. Cir. 2011) *cert. granted, judgment vacated sub nom.* WildTangent, Inc. v. Ultramercial, L.L.C., 132 S. Ct. 2431 (2012) (remanded for further

Judge Plager advanced the most pragmatic argument for the coarse filter approach recently in *MySpace v. GraphOn*, holding that "[n]o universal truths need be found that are necessarily applicable to the scope of patents generally, and in deciding the case the corpus of jurisprudence need not be expanded, contracted, redefined, or worse, become the source of yet more abstractions."[42] Judge Plager's majority opinion, joined by Judge Newman, reasoned that resolving questions on more specific statutory provisions rather than broad provisions is a prudent and long-established principle.[43] The "coarse filter" approach raises the question of what would constitute a sufficiently manifest showing of abstraction to overcome the broad eligibility provided by the statute. Judge Plager envisions a very high bar: "if it is clear and convincing beyond peradventure—that is, under virtually any meaning of 'abstract'—that the claim at issue is well over the line, then a case could be made for initially addressing the § 101 issue in the infringement context."[44]

In *Research Corp.*, Judge Rader articulated the basis for treating software patents as presumptively patent-eligible: a computer application is inherently an application of an idea designed to achieve some commercially valuable end.[45] One can trace Judge Rader's views back as far as his 1992 concurrence

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consideration in light of Mayo Collaborative Servs. v. Prometheus Labs., Inc., 132 S. Ct. 1289 (2012)).

42. *See* MySpace, Inc. v. GraphOn Corp., 672 F.3d 1250, 1260 (Fed. Cir. 2012).

43. *Id.* at 1259. The court in *MySpace* stated:

> [The validity criteria in] each of sections 102, 103, and 112 . . . [is] well developed and generally well understood. In most cases when properly applied they will address the specifics of the case and decide that particular case, nothing more. . . . The Supreme Court has wisely adopted a policy of not deciding cases on broad constitutional grounds when they can be decided on narrower, typically statutorily limited, grounds. Following the Supreme Court's lead, courts should avoid reaching for interpretations of broad provisions, such as § 101, when more specific statutes, such as §§ 102, 103, and 112, can decide the case.

Id. at 1259 (footnotes omitted). Similarly, in another case, Judge Plager, dissenting-in-part, urged the majority to "not foray into the jurisprudential morass of § 101 unless absolutely necessary," and reiterated the *Research Corp.* holding. *See* Dealertrack, Inc. v. Huber, 674 F.3d 1315, 1334 (Fed. Cir. 2012) (Plager, J., concurring-in-part and dissenting-in-part); *Research Corp.*, 627 F.3d at 869.

44. *MySpace*, 672 F.3d at 1261.

45. *See Research Corp.*, 627 F.3d at 869 ("[I]nventions with specific applications or improvements to technologies in the marketplace are not likely to be [deemed abstract and unpatentable]."); *see also* Robert R. Sachs, *Punishing Prometheus: Part II – What Is A Claim?*, PATENTLY-O, (Mar. 27, 2012), http://www.patentlyo.com/patent/2012/03/punishing-prometheus-part-ii-what-is-a-claim.html. (arguing that infringement claims are directed to commercially viable products in the marketplace: "[w]e draft claims that read on actual infringers in the real world. . . . No one makes, sells, or uses an abstract idea.").

in *Arrhythmia Research Technology*, where he declined to "perpetuate a non-statutory standard" advanced by the Supreme Court, describing exceptions to patentable subject matter as "vague and malleable terms infected with too much ambiguity and equivocation."[46] In Judge Rader's view, claims drawn to a " 'process' within the broad meaning of section 101," are sufficient, rendering the invention eligible for patent protection if it satisfies the other statutory requirements.[47] Judge Newman, joined by Judge Rader, emphasized the role of § 112 and the additional requirement of definiteness in limiting overbroad patent language: "if reasonable efforts at claim construction result in a definition that does not provide sufficient particularity and clarity to inform skilled artisans of the bounds of the claim, the claim is insolubly ambiguous and invalid for indefiniteness."[48] Thus, under the coarse filter approach, even if the invention falls under one of the statutory categories of § 101, excessively abstract claim language would be addressed as a § 112 issue.[49]

Judge Newman and Judge Rader vigorously dissented from the adoption of the machine-or-transformation test in *In re Bilski*. Judge Newman found it "a new and far-reaching restriction on the kinds of inventions that are eligible to participate in the patent system."[50] Judge Newman's reasoning clearly

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46. Arrhythmia Research Tech., Inc. v. Corazonix Corp., 958 F.2d 1053, 1061, 1063 (Fed. Cir. 1992).

47. *Id.* at 1066. The history of patentability of processes is discussed in detail in Section III.A.1, *infra*.

48. Classen Immunotherapies, Inc. v. Biogen IDEC, 659 F.3d 1057, 1066 (Fed. Cir. 2011) (quoting Star Scientific, Inc., v. R.J. Reynolds Tobacco Co., 537 F.3d 1357, 1371 (Fed. Cir. 2008)).

49. *Id.* (inventions that are "so conceptual that the written description does not enable a person of ordinary skill in the art to replicate the process . . . is a matter of patentability under § 112, not eligibility under § 101." (quoting *Research Corp.*, 627 F.3d at 869)).

50. *In re* Bilski, 545 F.3d 943, 976–77 (Fed. Cir. 2008) *aff'd but criticized sub nom.* Bilski v. Kappos, 130 S. Ct. 3218 (U.S. 2010) (Newman, J., dissenting). A representative claim, rejected as an abstract idea by both the Federal Circuit and the Supreme Court, recited:

> A method for managing the consumption risk costs of a commodity sold by a commodity provider at a fixed price comprising the steps of:
>
> (a) initiating a series of transactions between said commodity provider and consumers of said commodity wherein said consumers purchase said commodity at a fixed rate based upon historical averages, said fixed rate corresponding to a risk position of said consumer;
>
> (b) identifying market participants for said commodity having a counter-risk position to said consumers; and
>
> (c) initiating a series of transactions between said commodity provider and said market participants at a second fixed rate such that said series of market participant transactions balances the risk position of said series of consumer transactions.

rested on policy reasons: because today's innovation is increasingly occurring in the digital realm, the law must consistently protect the interests of inventors.[51] Judge Rader couched his views in policy arguments about national economic competitiveness.[52] Rejecting the "legal sophistry" of the machine-or-transformation test, Judge Rader proposed a standard for abstractness that would translate directly into examination procedure: "[s]uch an abstract claim would appear in a form that is not even susceptible to examination against prior art under the traditional tests for patentability."[53] This statement presaged the importance of comparison to prior art as a tool in policing overreaching software and business patents, which has re-emerged as a strategy under the recent patent reform, described in Section III.C.3, *infra*. Thus, the adherents of the coarse filter view envision a world of innovation no longer tied to physical machines, but protected on the merits of novelty, nonobviousness, and adequate description.

B. THE LIMITING TEST APPROACH

The other camp in the Federal Circuit continues to attempt to formulate a rule that would eliminate some algorithms and software patents under the abstract idea exception as part of a § 101 inquiry.[54] This camp includes the judges who had voted with the majority to adopt the machine-or-transformation test in *In re Bilski* and have consistently upheld attempts to

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Id. at 949.

51. *See id.* at 976–77 (Newman, J., dissenting). Judge Newman reasoned:

> The innovations of the 'knowledge economy'—of 'digital prosperity'—have been dominant contributors to today's economic growth and societal change. Revision of the commercial structure affecting major aspects of today's industry should be approached with care, for there has been significant reliance on the law as it has existed. . . . Uncertainty is the enemy of innovation. These new uncertainties not only diminish the incentives available to new enterprise, but disrupt the settled expectations of those who relied on the law as it existed.

Id.

52. *Id.* at 1076 (Rader, J., dissenting). Judge Rader focused on the effectiveness of U.S. policy:

> Unlike the laws of other nations that include broad exclusions to eligible subject matter, such as European restrictions on software and other method patents . . . U.S. law and policy have embraced advances without regard to their subject matter. That promise of protection, in turn, fuels the research that, at least for now, makes this nation the world's innovation leader.

Id. (citations omitted).

53. *Id.* at 1012–13 (Rader, J., dissenting).

54. The evolution of the Supreme Court's abstract idea doctrine is discussed in Section III.A.1, *infra*.

find new formulations for a suitable replacement test: particularly Judges Dyk, Prost, Moore, Schall, and Bryson.

Judge Mayer wrote a separate dissent in *In re Bilski*, arguing in favor of a broad business method exception from patent protection, and distinguishing business method patents from the constitutionally protected "useful arts" because they are entrepreneurial rather than technological.[55] In his dissent, Judge Mayer argued that business methods do not require intensive research and development and need not be incentivized by grants of limited monopoly because they are already directed at profit-making activities.[56] Business method patents would only remove "building blocks of commercial innovation from the public domain," leaving American companies at a disadvantage in comparison to their European and Asian counterparts who need not incur licensing fees.[57] Judge Mayer further noted the possible shortage of prior art in evaluating business method patent applications and the deluge of new applications, many of them reciting routine methods of daily life.[58] Judge Mayer also wrote a dissenting opinion in *MySpace*, disagreeing with the coarse filter approach to § 101, and arguing that § 101 is an "antecedent question" that must be fully resolved before proceeding to the other requirements of the title.[59]

Judge Prost authored the dissent in *CLS Bank* and voted with the majority in *Bancorp*, as discussed in Part I, *supra*, adopting a new test that "a computer must be integral to the claimed invention, facilitating the process in a way that a person making calculations or computations could not."[60] Judge

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55. *In re* Bilski, 545 F.3d 943, 1002 (Fed. Cir. 2008) (Mayer, J., dissenting).

56. *See id.* at 1003–04.

57. *Id.* at 1006–07.

58. *Id.* at 1002. Judge Mayer wrote:

> Patents granted in the wake of *State Street* have ranged from the somewhat ridiculous to the truly absurd. *See, e.g.*, U.S. Patent No. 5,851,117 (method of training janitors to dust and vacuum using video displays); U.S. Patent No. 5,862,223 (method for selling expert advice); U.S. Patent No. 6,014,643 (method for trading securities); U.S. Patent No. 6,119,099 (method of enticing customers to order additional food at a fast food restaurant); U.S. Patent No. 6,329,919 (system for toilet reservations); U.S. Patent No. 7,255,277 (method of using color-coded bracelets to designate dating status in order to limit "the embarrassment of rejection").

Id.

59. MySpace, Inc. v. GraphOn Corp., 672 F.3d 1250, 1264, 1268 (Fed. Cir. 2012) (Mayer, J., dissenting).

60. Part I, *supra*; CLS Bank Int'l v. Alice Corp. Pty. Ltd., 685 F.3d 1341, 1356–61 (Fed. Cir. 2012) *reh'g en banc granted, opinion vacated*, 484 F. App'x 559 (Fed. Cir. 2012) (Prost, J., dissenting); Bancorp Servs., L.L.C. v. Sun Life Assur. Co. of Canada (U.S.), 687 F.3d 1266, 1278 (Fed. Cir. 2012).

Prost was also the author of the majority opinion in *Fort Properties v. American Master Lease*, joined by Judges Schall and Moore.[61] In *Fort Properties*, the invention was a device of "deedshares" in a real estate portfolio that are sold in manner similar to stocks and allow the investor to take advantage of a favorable tax provision.[62] The court found Claims 1–31 to be ineligible for patenting because they did not recite the use of a computer, and the use of "deeds, contracts, and real property" was held to be an insufficient tie to the physical world to confer patentability to the claims.[63] In contrast, Claims 32–41 did recite the use of the computer, and the court proceeded in accordance with the line of cases that analyze whether the computer limitations "play a significant part in permitting the claimed method to be performed," concluding that the limitations were not significant because the claims "only require the computer to generate a plurality of deedshares."[64]

In *CyberSource v. Retail Decisions*, Judge Dyk, joined by Judges Prost and Bryson, authored the first opinion in a line of cases evaluating whether computer limitations "play a significant part" in the invention.[65] The invention in this case recited a method for detecting fraud in credit card transactions by creating a map of Internet Protocol (IP) addresses and associated credit card numbers.[66] The court held the claims to be patent

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61. Fort Props., Inc. v. Am. Master Lease L.L.C., 671 F.3d 1317, 1318 (Fed. Cir. 2012).
62. *Fort Props., Inc.*, 671 F.3d at 1318–19. A representative claim disclosed:

> A method of creating a real estate investment instrument adapted for performing tax-deferred exchanges comprising:
>
> > aggregating real property to form a real estate portfolio;
> >
> > encumbering the property in the real estate portfolio with a master agreement; and
> >
> > creating a plurality of deedshares by dividing title in the real estate portfolio into a plurality of tenant-in-common deeds of at least one predetermined denomination, each of the plurality of deedshares subject to a provision in the master agreement for reaggregating the plurality of tenant-in-common deeds after a specified interval.

Id. at 1319.

63. *Id.* at 1322–23.
64. *Id.* (internal quotations omitted).
65. CyberSource Corp. v. Retail Decisions, Inc., 654 F.3d 1366, 1375 (Fed. Cir. 2011).
66. A representative claim, as amended during reexamination, recited:

> A method for verifying the validity of a credit card transaction over the Internet comprising the steps of:
>
> > a) obtaining information about other transactions that have utilized an Internet address that is identified with the [ ] credit card transaction;
> >
> > b) constructing a map of credit card numbers based upon the other transactions and;

ineligible because they can be performed as a "mental process."[67] The court cited precedent in support of the "mental process" doctrine, concluding that that the claimed method "can be performed in the human mind, or by a human using a pen and paper," noting that while the patent's specification discussed "a database of Internet addresses," CyberSource conceded that the claim did not cover the initial creation of the database.[68] Thus, the court concluded there were no limitations that require a computer to "play a significant part" in the invention.[69]

Conversely, in *SiRF Technology*, Judge Dyk, joined by Judge Clevenger and former Chief Judge Michel, applied the same test to a method of estimating and processing GPS data, coming to the opposite conclusion.[70] The court found that a GPS receiver is a machine that is integral to each of the claims at issue and places a meaningful limit on the scope of the claims.[71] Yet, if GPS data can be presumed to be tied to a physical device that generates the data, a map of IP addresses and associated credit card number implicitly requires a physical device that performs online transactions. Similarly, the line drawn by *CyberSource* and *SiRF Technology*, which re-emerged in *CLS Bank* and *Bancorp*—distinguishing calculations that require a computer from those that can be performed in the human mind—traverses a gray area and is not

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> c) utilizing the map of credit card numbers to determine if the credit card transaction is valid.

Id. at 1368, n.1.

67. *Id.* at 1372–75.

68. *Id.* at 1372 ("[W]e have consistently 'refused to find processes patentable when they merely claimed a mental process standing alone and untied to another category of statutory subject matter[,] even when a practical application was claimed.' " (alteration in original) (citing In re Comiskey, 554 F.3d 967, 980 (Fed. Cir. 2009))).

69. *Id.* at 1375.

70. SiRF Tech., Inc. v. Int'l Trade Comm'n, 601 F.3d 1319, 1322, 1333 (Fed. Cir. 2010). The relevant claim recited:

> A method for calculating an absolute position of a GPS receiver and an absolute time of reception of satellite signals comprising:
>
> providing pseudoranges that estimate the range of the GPS receiver to a plurality of GPS satellites;
>
> providing an estimate of an absolute time of reception of a plurality of satellite signals;
>
> providing an estimate of a position of the GPS receiver; providing satellite ephemeris data;
>
> computing absolute position and absolute time using said pseudoranges by updating said estimate of an absolute time and the estimate of position of the GPS receiver.

Id. at 1331.

71. *Id.* at 1332. The court elaborated further that "there is no evidence here that the calculations here can be performed entirely in the human mind." *Id.* at 1333.

entirely convincing.[72] Both *CyberSource* and *SiRF Technology* inventions make use of locational data and provide a useful aggregate analysis of the information. The extension of this line of reasoning in *CLS Bank* and *Bancorp* leads to the same paradoxical result: while the calculations are theoretically possible to do with a pen and paper, no human mind can update and maintain such vast financial data structures in real time without the aid of a physical machine. Thus, a formulation of a patent eligibility test that can consistently link new computer-implemented methods to specific technology remains elusive.

C. CHANGING POSITIONS IN THE FEDERAL CIRCUIT

In prior eras, the Federal Circuit has made several attempts to formulate a test now sought in the *CLS Bank* rehearing. The Freeman-Walter-Abele test, derived from three cases decided between 1978 and 1982, comprised two steps: first, the court determined whether the claim at issue recited an "algorithm"; second, if the claim did recite an algorithm, the court determined whether that algorithm is "applied in any manner to physical elements or process steps."[73] In 1994, Judge Plager applied the Freeman-Walter-Abele test in *In re Schrader*, finding a method pertaining to an auction strategy to be ineligible subject matter.[74] Judge Newman dissented even then, contending that the matter should be remanded on § 102 and § 103 grounds.[75] The Freeman-Walter-Abele test was rejected by a majority in *AT&T v. Excel Communications*, which noted that *State Street Bank & Trust Co. v. Signature Financial Group* had questioned its continuing vitality, and concluded that "this type of physical limitations analysis seems of little value."[76]

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72. *See* note 38, *supra*, and accompanying text. This problem stems from what is called the Church-Turing thesis in computer science: that any algorithm written in language (and thus understandable to a human mind) can be written in a pure mathematical expression and vice versa, thus there is no boundary but only a spectrum of complexity. *See* Ben Klemens, *The Rise of the Information Processing Patent*, 14 B.U. J. SCI. & TECH. L. 1, 10 (2008).

73. *In re* Bilski, 545 F.3d 943, 958–59 (Fed. Cir. 2008) (citing *In re* Freeman, 573 F.2d 1237, 1245 (C.C.P.A. 1978); *In re* Walter, 618 F.2d 758, 767 (C.C.P.A. 1980); *In re* Abele, 684 F.2d 902, 907 (C.C.P.A. 1982)).

74. *In re* Schrader, 22 F.3d 290, 292, 294 (Fed. Cir. 1994).

75. *Id.* at 297 (Newman, J., dissenting).

76. AT&T Corp. v. Excel Commc'ns, Inc., 172 F.3d 1352, 1359 (Fed. Cir. 1999), *abrogated by In re* Bilski, 545 F.3d 943 (Fed. Cir. 2008). *See also* State St. Bank & Trust Co. v. Signature Fin. Group, Inc., 149 F.3d 1368, 1373–74 (Fed. Cir. 1998), *abrogated by* In re Bilski, 545 F.3d 943, 959 (Fed. Cir. 2008). The claims at issue in *State Street* involved a data processing system for a "hub and spoke" financial portfolio management platform, and were found to be patent-eligible subject matter. *Id.* at 1370.

In the mid-1990s, *In re Alappat* articulated the "useful, concrete, and tangible result" test, attempting to describe the very opposite of an abstract idea by drawing on the "new and useful" language of § 101.[77] *In re Allapat* effectively paved the way for software patents, and Judges Plager, Rader, and Newman each wrote a separate concurrence affirming the patentability of the practical application of a mathematical algorithm, favoring a broad interpretation of § 101, but did not challenge the "useful, concrete, and tangible" test adopted by the majority.[78] This test was in turn rejected by *In re Bilski*. The Court also rejected a proposed "technological arts" test as "inadequate" because "the meanings of the terms 'technological arts' and 'technology' are both ambiguous and ever-changing."[79] While the "technological arts" limitation on patentability has been praised by some commentators as an effective solution adopted by the European Patent Office, others have found it raises similar boundary definition problems.[80] *In re Alappat* raised another thorny issue that has resurfaced in the second question posed in the *CLS Bank* rehearing: the equivalence of software and a special purpose machine hardwired to carry out the same action.[81] This recognition gave rise to the practice of claiming a computer-implemented method as an apparatus.[82] A contemporaneous case recognized computer programs "embodied in a tangible medium," such as a disk, to be patentable subject matter, giving rise to media-based claim drafting.[83] These equivalences highlighted the shortcomings of a physicality requirement for

77. *In re* Alappat, 33 F.3d 1526, 1544, 1552 (Fed. Cir. 1994) (upholding patent eligibility of a "rasterizer" for pixel displays).

78. *Id.* at 1568–85.

79. *In re* Bilski, 545 F.3d 943, 959–60 (Fed. Cir. 2008) *aff'd but criticized sub nom.* Bilski v. Kappos, 130 S. Ct. 3218 (U.S. 2010).

80. Susan J. Marsnik & Robert E. Thomas, *Drawing A Line in the Patent Subject-Matter Sands: Does Europe Provide A Solution to the Software and Business Method Patent Problem?*, 34 B.C. INT'L & COMP. L. REV. 227, 230, 320 (2011) ("Instead of serving as a panacea for U.S. patent examiners and courts, the European technical requirement fails to provide a meaningful constraint for software patents and many business method patents on either side of the Atlantic.").

81. *In re* Alappat, 33 F.3d 1526, 1545 (Fed. Cir. 1994) ("[S]uch programming creates a new machine, because a general purpose computer in effect becomes a special purpose computer once it is programmed to perform particular functions pursuant to instructions from program software").

82. *Id.* This equivalence was originally addressed in *In re* Bernhart, 417 F.2d 1395, 1395 (C.C.P.A. 1969).

83. *See In re* Beauregard, 53 F.3d 1583, 1584 (Fed. Cir. 1995) (giving rise to the "Beauregard" claim form).

software inventions, and the ease with which claiming strategies could circumvent artificially constructed categories.[84]

By 1998, a shift away from attempting to limit § 101 began to take shape in *State Street*, unanimously decided by Judges Plager and Bryson and former Judge Rich.[85] In rejecting a categorical exception from patentable subject matter for business methods, the court found that concerns about breadth are best addressed by the subsequent statutory requirements.[86] Analogous reasoning was adopted shortly after by Judges Plager, Clevenger, and Rader in *AT&T*, finding claims pertaining to a system for automatic call routing fell "comfortably within the broad scope of patentable subject matter under § 101."[87] Both holdings were abrogated by the machine-or-transformation test of *In re Bilski*, but these analyses provide a clear record of the evolution from a rule-based approach towards a coarse filter approach favoring eligibility among some of the longest-serving judges.[88] Interestingly, Judge Bryson appears to have moved towards limiting patent eligibility in *CyberSource* from the majority position of *State Street*.[89]

Judge Linn voted with Judge O'Malley in *CLS Bank*, adopting the manifest abstractness approach.[90] While Judge Linn had voted with the majority in favor of the machine-or transformation test in *In re Bilski*, a year before that, Judge Linn dissented in part in *In re Nuijten* from a holding that certain encoded signals were not patent-eligible subject matter because they did not fall into any of the four statutory categories.[91] Judge Linn found the invention to be a manufacture, and wrote that it should be analyzed under

84. *See* Classen Immunotherapies, Inc. v. Biogen IDEC, 659 F.3d 1057, 1074 (Fed. Cir. 2011) ("When careful claim drafting or new claim formats avoid eligibility restrictions, the doctrine becomes very hollow.").

85. *See* State St. Bank & Trust Co. v. Signature Fin. Group, Inc., 149 F.3d 1368, 1370, 1375 (Fed. Cir. 1998), *abrogated by In re* Bilski, 545 F.3d 943, 959 (Fed. Cir. 2008). The claims at issue in *State Street* involved a data processing system for a "hub and spoke" financial portfolio management platform, and were found to be patent-eligible subject matter. *Id.* at 1370.

86. *Id.* at 1375, 1377 (noting that "whether the patent's claims are too broad to be patentable is not to be judged under § 101, but rather under §§ 102, 103 and 112").

87. AT&T Corp. v. Excel Commc'ns, Inc., 172 F.3d 1352, 1356 (Fed. Cir. 1999), *abrogated by In re* Bilski, 545 F.3d 943 (Fed. Cir. 2008) (noting that because processes are a category of patentable subject matter, "the judicially-defined proscription against patenting of a 'mathematical algorithm,' to the extent such a proscription still exists, is narrowly limited to mathematical algorithms in the abstract").

88. *See In re* Bilski, 545 F.3d 943, 976–98 (Fed. Cir. 2008) (Newman, J., dissenting); *Id.* at 1011–15 (Rader, J., dissenting).

89. *See* note 66, *supra*, and accompanying text.

90. *See* notes 15–22, *supra*, and accompanying text.

91. *In re* Nuijten, 500 F.3d 1346 (Fed. Cir. 2007).

"§ 101's textual requirements that statutory subject matter be 'new' and 'useful.' "[92] Thus, it appears that Judge Linn may favor a broader statutory interpretation of patent eligibility.[93]

Judge Lourie joined Judges Rader and O'Malley in *Ultramercial*, applying a coarse filter approach to claims disclosing a method of distributing media content over the Internet in exchange for the users' views of advertising, and referring to *Bilski* for the proposition that patentable subject matter may include business methods.[94] However, Judge Lourie also voted in favor of the machine-or-transformation test in *In re Bilski*, and in favor of the *Bancorp* rule that a "computer must be integral to the claimed invention, facilitating the process in a way that a person making calculations or computations could not."[95] Thus, Judge Lourie may take a fact-specific approach to cases rather than advancing a broad philosophy.

Finally, Judges Wallach and Reyna joined the Federal Circuit in 2011 and have not yet authored an opinion on the issue.[96] Judge Wallach voted with the majority in *Bancorp*; however, time will tell if that will be a long-standing position.[97] The new members of the Federal Circuit will likely play a significant role in the final outcome of this debate.

III. A LIFE IN THE MAELSTROM FOR COMPUTER-IMPLEMENTED INVENTIONS

Software patents have had the unique distinction of occupying a remarkably indeterminate place in the law for the entire lifespan of computer technology. Despite this uncertainty, the number of computer-implemented invention patents has grown tremendously in the last two decades, in step with the boom in information technology, bringing these patents into the center stage of intellectual property litigation.[98] Notwithstanding calls from

92. *Id.* at 1358–69 (Linn, J., dissenting).

93. *See id.*

94. Ultramercial, LLC v. Hulu, LLC, 657 F.3d 1323, 1325–26 (Fed. Cir. 2011*), cert. granted, judgment vacated sub nom.* WildTangent, Inc. v. Ultramercial, LLC, 132 S. Ct. 2431 (U.S. 2012).

95. *See In re* Bilski, 545 F.3d 943 (Fed. Cir. 2008); Bancorp Servs., L.L.C. v. Sun Life Assurance Co. of Canada (U.S.), 687 F.3d 1266, 1278 (Fed. Cir. 2012).

96. *See Judges*, U.S. COURT OF APPEALS FOR THE FEDERAL CIRCUIT, http://www.cafc.uscourts.gov/judges (last visited Apr. 8, 2013).

97. *See Bancorp Servs.*, 687 F.3d at 1266.

98. *See, e.g.*, Colleen V. Chien, *From Arms Race to Marketplace: The New Complex Patent Ecosystem and Its Implications for the Patent System*, 62 HASTINGS L.J. 297, 304–06 (2010). *See also 2012 Patent Litigation Study*, PricewaterhouseCoopers, LLP (Sept. 2012), *available at* http://www.pwc.com/us/en/forensic-services/publications/2012-patent-litigation-

the industry, the patent bar, and the bench, a comprehensive approach to patent protection for computer programs has not materialized.[99] The acceptance of software patents was driven by advances in industrial processes, but as computational technology gained increasing use in automating business methods and developing new financial tools, a host of new doctrinal and policy questions emerged before the courts. The Federal Circuit has had to chart a winding trajectory in following a similarly divided Supreme Court, and the *Prometheus* opinion posed two fundamental issues in § 101 analysis presented in the following Section. The Federal Circuit could significantly advance the inquiry by clarifying its stance on those issues in the current *CLS Bank* rehearing. This Section concludes with the implications of this uncertain history for administrative agencies and the steps taken by the Leahy-Smith America Invents Act ("AIA") of 2011 that will shape software patents in years to come.

A. METHODS, MACHINES AND PATENTABLE SUBJECT MATTER: THE PULL BETWEEN COURTS AND THE EXAMINATION PROCESS

Software patents owe their existence to the predecessor of the Federal Circuit, the Court of Customs and Patent Appeals ("CCPA"), which gradually dismantled the prohibition on computer program patents in place under the 1968 Patent Office Guidelines and the CCPA's prior doctrine.[100] The 1968 Guidelines rejected patent protection for software for largely administrative reasons, including lack of a prior art database and examination procedure; yet, the CCPA could find no logical boundary between advances in technology and increasing incorporation of computer-controlled elements in industry.[101] As technology became increasingly information-focused, implementing business strategies and financial transactions rather than industrial applications, the line for patentability became even more difficult to draw. This section describes the formidable challenge the Federal Circuit has faced in reconciling its uneven pre-existing body of precedent with ambiguous guidance from the Supreme Court to address rapidly changing technology.

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study.jhtml (indicating that the "Software" category in patent litigation has moved up from Rank 10 in 1995–2000 to Rank 6 by 2006–2011).

99. *See* Solutions to the Software Patent Problem Conference Resources, Santa Clara Law High Tech. Institute (Nov. 16, 2012), http://law.scu.edu/hightech/2012-patent-conference-resources.cfm.

100. *See* Diamond v. Diehr, 450 U.S. 175, 198–205 (1981) (Stevens, J., dissenting) (providing a detailed review of CCPA case law).

101. *See id.*

1. *"Abstract Idea" and "Mental Process" Exceptions to Patentable Subject Matter: A Winding Road in Supreme Court's Jurisprudence*

Despite the inclusion of "process" among the categories of patentable subject matter in § 101 of the 1952 Patent Act, the patentability of processes and methods has been uncertain in a system designed primarily for mechanical inventions.[102] The 1852 case of *Le Roy v. Tatham* is often cited as the origin of the abstract idea doctrine, where the Supreme Court rejected the patentability of a new method for forming lead pipe with known machinery, because a "principle, in the abstract, is a fundamental truth; an original cause; a motive; these cannot be patented, as no one can claim in either of them an exclusive right."[103] Soon after, however, the Court began recognizing methods and processes as patentable subject matter, albeit in an evolving relationship to manufacturing.[104]

In *Gottschalk v. Benson*, the first significant case dealing with a computer-implemented invention, the Supreme Court held a method for converting binary-coded decimal numerals into pure binary numerals to be unpatentable because "the patent would wholly preempt the mathematical formula and in practical effect would be a patent on the algorithm itself."[105] Thus, the Court reasoned that without limitations on the field of use or specification of machinery, the claim raised a concern of preemption of future uses of the algorithm, both in different fields and in new forms of technical implementation.

Several years later, the Supreme Court formulated an entirely new approach in *Parker v. Flook*, holding that limitations on the field of use in the

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102. *See* Bilski v. Kappos, 130 S. Ct. 3218, 3239–49 (2010) (Stevens, J., concurring) (reviewing patentability of methods in English and Early American law).

103. *Le Roy v. Tatham*, 55 U.S. 156, 175 (1852). *See also* note 14, *supra*; Diamond v. Diehr, 450 U.S. 175, 185 (1981).

104. *See* R. Carl Moy, *Subjecting Rembrandt to the Rule of Law: Rule-Based Solutions for Determining the Patentability of Business Methods*, 28 WM. MITCHELL L. REV. 1047, 1080–81 (2002) (citing Corning v. Burden, 56 U.S. 252 (1853), Burr v. Duryee, 68 U.S. 531, 570 (1863)). Eventually, a process came to be seen as "a mode of treatment of certain materials to produce a given result. [A process] is an act, or a series of acts, performed upon the subject-matter to be transformed and reduced to a different state or thing." Cochrane v. Deener, 94 U.S. 780, 788 (1876).

105. Gottschalk v. Benson, 409 U.S. 63, 68, 72 (1972). The Court found that

> the 'process' claim is so abstract and sweeping as to cover both known and unknown uses of the . . . conversion. The end use may (1) vary from the operation of a train to verification of drivers' licenses to researching the law books for precedents and (2) be performed through any existing machinery or future-devised machinery or without any apparatus.

Id.

form of "post-solution activity" do not confer patentability.[106] Rather, "an inventive application of the principle" or "some other inventive concept" besides the application of a mathematical formula is required.[107] While quoting *Benson*, the Court made an unprecedented determination that a new mathematical algorithm may not be the sole inventive concept because even a new algorithm must be treated as prior art.[108] And once the algorithm was assumed to be within the prior art, the application as a whole contained no patentable invention.[109] The majority rejected the argument that this approach imports § 102 and § 103 inquiries into the § 101 determination because the "obligation to determine what type of discovery is sought to be patented must precede the determination of whether that discovery is, in fact, new or obvious."[110] The dissenters, Justices Stewart and Rehnquist, adopted the opposing view: that this approach did indeed tread on the territory of § 102 and § 103, and that precedent dictated that the process in question should be patentable.[111]

Justice Rehnquist's view in *Flook* became the majority opinion just three years later in *Diamond v. Diehr*, which held that § 101 "is a general statement of the type of subject matter that is eligible for patent protection 'subject to the conditions and requirements of this title' . . . and § 102 covers in detail the conditions relating to novelty."[112] The majority held that the use of a formula in conjunction with the other steps of a rubber molding process, which utilized a digital computer to continuously calculate optimal temperature in accordance with a known equation, to be patentable subject matter, subject to further examination for novelty under § 102 and nonobviousness under § 103.[113] The majority distinguished *Flook* by finding that the method in *Diehr* was not an "insignificant post-solution activity," but a "process which, when considered as a whole, is performing a function

106. Parker v. Flook, 437 U.S. 584, 590, 594, 596 (1978) (finding claims for a "method for updating the value of at least one alarm limit on at least one process variable involved in a process comprising the catalytic chemical conversion of hydrocarbons" to be drawn to unpatentable subject matter).

107. *Id.* at 593–94.

108. *Id.* at 591–92 ("[T]he novelty of the mathematical algorithm is not a determining factor at all. Whether the algorithm was in fact known or unknown at the time of the invention, as one of the 'basic tools of scientific and technological work,' it is treated as though it were a familiar part of the prior art." (internal citation omitted) (quoting Gottschalk v. Benson, 409 U.S. 63, 67 (1972))). *See also*, note 149, *infra*, and accompanying text, describing the analytical problem with this approach.

109. *Id.* at 594–95.

110. *Id.* at 593.

111. *Id.* at 600 (Stewart, J., dissenting).

112. Diamond v. Diehr, 450 U.S. 175, 189 (1981).

113. *Id.* at 187, 191, 208.

which the patent laws were designed to protect."[114] Justice Stevens, the *Flook* majority author, was in the minority in *Diehr*, and authored the 5–4 dissent, reiterating the significance of the "inventive concept" inquiry, under which the claimed process would not have qualified for patent protection.[115]

After nearly a thirty-year gap, the Supreme Court returned to the abstract idea doctrine in *Bilski*.[116] The Court found Bilski's claims limiting hedging strategies to energy markets added even less to the underlying idea than the post-solution activity in *Flook*.[117] Without invoking the "inventive concept" inquiry directly, the Court held all claims at issue invalid because "[h]edging is a fundamental economic practice long prevalent in our system of commerce and taught in any introductory finance class."[118] Justice Stevens, concurred in the outcome but disagreed with the reasoning, pointing out that this basis for invalidity addresses the lack of novelty rather than the abstract idea doctrine.[119] Instead, Justice Stevens, joined by three other members of the Court, urged that a "process" within the meaning of § 101 should not include business methods.[120] The plurality, however, did not limit the definition of process, but adopted a broad view of patentable subject matter, to be refined by the succeeding statutory requirements.[121] This holding resonates with a coarse filter approach to § 101 in the Federal Circuit, however, the tenuous plurality achieved in *Bilski* suggested that the Court's position may shift in future rulings. The following two sections analyze the tensions behind this outcome and the swing towards narrowing patent eligibility in the *Prometheus* ruling of 2012.

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114. *Id.* at 190.

115. *Id.* at 192.

116. Bilski v. Kappos, 130 S. Ct. 3218, 3221–23 (2010).

117. *Id.* at 3231.

118. *Id.*

119. *Id.* at 3236 (Stevens, J., concurring) ("[The reasoning] cannot justify the Court's conclusion, as the proper construction of § 101 . . . does not involve the familiar issu[e] of novelty that arises under § 102.") (internal quotations omitted).

120. *Id.* at 3239.

121. The Court held that

> The § 101 patent-eligibility inquiry is *only a threshold test*. Even if an invention qualifies as a process, machine, manufacture, or composition of matter, in order to receive the Patent Act's protection the claimed invention must also satisfy "the conditions and requirements of this title." § 101. Those requirements include that the invention be novel, see § 102, nonobvious, see § 103, and fully and particularly described, see § 112.

Id. at 3225 (emphasis added).

2. *Convergence of Business Methods and Technological Innovation at the USPTO*

For a significant period in the history of patent law, methods of doing business were considered to be unpatentable,[122] although there is some evidence of early patents of financial methods[123] and automation of tabulations.[124] Until the mid-1900s, courts adhered to a general exclusion of business methods from patentable subject matter.[125] The tide changed with Judge Newman's dissent in *In re Schrader*, which questioned the logic of distinguishing between business and industrial uses of computation technology.[126] The USPTO abandoned the business method exception and adopted the *In re Schrader* dissent view in the 1996 Examination Guidelines for Computer-Related Inventions, which stated that such claims "should be treated like any other process claims, pursuant to these guidelines when

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122. *Id.* at 3239–49 (Stevens, J., concurring) (reviewing patentability of business methods in English and Early American law); *see also* Hotel Security Checking Co. v. Lorraine Co., 160 F. 467, 469 (2d Cir. 1908) ("A system of transacting business disconnected from the means for carrying out the system is not, within the most liberal interpretations of the term, an art."). *But see* State St. Bank v. Signature Fin. Group, Inc., 149 F.3d 1368, 1376 (Fed. Cir. 1998) (characterizing the business method exception in early cases as non-binding dicta, since invalidity rested on other factual determinations).

123. *See* Peter R. Lando, *Business Method Patents: Update Post State Street*, 9 TEX. INTELL. PROP. L.J. 403, 407 (2001). Lando states,

> The first financial patent was granted on March 19, 1799, to Jacob Perkins of Massachusetts for an invention for 'Detecting Counterfeit Notes.' . . . The first fifty years of the U.S. Patent Office saw the granting of forty-one financial patents in the arts of bank notes (2 patents), bills of credit (1), bills of exchange (1), check blanks (4); detecting and preventing counterfeiting (10), coin counting (1), interest calculation tables (5), and lotteries (17). Financial patents in the paper-based technologies have been granted continuously for over two hundred years.

Id.

124. *Id.* at 407–08 (describing patents granted to Herman Hollerith in 1889 that led to formation of the Tabulating Machine Company, which became International Business Machine Corporation in 1924, and pioneered the use of punch cards for processing business data prior to the invention of computers).

125. Until that time, USPTO's *Manual of Patenting Examination Procedure* also asserted that business methods were unpatentable. *See* Rinaldo Del Gallo, III, *Are "Methods of Doing Business" Finally out of Business as a Statutory Rejection?*, 38 IDEA 403, 404–06, 435 (1998).

126. *In re* Schrader, 22 F.3d 290, 297 (Fed. Cir. 1994) (Newman, J., dissenting) (arguing that the distinction is artificial because "data representing bid prices for parcels of land do not differ, in § 101 substance, from data representing electrocardiogram signals (*Arrhythmia*) or parameters in a process for curing rubber (*Diehr*)," which was held patentable subject matter by the Supreme Court).

relevant."[127] This view was subsequently upheld by the Federal Circuit, thus, the current status of computer programs rests on the tenuous acceptances of computer programs and business methods into the realm of patentable subject matter in the mid-1990s.[128] The Federal Circuit subsequently reversed those opinions in favor of the machine-or-transformation test in *In re Bilski*, which remains as a useful clue together with the uneasy acceptance of business method patents by the Supreme Court in *Bilski v. Kappos*.[129] Thus, in *Bilski*, the Supreme Court faced a convergence of doctrinal questions: (1) the patentability of a computer-implemented algorithms, which were previously examined through the lens of mathematical concepts and natural laws in the context of manufacturing,[130] and (2) the patentability of methods of doing business, which posed a separate doctrinal problem, subject to a distinct line of case law long before the invention of computers.[131] The patentability of business methods, however, is far from settled, as four justices in *Bilski* would have held up a categorical exclusion of business methods from patentable subject matter, and future rulings may limit the language of the *Bilski* majority.[132]

B. WRESTLING WITH *PROMETHEUS*

Just two years later, in 2012, the Supreme Court's *Prometheus* decision sent a "shockwave" through the biotechnology industry by invalidating a diagnostic method patent of the type long accepted as patentable, inviting widespread criticism of patentability jurisprudence.[133] The *Prometheus* claims were drawn to a medical diagnostic method rather than a computer program, yet the Court's analysis raised uncertain implications for software patents.[134]

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127. USPTO, *Examination Guidelines for Computer-Related Inventions*, 61 Fed. Reg. 7478-02, 7479 (Feb. 28, 1996), 1996 WL 82067; *see also* Moy, *supra* note 104, at 1055–56.

128. State St. Bank & Trust Co. v. Signature Fin. Group, Inc., 149 F.3d 1368, 1377 (Fed. Cir. 1998), *abrogated by* In re Bilski, 545 F.3d 943, 959 (Fed. Cir. 2008); AT&T Corp. v. Excel Communications, Inc., 172 F.3d 1352, 1359 (Fed. Cir. 1999), *abrogated by In re* Bilski, 545 F.3d 943 (Fed. Cir. 2008).

129. *See* Bilski v. Kappos, 130 S. Ct. 3218, 3228 (2010).

130. *Id.* at 3229–31 (applying the Benson-Flook-Diehr doctrine to the process at issues).

131. *See id* at 3239–49 (Stevens, J., concurring) (reviewing patentability of business methods in English and Early American law).

132. *See id.* at 3232 (Stevens, J., concurring, joined by Justices Ginsburg, Breyer, and Sotomayor).

133. Thomas Engellenmer, *'Mayo v. Prometheus': fire but no light*, THE NATIONAL LAW JOURNAL (Apr. 9, 2012), http://www.law.com/jsp/nlj/PubArticleNLJ.jsp?id=1202548424282&slreturn=1.

134. Mayo Collaborative Servs. v. Prometheus Labs., Inc., 132 S. Ct. 1289, 1295 (2012). A representative claim disclosed:

The Court applied an analogous analysis of patentability to claims invoking the natural law, abstract idea, or mental process exceptions, and found the *Prometheus* claims ineligible for patent protection along two principal lines of reasoning.[135] First, reviving the "inventive concept" approach of *Flook*, the Court concluded that the claims involved nothing more than "well-understood, routine, conventional activity previously engaged in by researchers in the field."[136] Second, in a "preemption" inquiry following *Benson*, the Court concluded that upholding the claims would "risk disproportionately tying up the use of the underlying natural laws, inhibiting their use in the making of further discoveries."[137] The implication of these approaches for the two sides of the Federal Circuit split are discussed in the following sections.

1. The Meaning of "Threshold" Test: Patent-Eligible Subject Matter Under § 101 and Patent Validity Requirements of §§ 102, 103, and 112

Courts have used the term "threshold" test ambiguously in applying § 101 by referring to both the procedural order and the scope of the proper inquiry under § 101, often blurring the distinction between the two.[138] With

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> A method of optimizing therapeutic efficacy for treatment of an immune-mediated gastrointestinal disorder, comprising:
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> (a) administering a drug providing 6–thioguanine to a subject having said immune-mediated gastrointestinal disorder; and
>
> (b) determining the level of 6–thioguanine in said subject having said immune-mediated gastrointestinal disorder,
>
> wherein the level of 6–thioguanine less than about 230 pmol per $8x10^8$ red blood cells indicates a need to increase the amount of said drug subsequently administered to said subject and
>
> wherein the level of 6–thioguanine greater than about 400 pmol per $8x10^8$ red blood cells indicates a need to decrease the amount of said drug subsequently administered to said subject.

Id. at 1295. *See, e.g.*, Bernard Chao, *Moderating Mayo*, 107 NW. U. L. REV. 82, 83 (2012) ("By failing to provide a framework for determining when additional limitations can change an unpatentable concept into a patentable application, the Supreme Court has cast doubt on a host of less controversial patents. But the decision does not have to wreak the havoc that many fear it will.").

135. *Prometheus*, 132 S. Ct. at 1293 ("Phenomena of nature, though just discovered, mental processes, and abstract intellectual concepts are not patentable, as they are the basic tools of scientific and technological work." (quoting Gottschalk v. Benson, 409 U.S. 63, 67 (1972))).

136. *Id.* at 1294.

137. *Id.*

138. *See* note 121, *supra*, and accompanying text. *Cf.* note 59, *supra*, and accompanying text. *See also* CLS Bank Int'l v. Alice Corp. Pty. Ltd., 685 F.3d 1341, 1360 *reh'g en banc granted, opinion vacated*, 484 F. App'x 559 (Fed. Cir. 2012) (Prost, J., dissenting) (arguing that *Prometheus*

respect to the procedural order, some judges and commentators have suggested that it is more sensible to address the other statutory requirements first, because this determination does not require grappling with the problematic exceptions to patentability.[139] After *Prometheus* appeared to reject this approach, the *CLS Bank* majority clarified that § 101 may be applied as a coarse filter before the remaining statutory requirements, where the manifest abstraction standard speaks to the weight of the presumption without sidestepping the § 101 inquiry.[140] In *Prometheus*, the Supreme Court also addressed the scope of § 101, explicitly rejecting the Solicitor General's argument that novelty and nonobviousness requirements could resolve the question of patentability because this approach would render the "law of nature" exception to § 101 patentability "a dead letter."[141] The *Prometheus* Court held that the "better established" inquiry under § 101 must maintain a different scope from the remaining requirements, noting that "shift[ing] the patent-eligibility inquiry entirely to these later sections risks creating

requires that the court "may not simply defer the threshold question of patentability to other provisions of the Act; rather, where the case squarely presents the issue, we must invalidate the patent under § 101."); Diamond v. Diehr, 450 U.S. 175, 188 (1981) ("Arrhenius' equation is not patentable in isolation, but when a process for curing rubber is devised which incorporates in it a more efficient solution of the equation, that process is at the very least not barred at the threshold by § 101.").

139. *See* Dealertrack, Inc. v. Huber, 674 F.3d 1315, 1335 (Fed. Cir. 2012) (Plager, J., concurring-in-part and dissenting-in-part) (urging the court to "not foray into the jurisprudential morass of § 101 unless absolutely necessary"); *see also* Dennis Crouch & Robert P. Merges, *Operating Efficiently Post-Bilski By Ordering Patent Doctrine Decision-Making*, 25 BERKELEY TECH. L.J. 1673, 1681–82 (2010) ("By analogy to the doctrine of avoidance, our approach conserves the courts' legitimacy by reserving consideration of § 101 issues for only those cases in which it is absolutely essential."); Michael Risch, *Everything Is Patentable*, 75 TENN. L. REV. 591, 591 (2008) ("The currently confused and inconsistent jurisprudence of patentable subject matter can be clarified by implementing a single rule: any invention that satisfies the Patent Act's requirements of category, utility, novelty, nonobviousness, and specification is patentable." (footnotes omitted)); Donald S. Chisum, *Weeds and Seeds in the Supreme Court's Business Method Patents Decision: New Directions for Regulating Patent Scope*, 15 LEWIS & CLARK L. REV. 11, 14–15 (2011). Chisum states:

> Section 101 abstract idea preemption inquiry can lead to subjectively-derived, arbitrary, and unpredictable results. . . . That harm would be largely avoided by implementing the suggested 'facts-first' approach, which minimizes the need to engage in the difficult legalistic inquiry into the meaning of 'abstract idea' and whether a given patent claim 'preempts' it.

Id. (footnote omitted).

140. CLS Bank Int'l v. Alice Corp. Pty. Ltd., 685 F.3d 1341, 1352 n.3. (Fed. Cir. 2012) *reh'g en banc granted, vacated*, 484 F. App'x 559 (Fed. Cir. 2012) ("[I]f a court . . . is not wholly convinced that the subject matter of the claims is abstract, the claims in question must be held patent eligible.").

141. *Prometheus*, 132 S. Ct. at 1303.

significantly greater legal uncertainty, while assuming that those sections can do work that they are not equipped to do."[142]

The Court's reasoning, however, closely mirrored the language of the very statutory sections the Court deemed inadequate for the task. First, the Court found that the "methods for determining metabolite levels were well known in the art" and the claimed steps were thus "conventional or obvious."[143] Section 102 describes the requirements of novelty, including types of acceptable prior art, while § 103 employs language nearly identical to the Court's in determining obviousness:

> A patent may not be obtained though the invention is not identically disclosed or described . . . if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.[144]

Similarly, the Supreme Court traced the roots of the preemption doctrine and abstract idea exception to a concern with claims "so abstract and sweeping as to cover both known and unknown uses."[145] Section 112, however, addresses the same concern:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same.[146]

A specification containing a full, clear, and exact description of a particular use was thus intended to exclude language that was overly broad and could cover undisclosed or unknown future uses.[147]

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142. *Id.*

143. *Id.* at 1297–98 (citing Parker v. Flook, 437 U.S. 584, 590 (1978)).

144. 35 U.S.C. § 103(a) (2006).

145. *Prometheus*, 132 S. Ct. at 1301 (citing Gottschalk v. Benson, 409 U.S. 63, 67, 68 (1972)).

146. 35 U.S.C.A. § 112(a).

147. One of the reasons software patents increasingly adopted broader claim language was a loosening of this requirement for software patents in several Federal Circuit decisions. *See* Dan L. Burk & Mark A. Lemley, *Is Patent Law Technology-Specific?*, 17 BERKELEY TECH. L.J. 1155, 1162 (2002). This problem is particularly acute and amenable to solution by more rigorous application of § 112 in the software field. *See* Mark Lemley, *Software Patents and the Return of Functional Claiming*, WIS. L. REV. (forthcoming 2013), *available at* http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2117302. However, in the biotechnology field, § 112 may indeed be insufficient to do the work of the natural phenomenon doctrine. *See*

The disagreement about the proper scope of inquiry under § 101 can be traced to the overlap in the statutory language itself. Section 101 requires a "new and useful" invention, while § 102 addresses the technical requirements of novelty. The question remains, however, whether § 101 inquiry must include the "inventive concept" and preemption analyses following *Prometheus*, and if so, how the courts are to conduct these determinations. *Prometheus* was unique in that the patent itself noted that the measuring techniques and correlations in question were known in prior art.[148] Without such disclosure, this approach may invite conjecture by the courts about what steps are in fact "routine" and "conventional." And in *Flook*, the Court pronounced any algorithm to be inherently in the prior art as a "basic tool[] of scientific and technological work," novel algorithms are at the heart of many modern inventions.[149] Thus, the Federal Circuit could advance the analysis substantially in the *CLS Bank* rehearing by clarifying the meaning of a "threshold" inquiry in terms of procedural order and scope of the "inventive concept" analysis.

Samantak Ghosh, *Prometheus and the Natural Phenomenon Doctrine: Let's Not Lose Sight of the Forest for the Trees*, 94 J. PAT. & TRADEMARK OFF. SOC'Y 330 (2012).

148. Mayo Collaborative Servs. v. Prometheus Labs., Inc., 132 S. Ct. 1289, 1295 (2012). The court noted,

> Previous studies suggested that measurement of 6–MP metabolite levels can be used to predict clinical efficacy and tolerance to azathioprine or 6–MP. But those in the field did not know the precise correlations between metabolite levels and likely harm or ineffectiveness. The patent claims at issue here set forth processes embodying researchers' findings that identified these correlations with some precision.

Id. (citations omitted) (internal quotation marks omitted). Following *Flook*, the Court found that "putting the formula to the side, there was no 'inventive concept' in the claimed application of the formula." *Id.* at 1299.

149. *See* Mark A. Lemley, *Point of Novelty*, 105 NW. U. L. REV. 1253, 1278 (2011). Professor Lemley identified the logical problem with this reasoning:

> That conclusion was quite remarkable. Under that approach, many drugs would be unpatentable because the discovery of their efficacy involves the mere identification of a previously unknown natural phenomenon. Computer software would be unpatentable because it is composed of algorithms. Even the classic mercury thermometer might not be patentable because it was based on the discovery of a physical attribute of mercury: the fact that it expands at a predictable rate as temperature increases.

Id. (footnotes omitted) (citations omitted).

2. *Describing the Invention: Claim Language and Levels of Abstraction in the "Preemption" Inquiry*

Patent law scholars are beginning to recognize that, as in copyright law, an invention can be characterized at multiple levels of abstraction.[150] A related issue is whether the invention is the new totality of all the elements in the claim, or the unique inventive element, not in combination with other steps. *Diehr* emphasized that the invention must be considered as a whole:

> It is inappropriate to dissect the claims into old and new elements and then to ignore the presence of the old elements in the analysis. This is particularly true in a process claim because a new combination of steps in a process may be patentable even though all the constituents of the combination were well known and in common use before the combination was made.[151]

The *Prometheus* Court departed from this long-standing practice, by considering the elements of the claims separately, then finding that "when viewed as a whole, add nothing significant beyond the sum of their parts taken separately." The Court did not address the specific numerical thresholds in the "wherein" clauses of the claim, which were the key findings of the patentee's research, instead finding that they "simply tell a doctor about the relevant natural laws" and holding that the disclosed steps of the diagnostic method were known in the prior art.[152]

In the *CLS Bank* dissent, Judge Prost similarly discounted certain elements of the claim by purporting to strip the method of "jargon," yet the majority cautioned against the danger present in arbitrary paraphrasing:

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150. Tun-Jen Chiang, *The Levels of Abstraction Problem in Patent Law*, 105 NW. U. L. REV. 1097, 1152 (2011) ("Once we understand that every invention can be characterized as multiple ideas on many levels of abstraction, it becomes clear that a selection among them must be made."); *see also* Peter Lee, *The Evolution of Intellectual Infrastructure*, 83 WASH. L. REV. 39, 68 n.155 (2008) ("[A]n invention, if subjected to a 'great number of patterns of increasing generality,' could be conceptualized as a combination of scientific principles and mechanical forces." (quoting Nichols v. Universal Pictures Corp., 45 F.2d 119, 121 (2d Cir. 1930))).

151. Diamond v. Diehr, 450 U.S. 175, 188 (1981).

152. *Prometheus*, 132 S. Ct. at 1291, 1295–98. The Court stated that

> 'Previous studies suggested that measurement of 6–MP metabolite levels can be used to predict clinical efficacy and tolerance to azathioprine or 6–MP.' But those in the field did not know the precise correlations between metabolite levels and likely harm or ineffectiveness. The patent claims at issue here set forth processes embodying researchers' findings that identified these correlations with some precision.

Id. (citations omitted).

> [N]othing in the Supreme Court's precedent, nor in ours, allows a court to go hunting for abstractions by ignoring the concrete, palpable, tangible, and otherwise not abstract invention the patentee actually claims. It is fundamentally improper to paraphrase a claim in overly simplistic generalities in assessing whether the claim falls under the limited "abstract ideas" exception to patent eligibility under 35 U.S.C. § 101. Patent eligibility must be evaluated based on what the claims recite, not merely on the ideas upon which they are premised.[153]

The temptation to simplify patent claims is understandable in view of the number of cases and the complex technologies judges must handle.[154] On the other hand, some courts are tempted to consider elements outside of the claim in looking for tangible, non-abstract elements.[155] The need for a consistent approach to the level of abstraction is particularly acute in the context of the preemption inquiry, so that courts neither improperly simplify the claims, nor impors additional elements from the specification or other claims.[156] Lack of a consistent approach to defining the invention "make[s] the determination of patentable subject matter depend simply on the draftsman's art and would ill serve the principles underlying the prohibition

153. CLS Bank Int'l v. Alice Corp. Pty. Ltd., 685 F.3d 1341, 1358, 1351–52 (Fed. Cir. 2012), *reh'g en banc granted, vacated*, 484 F. App'x 559 (Fed. Cir. 2012).

154. *See* Peter Lee, *Patent Law and the Two Cultures*, 120 YALE L.J. 2, 2 (2010) (advancing a "cognitive miser" model of information processing that relies on simplifying heuristics, and arguing that formalism limits and streamlines judicial engagement with technology); *see also* The Honorable Paul Michel, *Judicial Constellations: Guiding Principles As Navigational Aids*, 54 CASE W. RES. L. REV. 757, 762 (2004) ("In 1988 we had 217 patent cases pending; today we have 430 patent cases pending. Also, in the intervening years since 1988, the difficulty of the average patent case in our court has gone up at least one order of magnitude. Consequently, we have the same twelve people now doing a vastly larger amount of work on vastly harder cases.").

155. For example, *Research Corp* referred to devices (such as "high contrast film," "a film printer," "a memory," and "printer and display devices") mentioned in claims of the patent other than the claims at issue to support its finding that the claims were not abstract. Research Corp. Techs., Inc. v. Microsoft Corp., 627 F.3d 859, 865 (Fed. Cir. 2010). Representative claim 1 recites:

> A method for the halftoning of gray scale images by utilizing a pixel-by-pixel comparison of the image against a blue noise mask in which the blue noise mask is comprised of a random non-deterministic, non-white noise single valued function which is designed to produce visually pleasing dot profiles when thresholded at any level of said gray scale images.

Id.

156. *See* Diamond v. Diehr, 450 U.S. 175, 212 (1981) ("Proper analysis, therefore, must start with an understanding of what the inventor claims to have discovered-or phrased somewhat differently-what he considers his inventive concept to be.").

against patents for 'ideas' or phenomena of nature."[157] The preemption inquiry, in turn, heavily depends on how the invention is characterized. For example, in *CLS Bank*, whether the invention is the concept of automating escrow in general, the "shadow" credit records component, or the more detailed flowcharts in the specification[158] would substantially influence the question of whether is it possible for others to make a different escrow system without infringing the claims. Thus, the Federal Circuit could advance § 101 analysis by clarifying the level of description for the purposes of preemption inquiry, as well as how such inquiry is to be conducted by the court without technical expertise in a particular field.

C. INSTITUTIONAL FORCES AND THE FUTURE OF SOFTWARE PATENTS

As the above discussion shows, patent examination guidelines have sometimes diverged from Federal Circuit rulings, and the current status of software patents is the result of changes at multiple levels of the patent system.[159] The following Section analyzes the role of the Federal Circuit and the constraints on its decision-making, as well as the effects of the lack of bright-line rules on the examination and administrative review. Finally, this Section concludes with a summary of steps taken in the Leahy-Smith America Invents Act (AIA) of 2011 to combat the problem of overbroad method patents.

1. Rules, Formalism, and the Problem of Being the Federal Circuit

Scholars have suggested that the prospect of reversal by the Supreme Court leads the Federal Circuit to hyper-interpret Supreme Court precedent out of a desire for certainty and outcome-determinative criteria.[160] Legal scholars have long drawn a distinction between rules and standards: rules provide a determinate legal result that follows from one or more triggering facts; standards, on the other hand, apply a flexible principle or the types of factors to be considered in achieving an overall objective.[161] Thus, statutory

157. Parker v. Flook, 437 U.S. 584, 593 (1978).

158. *See* Br. of Amici Curae Electronic Frontier Foundation and Public Knowledge in Support of Appellees and Remand, CLS Bank Int'l v. Alice Corp. Pty. Ltd., Appeal No. 2011-1301 (Fed. Cir.).

159. *See* notes 125–127, *supra*, and accompanying text.

160. *See, e.g.*, Lucas S. Osborn, *Instrumentalism At The Federal Circuit*, 56 ST. LOUIS U. L.J. 419, 425 (2012); *see also* Craig Allen Nard, *Legal Forms And The Common Law Of Patents*, 90 B.U. L. REV. 51, 54–55 (2010).

161. Moy, *supra* note 104, at 1063. A widely used example of a rule is a speed limit of 65 miles per hour, whereas an example of a standard might be "a speed that is reasonably safe for the vehicle and driving conditions." *See also* Russell B. Korobkin, *Behavioral Analysis and Legal Form: Rules vs. Standards Revisited*, 79 OR. L. REV. 23, 23 (2000).

validity requirements serve as ex ante rules grounded in factual determination, while the abstract idea and mental process doctrines have functioned as flexible standards to address patents deemed to be too socially costly. Rules have the advantages of notice and horizontal equity to litigants as a group, while standards allow the adjudicator to balance the overall values and objectives.[162] The tension between the patentable subject matter inquiry under § 101 and the patent validity requirements of the subsequent sections arises from the divergent needs of the patent system: to conduct a fact-intensive scrutiny at the examination level ex ante, and to address overbroad patents that are perceived as socially harmful when they are asserted in litigation ex post.

In formulating its tests for patentability, the Federal Circuit has attempted to fashion predictable rules out of the Supreme Court's amorphous doctrine. However, ignoring or over-interpreting precedent that does not fit the newly-fashioned rule leaves the participants in the judicial process with the "impression of rigid formalism, eviscerating much of the flexibility that is the oft-cited benefit of a policy-driven analysis."[163] Thus, the Federal Circuit's attempts to interpret Supreme Court holdings have garnered criticism as internally inconsistent and insufficiently grounded in policy.[164] The Supreme Court's response, in turn, has been a continuing reluctance to endorse such rules.[165]

The USPTO argues that the Federal Circuit should not adopt a single "test" for the patent-eligibility of computer-implemented inventions because "[t]he Supreme Court has made clear that patent-eligibility is not amenable to bright-line, categorical rules."[166] Innovation inherently confronts the courts with change and unpredictability, and scholars have also argued that rigid rules are ill-suited for patent eligibility determinations, which require adaptability.[167] Judge Plager has agreed with this position in principle, writing

162. Moy, *supra* note 104, at 1064.

163. Osborn, *supra* note 160, at 459.

164. *See, e.g.*, Menell, *supra* note 9, at 1300–01 (2011); Rochelle Cooper Dreyfuss, *In Search of Institutional Identity: The Federal Circuit Comes of Age*, 23 BERKELEY TECH. L.J. 787, 808–14 (2008); Arti K. Rai, *Engaging Facts and Policy: A Multi-Institutional Approach to Patent System Reform*, 103 COLUM. L. REV. 10 35, 1039–41 (2003).

165. *See* Lee, *supra* note 154, at 42 (arguing that the Supreme Court is "push[ing] back against Federal Circuit formalism").

166. Br. for the United States as Amicus Curae on Rehearing En Banc in Support of Neither Party, CLS Bank Int'l v. Alice Corp. Pty. Ltd., Appeal No. 2011-1301 (Fed. Cir.).

167. John F. Duffy, *Rules and Standards on the Forefront of Patentability*, 51 WM. & MARY L. REV. 609, 614 (2009) ("[L]ong term failure of rules in defining patentability is also consistent with general models that predict standards to be more durable than rules when conditions are changing, and innovation presents a quintessential circumstance of change.").

that the primary role of the judiciary is resolving the specific conflict at issue before the court, rather formulating comprehensive, systemic solutions for the patent system.[168] Judge Rader's views have also been described as antiformalist, due to his frequent engagement with policy, context, and developments in foreign law.[169] Justice Scalia, on the other hand, has asserted that adherence to democratic principles requires a preference in the legal system for rules over standards.[170] In this view, the discretion inherent in adjudication by a standard requires the adjudicator to assert value judgments, and, in comparison to the constraining impact of a rule, tends to require more resources, judicial and otherwise.[171] Thus, the Federal Circuit must exercise its judicial role at the intersection of pressure from the district courts for greater formalism—more bright-line rules—and the opposite pressure from the Supreme Court for more flexible standards, while contending with patentees that have strong economic incentives to deliberately introduce uncertainties and extend the scope of their patents.[172]

2. *USPTO and BPAI Patent Eligibility Determinations: Forging their Own Paths*

While the courts have played a significant role in delineating the boundaries of patent eligibility, the examination and appeals process has followed its own trajectory. The USPTO has faced a challenging task in integrating Supreme Court and Federal Circuit decisions into cohesive guidelines for examination of patent validity. Until September 16, 2012, its decisions were subject to review by the Board of Patent Appeals and Interferences ("BPAI"), which then became the new Patent Trial and Appeal

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168. *See* S. Jay Plager, *The Federal Circuit As an Institution: On Uncertainty and Policy Levers*, 43 LOY. L.A. L. REV. 749, 769–70 (2010). Judge Plager writes:

> At the appellate level, the cases come to us in defined form and substance, defined in great detail by another forum, and our opinions are expected to respond and be confined to the arguments and issues presented by the parties' advocates. . . . [T]o the extent new rules and doctrinal explications emerge as a consequence of decision, so be it. Even then, the scope of doctrinal explication today is largely constrained by statute and precedent.

Id. Harking back to the work of Karl Llewellyn, the early advocate of legal realism, Judge Plager argues that simply a "reasonable regularity of decision" should be the primary objective of the courts. *Id.* at 754–55.

169. Peter Lee, *Antiformalism at the Federal Circuit: The Jurisprudence of Chief Judge Rader*, 7 WASH. J.L. TECH. & ARTS 405, 415–19 (2012).

170. *See* Moy, *supra* note 104, at 1065 (citing Antonin Scalia, *The Rule of Law as a Law of Rules*, 56 U. CHI. L. REV. 1175, 1176–77 (1989)).

171. *Id.*

172. Plager, *supra* note 168, at 755 (citing Kelly Casey Mullally, *Legal (Un)Certainty, Legal Process, and Patent Law*, 43 LOY. L.A. L. REV. 1109, 1130, 1135–36 (2010)).

Board ("PTAB").[173] Recent scholarship indicates that BPAI review has frequently applied its own rules inconsistent with Supreme Court and Federal Circuit precedent, and that its increasing reluctance to publish precedential opinions may have contributed to reduced consistency in examination.[174]

In the absence of bright-line rules, the BPAI remained reliant on the machine-or-transformation test, adopted its own "mental process" test, and has excluded applications that contain the phrase "computer readable medium."[175] In contrast, the current Manual of Patent Examination Procedures states that "computer readable storage medium" claims are patent-eligible with sufficient limitations to the medium, such as executable instructions or stored data.[176] Thus, applicants may be forced to write patent applications in a manner that must pass divergent and at times contradictory standards, differing from the analysis that would be applied if the patent were litigated.[177] In 2010, BPAI made 7,083 total decisions, of which only three were designated as precedential, with no precedential cases published in 2011 at all.[178] There have been no precedential decisions on patentable subject matter analysis since *Bilski*, allowing BPAI and examiners to adopt a variety of frameworks in the patentable subject matter analysis that may lead to conflicting results.[179]

While scholars and practitioners approach the software patent problem from a comprehensive perspective, the USPTO is limited by its lack of rulemaking authority.[180] In addition, the USPTO has had to adapt to new

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173. PTAB was created by the Leahy-Smith America Invents Act of 2011. *See* 35 U.S.C. § 6(a)–(b), 37 CFR § 41.100–41.208.

174. *See, e.g.*, Joseph Taylor Gooch, *Who's in Charge: an Analysis of BPAI Decisions Regarding Section 101 Patentability in Light of Bilski And Mayo*, 94 J. PAT. & TRADEMARK OFF. SOC'Y, (forthcoming 2013), *available at* http://ssrn.com/abstract=2162256; Jeffrey Fredman, *Silence Is Not Always Golden: Why Decisions of the Board of Patent Appeals and Interferences Should be Precedential*, 88 J. PAT. & TRADEMARK OFF. SOC'Y 859, 867 (2006) (finding that both the rate of affirmances and the rate of publication of precedent opinions have decreased significantly over the last 20 years).

175. Gooch, *supra* note 174.

176. MANUAL OF PATENT EXAMINING PROCEDURE (8th ed. Rev. 9) § 2106.01(II.A.(c)), *available at* http://www.uspto.gov/web/offices/pac/mpep/s2106.html.

177. Gooch, *supra* note 174.

178. *See BPAI/PTAB Final Decision Search*, U.S. PATENT & TRADEMARK OFFICE, http://e-foia.uspto.gov/Foia/PTABReadingRoom.jsp (last visited Apr. 8, 2013); *List of Precedential Decisions*, U.S. PATENT & TRADEMARK OFFICE, http://www.uspto.gov/ip/boards/bpai/decisions/prec/index.jsp (last visited Apr. 8, 2013).

179. Gooch, *supra* note 174 (demonstrating how the application of two BPAI tests may yield different outcomes for the same claim).

180. Plager, *supra* note 168, at 767 ("[T]he ability of the USPTO to do what is necessary is hindered by the agency's lack of any substantive rulemaking authority; but there again, the decision to leave the USPTO as one of the few major executive agencies to be so impaired is

technologies without the benefit of bright-line rules from the courts on interpreting statutory law. The examination of software patents did, however, benefit from a significant decision that provided for a more robust obviousness analysis.[181] With respect to patentable subject matter, the 2010 Interim Guidance for Determining Subject Matter Eligibility for Process Claims in View of *Bilski v. Kappos* stated that "§ 101 is, by design, a 'coarse filter,' " and:

> Therefore, examiners should avoid focusing on issues of patent-eligibility under § 101 to the detriment of considering an application for compliance with the requirements of §§ 102, 103, and 112, and should avoid treating an application solely on the basis of patent-eligibility under § 101 except in the most extreme cases.[182]

Thus, the USPTO has adopted an approach consistent with the coarse filter view in the Federal Circuit, and has continued to avoid § 101 questions whenever possible. In the cases where it is unavoidable, the analysis proceeds as a subjective balancing of factors derived from *Bilski* and prior cases.[183] Researchers, however, have raised doubts about the consistency of the USPTO's process.[184] Further, as Judge Newman has pointed out, the Manual

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for Congress to make."); *see also* Allen K. Yu, *Within Subject Matter Eligibility-A Disease And A Cure*, 84 S. CAL. L. REV. 387, 445–46 (2011) ("To accentuate the role patents play in a nation's larger Industrial Policy, eligibility may be defined in the context of a nation's broader economic policy to promote industrial and technological developments. The Article [] argues for a more administrative-driven approach to defining subject matter eligibility.").

181. David Kappos, Under Sec'y of Commerce for IP & Dir. of the USPTO, Keynote Address at the Center for American Progress: An Examination of Software Patents (Nov. 20, 2012), *available at* http://www.uspto.gov/news/speeches/2012/kappos_CAP.jsp. Kappos stated:

> In particular, we have benefited greatly from the seminal 2007 Supreme Court case, *KSR v. Teleflex*, as well as subsequent decisions by the U.S. Court of Appeals for the Federal Circuit. *KSR* and later Federal Circuit cases have strengthened the legal doctrine of obviousness. In other words, they narrowed what is considered patentable. Software experts have long observed that programming is incremental in nature, with modest improvements not worthy of patent protection. *KSR* gave us the ability to recognize this valid observation and incorporate it in our examination process.

Id. (citing KSR Int'l Co. v. Teleflex, Inc., 550 U.S. 398 (2007)).

182. Interim Guidance for Determining Subject Matter Eligibility for Process Claims in View of *Bilski v. Kappos*, 75 Fed. Reg. 43,922, 43,923–24 (July 27, 2010), *available at* http://www.uspto.gov/patents/law/exam/bilski_guidance_27jul2010.pdf.

183. *Id.* at 43,925–26.

184. *See* Sean Tu, *Luck/Unluck of the Draw: An Empirical Study of Examiner Allowance Rates*, 2012 STAN. TECH. L. REV. 10, 5 (2012).

of Patent Examining Procedure ("MPEP") instructs the examiners to conduct a thorough search of the prior art before evaluating the invention under § 101; thus, in practice, patent eligibility determinations generally take place in the context of comparison to prior art rather than a theoretical inquiry as a matter of law envisioned by the Federal Circuit.[185]

3. *Software Patents Under the Leahy-Smith America Invents Act of 2011*

The Supreme Court has more than once implored Congress to weigh in on the issue of software patents, citing the need for more data and a political consensus on policy goals.[186] While the AIA did not address software directly, several provisions are expected to have a significant effect on the quality of newly-issued and existing software patents.[187] The Transitional Program for Covered Business Method Patents, effective September 16, 2012 and until September 16, 2020, allows a party that has been sued or threatened with suit based on a financial business method patent to challenge its validity before the PTAB, which must reach a decision within a year.[188]

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185. *In re* Bilski, 545 F.3d 943, 996 (Fed. Cir. 2008) *aff'd but criticized sub nom.* Bilski v. Kappos, 130 S. Ct. 3218 (U.S. 2010) (Newman, J., dissenting) ("Prior to evaluating the claimed invention under 35 U.S.C. § 101, USPTO personnel are expected to conduct a thorough search of the prior art." (citing MPEP § 2106(III) (8th ed. Rev. 7) (July 2008))).

186. *See* Gottschalk v. Benson, 409 U.S. 63, 73 (1972). The Supreme Court stated:

> If these programs are to be patentable, considerable problems are raised which only committees of Congress can manage, for broad powers of investigation are needed, including hearings which canvass the wide variety of views which those operating in this field entertain. The technological problems tendered in the many briefs before us indicate to us that considered action by the Congress is needed.

Id. (footnotes omitted); *Parker v. Flook*, 437 U.S. 584, 595 (1978) ("Difficult questions of policy concerning the kinds of programs that may be appropriate for patent protection and the form and duration of such protection can be answered by Congress on the basis of current empirical data not equally available to this tribunal.").

187. *See* Jeff Kettle, *Congress Giveth and Taketh Away: A Look at Section 18 of the America Invents Act and the Review of Business Method Patents*, 94 J. PAT. & TRADEMARK OFF. SOC'Y 201, 201 (2012). The administrative review is expected to offer advantages over litigation:

> [S]ection 18 seems to correct where *State Street* allegedly erred. As a less-expensive and quicker alternative to civil litigation, a petitioner will be most successful when she can present prior art to invalidate the business method patent. Additionally, section 18 does not seem to have an overbroad effect, so businesses will still benefit from investing in business method patents that are novel, 'unobvious,' and non-abstract.

Id.

188. A Covered Business Method is "a patent that claims a method or corresponding apparatus for performing data processing or other operations used in the practice, administration, or management of a financial product or service." Leahy-Smith America Invents Act, 35 U.S.C. § 18(d)(1) (2012). *See Changes To Implement Transitional Program for*

Unlike the general Post-Grant Review provision, the Transitional Program will allow challenges to patents issued prior to the adoption of AIA.[189] The AIA also provides for third-party submission of prior art with explanation of its relevance, which is expected to facilitate rejections of overly broad and low quality patents. In addition, the USPTO is planning to implement a new system for "crowdsourcing" searches for prior art, the "Ask Patents" network.[190] These provisions are aimed an ameliorating concerns that low quality patents are frequently issued in the software field due to the difficulty of searching for relevant prior art and identifying synonymous terms and program components of previously used software.

IV. CONCLUSION

In the *CLS Bank* rehearing, the sharply split Federal Circuit must reconcile its divergent lines of precedent that have emerged from the coarse filter and limiting test approaches, resulting in the conflicting patentability criteria of recent holdings. The Federal Circuit must further resolve the questions posed by the Supreme Court's *Prometheus* ruling and the amorphous abstract idea doctrine. The determination under § 101 could be substantially advanced if the Federal Circuit chooses to clarify how the "threshold" test characterization applies to the procedural order and scope of inquiry, the requirements of "inventive concept" analysis, and the appropriate level of abstraction in describing the invention and determining whether the claim preempts the use of a fundamental idea. A review of the tumultuous history of software-related patents suggests that a test adopted in the en banc rehearing is unlikely to be the final word on the issue, and that the tension between the Federal Circuit's desire for bright-line rules and Supreme Court's preference for flexible standards will continue to shape the debate about patentability of software. Significant steps implemented by the AIA, however, may reduce the number of overbroad patents through administrative review, reducing the need for litigation on the grounds of § 101. While the merits of patents in the software industry continue to be debated, the Supreme Court's rejection of a per se business method exclusion in *Bilski* and the scale of the software industry along with its role in modern innovation makes it unlikely that software patents will be rejected

Covered Business Method Patents, 77 Fed. Reg. 7080-01, 7082 ("Proposed § 42.300(c) would provide a one-year timeframe for administering the proceeding after institution, with a six-month extension for good cause. This proposed rule is consistent with 35 U.S.C. 326(a)(11), which sets forth statutory timeframes for post-grant review.").

189. *See* Leahy-Smith American Invents Act, § 18(a)(2).

190. Kappos, *supra* note 181.

altogether.[191] The Federal Circuit's ruling, however, may provide a step toward greater rigor in policing the boundaries of patentable inventions, providing greater certainty and a solid foundation for a marketplace of ideas at the heart of a robust technological progress.[192]

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191. *See* Moy, *supra* note 104, at n.81:

> No economist, on the basis of present knowledge, could possibly state with certainty that the patent system, as it now operates, confers a net benefit or a net loss on society. . . . If we did not have a patent system, it would be irresponsible, on the basis of our present knowledge, to recommend instituting one. But since we have had a patent system for a long time, it would be irresponsible, on the basis of our present knowledge, to recommend abolishing it.

Id. (quoting Staff of S. Comm. on the Judiciary, Subcomm. on Patents, Trademarks, and Copyright of the Comm. of the Judiciary of the U.S. Senate, 85th Cong., 2d Sess., Econ. Review of the Patent Sys. , Study No. 15 76–80 (Comm. Print 1958)). *But see* Ben Klemens, *The Rise of the Information Processing Patent*, 14 B.U. J. SCI. & TECH. L. 1, 22–36 (2008) (arguing that empirical evidence supports the conclusion that patentability should only be extended to claims that are "non-trivially physical").

192. Judge Easterbrook posits that the main value of an intellectual property system may be creating bargaining institutions rather than stimulating investment in innovation directly. *See* Frank H. Easterbrook, *Cyberspace Versus Property Law?*, 4 TEX. REV. L. & POL. 103 (1999). Judge Easterbrook identifies three propositions for a well-functioning IP system: (1) Make rules clearer, to promote bargains. (" 'We' do not know what is best, but in a Coasean world the affected parties will by their actions establish what is best."); (2) Create property rights where there are none to make bargains possible; (3) Create bargaining institutions. *Id.* at 111–13.

A ROCK AND A HARD PLACE: CHOOSING BETWEEN § 271(A) AND (B) FOR DIVIDED INFRINGEMENT IN *AKAMAI*

Michael Liu Su†

Our patent system incentivizes inventors to share their useful inventions to the public by giving them exclusive rights to practice their inventions for a limited time. However, such incentives only exist if inventors know that their exclusive rights can be reliably enforced. A loophole in patent infringement law for certain inventions means that inventors will be reluctant to share their work, and society will be deprived of the benefits of such inventions. A loophole that allows no recourse against divided infringement[1] of method patents raises such an issue.

Since the 1970s, courts have recognized that when there is divided infringement of a method patent, the entities that collectively perform all the claimed steps should and can be held liable. In such a situation, courts typically find liability through the doctrine of joint infringement under 35 U.S.C. § 271(a).[2] To establish liability under this doctrine, there must be some relationship between these entities, but the relationship standard has not remained constant. In 2007, *BMC Resources v. Paymentech, L.P.* established that a "direction or control" relationship among these entities is a prerequisite for liability.[3] However, in 2012, the Federal Circuit changed the law in its en banc decision in *Akamai Technologies, Inc. v. Limelight Networks, Inc.*[4] Instead of ruling on the appealed issue of the "direction or control" standard, the Federal Circuit created a new avenue for finding liability through inducement of

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1. For the purpose of this discussion, several different types of infringement are defined as follows. Divided infringement is broadly defined as infringement by the aggregate conduct of more than one actor. *See* Mark A. Lemley et al., *Divided Infringement Claims*, 33 AIPLA Q.J. 255, 256 (2005). Direct infringement means infringement under 35 U.S.C. § 271(a), while indirect infringement means inducement of infringement under § 271(b) or contributory infringement under § 271(c). The doctrine of joint infringement is a doctrine through which courts find liability under § 271(a) in situations of divided infringement of method patents.

2. 35 U.S.C. § 271(a) (2006).

3. BMC Resources v. Paymentech, L.P., 498 F.3d 1373, 1379–81 (Fed. Cir. 2007).

4. Akamai Techs., Inc. v. Limelight Networks, Inc., 692 F.3d 1301 (Fed. Cir. 2012).

infringement under § 271(b).[5] In doing so, the Federal Circuit partially overruled *BMC Resources* and held that for the purpose of finding inducement liability, there is no "direction or control" relationship requirement among the induced entities.[6] However, the relationship standard established by *BMC Resources* for the purpose of applying the doctrine of joint infringement under § 271(a) has been left intact.[7]

Akamai represents a substantial change in the law governing divided infringement, and closes a loophole following *BMC Resources* that left patentees without recourse when entities were able to collectively perform all the steps of a method claim through arms-length transactions. Under *BMC Resources* and before *Akamai*, since there was no "direction or control" relationship among these entities, no one was liable under the doctrine of joint infringement.

Part I of this Note traces the development of divided infringement law leading up to *Akamai*. Part II explains *Akamai*, and Part III discusses the propriety of the new *Akamai* rule based on patent policy, legislative history, case law, and statutory interpretation. Part III also argues that although the *Akamai* rule is correct in light of patent policy and legislative history, it nevertheless results in inconsistent statutory interpretation. Instead of opening this new avenue for finding liability, a better approach is to simply loosen the relationship standard required under the doctrine of joint infringement.

I. HISTORY OF DIVIDED INFRINGEMENT LAW

Although patent infringement law was codified for the first time in 1952,[8] common law had long recognized that it is desirable to hold an entity liable when it acts in concert with another to infringe a patent, even though the entity fails to infringe on its own.[9] Part I of this Note explores the common

5. *Id.* at 1306.

6. *Id.* ("[W]e hold that all the steps of a claimed method must be performed in order to find induced infringement, but that it is not necessary to prove that all the steps were committed by a single entity.").

7. *Id.* ("Much of the briefing in these cases has been directed to the question whether direct infringement can be found when no single entity performs all of the claimed steps of the patent. It is not necessary for us to resolve that issue today because we find that these cases and cases like them can be resolved through an application of the doctrine of induced infringement.").

8. 35 U.S.C. § 271 (1952).

9. *See* H.R. REP. NO. 82-1923, at 9 (1952) ("The doctrine of contributory infringement has been part of our law for about 80 years. It has been applied to enjoin those who sought

law treatment of such scenarios before the Patent Act of 1952, and the subsequent development of the doctrine of joint infringement leading up to *Akamai*.

A. DIVIDED INFRINGEMENT BEFORE 1952

Prior to 1952, instead of defining infringement, the patent statute simply conferred exclusive rights to a patentee,[10] and a violation of those rights was a tort remediable through a lawsuit.[11] In the early days of the patent system, from the late eighteenth century to the first half of the nineteenth century, courts ruled on the issue of infringement by comparing a defendant's product or process with the asserted patent's specification, finding infringement as the act of making a substantial copy of the invention described in the specification.[12] After the requirement for claims was introduced in the Patent Act of 1836,[13] the infringement analysis gradually shifted to the claims.[14] This shift naturally led to a question: If a person is liable as an infringer for making or performing all the elements in a claim, what is the liability for one who falls short of doing so but violates a patentee's right by combining his products or actions with those of another person's?

Thus came the earliest cases of divided infringement. *Wallace v. Holmes* in 1871 was the first case that recognized contributory infringement, the act of providing parts for a patented combination but letting another entity

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to cause infringement by supplying someone else with the means and directions for infringing a patent.").

10. Patent Act of 1836, ch. 357, § 5, 5 Stat. 117 (1836) (granting a patentee "the full and exclusive right and liberty of making, using, and vending to others to be used, the said invention or discovery"). *See also* H.R. REP. NO. 82-1923, at 9 (1952) (stating that "the granting clause [of the Patent Act] creates certain exclusive rights and infringement would be any violation of those rights").

11. *Contributory Infringement: Hearings on H.R. 3866 Before Subcomm. No. 4 of the H. Comm. on the Judiciary*, 81st Cong. 2 (1949) (statement of Giles S. Rich) ("A patent grants certain rights to the patentee, specifically the right to exclude others from making, using, or selling the invention which is covered by his patent, and any violation of that right is a tort.").

12. *See* GEORGE TICKNOR CURTIS, A TREATISE ON THE LAW OF PATENTS FOR USEFUL INVENTIONS, AS ENACTED AND ADMINISTERED IN THE UNITED STATES OF AMERICA § 307 (The Lawbook Exchange, 4th ed. 2005) (1873) ("An infringement involves substantial identity, whether that identity is described by the terms, 'same principle,' 'same *modus operandi*,' or any other. It is a copy of the thing described in the specification of the patentee, either without variation, or with only such variations as are consistent with its being in substance the same thing.").

13. Patent Act of 1836, ch. 357, § 6, 5 Stat. 117 (1836) (requiring a patentee to "particularly specify and point out the part, improvement, or combination, which he claims as his own invention or discovery").

14. *See, e.g.*, Merrill v. Yeomans, 94 U.S. 568 (1876).

complete the combination.[15] In *Wallace*, the plaintiff patented an oil lamp that required both a burner and a glass chimney on top of the burner.[16] The defendant manufactured and sold burners that were substantially the same as the patentee's burner but did not provide any accompanying chimneys.[17] Instead, the defendant allowed its customers to complete the assembly on their own.[18] Although the court acknowledged the general rule that there is no infringement unless the defendant makes all the claimed elements, it nevertheless held that the defendant infringed the patent because the burners sold by the defendant had no other use except for being combined with the chimneys.[19]

On the other hand, the court in *Snyder v. Bunnell* in 1886 held that a device sold by the defendant did not infringe because it had non-infringing uses.[20] The plaintiff's patent covered an electromagnetic burglar alarm designed for continued ringing after it was triggered.[21] Although the defendant sold a device that could be combined with others to infringe the patent, the device also had non-infringing uses.[22] Also, there was no evidence that the defendant sold the device knowing that it could be combined for infringement.[23] The court distinguished *Wallace*, reasoning that while the defendant's product in *Wallace* could not be used in any manner that did not infringe, the device at issue in *Snyder* could be used for non-infringing purposes.[24] The court thus ruled that if the defendant was liable, others could be equally liable for the sale of an unpatented galvanic battery or electric bell, which were also necessary components in the patented invention, and that such a rule would be too dangerous.[25]

In addition to cases where courts found contributory infringement based on the absence of non-infringing uses of the accused product, there was another line of cases where courts found contributory infringement based on the defendant's intent. One example is *Westinghouse Electric & Manufacturing Co. v. Precise Manufacturing Corp.* in 1926, where the Second Circuit found the defendant liable because it intended for its product to be combined into an

15. Wallace v. Holmes, 29 F. Cas. 74 (C.C.D. Conn. 1871).
16. *Id.* at 79.
17. *Id.* at 79–80.
18. *Id.*
19. *Id.* at 80.
20. Snyder v. Bunnell, 29 F. 47 (C.C.S.D.N.Y. 1886).
21. *Id.* at 47.
22. *Id.*
23. *Id.*
24. *Id.*
25. *Id.* at 48.

infringing device.[26] The defendant manufactured and sold transformers that could be combined with other components into an infringing radio receiver.[27] Although the transformers could be used for non-infringing purposes, the defendant advertised that they were especially suitable for the infringing use and provided instructions to build the infringing radio receiver.[28] The court thus held that because the defendant manufactured with knowledge of the contemplated infringement, it was liable for contributory infringement.[29]

However, just as clever manufacturers attempted to avoid infringement liability by not making every element of a claimed invention, ingenious patentees started to push for product tying arrangements,[30] hoping to extend the scope of patent protection beyond what was claimed. In *Heaton-Peninsular Button-Fastener Co. v. Eureka Specialty Co.*, the plaintiff held patents related to the fastening of buttons to shoes and machines for such operation.[31] The machines were sold by the patentee with other unpatented staple articles used by the machines, under an agreement that the sale was on the condition that the purchaser would only use the patentee's staple articles.[32] The Sixth Circuit held that the tying arrangement for the staple articles was enforceable, reasoning that the purchasers of the button-fastening machines agreed that their rights to use the machines were limited to the use of the machines with the staple articles supplied by the patentee.[33] *Button-Fastener* led to widespread use of tying arrangements.[34] Such use was subsequently affirmed by the Supreme Court in *Henry v. A.B. Dick*, where the Court permitted the use of a tying arrangement that required purchasers of a patented mimeograph device to use only staple articles manufactured by the patentee.[35]

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26. Westinghouse Elec. & Mfg. Co. v. Precise Mfg. Corp., 11 F.2d 209, 211–12 (2d Cir. 1926).

27. *Id.* at 211.

28. *Id.*

29. *Id.* at 212.

30. Tying arrangements are contracts that require consumers of a patented article to purchase necessary but unpatented components of that article from the patentee, thus effectively expanding the patent's scope to the components.

31. Heaton-Peninsular Button-Fastener Co. v. Eureka Specialty Co., 77 F. 288, 288 (6th Cir. 1896).

32. *Id.* at 289.

33. *Id.* at 292.

34. Such widespread use can be demonstrated by the many cases in which tying arrangements were upheld. *See, e.g.*, Rupp & Wittenfeld Co. v. Elliott, 131 F. 730, 731, 734 (6th Cir. 1904); Victor Talking Mach. Co. v. The Fair, 123 F. 424, 426–27 (7th Cir. 1903).

35. Henry v. A.B. Dick, 224 U.S. 1, 49 (1912).

Nevertheless, these tying arrangements had a short lifespan. Just five years after *A.B. Dick*, the Supreme Court overruled it in *Motion Pictures Patents Co. v. Universal Film Manufacturing Co.*[36] In *Motion Pictures*, the plaintiff owned a patent covering a film feeding mechanism used within a movie projector and granted a license to a projector manufacturer that agreed to sell the patented projectors subject to restrictions.[37] The projectors were sold under the condition that they would be used solely for playing films embodying a separate patent that was licensed by the plaintiff.[38] The Court ruled that a patentee's rights were limited to the claims of the patent, and that it was improper to extend these rights by restricting the staple articles that were used by the patented invention if the staple articles were not covered by the same patent.[39]

After *Motion Pictures*, patentees' rights were further limited by the doctrine of patent misuse, which was affirmed by the Supreme Court in *Carbice Corp. of America v. American Patents Development Corp.*[40] In *Carbice Corp.*, the plaintiff sued its competing manufacturer for contributory infringement because the competitor sold to the patentee's customers dry ice used in transportation packages covered by the plaintiff's patent.[41] Instead of examining the accused infringer's conduct, the Court looked at the plaintiff's behavior and denied relief because the plaintiff was "attempting, without sanction of law, to employ the patent to secure a limited monopoly of unpatented material used in applying the invention."[42] Soon afterwards, the doctrine of patent misuse quickly developed with cases by the Supreme Court, such as *Leitch Manufacturing Co. v. Barber Co.*[43] and *Morton Salt Co. v. G.S. Suppiger Co.*[44] In those cases, the Court reiterated the prohibition against using a patent to obtain a monopoly over an unpatented article.[45] Subsequently, in *B.B.*

36. Motion Pictures Patents Co. v. Universal Film Mfg. Co., 243 U.S. 502 (1917).

37. *Id.* at 505–06.

38. *Id.* at 506–07.

39. *Id.* at 518.

40. Carbice Corp. of Am. v. Am. Patents Dev. Corp., 283 U.S. 27 (1931). Although *Cabrice* discussed the concept of the doctrine of patent misuse, it did not coin the term. The term likely originated in *B.B. Chemical Co. v. Ellis*, where the Supreme Court discussed the "petitioner's misuse of the patent by permitting its use only with the unpatented materials sold by petitioner." B.B. Chem. Co. v. Ellis, 314 U.S. 495, 496 (1942).

41. Carbice Corp. of Am. v. Am. Patents Dev. Corp., 283 U.S. 27 (1931).

42. *Id.* at 33–34.

43. Leitch Mfg. Co. v. Barber Co., 302 U.S. 458, 463 (1938).

44. Morton Salt Co. v. G.S. Suppiger Co., 314 U.S. 488 (1942).

45. *Id.* at 493–94 ("Where the patent is used as a means of restraining competition with the patentee's sale of an unpatented product . . . . Equity may rightly withhold its assistance from such a use of the patent by declining to entertain a suit for infringement, and should do so at least until it is made to appear that the improper practice has been abandoned and that

Chemical Co. v. Ellis, the Court held that the patentee's attempt to monopolize the sale of unpatented staple articles barred it from obtaining an injunction.[46]

While these rulings prevented tying arrangements, they also significantly diminished the power of the doctrine of contributory infringement, for a patentee asserting this doctrine ran the great risk of being accused of patent misuse. The hardest blow against this doctrine came in *Mercoid Corp. v. Mid-Continent Investment Co.*[47] In denying the plaintiff injunctive relief against the accused contributory infringer, the Court discussed the relationship between the doctrines of patent misuse and contributory infringement, stating that "[w]here there is a collision between the principle of [patent misuse] and the conventional rules governing either direct or contributory infringement, the former prevails."[48] In essence, this line of patent misuse cases by the Supreme Court effectively eviscerated contributory infringement, for it became almost impossible to assert contributory infringement without risking a counterclaim of patent misuse. Finding no support from the courts, patentees decided to turn to the legislature to effectively enforce their patent rights.

B. THE PATENT ACT OF 1952

In 1948, the New York Patent Law Association initiated the effort to draft the bill H.R. 5988 in the 80th Congress to codify contributory infringement,[49] so as to "provide for the protection of patent rights where enforcement against direct infringers is impracticable, [and] to define 'contributory infringement.' "[50]

The bill did not pass the Congress, nor did its successor, H.R. 3866 in the 81st Congress.[51] Subsequently, the effort to codify the rules of infringement was subsumed in a much more expansive plan to codify many aspects of

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the consequences of the misuse of the patent have been dissipated."); Leitch Mfg. Co., 302 U.S. at 463 ("[E]very use of a patent as a means of obtaining a limited monopoly of unpatented material is prohibited.").

46. B.B. Chem. Co. v. Ellis, 314 U.S. 495, 497–98 (1942) ("[I]n view of petitioner's use of the patent as the means of establishing a limited monopoly in its unpatented materials . . . we hold that the maintenance of this suit to restrain any form of infringement is contrary to public policy, and that the district court rightly dismissed it.").

47. Mercoid Corp. v. Mid-Continent Inv. Co., 320 U.S. 661 (1944).

48. *Id.* at 669.

49. *See Contributory Infringement in Patents and Definition of Invention: Hearings on H.R. 5988, 4061, and 5248 Before Subcomm. on Patents, Trade-Marks, and Copyrights of the H. Comm. on the Judiciary*, 80th Cong. 1, 6 (1948) (statements of Earl R. Lewis and Giles S. Rich).

50. *Id.* at 1 (statement of Earl R. Lewis).

51. H.R. 3866, 81st Cong. (1949).

patent law, H.R. 9133 in the 81st Congress,[52] which later evolved to H.R. 3760 in the 82nd Congress,[53] and eventually became H.R. 7794 in the later session of the same Congress and passed in the Senate to become Title 35 of the United States Code.[54]

In H.R. 5988, only indirect infringement was mentioned, but it included both indirect infringement based on inducement and on the act of providing a non-staple part of an infringing device[55]—contributory infringement as we know it today. The sections governing indirect infringement evolved through the subsequent bills to become 35 U.S.C. § 271(b) and (c).[56] On the other hand, the section governing direct infringement was not introduced until H.R. 9133 in 1950 and subsequently evolved into 35 U.S.C. § 271(a).[57]

As a result, the current patent infringement statute, 35 U.S.C. § 271, as codified in 1952, states:

> (a) Except as otherwise provided in this title, whoever without authority makes, uses, offers to sell, or sells any patented invention, within the United States, or imports into the United States any patented invention during the term of the patent therefor, infringes the patent.
>
> (b) Whoever actively induces infringement of a patent shall be liable as an infringer.
>
> (c) Whoever offers to sell or sells within the United States or imports into the United States a component of a patented machine, manufacture, combination, or composition, or a material or apparatus for use in practicing a patented process, constituting a material part of the invention, knowing the same to be especially made or especially adapted for use in an infringement of such patent, and not a staple article or commodity of commerce suitable for substantial noninfringing use, shall be liable as a contributory infringer.[58]

52. H.R. 9133, 81st Cong. (1950).
53. H.R. 3760, 82d Cong. (1951).
54. H.R. 7794, 82d Cong. (1952).
55. H.R. 5988, 80th Cong. §§ 1–3 (1948).
56. 35 U.S.C. § 271(b)–(c) (1952); H.R. 7794, 82d Cong. § 271(b)–(c) (1952); H.R. 3760, 82d Cong. § 231(b)–(c) (1951); H.R. 9133, 81st Cong. § 231(c)–(e) (1950); H.R. 3866, 81st Cong. §§ 1–3 (1949).
57. 35 U.S.C. § 271(a) (1952); H.R. 7794, 82d Cong. § 271(a) (1952); H.R. 3760, 82d Cong. § 231(a) (1951).
58. 35 U.S.C. § 271 (1952).

C. DEVELOPMENT OF THE DOCTRINE OF JOINT INFRINGEMENT

After § 271 was introduced, courts promptly used paragraphs (b) and (c) to capture divided infringement of product claims. For example, in *Fromberg, Inc. v. Thornhill*, the defendant taught its customer car dealers how to recreate a patented device for repairing tire punctures by inserting a replacement part provided by the defendant.[59] The Fifth Circuit held that the defendant was liable as an inducer under § 271(b).[60] Also, in *Aro Manufacturing Co. v. Convertible Top Replacement Co.*, the owner of a patent covering automobile convertible tops sued a manufacturer of fabric replacements for such convertible tops, claiming that the manufacturer was a contributory infringer.[61] The Supreme Court recognized that such an act of manufacturing could well "constitute contributory infringement under § 271(c), if, but only if, such a replacement by the [end users] would in itself constitute a direct infringement under § 271(a) . . . ."[62] Nevertheless, the Court held that because the end users' replacement of convertible tops constituted a permissible "repair," there was no direct infringement, and thus no contributory infringement of the patent.[63]

On the other hand, when there was divided infringement of method claims, the law developed at a slower pace and gradually turned into the doctrine of joint infringement. A central issue in this line of cases has been what kind of relationship between the entities who collectively performed a claimed method is required to hold them liable.[64] In most of the early district court cases, the courts required a looser relationship standard: "participation and combined action" or "some connection" would suffice.[65] This standard

59. Fromberg, Inc. v. Thornhill, 315 F.2d 407, 410–11 (5th Cir. 1963).

60. *Id.*

61. Aro Mfg. Co. v. Convertible Top Replacement Co., 365 U.S. 336, 337 (1961).

62. *Id.* at 341.

63. *Id.* at 345–46.

64. *See, e.g.*, BMC Resources v. Paymentech, L.P., 498 F.3d 1373, 1379–81 (Fed. Cir. 2007) (finding "direction or control" the appropriate relationship standard for accused infringers under the doctrine of joint infringement); E.I. Dupont De Nemours & Co. v. Monsanto Co., 903 F. Supp. 680, 734–35 (D. Del. 1995) (finding a merchant-customer relationship sufficient for finding liability); Shields v. Halliburton Co., 493 F. Supp. 1376, 1389 (W.D. La. 1980) (requiring a "participation and combined action" relationship for finding liability).

65. *See, e.g.*, Faroudja Labs., Inc. v. Dwin Elecs., Inc., No. 97-20010 SW, 1999 WL 111788, at *5 (N.D. Cal. Feb. 24, 1999) ("It is true that several district courts have found a party liable for direct infringement of a process patent even where the various steps included in the patent are performed by distinct entities. However, these cases indicate that some connection between the different entities justified that finding."); Shields, 493 F. Supp. at 1389 ("When infringement results from the participation and combined action of several parties, they are all joint infringers and jointly liable for patent infringement.").

was later accepted by the Federal Circuit in *On Demand Machine Corp. v. Ingram Industries, Inc.* in 2006.[66]

One of the earlier cases that adopted a looser standard was *Metal Film Co. v. Melton Corp.*[67] In *Metal Film*, the court held the defendant liable for infringement when it hired outside suppliers to perform the first step of the plaintiff's patented method and completed the remaining steps itself.[68] However, there was no discussion of which subsection of § 271 should be used to find liability or of the term "joint infringement." Also, the court merely mentioned in a footnote that the fact that "defendants choose to have [one of the claimed steps] . . . done by outside suppliers does not mitigate their infringement of the overall process."[69] Nevertheless, the court did not examine what type of relationship the defendant had with the outside suppliers. Thus, under the *Metal Film* reasoning, entities that had a loose relationship but collectively performed a claimed method could be held liable for infringement.

Similarly, in *Mobil Oil Corp. v. W.R. Grace & Co.*, the court held the defendant liable for direct infringement when its customers performed the last step of the plaintiff's method claim, which covered a catalytic process to chemically transform a compound.[70] Except for the last heating step, which was performed by the customers, the defendant practiced all the other steps.[71] Acknowledging that performance of the claimed method was divided between multiple entities, the court nevertheless held the defendant liable.[72] The court reasoned that the defendant, in effect, "made each of its customers its agent in completing the infringement step" even though the relationship between the defendant and its customers was much looser than an agency relationship.[73] Like *Metal Film*, *W.R. Grace* supported a loose relationship standard for the purpose of applying the doctrine of joint infringement.

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66. On Demand Mach. Corp. v. Ingram Indus., Inc., 442 F.3d 1331, 1345 (Fed. Cir. 2006) (accepting a jury instruction that stated: "Where the infringement is the result of the participation and combined action(s) of one or more persons or entities, they are joint infringers and are jointly liable for the infringement.").

67. Metal Film Co. v. Metlon Corp., 316 F. Supp. 96 (S.D.N.Y. 1970).

68. *Id.* at 110–11.

69. *Id.* at 110 n.12.

70. Mobil Oil Corp. v. W. R. Grace & Co., 367 F. Supp. 207, 253 (D. Conn. 1973).

71. *Id.*

72. *Id.*

73. *Id.* The relationship between the defendant and its customers was not one of true agency because the defendant did not have control over its customers with regard to how they performed some of the claimed steps, and the defendant only knew its customers would complete the last step but did not direct them to do so. *See id.*; RESTATEMENT (THIRD) OF AGENCY § 1.01 (2006) ("Agency is the fiduciary relationship that arises when [a principal]

In *Shields v. Halliburton Co.*, the court adopted a similar but different "participation and combined action" relationship requirement for finding liability.[74] The defendants collectively carried out a patented offshore drilling method while building oil rigs, with each defendant performing different steps of the method.[75] The court determined that all three companies were liable, reasoning that "[w]hen infringement results from the participation and combined action of several parties, they are all joint infringers and jointly liable for patent infringement."[76] Also, the court stated that "[i]nfringement of a patented process or method cannot be avoided by having another perform one step of the process or method."[77]

On the other hand, the Ninth Circuit adopted a more stringent relationship standard in *Mobil Oil Corp. v. Filtrol Corp.*[78] In *Filtrol*, the defendants collectively performed the steps of the plaintiff's claimed method for preparing a catalyst used in oil refineries.[79] The Ninth Circuit found neither one of the two defendants liable and questioned "whether a method claim can be infringed when two separate entities perform different operations and neither has control of the other's activities."[80]

Afterwards, district courts continued to recognize the possibility of holding entities liable for divided infringement, even if the entities shared a relationship that did not amount to agency. In *E.I. Dupont De Nemours & Co. v. Monsanto Co.*, the court found a typical merchant-customer relationship sufficient for finding liability.[81] The defendant performed the first step of the plaintiff's patented method and sold the resulting product to its customer, who performed the remaining steps.[82] The court held the customer liable for infringement and the defendant liable for inducement, reasoning that the

manifests assent to [an agent] that the agent shall act on the principal's behalf and subject to the principal's control, and the agent manifests assent or otherwise consents so to act."). *See also* Long Truong, Note, *After* BMC Resources, Inc. v. Paymentech, L.P.*: Conspiratorial Infringement as a Means of Holding Joint Infringers Liable*, 103 NW. U. L. REV. 1897, 1909 (2009) (stating that the situation in *W.R. Grace* was not one of true agency).

74. Shields v. Halliburton Co., 493 F. Supp. 1376, 1389 (W.D. La. 1980).

75. *Id.* at 1388–89.

76. *Id.* at 1389.

77. *Id.* at 1389.

78. Mobil Oil Corp. v. Filtrol Corp., 501 F.2d 282 (9th Cir. 1974).

79. *Id.* at 291.

80. *Id.* at 291–92.

81. *See* E.I. Dupont De Nemours & Co. v. Monsanto Co., 903 F. Supp. 680, 734–35 (D. Del. 1995).

82. *Id.* at 734.

customers could not avoid direct infringement liability "by paying [the defendant] to practice step (a) of the patented process . . . ."[83]

Faroudja Labs., Inc. v. Dwin Electronics, Inc. introduced a slightly different relationship standard—the "some connection" standard.[84] In *Faroudja*, the defendant was accused of inducing its customers to use its television line doublers in a manner that, combined with steps done by third parties, amounted to performance of all the claimed steps of the plaintiff's patent.[85] However, the court reasoned that in order to find entities liable for infringing a claimed method by "work[ing] in concert," there must be "some connection" between them.[86] The court found that the relationship between the customers and the third parties did not amount to "some connection" to warrant a determination of infringement.[87] Since there was no underlying direct infringement on the customers' part, the court found no inducement liability for the defendant.[88]

In subsequent cases, both district courts and the Federal Circuit continued to apply these looser standards for the doctrine of joint infringement.[89] However, in 2007 the Federal Circuit started tightening the relationship standard, eventually resulting in the single-entity rule—a requirement that the actions of one or more entities be attributable to one single entity in order to hold them liable as joint infringers.[90] In *BMC Resources*, the Federal Circuit rejected the prior looser standards and upheld the district court, which required a "direction or control" relationship

83. *Id.* at 735.

84. Faroudja Labs., Inc. v. Dwin Elecs., Inc., No. 97–20010 SW, 1999 WL 111788, at *5–6 (N.D. Cal. Feb. 24, 1999).

85. *Id.* at *4–5.

86. *Id.* at *5–6.

87. *Id.*

88. *Id.* at *7.

89. *See, e.g.*, On Demand Mach. Corp. v. Ingram Indus., Inc., 442 F.3d 1331, 1345 (Fed. Cir. 2006) (agreeing with the trial court's jury instruction which stated: "Where the infringement is the result of the participation and combined action(s) of one or more persons or entities, they are joint infringers and are jointly liable for the infringement."); Applied Interact, LLC v. Vt. Teddy Bear Co., Inc., No. 04 Civ. 8713 HB, 2005 WL 2133416, at *4 (S.D.N.Y. Sept. 6, 2005) (applying the "some connection" standard); Marley Mouldings Ltd. v. Mikron Indus., Inc., No. 02 C 2855, 2003 WL 1989640, at *2, *4 (N.D. Ill. Apr. 30, 2003) (reiterating that "some connection" between the accused entities was required for the doctrine of joint infringement); Cordis Corp. v. Medtronic AVE, Inc., 194 F. Supp. 2d 323, 350 (D. Del. 2002) (finding that the relationship between a medical device company and its customers satisfied the "some connection" standard).

90. In Judge Newman's words, the single-entity rule requires that divided infringement is not actionable "unless all of the participants are in a contract or agency relationship that is directed or controlled by a single 'mastermind.'" Akamai Techs., Inc. v. Limelight Networks, Inc., 692 F.3d 1301, 1319 (Fed. Cir. 2012) (Newman, J., dissenting).

between the entities that committed divided infringement.[91] Afterwards, in *Muniauction, Inc. v. Thomson Corp.*, the Federal Circuit further raised the bar for the relationship standard by framing the test as whether control by one entity over another exists to such a degree that the entity itself "can be said to have performed every step of the asserted claims"—a standard akin to agency.[92] Subsequently, in *Golden Hour Data Systems, Inc. v. emsCharts, Inc.*, the Federal Circuit affirmed the district court's use of the "direction or control" standard without much discussion.[93] Thus, recent case law has departed from the looser "participation and combined action" or "some connection" standards that were rooted in opinions from the 1970s to the 1990s and has evolved towards the heightened single-entity rule.[94]

II. *AKAMAI*: THE CASE

In the Federal Circuit's *Akamai* decision in 2012, the court once again faced the question of the required relationship standard between the accused infringers under the doctrine of joint infringement. *Akamai* was an en banc decision that consolidated a case between Akamai Technologies and Limelight Networks and another one between McKesson Technologies and Epic Systems.[95] The Federal Circuit panels for these two cases affirmed the district courts' respective opinions and emphasized the use of an agency requirement,[96] but the en banc court reversed and introduced a new avenue for finding liability through § 271(b).[97]

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91. BMC Resources v. Paymentech, L.P., 498 F.3d 1373, 1379–81 (Fed. Cir. 2007).

92. Muniauction, Inc. v. Thomson Corp., 532 F.3d 1318, 1329 (Fed. Cir. 2008).

93. Golden Hour Data Sys., Inc. v. emsCharts, Inc., 614 F.3d 1367, 1380 (Fed. Cir. 2010).

94. *See, e.g.*, Faroudja Labs., Inc. v. Dwin Elecs., Inc., No. 97–20010 SW, 1999 WL 111788, at *5 (N.D. Cal. Feb. 24, 1999) ("It is true that several district courts have found a party liable for direct infringement of a process patent even where the various steps included in the patent are performed by distinct entities. However, these cases indicate that some connection between the different entities justified that finding."); Shields v. Halliburton Co., 493 F. Supp. 1376, 1389 (W.D. La. 1980) ("When infringement results from the participation and combined action of several parties, they are all joint infringers and jointly liable for patent infringement.").

95. McKesson Info. Solutions LLC v. Epic Sys. Corp., No. 1:06–CV–2965–JTC, 2008 WL 5054479 (N.D. Ga. Aug. 29, 2008).

96. McKesson Techs. Inc. v. Epic Sys. Corp., No. 2010-1291, 2011 U.S. App. LEXIS 7531, at *1–2 (Fed. Cir. Apr. 12, 2011) ("Because McKesson is unable to attribute the performance of all the steps of the asserted method claims to a single party . . . this court affirms the finding of noninfringement."); Akamai Techs., Inc. v. Limelight Networks, Inc., 629 F.3d 1311, 1319 (Fed. Cir. 2010) ("While control or direction is a consideration, as is the extent to which instructions, if any, may be provided, what is essential is not merely the exercise of control or the providing of instructions, but whether the relationship between the

A. FACTS

Akamai's patent claimed a method for efficient delivery of web content.[98] The method included the steps of placing content elements on a set of replicated servers and modifying the content provider's web page, so as to instruct web browsers to retrieve that content from those servers.[99] Limelight maintained a network of servers and uploaded content elements on its servers but did not modify the content provider's web pages itself.[100] Instead, Limelight taught its customers how to perform the last modification step.[101]

McKesson Information Solutions patented a method covering electronic communication between healthcare providers and their patients.[102] Epic Systems licensed to healthcare organizations its software that included an application, which allowed healthcare providers to communicate electronically with patients.[103] Epic did not perform any steps of the claimed method; instead, those steps were divided between patients, who initiated communications, and healthcare providers, who performed the remaining steps.[104]

B. THE FEDERAL CIRCUIT'S PANEL HOLDINGS

For the dispute between Akamai and Limelight, the Federal Circuit panel did not address the propriety of the single-entity rule but simply applied it.[105] The panel clarified the rule, stating: "[W]hat is essential is not merely the exercise of control or the providing of instructions, but whether the relationship between the parties is such that acts of one may be attributed to the other."[106] The panel concluded that because the relationship between Limelight and its customers did not meet such a standard, Limelight was not

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parties is such that acts of one may be attributed to the other. Implicit in this court's holdings in *BMC Resources* and *Muniauction* is that the performance of a method step may be attributed to an accused infringer when the relationship between the accused infringer and another party performing a method step is that of principal and agent, applying generally accepted principles of the law of agency as explicated by the Supreme Court and the Restatement of Agency.").

97. Akamai Techs., Inc. v. Limelight Networks, Inc., 692 F.3d 1301, 1306 (Fed. Cir. 2012).

98. *Id.*

99. *Id.*

100. *Id.*

101. *Id.*

102. *Id.*

103. *Id.*

104. *Id.*

105. *See* Akamai Techs., Inc. v. Limelight Networks, Inc., 629 F.3d 1311, 1320–21 (Fed. Cir. 2010).

106. *Id.* at 1319.

liable under the doctrine of joint infringement.[107] Adopting a similar reasoning, a different Federal Circuit panel held that Epic was not liable for infringement of McKesson's patent.[108]

C. THE FEDERAL CIRCUIT'S EN BANC HOLDING

Although the issue for rehearing en banc was the propriety of the single-entity rule for the doctrine of joint infringement, the en banc Federal Circuit did not elaborate on this issue.[109] Instead, it created a new avenue for finding liability through inducement of infringement under § 271(b).[110] The court partially overruled *BMC Resources* and abolished the single-entity rule for the purpose of finding inducement liability but left intact the rule for the doctrine of joint infringement.[111] Essentially, the court held that to support a theory of inducement of infringement, it does not require a single entity to perform all the steps of a method claim.[112] To reach this reading of § 271(b), the court sought support from legislative history, other areas of the law, patent law statutes, precedent, and policy.

The court reviewed the legislative history of the Patent Act of 1952 and stated that the Act provides strong support for interpreting inducement of infringement as not requiring a single entity committing all the acts necessary to constitute infringement.[113] The court cited the statements of Judge Giles Rich, who was one of the principal drafters of the statute and a frequent witness at hearings regarding the Act.[114] The court explained that Judge Rich "saw no anomaly in finding liability for indirect infringement when there was 'obvious infringement of the patent' even though there was 'no direct infringer of the patent.' "[115]

The court also found support for its conclusion in other areas of the law, such as the Federal Criminal Code and the Restatement of Torts, stating that

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107. *See id.* at 1322.

108. McKesson Techs. Inc. v. Epic Sys. Corp., No. 2010–1291, 2011 U.S. App. LEXIS 7531, at *1–2 (Fed. Cir. Apr. 12, 2011).

109. Akamai Techs., Inc. v. Limelight Networks, Inc., 692 F.3d 1301, 1319 (Fed. Cir. 2012) (Newman, J., dissenting).

110. *Id.* at 1306.

111. *Id.*

112. *Id.*

113. *Id.* at 1310.

114. Judge Rich was the vice president of the New York Patent Law Association, which initiated the effort to draft the bill H.R. 5988. *See Contributory Infringement in Patents and Definition of Invention: Hearings on H.R. 5988, 4061, and 5248 Before Subcomm. on Patents, Trade-Marks, and Copyrights of the H. Comm. on the Judiciary*, 80th Cong. 1, 3 (1948) (statement of Earl R. Lewis).

115. *Id.* at 1310–11.

"a principal's liability for acts committed not only through an agent but also by an innocent intermediary who was induced by the principal is not an idiosyncrasy of patent law," and "[t]he implication of that principle, as applied [in patent law], is that a party may be liable for inducing infringement even if none of the individuals whose conduct constituted infringement would be liable, as direct infringers, for the act of infringement that was induced."[116]

Moreover, the court looked at other subsections of § 271 and noted that "infringement" under these subsections does not necessarily mean infringement under § 271(a).[117] The court observed that "nothing in the text of either subsection suggest[ed] that the act of 'infringement' required for inducement under section 271(b) must qualify as an act that would make a person liable as an infringer under section 271(a)," and thus the single-entity rule that binds § 271(a) is not necessarily applicable to other parts of § 271.[118]

Furthermore, by looking to Supreme Court precedent and its own, the Federal Circuit declared that its rule in *BMC Resources* is unwarranted.[119] For example, the court explained that although *Dynacore Holdings Corp. v. U.S. Philips Corp.* requires infringement for a finding of inducement of infringement, it does not require a single party to commit that infringement.[120] The court also explained that *Aro* does not stand for the proposition that liability for inducement requires that a single party be liable for direct infringement.[121] This is partly because the patent at issue in *Aro* involved product claims.[122] Unlike claimed methods, whenever a claimed product is made, used, or sold, there is always a direct infringer—the entity who completes the product.[123] Furthermore, the court pointed out several circuit court cases predating *Aro*, explaining that none of those cases applied the single-entity rule to find liability for inducement of infringement.[124]

Addressing the policy ramifications of the issue, the court reasoned that the "broader proposition [of the single-entity rule] invites evasion of the

116. *Id.* at 1311–13.

117. *Id.* at 1314.

118. *Id.* The court pointed to § 271(e)(2), (f), and (g), and stated that "the statute uses the term 'infringement' in a way that is not limited to the circumstances that give rise to liability under section 271(a)."

119. *Id.* at 1315.

120. *Id.* at 1315 (citing Dynacore Holdings Corp. v. U.S. Philips Corp., 363 F.3d 1263, 1372 (Fed. Cir. 2004)).

121. *Id.* at 1315–16. *See also* Aro Mfg. Co. v. Convertible Top Replacement Co., 365 U.S. 336 (1961).

122. *Akamai*, 692 F.3d at 1316.

123. *Id.* at 1316–17.

124. *Id.*

principles of patent infringement and serves no policy-based purpose."[125] The court explained that "[i]f an entity has induced conduct that infringes a patent, there is no justification for immunizing the inducer from liability simply because no single party commits all of the components of the appropriative act."[126]

In sum, the Federal Circuit held that based on legislative history, other areas of the law, patent law statutes, precedent, and policy, it should eliminate the single-entity rule propounded by *BMC Resources* for the purpose of finding inducement liability.[127] However, the single-entity rule is still in place for the purpose of applying the doctrine of joint infringement.[128]

III. ANALYSIS OF THE *AKAMAI* RULE

As mentioned above, a loophole in divided infringement law governing method inventions means that society will lose out on the benefits of such inventions. As explained below, the single-entity rule is such a loophole, and the *Akamai* rule provides an adequate fix by allowing patentees of method inventions to reliably catch infringers in situations of divided infringement. However, the majority in *Akamai* was strongly opposed by two dissenting factions, one arguing for the single-entity rule[129] and the other arguing for the abolishment of it,[130] suggesting that the *Akamai* rule might not be proper as a matter of law. This Part argues that although the *Akamai* rule reaches an equitable result and is correct in terms of legislative intent, it nevertheless results in inconsistent statutory interpretation. A better approach is to deal directly with the single-entity rule under the doctrine of joint infringement and replace it with a more flexible relationship standard.

A. REACHING AN EQUITABLE RESULT FOR DIVIDED INFRINGEMENT IN *AKAMAI*

The law before *Akamai* left a loophole that failed to reliably prevent divided infringement of method patents. Under *BMC Resources*, multiple entities can only be held liable under § 271(a) when they are essentially a

125. *Id.* at 1315.
126. *Id.*
127. *Id.* at 1306.
128. *Id.* ("Much of the briefing in [cases of divided infringement of method claims] has been directed to the question whether direct infringement can be found when no single entity performs all of the claimed steps of the patent. It is not necessary for us to resolve that issue today because we find that these cases and cases like them can be resolved through an application of the doctrine of induced infringement.").
129. *See id.* at 1337–51 (Linn, J., dissenting).
130. *See id.* at 1319–36 (Newman, J., dissenting).

single entity because of the strong relationship between them.[131] Although the indirect infringement statutes provide additional protection, they require an underlying act of infringement under § 271(a). However, since § 271(a) was restricted under *BMC Resources* to only cover entities that met the single-entity rule, this underlying act had to be committed by entities that met the same strong relationship requirement. Thus, a patentee of a method invention was often left without recourse under § 271(a)–(c). As acknowledged by the Federal Circuit itself in *BMC Resources*, "the standard requiring control or direction for a finding of joint infringement may in some circumstances allow parties to enter into arms-length agreements to avoid infringement."[132]

Such a deficiency may lead to severe consequences, especially for many high-tech industries, such as the software industry and the biotechnology industry. For companies in these industries, an innovative method containing steps performed by more than one entity can easily be replicated by a competitor without infringing the corresponding patent. For instance, many software methods, especially those implemented through the Internet and involving a host server and an end user, share such a characteristic. Amazon.com's patent covering its 1-Click purchasing method is an example.[133] Claim 1 of the patent contains, *inter alia*, two steps for a client system and two other steps for a server system.[134] Similarly, medical diagnostics patents held by biotechnology companies often involve a method that contains steps such as data gathering, analysis, correlation, and treatment with a drug in the end. Typically, such steps are carried out by different parties, such as a diagnostics laboratory that performs the analysis, a pharmaceutical company that provides the drug, and a physician that collects the data and provides treatment.[135]

131. BMC Resources v. Paymentech, L.P., 498 F.3d 1373, 1379–81 (Fed. Cir. 2007).

132. *Id.* at 1381.

133. *See* U.S. Patent No. 5,960,411 (filed Sept. 12, 1997).

134. *Id.* col. 10. The two steps for the client systems are "displaying information identifying the item" and "in response to only a single action being performed, sending a request to order the item along with an identifier of a purchaser of the item to a server system." The two steps for the server systems are "receiving the request" and "retrieving additional information previously stored for the purchaser identified by the identifier in the received request." *Id.*

135. *See, e.g.*, U.S. Patent No. 8,287,869 (filed Jan. 7, 2009) (claiming a method that comprises a step of measuring a patient's level of an intercellular signaling molecule, which is typically performed by a physician and a diagnostics laboratory, and a step of treating the patient with an antibody, which is usually provided by a pharmaceutical company and administered by the physician).

Some commentators have proposed a solution that has been widely adopted by patent prosecutors: describing such inventions in "unitary claims," claims in which all the steps are illustrated from the perspective of one entity.[136] Also, the Federal Circuit noted in *BMC Resources*: "The concerns over a party avoiding infringement by arms-length cooperation can usually be offset by proper claim drafting. A patentee can usually structure a claim to capture infringement by a single party."[137] However, this solution assumes that for every type of method claim, there is a "hub"—an actor for at least one of the claimed steps that interacts with other actors for all the remaining steps, so that the remaining steps can be written from the perspective of the hub. This is not true for many types of patents. For example, a distributed computing system can involve server A communicating to server B, server B communicating to server C, and so on, without having a central server that is involved in every step of a claimed method, either at the transmitter or recipient end.[138] In fact, by using the adverb "usually" in the above statement, the Federal Circuit acknowledged there are times when this deficiency cannot be cured by unitary claim drafting.[139]

In terms of practicality, *Akamai* is a clever solution that solves the above problem by opening up another avenue for finding liability—using § 271(b) without requiring the single-entity rule for the underlying infringement. The *Akamai* rule provides a remedy for situations where an entity induces divided infringement by multiple entities with a loose relationship among them, regardless of whether the inducer performs some of the claimed steps itself. Also, the inducer's intent is a requirement for finding liability under § 271(b). Thus, the *Akamai* rule holds liable entities that knowingly induce infringement of a method claim but leaves unscathed innocent parties that are induced to perform just parts of the claim (such as Internet users who are induced by a corporation to do so).

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136. *See* Lemley, *supra* note 1, at 272. This article provides a comparison between non-unitary and unitary claims for a method. The method involves actions by a client and a server. When the steps "transmitting a request to a server" and "generating at the client a unique client key" are respectively changed to "receiving a request from a client" and "receiving from the client a unique client key," the method is described from the standpoint of the server. Thus, when a server company performs these steps, it infringes regardless of the relationship between the company and the client.

137. BMC Resources v. Paymentech, L.P., 498 F.3d 1373, 1381 (Fed. Cir. 2007) (emphasis added).

138. *See, e.g.*, U.S. Patent No. 7,103,640 (filed Sept. 13, 2000) (claiming a method for retrieving data location information that involves transmitting a request from a client to a first server, and if necessary, from the first server to a second server, and so on until the purpose of the method is achieved).

139. *See* BMC Resources, 498 F.3d at 1381.

B. THE LEGAL PROPRIETY OF THE *AKAMAI* RULE

Despite the practicality of the *Akamai* rule, it is questionable as a matter of law. Under *Akamai*, a court uses § 271(b) to hold an entity liable for divided infringement of a method claim. This approach differs from the doctrine of joint infringement, under which courts use § 271(a) to find liability. To analyze *Akamai*, this Section first takes a step back and inquires whether the majority's use of § 271(b) in situations of divided infringement is correct. It concludes that it is because such usage is what Congress envisioned in the Patent Act of 1952. Nevertheless, this Section subsequently argues that without overturning the single-entity rule for the doctrine of joint infringement, the majority cannot ignore the single-entity rule only in the limited situation of the *Akamai* rule. Doing so leads to inconsistent statutory interpretation.

1. Using § 271(b) Instead of § 271(a) to Capture Divided Infringement

Under the doctrine of joint infringement, liability for divided infringement of method patents is found under § 271(a). However, one cannot help but wonder why § 271(a), instead of § 271(b) or § 271(c), is used for such a purpose—especially given that the purpose of H.R. 5988, the bill that initially introduced the precursors to § 271(b)–(c) but not § 271(a), was to "provide for the protection of patent rights where enforcement against direct infringers is impracticable . . . ."[140] In fact, divided infringement of method patents was an issue considered by the drafters of this bill, the New York Patent Law Association. In a memorandum to Congress, the Association stated:

> Improvements in such arts as radio communication, television, etc., sometimes involve the new combination of elements which in use are normally owned by different persons. Thus a new method of radio communication may involve a change in the transmitter and a corresponding change in the receiver. To describe such an invention in patent claims, it is necessary either to specify a new method which involves both transmitting and receiving, or a new combination of an element in the receiver and an element in the transmitter. There are patents with such claims covering television inventions of importance.[141]

140. *Contributory Infringement in Patents and Definition of Invention: Hearings on H.R. 5988, 4061, and 5248 Before Subcomm. on Patents, Trade-Marks, and Copyrights of the H. Comm. on the Judiciary*, 80th Cong. 1 (1948) (statement of Earl R. Lewis).

141. *Id.* at 5.

Moreover, other facts also indicate that Congress intended for § 271(b)–(c), but not § 271(a), to be used for divided infringement. For example, the precursory paragraph to § 271(a) did not even exist when H.R. 5988 was introduced in 1948. Instead, it was introduced in H.R. 9133 in 1950.[142] Moreover, when § 271(a) was eventually codified, Congress stated that it "is not actually necessary because the granting clause creates certain exclusive rights and infringement would be any violation of those rights."[143] This statement was corroborated by Judge Rich, who stated: "Paragraph (a) defines direct infringement and is present only for the sake of completeness. We got along without it for 162 years and we could again. Its omission would change nothing."[144] Given the seeming insignificance of § 271(a), why do courts use this subsection for the doctrine of joint infringement?

An answer to this question lies in the shift in the analytical framework used for finding liability before and after the Patent Act of 1952. Prior to 1952, when infringement was defined as the violation of the statutory patent rights, the courts adopted a straightforward, one-step analysis for finding liability: simply determining who the infringers were. For example, in the earliest contributory infringement case of *Wallace*, the court determined that the oil lamp as assembled by the purchaser infringed the plaintiff's patent and held that in such a situation where different entities manufacture components that have no use other than being assembled into a patented product, they "all are tort-feasors, engaged in a common purpose to infringe the patent."[145] Similarly, in *Thomson-Houston Electric Co. v. Ohio Brass Co.*, the Sixth Circuit analogized patent infringement to a trespass under tort law and reasoned that "all who take part in a trespass, either by actual participation therein or by aiding and abetting it, have been held to be jointly and severally liable for the injury inflicted."[146] Also, in *Solva Waterproof Glue Co. v. Perkins Glue Co.*, the Seventh Circuit stated: "[O]ne who makes and sells one element of a patented combination with the intention and for the purpose of bringing about its use in such a combination is guilty of contributory infringement, and is equally liable with him who organizes the complete combination."[147] In other words, prior to 1952, the courts adopted the tort doctrine of joint and several liability for contributory infringement and found that those who were instrumental in infringement were jointly liable (although the purchasers

142. H.R. 9133, 81st Cong. § 231(a) (1950).

143. H.R. REP. NO. 82-1923, at 9 (1952).

144. Giles S. Rich, *Infringement under Section 271 of the Patent Act of 1952*, 21 GEO. WASH. L. REV. 521, 537 (1953).

145. Wallace v. Holmes, 29 F. Cas. 74, 80 (C.C.D. Conn. 1871).

146. Thomson-Houston Elec. Co. v. Ohio Brass Co., 80 F. 712, 721 (6th Cir. 1897).

147. Solva Waterproof Glue Co. v. Perkins Glue Co., 251 F. 64, 73–74 (7th Cir. 1918).

were typically not part of the lawsuits).[148] The courts did not distinguish between a direct infringer and one who contributed to the infringement.[149]

The straightforwardness of the pre-1952 test can also be indirectly demonstrated by infringement terminology used by those in the patent field at that time and in Judge Rich's seemingly contradictory statements, as indicated by the *Akamai* majority and Judge Newman's dissent.[150] The majority pointed out that Judge Rich recognized situations where although "there is obvious infringement of the patent, there is no direct infringer of the patent but only two contributory infringers."[151] The majority also quoted Judge Rich's statement that "contributory infringement is a specific application to patent law of the law of joint tort feasor where two people somehow together create an infringement which neither one of them individually or independently commits.' "[152] However, in her dissent, Judge Newman pointed to statements from Judge Rich's later testimony, such as that "[t]he law always has been that, to hold anyone for contributory infringement, there must have been somewhere a direct infringement which was contributed to.' "[153]

The ostensible contradiction between these statements may have an explanation. Prior to 1952, the terms "infringement" and "direct infringement" were likely used interchangeably to mean "a violation of a patent right." In the Congressional report accompanying H.R. 7794, the bill that eventually introduced § 271, the Committee on the Judiciary stated "Section 271, paragraph (a), is a declaration of what constitutes

148. *See Contributory Infringement in Patents and Definition of Invention: Hearings on H.R. 5988, 4061, and 5248 Before Subcomm. on Patents, Trade-Marks, and Copyrights of the H. Comm. on the Judiciary*, 80th Cong. 12 (1948) (statement of Giles S. Rich) ("Infringement is considered to be a tort and contributory infringement is a specific application to patent law of the law of joint tort feasor [sic] where two people somehow together create an infringement which neither one of them individually or independently commits.").

149. *See, e.g.*, Peerless Equip. Co. v. W.H. Miner, Inc., 93 F.2d 98, 105 (7th Cir. 1937) (finding the defendant a contributory infringer without determining whether there was a direct infringer); Westinghouse Elec. & Mfg. Co. v. Precise Mfg. Corp., 11 F.2d 209, 211–12 (2d Cir. 1926) (same).

150. *See* Akamai Techs., Inc. v. Limelight Networks, Inc., 692 F.3d 1301,1310–11, 1329 (Fed. Cir. 2012).

151. *Id.* at 1310.

152. *Id.* at 1311.

153. *Id.* at 1329–30. Judge Newman quoted Judge Rich's later testimonies, and argued that the majority quoted Judge Rich's statements out of context. *Id. See also Patent Law Codification and Revision: Hearings on H.R. 3760 Before Subcomm. No. 3 of the H. Comm. on the Judiciary*, 82nd Cong. 151 (1951) (statement of Giles S. Rich) ("[W]herever there is contributory infringement there is somewhere something called direct infringement, and to that direct infringement someone has contributed.").

infringement."[154] On the other hand, Judge Rich described § 271(a) with slightly different terminology, saying "[p]aragraph (a) defines direct infringement . . . ."[155] Referring to an act that falls under § 271(a) as both "infringement" and "direct infringement" in these statements demonstrates the interchangeability of these two terms. At the same time, the term "direct infringer" likely meant "a single entity who infringed a patent" and "contributory infringer" meant "one of the two or more entities that collectively infringed a patent." If, instead, both of these terms meant "one of the two or more entities that collectively infringed a patent," Judge Rich's remarks on situations where "there is no direct infringer of the patent but only two contributory infringers" would be self-contradictory.[156]

The way these terms were used and Judge Rich's statements indicate that although direct infringement (or simply infringement) is a prerequisite for contributory infringement, a single-entity direct infringer is not a requirement. In other words, in a pre-1952 contributory infringement analysis, once there was a violation of a patentee's rights, a court did not look for a direct infringer before finding one or more contributory infringers. Instead, the court would perform a simple one-step analysis, i.e., determining who the contributory infringers were. Such an analytical framework was made possible by the patent rights statute before 1952, which conferred to a patentee "the full and exclusive right and liberty of making, using, and vending to others to be used, the said invention or discovery."[157] A violation of that right constituted infringement, even when the violation was perpetrated by two or more entities. In such a situation, there was no statutory requirement to find a direct infringer before finding a contributory infringer, especially given that the tort doctrine of joint and several liability was used to determine the contributory infringer. However, the introduction of § 271(a) changed this dynamic.

As mentioned above, the precursor to § 271(a) was not introduced until two years after the indirect infringement statutes were proposed.[158] Also, Congress viewed § 271(a) as unnecessary,[159] almost as if it was an afterthought instead of a well-contemplated basis that was required for a

154. H.R. REP. NO. 82-1923, at 9 (1952).

155. Rich, *supra* note 144, at 537.

156. *See* Akamai Techs., Inc. v. Limelight Networks, Inc., 692 F.3d 1301, 1310–11 (Fed. Cir. 2012).

157. Patent Act of 1836, ch. 357, § 5, 5 Stat. 117 (1836).

158. *See* H.R. 5988, 80th Cong. §§ 1–5 (1948); H.R. 9133, 81st Cong. § 231(a) (1950).

159. *See* H.R. REP. NO. 82-1923, at 9 (1952) (stating that § 271(a) is "not actually necessary because the granting clause creates certain exclusive rights and infringement would be any violation of those rights").

finding of indirect infringement. Although § 271(a) was intended to mirror the exclusionary rights conferred to a patentee, Congress likely failed to consider that while the old patent statute merely mentioned *what* cannot be done except by a patentee ("making, using, and vending"),[160] § 271(a) introduced the additional complexity of *who* cannot do these acts ("whoever without authority makes, uses, offers to sell, or sells . . . or imports").[161] This additional complexity subtly changed the analytical framework for indirect infringement.

As explained in Section III.B.2, *infra*, a finding of inducement or contributory infringement requires an underlying act of infringement by individuals not authorized to do those acts under § 271(a).[162] In effect, this changed the analytical framework into a two-step analysis: First, a court finds the infringer under § 271(a); second, the court then determines whether someone induced or contributed to that infringement under § 271(b) or § 271(c) and finds this additional indirect infringer.[163]

For a product claim, divided infringement easily fits into this framework. For example, in *Fromberg*, the Fifth Circuit found that the defendant's customer car dealers infringed the plaintiff's patent before finding the defendant liable for inducing infringement under § 271(b).[164] Also, in *Aro*, the central issue was whether the car owners who bought the replacement fabric from the accused contributory infringer actually infringed the patent.[165] In other words, the Court was trying to find an infringer under § 271(a) as a prerequisite for finding a contributory infringer under § 271(c). When there is infringement of a product claim, there is always a single entity that is the

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160. Patent Act of 1836, ch. 357, § 5, 5 Stat. 117 (1836).

161. 35 U.S.C. § 271(a) (2006).

162. *See* Aro Mfg. Co. v. Convertible Top Replacement Co., 365 U.S. 336, 341 (1961) ("[I]t is settled that if there is no direct infringement of a patent there can be no contributory infringement.").

163. Judge Rich likely recognized this analytical framework shift in his 1953 article on infringement under the Patent Act of 1952:

> Active inducement implies that there is not a *direct* infringement by the one doing the inducing and that the direct infringement was by another. In suing a direct infringer one would not have recourse to paragraph (b). Reliance on paragraph (b) as a basis for liability is in itself a clear indication that the party held liable is not a *direct* infringer and if he is to be called any kind of an infringer there is no applicable recognized term except "contributory infringer."

Rich, *supra* note 144, at 537.

164. Fromberg, Inc. v. Thornhill, 315 F.2d 407, 413 (5th Cir. 1963).

165. Aro, 365 U.S. at 339, 341 (stating as a principle issue: "[D]oes the car owner infringe (and the supplier contributorily infringe) the combination patent when he replaces the spent fabric without the patentee's consent?").

infringer under § 271(a) because the completed product has to be made, used, or sold by someone to constitute infringement.

On the other hand, divided infringement of a method claim presents a different scenario, difficult to fit into this new analytical framework. When a court starts the first step of the analysis, § 271(a) is sufficient for finding liability if the term "whoever" is construed to encompass the two or more entities that collectively perform the claimed method. Thus, there is no need to enter the second step of the analysis to find liability under § 271(b). It is likely because of this that in many of the early cases under the doctrine of joint infringement, the courts resorted to the pre-1952 one-step analysis for finding infringement instead of using the new two-step analysis.[166] In other words, for divided infringement of a method claim, the two-step analysis that was supposed to be used under § 271 was collapsed into a one-step analysis similar to that used before the Patent Act of 1952.

For example, in *Metal Film*, the defendant performed all but one of the claimed steps, which was outsourced to outside suppliers.[167] Nevertheless, without discussing whether there existed a single entity that performed all the claimed steps or whether the defendant could be liable as an inducer, the court simply stated that the defendant could not mitigate its infringement liability by using outside suppliers to perform one of the claimed steps.[168] Similarly, in *W. R. Grace*, the defendant used the steps of the claimed method to partially manufacture catalysts, but did not perform the final steps needed to complete the manufacture.[169] Instead, the defendant's customers performed those steps when they used the catalysts.[170] The court held that the defendant was a direct infringer by "[making] each of its customers its agent in completing the infringement step, knowing full well that the infringement step would in fact be promptly and fully completed by those customers."[171] This type of reasoning was explicitly pointed out in *Shields*,

166. *See, e.g.*, Shields v. Halliburton Co., 493 F. Supp. 1376 (W.D. La. 1980) (finding that the defendants singularly and jointly infringed without discussing indirect infringement).

167. Metal Film Co. v. Metlon Corp., 316 F. Supp. 96, 110 (S.D.N.Y. 1970)

168. *Id.* at 111.

169. Mobil Oil Corp. v. W. R. Grace & Co., 367 F. Supp. 207, 253 (D. Conn. 1973)

170. *Id.*

171. *Id.* In addition to finding joint infringement, the court also found inducement liability with regard to other method claims that were performed entirely by the defendant's customers. *Id.* at 254. As stated by the court:

> Defendant's customers . . . followed the instructions and requirements of [plaintiff's claims] in the catalytic cracking of gas oil to produce gasoline commercially. [Defendant] had knowledge of its customers' practices in this respect and indemnified its customers with respect thereto.

where the court referenced early twentieth century common law and stated: "When infringement results from the participation and combined action of several parties, they are all joint infringers and jointly liable for patent infringement."[172] Even though the court also briefly discussed the law with regard to inducement, it nevertheless found that the claimed methods were "singularly and jointly infringed" by the defendants.[173]

Nevertheless, there were still cases where the courts performed the two-step analysis. For example, in *E.I. DuPont*, the defendant performed the first step of the plaintiff's claimed method and sold the results to its customers to complete the remaining steps.[174] Instead of holding the defendant liable under § 271(a), the court found that the customers were the infringers because they performed all but one step of the claimed method, and that the defendant was liable as an indirect infringer.[175] On the other hand, *Free Standing Stuffer, Inc. v. Holly Development Co.* involved a different situation—the defendant itself did not perform any of the claimed steps. The defendant gave orders through its advertising agency, a separate company, to printing companies and newspaper companies, who collectively performed all the steps of the plaintiff's claim on a method for direct response advertising.[176] The court found that since the defendant "by its various acts actively induced the acts of the printer, the newspapers and others who carried out specific steps of the [claimed] method," it was "liable as an infringer for having actively induced infringement of the patent under 35 U.S.C. § 271(b)."[177] *Faroudja* also involved a similar situation. The defendant was accused of inducing its customers to use its television line doublers in a manner that, combined with steps done by third parties, amounted to performance of all the claimed steps of the plaintiff's patent.[178] However, the court found that the relationship between the customers and the third parties was not sufficient to warrant a determination of underlying direct infringement to

> Defendant actively induced these acts of infringement by its customers and contributed to that infringement.

Id.

172. Shields v. Halliburton Co., 493 F. Supp. 1376, 1389 (W.D. La. 1980).

173. *Id.*

174. E.I. DuPont De Nemours & Co. v. Monsanto Co., 903 F. Supp. 680, 734 (D. Del. 1995).

175. *Id.* at 735, 737.

176. Free Standing Stuffer, Inc. v. Holly Dev. Co., No. 72 C 1070, 1974 WL 20219, at *14 (N.D. Ill. Dec. 24, 1974).

177. *Id.*

178. Faroudja Labs., Inc. v. Dwin Elecs., Inc., No. 97–20010 SW, 1999 WL 111788, at *6 (N.D. Cal. Feb. 24, 1999).

support the plaintiff's claim of inducement.[179] Notwithstanding these isolated instances where courts assessed liability based on indirect infringement, since the turn of the millennium, courts have consistently shied away from this two-step approach when they discussed the issue of divided infringement of method claims.[180]

In *Cordis Corp. v. Medtronic AVE, Inc.*, the court examined the relationship between a medical device company and physicians and assessed whether their acts added up to direct infringement under § 271(a).[181] The court stated: "To constitute a predicate act of direct infringement of a method claim, either a single entity must perform every step of the method or, if two or more entities perform different steps of the method, those entities must have some connection to each other."[182] Similarly, in *Marley Mouldings Ltd. v. Mikron Industries, Inc.*, the court held that an entity could directly infringe a method patent even where the various steps of the patent were performed by distinct entities, as long as there was "some connection between the entities performing the steps."[183] As the court in *Applied Interact v. Vermont Teddy Bear Co.* noted: "[D]irect infringement may be sustained when a method claim is performed by connected entities and particularly where the patent contemplates action by at least two actors."[184] Subsequently, *On Demand*,[185] *BMC Resources*,[186] *Muniauction*,[187] and *emsCharts*[188] all determined liability based on direct infringement by different entities.

In sum, the enactment of § 271 changed the analytical framework for finding indirect infringement by introducing a two-step analysis. However, because of the way § 271(a) is written, many courts inadvertently resorted to the one-step analysis under the old regime for divided infringement of

179. *Id.* at *6–7.

180. *See, e.g.*, BMC Resources, Inc. v. Paymentech, L.P., 498 F.3d 1373, 1381 (Fed. Cir. 2007) (assessing direct instead of indirect infringement); Applied Interact, LLC v. Vermont Teddy Bear Co., No. 04 Civ. 8713 HB, 2005 WL 2133416, at *4 (S.D.N.Y. Sept. 6, 2005) (same); Cordis Corp. v. Medtronic AVE, Inc., 194 F. Supp. 2d 323, 350 (D. Del. 2002) (same).

181. *Id.* at 349.

182. *Id.*

183. Marley Mouldings Ltd. v. Mikron Indus., Inc., No. 02 C 2855, 2003 WL 1989640, at *2 (N.D. Ill. Apr. 30, 2003).

184. Applied Interact, LLC v. Vermont Teddy Bear Co., Inc., No. 04 Civ. 8713 HB, 2005 WL 2133416, at *5 (S.D.N.Y. Sept. 6, 2005).

185. On Demand Mach. Corp. v. Ingram Indus., Inc., 442 F.3d 1331, 1345 (Fed. Cir. 2006).

186. BMC Resources v. Paymentech, L.P., 498 F.3d 1373, 1381 (Fed. Cir. 2007).

187. Muniauction, Inc. v. Thomson Corp., 532 F.3d 1318, 1330 (Fed. Cir. 2008).

188. Golden Hour Data Sys., Inc. v. emsCharts, Inc., 614 F.3d 1367, 1381 (Fed. Cir. 2010).

method claims. In this regard, the *Akamai* majority is correct in using § 271(b) to find liability for the divided infringement issues before the court. Also, for the two-step analytical framework to properly cover divided infringement of method claims, and for § 271(a) to mirror the rights conferred to a patentee, Congress likely intended that the underlying infringement for § 271(b) need not be committed by a single entity. Thus, the *Akamai* majority is also correct in this regard in abolishing the single-entity rule for the purpose of finding inducement liability.

2. *Bypassing the Single-Entity Rule When Using § 271(b)*

Although the *Akamai* rule is correct in terms of patent policy and its use of § 271(b) as intended by Congress, it nevertheless has a legal deficiency. Even though the Federal Circuit held that for the purpose of finding inducement liability, there is no requirement for the single-entity rule between the induced entities,[189] it left intact this requirement for the purpose of applying the doctrine of joint infringement.[190] As explained below, this failure to completely abolish the single-entity rule results in inconsistent statutory interpretation. To support the new rule it created, the majority argued that the required underlying infringement for § 271(b) does not have to be infringement under § 271(a)[191] but statutory construction and binding precedents show otherwise, as discussed below. Thus, inconsistent statutory interpretation results when the court requires the single-entity rule for the doctrine of joint infringement under § 271(a) but ignores the same rule solely for the purpose of reading § 271(a) through § 271(b) when finding inducement liability. Doing so means that the term "whoever" in § 271(a) is read narrowly in the former situation (the single-entity rule applies to "whoever") but is read broadly in the latter situation (no relationship is required), resulting in an impermissible inconsistent reading of the same statutory term.

Courts should begin statutory interpretation by looking at "the language [of the statute] itself,"[192] i.e., by simply reading the plain meaning of the statute. Only when the statutory language fails to provide a clear meaning

189. Akamai Techs., Inc. v. Limelight Networks, Inc., 692 F.3d 1301 (Fed. Cir. 2012).

190. *Id.*

191. Akamai Techs., Inc. v. Limelight Networks, Inc., 692 F.3d 1301, 1314 (Fed. Cir. 2012) ("[N]othing in the text of either subsection [(a) or (b)] suggests that the act of 'infringement' required for inducement under section 271(b) must qualify as an act that would make a person liable as an infringer under section 271(a).").

192. United States v. James, 478 U.S. 597, 604 (1986).

should legislative history be used in deciphering legislative intent.[193] Policy considerations come last in statutory interpretation, and their use is controversial.

Here, a reading of the statute supports the requirement that inducement under § 271(b) be based upon § 271(a). As discussed earlier, § 271(a) states "whoever without authority makes, uses, offers to sell, or sells any patented invention . . . infringes the patent,"[194] while § 271(b) states "[w]hoever actively induces infringement of a patent shall be liable as an infringer."[195] Based on the "normal rule of statutory construction that identical words used in different parts of the same act are intended to have the same meaning,"[196] a rule that also applies to different grammatical forms of the same word,[197] "infringement" under § 271(b) means the actions performed by whoever "infringes" a patent under § 271(a). Further, even though the majority argued that § 271(e)(2), (f), and (g) indicated that the term "infringement" could be defined "in a way that is not limited to the circumstances that give rise to liability under § 271(a)"[198] and thus § 271(b) should not be grounded within § 271(a), these subsections point to the opposite conclusion. The conclusion is that "when Congress intended to cover acts not encompassed within the traditional definition of infringement, it knew how to create an alternative definition thereof."[199] For example, § 271(a) specifies that the making, using, offering to sell, selling, and importing a patented invention "infringes the patent."[200] Similarly, § 271(e)(2) enumerates situations that go beyond uses reasonably related to the development and submission of information to the FDA, and thus constitute "an act of infringement."[201] On the other hand, § 271(b), (c), (f) and (g) explain situations where an entity will be "liable as an infringer" if it facilitates "infringement."[202] These distinctions demonstrate that Congress knew which sections define infringement and which ones

193. *See* Ardestani v. INS, 502 U.S. 129, 135–36 (1991) ("[T]he 'strong presumption' that the plain language of the statute expresses congressional intent is rebutted only in 'rare and exceptional circumstances,' when a contrary legislative intent is clearly expressed." (citations omitted)).

194. 35 U.S.C. § 271(a) (2006).

195. 35 U.S.C. § 271(b) (2006).

196. Sullivan v. Stroop, 496 U.S. 478, 484 (1990) (internal quotation marks omitted).

197. *See, e.g.*, Taniguchi v. Kan Pac. Saipan, Ltd., 132 S. Ct. 1997, 2004 (2012) (construing the term "interpreter" in one part of a statute to have a meaning consistent with the term "interpretation" in another part of the statute).

198. Akamai Techs., Inc. v. Limelight Networks, Inc., 692 F.3d 1301, 1314 (Fed. Cir. 2012).

199. *Id.* at 1343 (Linn, J., dissenting).

200. 35 U.S.C. § 271(a) (2006).

201. 35 U.S.C. § 271(e)(2) (2006).

202. 35 U.S.C. § 271(b)–(c), (f)–(g) (2006).

define indirect liability, i.e., when an actor is "liable as an infringer." Since only § 271(a) and (e)(2) define infringement, and § 271(e)(2) is irrelevant to divided infringement of method claims, only the language in § 271(a) is relevant to the issue raised in *Akamai*.

Moreover, the proposition that § 271(b) must be predicated upon § 271(a) is still supported by legislative history even if, *arguendo*, it is not supported by a plain reading of § 271. In the Congressional report accompanying H.R. 7794, the eventual bill that introduced § 271, the Committee on the Judiciary stated, "Section 271, paragraph (a), is a declaration of what constitutes infringement."[203] Thus, it is clear that when § 271(b) states that "[w]hoever actively induces infringement of a patent shall be liable as an infringer," the term "infringement" is "infringement under § 271(a)." As one commentator noted, perhaps because § 271 was drafted by patent lawyers, its structure resembles an independent claim and its dependent claims.[204] By this rationale, § 271(b) cannot be met unless § 271(a) is met—there can be no inducement liability without infringement under § 271(a).

Furthermore, Supreme Court precedent also dictates that direct infringement under § 271(a) is a requirement for indirect infringement liability. In *Global-Tech Appliances, Inc. v. SEB S.A.*, the Court stated that inducement of infringement under § 271(b) means that "[an] inducer lead[s] another to engage in conduct that happens to amount to infringement, i.e., the making, using, offering to sell, selling, or importing of a patented invention" under § 271(a).[205] Similarly, in *Aro*, the Court reasoned that the defendant may be liable for indirect infringement "if, but only if, [the defendant's customer's action] would in itself constitute a direct infringement under § 271(a)."[206]

Therefore, inducement liability under § 271(b) must be predicated upon infringement under § 271(a). However, the *Akamai* rule cannot be squared with this rule because they culminate in inconsistent statutory interpretation. Under the *Akamai* rule, there will be situations where an entity is liable under § 271(b) for inducing the concerted action of loosely connected entities. Nevertheless, the action of such entities might not constitute infringement

203. H.R. REP. NO. 82-1923, at 9 (1952).

204. Charles W. Adams, *A Brief History of Indirect Liability for Patent Infringement*, 22 SANTA CLARA COMPUTER & HIGH TECH. L.J. 369, 386 (2006).

205. Global-Tech Appliances, Inc. v. SEB S.A., 131 S. Ct. 2060, 2065 (2011).

206. Aro Mfg. Co. v. Convertible Top Replacement Co., 365 U.S. 336, 341 (1961). Although the Supreme Court discussed this rule in the context of contributory infringement under § 271(c), it also applies to inducement, for both types of indirect infringement deal with acts that promote "infringement." *Id.*; 35 U.S.C. § 271(b)–(c) (2006).

under § 271(a) because of the entities' failure to meet the single-entity rule, which is still a requirement for the sole purpose of finding infringement under § 271(a). If the single-entity rule is not a requirement when reading § 271(a) through the lens of § 271(b), as held by the *Akamai* majority, "whoever" in § 271(a) may be read broadly as "entities that have no relationship whatsoever." However, the continued existence of the single-entity rule for the sole purpose of applying the doctrine of joint infringement under § 271(a) means that the term "whoever" is read narrowly as "entities who have a 'direction or control' or agency relationship among them." This directly contradicts Supreme Court precedent that the same term within a statute must be read in a consistent manner,[207] and is thus clearly impermissible.

C. LOWERING THE RELATIONSHIP STANDARD FOR THE DOCTRINE OF JOINT INFRINGEMENT

As explained above, the single-entity rule cannot be eliminated solely for the purpose of finding liability under § 271(b). However, if the single-entity rule were completely abolished, § 271(a) would be unduly augmented to cover unrelated entities that coincidentally perform all the steps of a method claim. Thus, the current statutory framework is imperfect for capturing divided infringement of method claims. Nevertheless, it is still desirable to have divided infringement law that reliably covers all situations in which a patentee's right is violated. Under such statutory constraints, a rule that reaches the same equitable result as the *Akamai* rule but avoids the problem of inconsistent statutory interpretation is the adoption of a looser but consistent relationship standard for both reading § 271(a) on its own and reading § 271(a) for the purpose of applying § 271(b).

Two good alternatives to the "direction or control" standard or single-entity rule are the "participation and combined action" standard adopted in *Shields*[208] or the similar "some connection" standard espoused in *Faroudja*.[209]

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207. Ratzlaf v. United States, 510 U.S. 135, 143 (1994) ("A term appearing in several places in a statutory text is generally read the same way each time it appears. We have even stronger cause to construe a single formulation . . . the same way each time it is called into play.") (citations omitted). In *Ratzlaf*, the Court refused to construe the term "willfully violating" in 31 U.S.C § 5322(a) variably when § 5332(a) referred to different criminal statutes. *See also* Reno v. Bossier Parish Sch. Bd., 528 U.S. 320, 329–30 (2000) (refusing to "adopt a construction that would attribute different meanings to the same phrase in the same sentence, depending on which object it is modifying"); Brown v. Gardner, 513 U.S. 115, 118 (1994) (stating that the "presumption that a given term is used to mean the same thing throughout a statute" is "surely at its most vigorous when a term is repeated within a given sentence").

208. Shields v. Halliburton Co., 493 F. Supp. 1376, 1389 (W.D. La. 1980).

The benefit of these standards is their flexibility. In situations of divided performance of a claimed method, these standards do not rigidly require a court to find liability only when the relationship between entities approximates that of agency. As shown by the courts that applied these standards in cases such as *Shields*,[210] *Cordis*,[211] *Marley Mouldings*,[212] and *Vermont Teddy Bear*,[213] they are flexible enough to give a court discretion in determining whether the level of cooperation between the defendants amounts to divided infringement. Also, because of their flexibility, these standards also have the benefit of holding an entity liable when it induces divided infringement by other loosely connect entities while keeping its hands off the claimed steps. Moreover, a flexible rule is in line with patent law precedent from the Supreme Court, which typically favors flexibility over rigid bright-line rules.[214]

A great concern by those advocating a tighter relationship standard such as the single-entity rule is the possible liability on the innocently induced. However, such fear is unwarranted. If the innocently induced are individuals, a patentee will not bring suit for they are not cost-effective litigation targets or are likely to be constituents of the patentee's market, such as Internet users or doctors. If the innocently induced are more sophisticated parties such as corporations, they can incorporate an indemnification clause in their business contract with an entity that is later found to have induced it to perform some steps of a claimed method. Moreover, even if a patentee brings suit against an innocent party, a court will have the leeway under these flexible standards to deny relief altogether, reminding the patentee that it is

209. Faroudja Labs., Inc. v. Dwin Elecs., Inc., No. 97–20010 SW, 1999 WL 111788, at *5 (N.D. Cal. Feb. 24, 1999).

210. Shields, 493 F. Supp. at 1389.

211. Cordis Corp. v. Medtronic AVE, Inc., 194 F. Supp. 2d 323, 349–50 (D. Del. 2002).

212. Marley Mouldings Ltd. v. Mikron Indus., Inc., No. 02 C 2855, 2003 WL 1989640, at *2 (N.D. Ill. Apr. 30, 2003).

213. Applied Interact, LLC v. Vermont Teddy Bear Co., Inc., No. 04 Civ. 8713 HB, 2005 WL 2133416, at *4–5 (S.D.N.Y. Sept. 6, 2005).

214. *See, e.g.*, Bilski v. Kappos, 130 S. Ct. 3218, 3226–27 (2010) (rejecting the "machine-or-transformation" test as the only touchstone for subject matter eligibility for method inventions); KSR Int'l Co. v. Teleflex Inc., 550 U.S. 398, 419 (2007) (rejecting rigid application of the "teaching, suggestion, or motivation" test for determining obviousness); eBay Inc. v. MercExchange, L.L.C., 547 U.S. 388, 393–94 (2006) (rejecting default permanent injunctions upon a finding of infringement); Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., Ltd., 535 U.S. 722, 737–38 (2002) (rejecting absolute bar to the doctrine of equivalents by prosecution history estoppel); Pfaff v. Wells Elecs., Inc., 525 U.S. 55, 63 (1998) (rejecting a rigid rule that an invention cannot be "on sale" under 35 U.S.C. § 102(b) until it has been reduced to practice).

improper to bring suit against entities that are induced by no fault of their own.

IV. CONCLUSION

Under our imperfect statutory framework for capturing patent infringement, the single-entity rule is a loophole in the law that must be fixed. Without reliable enforcement of patent rights, society is bound to lose out on the benefits of certain inventions. We might be uncertain of the importance of such inventions or their potential for future growth, but that is precisely why we should protect them. As the Supreme Court emphasized in *Diamond v. Chakrabarty*, the inventions "most benefitting mankind" are the ones that we cannot foresee.[215] In *Akamai*, the Federal Circuit created a new rule that reaches this equitable result by applying § 271(b) as intended by Congress. Nevertheless, this rule is impermissible because it results in inconsistent statutory interpretation. A better approach is to deal directly with the single-entity rule under § 271(a) and lower the relationship requirement for the doctrine of joint infringement to the flexible "participation and combined action" standard or "some connection" standard. These standards can cure the deficiency of the single-entity rule while giving courts sufficient discretion to shield innocently induced parties from infringement liability.

215. Diamond v. Chakrabarty, 447 U.S. 303, 316 (1980).

DEFINING A NATURAL PHENOMENON AFTER *PROMETHEUS*

Ethan M. Weiner†

The Supreme Court's historical jurisprudence on patentable subject matter is wrought with confusion, confounding academics and practitioners alike.[1] The *Benson-Flook-Diehr* trilogy[2] left those in the field uncertain as to how much needed to be added to a natural phenomenon to make it a patentable process rather than an attempt to monopolize a decidedly unpatentable law of nature. After *Diehr*, the Supreme Court was silent on the issue of patentable subject matter for nearly thirty years. In 2010, the Supreme Court reentered the field with a whimper with the *Bilski* decision.[3] Many in the field hoped that the *Bilski* decision would finally provide clear guidance to determine what is patentable subject matter.[4] *Bilski* was ultimately a disappointment, and instead of providing a test for patentable subject matter, the Court's narrow holding simply stated that the machine-or-transformation test could not be the exclusive test for the patent eligibility of process claims.[5] Perhaps recognizing the need to put forward an affirmative test of patentable subject matter, the Supreme Court granted certiorari in *Mayo Collaborative Services v. Prometheus Laboratories, Inc.*[6]

As framed by the *Prometheus* Court, patent eligibility for claims that depend on natural laws centers on the issue of whether or not "the patent

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1. *See* Peter S. Menell, *Forty Years of Wondering in the Wilderness and No Closer to the Promised Land: Bilski's Superficial Textualism and the Missed Opportunity to Return Patent Law to Its Technology Mooring*, 63 STAN. L. REV. 1289 (2011).

2. Diamond v. Diehr, 450 U.S. 175 (1981); Parker v. Flook, 437 U.S. 584 (1978); Gottschalk v. Benson, 409 U.S. 63 (1972).

3. Bilski v. Kappos, 130 S. Ct. 3218 (2010).

4. *See* Menell, *supra* note 1, at 1291.

5. *Bilski*, 130 S. Ct. at 3226–27.

6. Mayo Collaborative Servs. v. Prometheus Labs., Inc., 131 S. Ct. 3027 (2011) (granting certiorari). Justice Breyer had earlier recognized the need to establish clear rules of patentable subject matter to guide the balance between incentive and overprotection. *See* Lab. Corp. of Am. Hlds. v. Metabolite Labs., Inc., 548 U.S. 124 (2006) (Breyer, J., dissenting from dismissal of certiorari as improvidently granted) ("One way in which patent law seeks to sail between these opposing and risky shoals [of overprotection and incentive to invent] is through rules that bring certain types of invention and discovery within the scope of patentability while excluding others.").

claims add *enough*" to a natural law to make them an application of the natural law rather than an attempt to claim the natural law itself.[7] Clarity on this issue could provide stability to the emerging field of medical diagnostics, which frequently relies on physiological responses to personalize treatment plans or diagnose diseases.[8] Unfortunately, the *Prometheus* decision was not the guiding beacon for patentable subject matter that the PTO, the Federal Circuit, and inventors anxiously awaited. Instead, the granting of certiorari was nothing more than the song of Sirens, leaving inventors shipwrecked on an island of patentable subject matter confusion. The *Prometheus* Court failed to deliver any clear rule controlling patentable subject matter for process claims.

This Note argues that the Supreme Court's poorly crafted *Prometheus* decision obfuscated not only the methodology of examining a process claim relying on a natural phenomenon, but also the very understanding of a natural phenomenon itself. If not carefully applied by the Federal Circuit, the *Prometheus* decision risks destabilizing the patent system and industries that rely on applications of the natural laws, particularly computer software, medical diagnostics, and biotechnology. Part I traces the history of the natural phenomenon doctrine and explores the difficulties courts have had in distinguishing natural phenomena and abstract ideas from their applications. It also sets forth the preemption and inventive concept standards that courts use to determine whether a claim involving a natural phenomenon is patent-eligible. Part II closely examines the recent *Prometheus* decision and demonstrates how the Supreme Court's misunderstanding of a natural phenomenon makes it difficult to appreciate the inventive contribution embodied in claims related to medical diagnostics. Part III attempts to distinguish natural correlations from man-made correlations and argues how a poor definition of a natural phenomenon makes the natural phenomenon doctrine impracticable to apply.

I. THE NATURAL PHENOMENON DOCTRINE

While the basic premise of the patent system is to "promote the Progress of . . . the useful Arts,"[9] some commentators disagree as to the scope of patentable subject matter that best achieves this goal.[10] An overly broad allowance of patent monopolies may ultimately inhibit downstream

7. Mayo Collaborative Servs. v. Prometheus Labs., Inc., 132 S. Ct. 1289, 1297 (2012).

8. *See* Allen K. Yu, *Within Subject Matter Eligibility—A Disease and a Cure*, 84 S. CAL. L. REV. 387, 401 (2011).

9. U.S. CONST. art I, § 8.

10. *See, e.g.*, Robert P. Merges & Richard R. Nelson, *On the Complex Economics of Patent Scope*, 90 COLUM. L. REV. 839 (1990).

innovation, as inventors are unable to make technological progress without approval from other patent holders.[11] On the other hand, the right to a patent may encourage inventors, allowing them to hedge failure through the promise of a limited market monopoly if they are successful.[12] The scope of patentable subject matter can therefore be thought of as controlling the balance between the two theories of downstream obstruction and inventor incentive.[13] Allowing an overly broad scope for patentable subject matter will generate too many blocking patents, hindering downstream technological development, while too narrow scope risks nullifying the incentive effects. The scope of patentable subject matter can be controlled through § 101 by putting limits on what types of inventions can be patented.[14]

Section 101 of the Patent Act provides that "[w]hoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title."[15] This text is largely unchanged from its original drafting by Thomas Jefferson in 1793.[16] A strict textualist reading of the statute suggests that both discoveries and inventions are included in patentable subject matter. Yet over 150 years of judicial common law has restricted the breadth of this section. Specifically, the Supreme Court has declared "laws of nature, physical phenomena, and abstract ideas" to be non-patentable subject matter.[17] The discovery of a natural phenomenon is not sufficient to earn a patent on that natural phenomenon. An application of a natural law, however, can be patentable subject matter.[18]

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11. *See* Maureen A. O'Rourke, *Toward a Doctrine of Fair Use in Patent Law*, 100 COLUM. L. REV. 1177, 1194 (2000) (describing how "blocking patents" generate negotiating leverage over a future inventors improving on a patented invention); Michael A. Heller & Rebecca S. Eisenberg, *Can Patents Deter Innovation? The Anticommons in Biomedical Research*, 280 SCIENCE 698 (1998) (arguing that an overabundance of patents will inhibit an inventor's ability to further progress the technological art).

12. *See* Peter Menell & Suzanne Scotchmer, *Intellectual Property Law*, *in* 2 HANDBOOK OF LAW & ECONOMICS 1473, 1478 (A. Mitchell Polinsky & Steven Shavell eds., 2007).

13. *See* Mark A. Lemley, et al., *Life After* Bilski, 63 STAN. L. REV. 1315, 1328–29 (2011).

14. *See id.* at 1329–32 (distinguishing scope limitations in § 101 and § 112).

15. 35 U.S.C. § 101 (2006).

16. *See* Patent Act of 1793, ch. 11, 1 Stat. 318, 319–320 (1793) (patents were available for "any new and useful art, machine, manufacture or composition of matter" or improvements thereof). The term "art" was changed to "process" in the 1952 Patent Act without any substantive change to its meaning. *See* Menell, *supra* note 1, at 1296.

17. Bilski v. Kappos, 130 S. Ct. 3218, 3225 (2010) (quoting Diamond v. Chakrabarty, 447 U.S. 303, 309 (1980)).

18. *See* Diamond v. Diehr, 450 U.S. 175, 187–88 (1981).

Several justifications for the exclusion of natural laws from patentable subject matter have been suggested including altruistic motives of the discoverers of natural laws, natural rights of others, lack of novelty, claim overbreadth, and preserving research tools in the public domain.[19] Underlying each of these concerns is the idea that using a patent as an incentive for discovering natural laws would slow the progress of technology rather than encourage its development.[20] Courts have generally employed two different but overlapping tests to determine if the scope of a method claim has become so broad that it should be unpatentable. The first is the preemption standard.[21] This approach directly confronts when a claim is so broad that it prevents others from using a natural phenomenon.[22] The second is the inventiveness standard, which assesses when an inventor has done enough to apply the natural law to warrant a patent.[23] The Court of Customs and Patent Appeals ("C.C.P.A.") and, subsequently, the Federal Circuit struggled to integrate these two standards into a single coherent test. The C.C.P.A. developed the *Freeman-Walter-Abele* test, which the Federal Circuit replaced with the machine-or-transformation test.[24] The Supreme Court, however, dismissed the machine-or-transformation test, without articulating the proper test for patentable subject matter.[25]

A. PREEMPTION STANDARD

Courts frequently express concern that allowing patents on natural phenomena would hinder downstream scientific progress.[26] If a discoverer of a law of nature lays claim to the natural law, then no later inventor or

19. *See* Alan L. Durham, *Natural Laws and Inevitable Infringement*, 93 MINN. L. REV. 933, 952–60 (2009) (giving a critical assessment of each of these justifications); *see also* Joshua D. Sarnoff, *Patent-Eligible Inventions After* Bilski*: History and Theory*, 63 HASTINGS L.J. 53, 84–90 (2011) (describing how Lockean moral principles of "God-given commons" contributed to the ban on patentability of laws of nature).

20. *See* Durham, *supra* note 19, at 951–52.

21. *See* Gottschalk v. Benson, 409 U.S. 63, 72 (1972) (holding that a claim that wholly preempts a mathematical algorithm is not patentable subject matter).

22. *See Bilski*, 130 S. Ct. at 3231 (holding that a patent on hedging was not patentable subject matter because it would pre-empt all use of an abstract idea).

23. Parker v. Flook, 437 U.S. 584, 594 (1978) (holding that a mathematical algorithm cannot be patented unless there is an inventive concept).

24. *See In re* Bilski, 545 F.3d 943, 958–59 (Fed. Cir. 2008).

25. *See Bilski*, 130 S. Ct. at 3226–27.

26. *See, e.g.*, Classen Immunotherapies, Inc. v. Biogen IDEC, 659 F.3d 1057, 1080 (Fed. Cir. 2011) (Rader, J., concurring) (arguing that claims that "so clearly offend the constitutional imperative to promote the useful arts, where they preempt all application of a principle idea" are unpatentable subject matter); *Bilski*, 130 S. Ct. at 3253 (Stevens, J., concurring) (arguing that patents on laws of nature, natural phenomena, and abstract ideas "would stifle the very progress that Congress is authorized to promote").

discoverer could exploit that natural law without permission from the patent owner during the term of the patent.[27] The downstream inventor would be preempted from utilizing the natural law because of the power bestowed onto the upstream patent holder. Of course, all patents preempt later inventors to some extent, as many inventions are made through incremental improvements of previously patented inventions. For example, a patent on a new microprocessor chip would preempt any new computer using that chip. In these circumstances, licensing agreements are frequently made between inventors to avoid an absolute bar to downstream innovations. Nevertheless, the Supreme Court has found patents on natural phenomena to be overly preemptive.[28]

To what extent a patent preempts later inventions depends on the scope of its claims. The broader the scope of the claim, the more preemption affects downstream innovations. If the goal of the patent system is to incentivize the most technological innovation in the shortest period of time, then patent scope should be broad enough to encourage the development of a technology but not so broad as to preclude others from entering that technological field and making their own inventive contributions.[29] Put another way, if a patent claim is so broad that no inventions could be made in that field without ensnaring the prior art, other inventors may be unwilling to continue exploring the field.[30] Historically, the courts drew a line finding natural law patents as overly preemptive, while patents applying natural law as reasonably preemptive.[31]

The origins of the preemption doctrine can be traced back more than 150 years to *O'Reilly v. Morse*, although the focus of the Court's concern was the written description requirement rather than patentable subject matter.[32]

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27. *See* Zenith Radio Corp. v. Hazeltine Research, Inc., 395 U.S. 100, 135 (1969) ("A patentee has the exclusive right to manufacture, use, and sell his invention.").

28. *See* Gottschalk v. Benson, 409 U.S. 63, 67 (1972) (explaining that natural phenomena are the "basic tools of scientific and technological work," and cannot be patented).

29. *See* Merges & Nelson, *supra* note 10, at 875–76.

30. *See also* Christina Bohannan & Herbert Hovenkamp, *IP and Antitrust: Reformation and Harm*, 51 B.C.L. REV. 905, 955 (2010) ("Overly broad claims eliminate rivalry because the patent covers not only the technology that the patentee actually invented, but other potentially competing technologies that might have entered the market had the patent not squelched them.").

31. *See* Diamond v. Diehr, 450 U.S. 175, 187 (1981) (reasoning that the inventors of a process applying an equation "do not seek to pre-empt the use of that equation" but "seek only to foreclose from others the use of that equation in conjunction with all of the other steps in their claimed process").

32. O'Reilly v. Morse, 56 U.S. 62, 113 (1853) (Morse claimed "an exclusive right to use a manner and process which he has not described and indeed had not invented").

The PTO granted Morse a patent on the electromagnetic telegraph in 1840.[33] The *Morse* Court invalidated claim 8, which claimed "electro-magnetism, however developed for making or printing intelligible characters, signs or letters, at any distances."[34] Of significant concern for the Court was preemption.

> If this claim can be maintained, it matters not by what process or machinery the result is accomplished. For aught that we now know some future inventor, in the onward march of science, may discover a mode of writing or printing at a distance by means of the electric or galvanic current, without using any part of the process or combination set forth in the [Morse] specification. His invention may be less complicated—less liable to get out of order—less expensive in construction, and in its operation. But yet if it is covered by this patent the inventor could not use it, nor the public have the benefit of it without the permission of [Morse].[35]

The concept of electro-magnetism is, presumably, a natural phenomenon. It is not something created by Morse, but something that existed in nature whether or not Morse had discovered it. But claim 8 was directed to "making or printing intelligible characters" by way of electro-magnetism.[36] The Court appeared to be more concerned with the scope of the invention, and that it claimed more than Morse actually had invented.

Morse attempted to claim more than he actually described (claiming any electro-magnetism for making letters and signs at a distance rather than the use of electro-magnetism confined to his telegraph machine), raising the concern of preemption.[37] The written description requirement in a patent application can be traced back to the Patent Act of 1793.[38] The purpose of this requirement was to instruct other inventors of the scope of the patent and to enable them to make further innovations.[39] But *Morse* expanded the purpose of the requirement to ensure the patentee's claims were not overly broad, thereby ensuring the inventor actually invented the claimed invention

33. U.S. Patent No. 1,647 (issued June 20, 1840) [hereinafter '647 Patent].

34. *See Morse*, 56 U.S. at 113; '647 Patent.

35. *Id.*

36. *See* '647 Patent.

37. *See Morse*, 56 U.S. at 113. *But see* Jur Strobos, *Stalking the Elusive Patentable Software: Are There Still Diehr or Was it Just a Flook?*, 6 HARV. J.L. & TECH. 363, 365 n.8 (1993) (distinguishing preemption from claim overbreadth).

38. *See* Jacob Adam Schroeder, *Written Description: Protecting the Quid Pro Quo Since 1793*, 21 FORDHAM INTELL. PROP. MEDIA & ENT. L.J. 63 (2010) (describing the history of the written description requirement).

39. *See* Evans v. Eaton, 20 U.S. 356, 366–67 (1822).

and preventing the preemption of downstream inventions.[40] This concern that overly broad claims might cause inventors to claim more than they actually invented ultimately led to a judicially created ban on claims covering natural phenomena.[41]

With the rise of software patents in the 1960s and 1970s, the Supreme Court began to implement this preemption doctrine to justify patent invalidity for Information Age technologies.[42] This was not done through the written description requirement, however, but by using the preemption standard to justify excluding natural phenomena as patentable subject matter under § 101.[43] The *Benson* Court held that a computer program designed to convert signals from binary-coded decimal form into pure binary form was not patentable because the "patent would wholly pre-empt the mathematical formula and in practical effect would be a patent on the algorithm itself."[44] Under the Court's reasoning, the algorithm has no "substantial practical application" outside of a computer, and therefore a patent of the algorithm, even when strictly tied to the computer, should not be patent eligible.[45] The Court acknowledged that the algorithm could be used without a computer,[46] but a patent on the algorithm when used with a computer was not sufficient to move the claim from an unpatentable abstract idea to patentable subject matter.[47]

The preemption concern in *Benson* was centered on the position that a patent should not prevent others from using "the basic tools of scientific and technological work."[48] As with the *Morse* claim, the scope of this claim was too broad to be allowed by the Supreme Court. Unlike *Morse*, however, there was no issue with the written description of the claims. Instead the *Benson* Court was concerned that the Patent Act was not intended to grant monopolies on the type of thing the inventors were attempting to claim.

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40. *See* Schroeder, *supra* note 38, at 74.

41. *See* Funk Bros. Seed Co. v. Kalo Inoculat Co., 333 U.S. 127, 130 (1948) (explaining that the only patentable invention arising from a natural phenomenon would be in its application); *see also* Le Roy v. Tatham, 55 U.S. 156, 175 (1852).

42. Information Age technologies, such as computer software and medical diagnostics, can be distinguished from Industrial Age technologies, such as mechanical machines or a new metal alloy. *See* Bilski v. Kappos, 130 S. Ct. 3218, 3227 (2010).

43. *See* Gottschalk v. Benson, 409 U.S. 63, 72 (1972) (stating a claim that wholly preempts a mathematical formula is "in practical effect" a claim over the mathematical formula itself and thus not patentable subject matter).

44. *Id.* at 71–72.

45. *Id.* at 71.

46. *See id.* at 67.

47. *Id.* at 71–72.

48. *Id.* at 67.

Benson held that claims over "[p]henomena of nature, though just discovered, mental processes, and abstract intellectual concepts," such as mathematical algorithms, were too preemptive and thus unpatentable.[49]

Following *Benson*, lower courts understood the wholly preemptive standard to be an applicable test for patentable subject matter.[50] The C.C.P.A. significantly limited this preemption standard test, as well as the *Benson* holding, as applicable only to "algorithms."[51] The two-step test established by *In re Freeman* required first, a determination that the claim recites an algorithm, and second, a determination if the claim "in its entirety . . . wholly preempts that algorithm."[52]

The Supreme Court stepped away from its "wholly preempts" language when it considered the claims at issue in *Parker v. Flook*.[53] The *Flook* claims were directed to a method of calculating an alarm limit by employing a mathematical formula.[54] But the claims were also limited to the field of "chemical conversion of hydrocarbons" and not to all uses of the algorithm.[55] The Court acknowledged that the claim does not "wholly preempt the mathematical formula" since the claim covered the use only in a specific field, leaving the formula available to the public for use outside of that field.[56] Nevertheless, the Court found the claims to be unpatentable because they did not adequately apply the formula.[57] The C.C.P.A. reformulated its *Freeman* test in response to *Flook* in *In re Walter* such that a claim need not wholly preempt the mathematical formula to be declared

49. *Id.*

50. *See In re* Chatfield, 545 F.2d 152, 155–56 (C.C.P.A. 1976) ("[T]he fundamental rationale we glean from *Benson* is that a patent containing Benson's claims would have preempted all practical use of both the underlying mathematical formula and the involved algorithm."). The preemption standard remained in contention with the "point of novelty" test, discussed *infra* Section I.B. *Compare In re* Christensen, 478 F.2d 1392, 1394 (C.C.P.A. 1973) (Lane, J.) (holding a process is unpatentable when the only "point of novelty" is a mathematical formula), *with id.* at 1396 (Rich, J., concurring) (arguing that, in accordance with *Benson*, a claim is not patentable subject matter when it preempts a formula with no application outside of the claim). The C.C.P.A. overruled *Christensen* in *In re* Taner, 681 F.2d 787 (C.C.P.A. 1982) (reasoning *Diehr* negated any point of novelty test). *See also In re* Walter, 618 F.2d 758 (C.C.P.A. 1980) ("We do not read *Flook* as adopting a 'point of novelty' test; as we have shown, such a test flies in the fact of Supreme Court precedent reaffirmed in *Flook* and does violence to the statute.").

51. *See In re* Freeman, 573 F.2d 1237, 1245 (C.C.P.A. 1978).

52. *Id.*

53. Parker v. Flook, 437 U.S. 584 (1978).

54. *Id.* at 585.

55. *Id.* at 586.

56. *Id.* at 589–90.

57. *See id.* at 590 (holding "post-solution activity" cannot transform an unpatentable mathematical algorithm into a patentable process); *see also infra* Section I.B.

unpatentable. Rather, a claim may be found unpatentable if it is directed only to solving the mathematical formula but not to applying the result of the calculation.[58]

The preemption standard for determining patentable subject matter was implemented to ensure the "basic tools of scientific and technological work" were available for later inventors to innovate.[59] In *Morse*, the Court was concerned that a patent on electro-magnetism would prevent later inventors from utilizing that natural phenomenon.[60] In *Benson*, the Court was concerned that a patent would wholly preempt a mathematical formula.[61] However the Supreme Court also recognized that a "wholly" preemptive standard was insufficient in *Flook*, as a claim might not be wholly preemptive but still not sufficiently apply a natural law to warrant a patent.[62] The question remains as to how preemptive is too preemptive.[63]

B. INVENTIVE CONTRIBUTION STANDARD

In addition to preemption concerns, courts frequently express concern that an applicant should not be granted a patent if she does not make a sufficiently inventive contribution.[64] When the invention relates to a natural phenomenon, it can be difficult to determine whether a claim is something inventive or "new" rather than a claim on the natural phenomenon itself. While the preemption standard inquires whether a claim is so broad it prevents other uses of a natural phenomenon, the inventive contribution standard inquires whether or not a natural phenomenon has been adequately applied.[65] The finding that a claim is "new" under § 101 is presumably different from the novelty requirement of § 102, which requires an element-by-element approach to determine what is new in the invention.[66] Instead,

58. *See In re* Walter, 618 F.2d 758, 767 (C.C.P.A. 1980).

59. Gottschalk v. Benson, 409 U.S. 63, 67 (1972).

60. *See* O'Reilly v. Morse, 56 U.S. 62, 113 (1853).

61. *See* Gottschalk v. Benson, 409 U.S. 63, 71–72 (1972).

62. *See* Parker v. Flook, 437 U.S. 584, 589–90 (1978).

63. *See* Samantak Ghosh, *Prometheus and the Natural Phenomenon Doctrine: Let's not Lose Sight of the Forest for the Trees*, 90 J. PAT. & TRADEMARK OFF. SOC'Y 330, 349–50 (2012).

64. Cuno Eng'g Corp. v. Automatic Device Corp., 314 U.S. 84, 90 (1941) (explaining that to be patentable, a claim must be more than "new or useful" but must actually be an "invention").

65. *See Flook*, 437 U.S. at 594.

66. *See In re* Robertson, 169 F.3d 743, 745 (Fed. Cir. 1999) (explaining that each element must be found, either expressly or inherently, in the prior art to anticipate an invention).

inventiveness under § 101 should, in theory, be determined considering the claim as a whole.[67]

Conceptually, the discovery of a natural phenomenon is neither inventive nor new. The natural phenomenon existed prior to its discovery, and remains unchanged after its discovery.[68] The Supreme Court reaffirmed this principle in *Funk Bros.*, declaring laws of nature are "free to all men and reserved exclusively to none."[69] The *Funk Bros.* claim was directed to a combination of several strains of nitrogen-fixing bacteria, which, to the surprise of the industry, did not inhibit one another.[70] Without dismissing the importance of the discovery, the Court held that the applicants could not patent the claims because there was nothing inventive.[71] The *Funk Bros.* Court reasoned that the inventor did "not create state of inhibition or of non-inhibition in the bacteria. Their qualities are the work of nature."[72] Since the discovery was a natural phenomenon rather than an invention, it was not patentable subject matter.[73] The *Funk Bros.* discovery can be compared to the claims in *Chakrabarty*, which were patentable because the genetically engineered bacteria at issue had been modified by the inventors and were not simply found in nature.[74] This concept of "inventiveness" and the determination of when a process adequately *applies* a natural law have plagued the patent field for decades.[75]

1. *Point of Novelty Test Before* Flook

Even before *Benson*, the C.C.P.A. employed the "point of novelty" test to determine when a natural phenomenon was applied rather than an attempt to claim the natural phenomenon itself.[76] Often used in connection with the

67. *See In re* Chatfield, 545 F.2d 152, 158 (C.C.P.A. 1976) (rejecting the notion that if a portion of a claim is non-statutory then the claim as a whole is non-statutory, since under § 101 the claim should be considered as a whole).

68. *See* Le Roy v. Tatham, 55 U.S. 156, 175 (1852) ("The elements of the power exist; the invention is not in discovering them, but in applying them to useful objects.").

69. Funk Bros. Seed Co. v. Kilo Inoculant Co., 333 U.S. 127, 130 (1948).

70. *See id.* at 128–29.

71. *See id.* at 132.

72. *Id.* at 130.

73. *See Id.*

74. *See* Diamond v. Chakrabarty, 447 U.S. 303, 309 (1980) (holding that under § 101, "anything under the sun that is made by man" is patentable subject matter).

75. *See generally* Irah H. Donner, *Two Decades of Gottschalk v. Benson: Putting the "Rithm" Back Into the Patenting of Mathematical Algorithms*, 5 SOFTWARE L.J. 419, 426–27 (1992) (describing the many tests for patentable subject matter used and discarded by courts).

76. *See id.* at 426–27.

mental steps doctrine,[77] the "point of novelty" test rejected any claim as unpatentable under § 101 if the only novel element of a process was a mental step or other unpatentable element, such as a natural phenomenon.[78] Thus, adding an unpatentable element to a known process would not generate a new patentable process.

The C.C.P.A. was inconsistent with its adoption of the "point of novelty" test, however, first accepting it under *In re Abrams*,[79] rejecting it under *In re Musgrave*,[80] resurrecting it in *In re Christensen*,[81] and finally rejecting it again in *In re Chatfield*.[82] *Chatfield* put particular emphasis on the need to examine the claim as a whole, rather than dissecting the claim and searching for the novel element.[83] Furthermore, the "point of novelty" test fails to allow an inventive combination of known elements to be patentable subject matter, contrary to the provisions of § 103.[84]

2. *Inventive Contribution and the Point of Novelty Test After* Flook

Much of the C.C.P.A.'s confusion over the "point of novelty" test was centered on the inconsistent approaches taken by the Supreme Court in *Flook* and *Diehr*. The Board of Appeals of the PTO originally rejected the *Flook* claims because the mathematical algorithm was the only "point of novelty."[85] The C.C.P.A., having rejected the "point of novelty" test in *Christensen*,

77. Similar to the natural phenomenon doctrine, the mental steps doctrine holds that mental steps of a process are generally unpatentable. It is to be noted that this doctrine has been highly scrutinized by both courts and commentators. *See* Kevin Emerson Collins, *Propertizing Thought*, 60 S.M.U. L. REV. 317, 355–56 (2007).

78. *See* Diamond v. Diehr, 450 U.S. 175, 200 n.15 (1981).

79. *See In re* Abrams, 188 F.2d 165 (C.C.P.A. 1951) (holding that when the novel element of a patent claim is a mental step, the claim is unpatentable). *Abrams* clarified the growing mental steps doctrine, a parallel to the point of novelty test. *See* Julie E. Cohen, *Reverse Engineering and the Rise of Electronic Vigilantism: Intellectual Property implications of "Lock-Out" Programs*, 68 S. Cal. L. Rev. 1091, 1170–71 (1995); Pamela Samuelson, *Benson Revisited: The Case Against Patent Protection for Algorithms and Other Computer Program-Related Inventions*, 39 EMORY L.J. 1025, 1034–38 (1990).

80. *See In re Musgrave*, 431 F.2d 882, 889–90 (C.C.P.A. 1970) (reasoning that difficulty interpreting the term "mental steps" could lead to an unsound rule).

81. *In re* Christensen, 478 F.2d 1392, 1394 (C.C.P.A. 1973) (holding a claim to be unpatentable where the point of novelty is a mathematical equation).

82. *See In re* Chatfield, 545 F.2d 152, 158 (C.C.P.A. 1976) (rejecting the idea of dissecting the claim to determine a point of novelty).

83. *See id.*; *see also In re* Taner, 681 F.2d 787, 790–91 (C.C.P.A. 1982) (arguing *Diehr* rejected the "point of novelty" analysis).

84. 35 U.S.C. § 103 (2006); *see Chatfield*, 545 F.2d at 158; Graham v. John Deere Co., 383 U.S. 1 (1966).

85. Parker v. Flook, 437 U.S. 584, 587 (1978).

reversed the PTO.[86] In doing so, the C.C.P.A. indicated the claims were patentable because they did not "wholly pre-empt" the mathematical algorithm.[87] In overturning the C.C.P.A. and rejecting the claims, the Supreme Court stated that the mathematical algorithm ought to be considered to be in the prior art, leaving nothing "inventive" in the claim, while at the same time rejecting the notion they were dissecting the claim.[88] *Flook* required an inventor to make some inventive contribution in addition to the mathematical formula to render a claim patentable subject matter.[89]

It is difficult to accept that the *Flook* Court's analysis was internally consistent when it claimed to evaluate the claims as a whole while at the same time it isolated the mathematical algorithm and determined that nothing, in addition to the algorithm, was inventive.[90] The latter approach by the Court necessarily dissects the claims in search of a novel element. Just as in the "point of novelty" test of the lower courts, the Supreme Court indicated that the mathematical formula was to be considered in the prior art while the remainder of the claim was examined for inventiveness.[91] The C.C.P.A. refused to believe *Flook* was endorsing any "point of novelty" approach, stating such an approach "would immeasurably debilitate the patent system," and it did not believe the Supreme Court "acted in a manner so potentially destructive."[92] Other commentators, however, suggest that *Flook* did indeed resurrect the point of novelty test with a more destructive tone, as such a method would question the patent eligibility of any drugs or computer software because both rely on some natural phenomenon.[93] The C.C.P.A. interpreted *Flook* narrowly to avoid the result that would arise under a point of novelty approach and held as patentable subject matter a process where the only novel element was a computer program.[94]

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86. *See In re* Flook, 559 F.2d 21 (C.C.P.A. 1977).

87. *Id.* at 23. *See supra* Section I.A.

88. *See Flook*, 437 U.S. at 594 ("Our approach . . . is, however, not at all inconsistent with the view that a patent claim must be considered as a whole.").

89. *Id.*

90. *See* Samuelson, *supra* note 79, at 1080–82.

91. *See Flook*, 437 U.S. at 591–92.

92. *In re* Walter, 618 F.2d 758, 766 (C.C.P.A. 1980). *But see* Mark Nusbaum, *35 U.S.C. 101 Claim Analysis—The Point of Novelty Approach*, 62 J. PAT. OFF. SOC'Y 521, 522–23 (1980) (arguing that the only way to meaningfully approach claims after *Flook* is through a "point of novelty" approach).

93. *See* Mark A. Lemley, *Point of Novelty*, 105 NW. U.L. REV. 1253, 1278 (2011). Lemley suggested that under *Flook*, a natural substance effective as a drug might not be patentable because the only point of novelty in the claim would be the physiological response of the body to the drug. Such a physiological response could be considered a natural phenomenon. *Id.*

94. *See* Diamond v. Diehr, 450 U.S. 175, 200, 205 (1981).

The dissent in *Flook* did not explicitly accuse the majority of re-establishing the point of novelty test, however it still harshly criticized the majority for doing precisely what it claimed to not be doing: dissecting the claims and looking for a novel element.[95] Such issues of novelty, the dissent argued, should be decided under § 102 and § 103, and not under § 101.[96] The divergent view between the majority and dissent was centered on how the claim was viewed. The majority viewed the claim as an unpatentable mathematical formula, and a "competent draftsman" simply added "post-solution activity" in an attempt to patent the mathematical formula itself.[97] The dissent, however, viewed the claim as a patentable process (although perhaps not novel or nonobvious under § 102 or § 103), which the applicant limited by adding a mathematical formula.[98]

The *Flook* dissent waited only three years before Justice Renquist, of the *Flook* dissent, authored the majority opinion in *Diehr*, illustrating his point.[99] *Diehr* re-emphasized that the claims should not be dissected but considered as a whole and that adding a non-patentable element to an otherwise patent eligible process does not necessarily render the entire process unpatentable under § 101 due to a lack of inventiveness.[100] But *Deihr* would not go so far as to overturn *Flook* and instead attempted to distinguish the *Deihr* claims from the *Flook* claims.[101] The Court drew a tenuous distinction between the claims, determining the *Flook* claim was not patentable because it simply calculated an alarm limit whereas the *Deihr* claim used a mathematical formula integrated in the process.[102]

But Justice Stevens, author of the *Diehr* dissent and the *Flook* majority, was not convinced that the majority was preserving the *Flook* decision.[103] Instead, the dissent accused the majority of misunderstanding what the actual claimed invention was.[104] According to Justice Stevens, if the invention was a new process that utilized a mathematical algorithm, then it should be considered patentable subject matter. But if, as the dissent argued, the

95. *See Flook*, 437 U.S. at 599 (Stewart, J., dissenting) (indicating that the issue is if the claim becomes unpatentable "simply because *one step* in the process would not patentable subject matter if considered in isolation").

96. *Id.* at 600.

97. *Id.* at 590.

98. *Id.* at 599 (Stewart, J., dissenting).

99. *See Diehr*, 450 U.S. at 175.

100. *Id.* at 188–89.

101. *Id.* at 186–87.

102. *Id.*

103. *Id.* at 211 (Stevens, J., dissenting) (arguing that the majority and the C.C.P.A. both misapplied *Flook*).

104. *Id.* at 194.

invention was simply a method of calculating how long a step of the process should take, then it is too close to an algorithm to be patentable.[105]

The *Diehr* dissent's methodology of determining what was the claimed invention was no clearer than the majority's and again appears to reiterate the point of novelty approach. Justice Stevens highlighted that the only difference between the conventional methods in the art and the claimed invention was the calculation of the mathematical formula.[106] But Justice Stevens also carefully explained the history of the point of novelty approach and how it had been dismissed by the C.C.P.A.[107]

The *Diehr* and *Flook* opinions illustrate diverging approaches to patentable subject matter. Under *Flook*, if the only novel element is unpatentable subject matter while the remainder is "conventional," then the entire claim is unpatentable. Under *Diehr*, however, if the claim is patentable subject matter without the unpatentable element, then the claim, taken as a whole, might still be patentable. Thus, under *Diehr*, a claim may still be patentable subject matter even if each element is known because the combination of the elements is inventive. The combination of *Flook* and *Diehr* has resulted in significant confusion over what is patentable subject matter. *Flook* is certainly not dead law, with courts increasingly relying on it in recent cases under the pretense that it is somehow consistent with *Diehr*.[108]

C. DEFINING A TEST FOR PATENTABLE SUBJECT MATTER

The inconsistencies of the *Benson-Flook-Diehr* trilogy left those in the field struggling to find a workable test for patentable subject matter.[109] While *Benson* made clear that an algorithm wholly preempted by a patent claim is not patentable subject matter,[110] it was unclear how much preemption would be allowed under *Flook* and *Diehr*. The conflicting approaches of *Flook* and *Diehr* also made it difficult to determine when a patent claim was adequately applied. Furthermore, each of these Supreme Court cases evaluated the patent eligibility of a claim related to a mathematical algorithm or computer

105. *Id.* at 206–07.

106. *Id.* at 208.

107. *Id.* at 200–02.

108. *See* Bilski v. Kappos, 130 S. Ct. 3218, 3227 (2010) (holding a business method to be unpatentable because it amounted to no more than an abstract idea, in view of *Benson*, *Flook*, and *Diehr*); Dennis Crouch and Jason Rantanen, *The Revival of* Parker v. Flook, PATENTLYO.COM (Oct. 5, 2012, 3:13 PM), http://www.patentlyo.com/patent/2012/10/the-revival-of-parker-v-flook.html (indicating that after a short hiatus, *Flook* has been cited with increased frequency since 2005).

109. *See* Menell, *supra* note 1.

110. *See* Gottschalk v. Benson, 409 U.S. 63, 72 (1972).

program, and the tests developed by the C.C.P.A. were formulated accordingly.[111] It was not clear if these tests were equally applicable to the other judicially created exceptions to patentable subject matter: laws of nature, natural phenomena, or abstract ideas.[112]

The C.C.P.A. developed the *Freeman-Walter-Abele* test after *Diehr* to more clearly define the limitations of the inventive contribution standard and move away from a direct application of the wholly preemptive standard used in *Benson*.[113] The applicability of this test, however, continued to be limited. First, the test was directed only to algorithms and not other natural processes. Second, the test left generally vague how to determine whether or not a process claim adequately applied the algorithm.[114] The Federal Circuit ultimately discarded the *Freeman-Walter-Abele* test in favor of the machine-or-transformation test, which held a process claim to be patentable if it was tied to a particular machine or transformed some tangible article.[115] *In re Bilski* addressed process claims covering a business method for hedging risk in a commodities market.[116] The Federal Circuit determined that the business method was not patentable subject matter because it was neither tied to a machine nor did it transform a tangible object.[117] The Federal Circuit rationalized the machine-or-transformation test on the basis of preemption, stating:

> A claimed process involving a fundamental principle that uses a particular machine or apparatus would not pre-empt uses of the principle that do not also use the specified machine or apparatus in the manner claimed. And a claimed process that transforms a particular article to a specified different state or thing by applying a fundamental principle would not pre-empt the use of the principle to transform any other article, to transform the same article but in a

111. The *Walter* test attempted to determine patentable subject matter based on whether or not the mathematical result of an algorithm was applied. *See In re* Walter, 618 F.2d 758, 767 (C.C.P.A. 1980).

112. *See* Andrei Iancu & Peter Gratzinger, *Machines and Transformations: The Past, Present, and Future Patentability of Software*, 8 NW. J. TECH. & INTELL. PROP. 247, 267–69 (2010) (describing the difficulty courts have had defining a mathematical algorithm).

113. *See In re* Abele, 684 F.2d 902, 905–06 (C.C.P.A. 1982). The *Freeman-Walter-Abele* test "had two steps: (1) determining whether the claim recites an 'algorithm' within the meaning of *Benson*, then (2) determining whether that algorithm is 'applied in any manner to physical elements or process steps.' " *In re* Bilski, 545 F.3d 943, 959 (Fed. Cir. 2008).

114. *See In re* Bilski, 545 F.3d at 959.

115. *Id.* at 956.

116. *Id.* at 949.

117. *See id.* at 966.

> manner not covered by the claim, or to do anything other than transform the specified article.[118]

The machine-or-transformation test, unlike the *Freeman-Walter-Abele* test, had broader applicability to all process claims "involving a fundamental principle" rather than only mathematical formulae.[119]

The Supreme Court rejected the machine-or-transformation test as the "sole test" for patentable subject matter but recognized it as an "important clue."[120] The Court acknowledged the machine-or-transformation test may have been more useful in the Industrial Age, but it recognized it might not be an appropriate test in the Information Age where the patent system is more frequently confronted with new technologies, such as medical diagnostics.[121] A claim could therefore be directed towards patentable subject matter but still fail the machine-or-transformation test. *Bilski* reinforced the wholly preemptive standard, but failed to provide a new test to determine when a claim is preemptive. The Supreme Court simply stated that the claims at issue in *Bilski* could not be patented because they were drawn to an "abstract idea" and thus preempted the use of hedging in all fields.[122] By abandoning the machine-or-transformation test, *Bilski* abandoned the only available test to determine when a patent claim preempts a natural law in recognition of the rising Information Age. In doing so, however, the Supreme Court failed to provide any alternative guidance beyond the non-harmonious *Benson-Flook-Diehr* trilogy.

II. BIOTECHNOLGOY PATENTS IN THE INFORMATION AGE

The most recent tests for patentable subject matter have been developed largely by considering the software patents at issue in the *Benson-Flook-Diehr* trilogy. Each of the claims at issue questioned whether or not a mathematical algorithm utilized by computer in the form of software could be within the realm of patentable subject matter.[123] To aid the patentable subject matter

118. *Id.* at 954.
119. *See id.*
120. Bilski v. Kappos, 130 S. Ct. 3218, 3227 (2010).
121. *See id.*
122. *See id.*
123. *See* Diamond v. Diehr, 450 U.S. 175, 177–78 (1981) (upholding a patent claiming a process to cure rubber even though one step of the process relies on a mathematical formula, the Arrhenius equation, to calculate a temperature); Parker v. Flook, 437 U.S. 584, 585 (1978) (invalidating a patent claiming a mathematical algorithm useful for calculating an alarm limit); Gottschalk v. Benson, 409 U.S. 63, 65 (1972) (invalidating a patent claiming a

analysis, the Federal Circuit established the machine-or-transformation test as the appropriate test to analyze a process claim for patentable subject matter.[124] The Supreme Court narrowed the applicability of this test, noting that while it may have been useful during the Industrial Age, it may not be as useful in the Information Age of software and biotechnology.[125]

Initial rumblings questioning the patentability of diagnostics tests in the biotech industry arose in *Laboratory Corp. of America Holdings v. Metabolite Laboratories, Inc.*, where the patentee claimed a method of diagnosing a vitamin deficiency by measuring homocysteine levels in a subject and correlating elevated homocysteine levels with a vitamin deficiency.[126] The patentee conceded that the correlation between homocysteine and vitamin levels is a natural phenomenon but nonetheless argued that the use of the natural phenomenon should be patentable subject matter because it is integrated into a process.[127] But Justice Breyer disagreed in his dissent from the dismissal of certiorari, stating that the claim was nothing more than a natural phenomenon with "an instruction to read some numbers in light of medical knowledge."[128] *Metabolite* is not binding law, although it did bring a dark cloud on the medical diagnostics industry. With *Metabolite* being dismissed, it was only a matter of time before the medical diagnostics industry would confront subject matter eligibility again. That opportunity arose with the filing of *Prometheus*.

A. *PROMETHEUS* IN THE LOWER COURTS

Prometheus Laboratories ("Prometheus") was the exclusive licensee of a method patent directed towards determining the appropriate dosage regime of thiopurine drugs when treating autoimmune diseases such as Crohn's disease and ulcerative colitis.[129] After administering a thiopurine drug, such as 6-mercaptopurine or azathioprine, a patient's blood could be measured for

computer program designed to convert signals from binary-coded decimal form into pure binary form).

124. *In re* Bilski, 545 F.3d 943 (Fed. Cir. 2008).

125. Bilski v. Kappos, 130 S. Ct. 3218, 3227 (2010).

126. Lab. Corp. of Am. Holdings v. Metabolite Labs., Inc., 548 U.S. 124, 125 (2006) (Breyer, J. dissenting). This case was dismissed as improvidently granted after a determination that the appellants had not argued invalidity for lack of patentable subject matter under § 101. *See id.* at 132–33.

127. *Id.* at 135–36 (respondents argue the process requires a transformation of the blood sample and produces a "useful, concrete, and tangible result" in detecting the vitamin deficiency).

128. *Id.* at 137.

129. *See* Mayo Collaborative Servs. v. Prometheus Labs., Inc., 132 S. Ct. 1289, 1293–94 (2012).

certain metabolites, such as 6-thioguanine ("6-TG") and 6-methyl-mercaptopurine ("6-MMP"), and these concentrations could be correlated to a harmful overdose or ineffective underdose of the drug.[130] The exemplar claim evaluated by the courts, claim 1, was as follows:

> A method of optimizing therapeutic efficacy for treatment of an immune-mediated gastrointestinal disorder, comprising:
>
> (a) administering a drug providing 6-thioguanine to a subject having said immune-mediated gastrointestinal disorder; and
>
> (b) determining the level of 6-thioguanine in said subject having said immune-mediated gastrointestinal disorder,
>
> wherein the level of 6-thioguanine less than about 230 pmol per $8x10^8$ red blood cells indicates a need to increase the amount of said drug subsequently administered to said subject and
>
> wherein the level of 6-thioguanine greater than about 400 pmol per $8x10^8$ red blood cells indicates a need to decrease the amount of said drug subsequently administered to said subject.[131]

Mayo Collaborative Services ("Mayo") bought and used tests manufactured by Prometheus, but soon announced its intention to develop its own test.[132] Prometheus brought an infringement suit against Mayo, who responded that the patent was invalid under § 101.[133] Drawing from Justice Breyer's dissenting opinion in *Metabolite*, the district court determined that while the patent was infringed, it was also invalid because the claim was an attempt to monopolize a natural phenomenon.[134] The district court construed the claim to comprise three steps: an "administering" step, a "determining" step, and a "warning" step.[135] The "administering" and "determining" steps were categorized by the district court as "conventional" "data-gathering steps" insufficient to improve a natural phenomenon into the realm of patentable subject matter under *Flook*.[136] The "warning" step, according to the district court, was only a "mental step" employing a natural

130. *Id.* at 1294.
131. U.S. Patent No. 6,355,623 col. 20 l. 10–25 (filed Apr. 8, 1999).
132. *See Prometheus*, 132 S. Ct. at 1295–96.
133. *See* Prometheus Labs., Inc. v. Mayo Collaborative Servs., No. 04CV1200 JAH (RBB), 2008 WL 878910 (S.D. Cal. Mar. 28, 2008).
134. *Id.* at *7–8.
135. *Id.* at *6.
136. *Id.*

phenomenon.[137] Finally, the district court concluded that the claim " 'wholly pre-empts' all practical use" of the natural phenomenon.[138]

The Federal Circuit reversed, originally stating in its pre-*Bilski* decision that the "definitive test" for a process claim is the machine-or-transformation test.[139] The Federal Circuit rejected the categorization of the administering and determining steps as "data-gathering" and instead explained them to be "transformative."[140] Further, the Federal Circuit stated that the administering and determining steps were an integral part of the method of treatment, and therefore went beyond "insignificant extra-solution activity."[141] Once the Federal Circuit established the first two steps were patent eligible, the court noted that further limiting the claim by including a natural phenomenon did not render the claim non-statutory.[142] Under the Federal Circuit's reasoning, these "methods of treatment" were patentable subject matter.[143]

The Federal Circuit decision did not stand long, as the Supreme Court issued a GVR order after limiting the scope of the machine-or-transformation test in *Bilski v. Kappos*.[144] The Federal Circuit interpreted *Bilski* as holding the machine-or-transformation test could no longer be used to definitively exclude patentable subject matter but did not prevent its use as a test of sufficiency.[145] Maintaining the logic of its previous decision, the Federal Circuit again held the *Prometheus* claims to be patentable subject matter.[146]

B. THE SUPREME COURT DECISION

The Supreme Court again granted certiorari and reversed the Federal Circuit in a unanimous opinion authored by Justice Breyer.[147] Rejecting the Federal Circuit's post-*Bilski* application of the machine-or-transformation test, the Court emphasized that "one must do more than simply state the law

137. *Id.*
138. *Id.* at *10.
139. *See* Prometheus Labs., Inc. v. Mayo Collaborative Servs., 581 F.3d 1336, 1342 (Fed. Cir. 2009).
140. *See id.* at 1346–47.
141. *Id.* at 1348.
142. *See id.* at 1348–49.
143. *Id.* at 1346 (reasoning that methods of treatment "are always transformative when a defined group of drugs is administered to the body to ameliorate the effects of an undesired condition").
144. Mayo Collaborative Servs. v. Prometheus Labs., Inc. 130 S. Ct. 3543 (2010).
145. Prometheus Labs., Inc. v. Mayo Collaborative Servs., 628 F.3d 1347, 1355 (Fed. Cir. 2010).
146. *Id.* at 1359.
147. *See* Mayo Collaborative Servs. v. Prometheus Labs., Inc., 132 S. Ct. 1289 (2012).

of nature while adding the words 'apply it.' "[148] According to the Court, the claims did not "add *enough*" to the natural law to make them patentable applications.[149] In reaching its conclusion, the Court claimed to rely on the precedential requirements that the claims contain "an 'inventive concept' sufficient to ensure the patent in practice amounts to significantly more than a patent upon the natural law itself" and that the claims do not "too broadly preempt the use of a natural law."[150]

The Court viewed the claim as simply reciting a natural law and including an "administering" step, a "determining" step, and a "wherein" or informing step.[151] The Court identified the natural law as the correlation between the metabolite levels and the need to increase or decrease the drug dosage.[152] The "administering" step, according to the Court, provided a reference to those who would be interested in the natural law (doctors treating patients with the drug), the "determining" step only informed the relevant audience to do something that was "well known in the art," and the "wherein" step did nothing more than inform a doctor about the natural law.[153] The Court concluded that the claims simply informed doctors about the natural law and added "routine, conventional activity."[154] The steps were therefore not "enough," taken either independently or as a whole, to contain the requisite "inventive concept."[155] Without an inventive contribution applying the natural phenomenon, the *Prometheus* Court held that the claims were not patentable subject matter.[156]

As an alternative justification for excluding the *Prometheus* claim as unpatentable subject matter, the Supreme Court engaged in a preemption analysis. After defining the natural law as the correlation between an artificial drug metabolite and effective drug dosage, the Court reasoned that the claims "broadly preempt[ed]" this natural law.[157] Consistent with previous Courts and commentators, the *Prometheus* Court was concerned that patent protection over natural laws would "inhibit further discovery by improperly

148. *Id.* at 1294; *see also* USPTO, 2012 Interim Procedure for Subject Matter Eligibility Analysis of Process Claims Involving Laws of Nature, USPTO.GOV (July 3, 2012), *available at* http://www.uspto.gov/patents/law/exam/2012_interim_guidance.pdf.

149. *See Prometheus*, 132 S. Ct. at 1297, 1302–03.

150. *Id.* at 1294.

151. *Id.* at 1297.

152. *See id.*

153. *See id.* at 1297–98.

154. *See id.*

155. *See id.* at 1299.

156. *See id.*

157. *Id.* at 1294, 1302.

tying up the future use of the laws of nature."[158] The Court feared that validating the patent would "tie up the doctor's subsequent treatment decision," prevent the development of "more refined treatment recommendations" that might be combined with later discovered natural laws, or preempt later developed forms of the "determining" step.[159] While the Court acknowledged this natural law is narrowly defined, it refused to allow this to factor into its decision to avoid "depart[ing] from case law precedent."[160]

In a surprisingly noncommittal corollary to the preemption analysis, the *Prometheus* Court noted that it was not deciding the case on the preemptive features of the claims but on the lack of inventive contribution of the claims.[161] The Court stated, "We need not, and do not, now decide whether were the steps at issue here les conventional, these features of the claims would prove sufficient to invalidate them."[162] The opinion is unclear as to whether or not an inventive concept would allow an application of a natural law to be patentable subject matter if that application preempts any future use of the natural law.

C. DIAGNOSING THE *PROMETHEUS* DECISION

Despite the need for clarity on the issue of patentable subject matter, the *Prometheus* decision ultimately can only be described as judicial sausage.[163] As a preliminary matter, the *Prometheus* Court failed to adequately justify its

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158. *Id.* at 1301.

159. *Id.* at 1302.

160. *See id.* at 1302.

161. *See id.* (noting in dicta that the preemption analysis "simply reinforces our conclusion that the process described in the patents are not patent eligible").

162. *Id.*

163. Otto von Bismarck is frequently credited with describing the legislative process as grotesque as making sausage. *See* Charles W. Wolfram, *Bismarck's Sausages and the ALI's Restatements*, 26 HOFSTRA L. REV. 817, 817 (1998). Similarly, the judicial process can be described as making sausage when inconsistent opinions are joined together to form a potentially unjust result. *See* Roscoe Pound, *Enforcement of Law*, 20 GREEN BAG 401 (1908). As described by Pound:

> The process and the result are conceived of as something purely logical and scientific. If the result chances to be just, so much the better. But justice in the cause in hand is not the chief end. The facts of concrete causes are to be thrown into the judicial sausage-mill and are to be ground into uniformity; and the resulting sausage is to be labeled justice. Absolute uniformity of decision of cases logically alike and entire certainty in advance as to the outcome on any given state of facts are the ends it seeks.

Id. at 404.

determination that the correlation between an artificial drug metabolite level and drug efficacy should be considered a natural law. Even if the correlation is a natural law, *Prometheus* did not provide clear guidance as to what, precisely, would be "enough" to render a claimed invention a claim over an application of a natural law rather than a claim over the natural law itself. The Court reiterated the *Flook* holding that adding insignificant, post-solution activity to a natural law was not "enough"[164] but failed to specify why the claims in *Diehr* were "enough." Once the Court determined that the *Prometheus* claims were unpatentable subject matter, it rationalized this decision through a superficial preemption analysis that misapprehended the purpose underlying the preemption standard.

1. The Imprecise Natural Law

The Supreme Court previously justified excluding natural laws from patentable subject matter because it considered the natural laws to be "basic tools of science and technological work" and reserved for all of mankind.[165] It is a reasonable assertion that if a patent is so broad that future inventors are unable to conduct research or develop technologies, then the constitutional mandate to promote innovation will not be met. For this reason, it is well established that laws of nature and natural phenomena, such as electro-magnetism or $E=mc^2$, cannot be patentable subject matter.[166] In order to determine if a patent claim broadly preempts a natural law, however, it is important to fully understand the natural law at issue.

The natural law at issue in the *Prometheus* claims can be better appreciated with an understanding of the biochemical context (Figure 1). The thiopurine drug 6-mercaptopurine ("6-MP") is commonly used to treat inflammatory bowel disease.[167] Once administered, the enzyme hypoxanthine-guanine phosphribosyltransferase ("HGPRT") converts 6-MP into 6-thioinosine 5'-monophosphate ("6-TIMP").[168] Other enzymes metabolize 6-TIMP into pharmacologically active 6-TG metabolites referred to by the *Prometheus* claims.[169] HGPRT is not able to convert all available 6-MP, however, as the competing enzyme thiopurine methyltransferase ("TPMT") simultaneously

164. *Prometheus*, 132 S. Ct. at 1297.

165. *See* Gottschalk v. Benson, 409 U.S. 63, 67 (1972).

166. *See* Diamond v. Chakrabarty, 447 U.S. 303, 309 (1980).

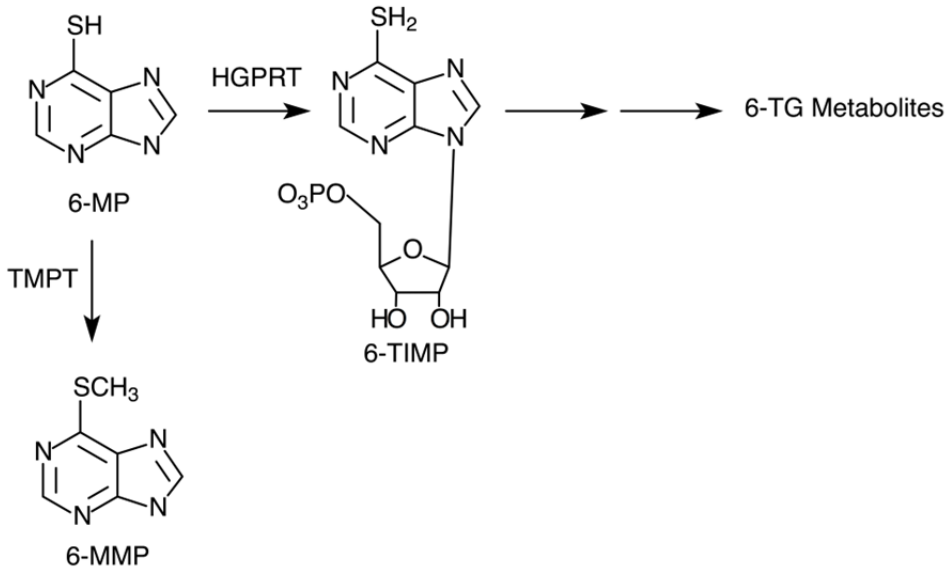
167. Marla C. Dubinsky, et al., *Pharmacogenomics and Metabolite Measurements for 6-Mercaptopurine Therapy in Inflammatory Bowel Disease*, 118 GASTROENTEROLOGY 705, 705 (2000).

168. Elise Petit, *Differential Toxic Effects of Azathioprine, 6-Mercaptopurine and 6-Thioguanine on Human Hepatocytes*, 22 TOXICOLOGY IN VITRO 632, 633 (2008).

169. *See id.*

metabolizes some of the administered drug into 6-methyl-mercaptopurine ("6-MMP").[170] Different patients may have differing levels of TPMT activity, making it difficult for doctors to know precisely how much of the administered 6-MP drug is metabolized into the desired 6-TG metabolite and how much is metabolized into the undesired 6-MMP metabolite.[171] Additionally, very high levels of 6-TG can result in undesired side effects.[172] The inventors of the *Prometheus* claims discovered precise levels of 6-TG that are necessary for drug efficacy and those that result in the undesired side effects.[173]

Figure 1: Metabolic pathway of the synthetic drug 6-mercaptopurine.

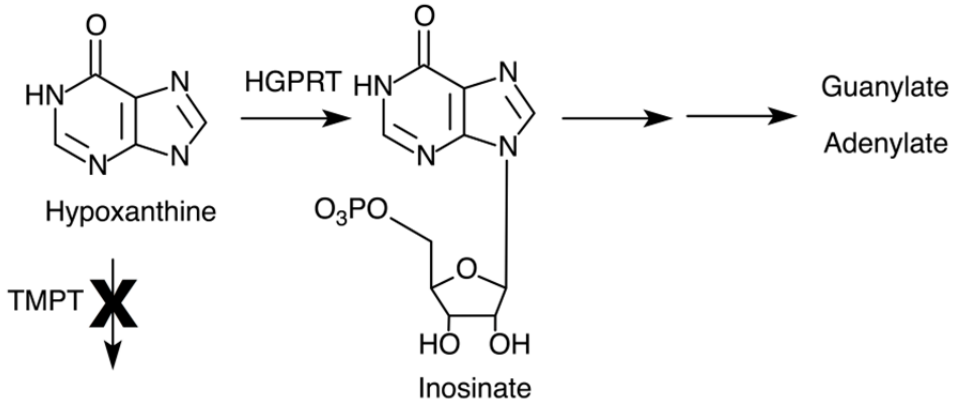


Of course, as recognized by the *Prometheus* Court, 6-TG is an artificial metabolite that would not exist without the "human action (the administration of a thiopurine drug) to trigger a manifestation" of the correlation.[174] Under natural conditions (i.e., without human action), HGPRT acts upon naturally occurring hypoxanthine or guanine to generate inosinate or guanylate (Figure 2).[175] This metabolizing reaction could certainly be considered a natural law. Drug activation, however, frequently relies on an enzyme's ability to recognize and metabolize *artificial* substrate analogs, such

170. *See* Dubinsky, *supra* note 167, at 705.
171. *Id.*
172. *Id.* at 711 (explaining how excessively high 6-TG levels can result in leukopenia).
173. U.S. Patent No. 6,355,623 (Filed April 8, 1999).
174. Mayo Collaborative Servs. v. Prometheus Labs., Inc., 132 S. Ct. 1289, 1297 (2012).
175. JEREMY M. BERG, ET AL., BIOCHEMISTRY 698 (5th ed. 2002).

as 6-MP. The Court suggested that even though human action is required to supply the artificial substrate analog, an enzyme's ability to metabolize the artificial substrate analog is itself an "entirely natural process."[176]

Figure 2: Metabolism of Natural Substrates



The rationale provided by the Court is weak. The Court assumed that the process whereby HGPRT metabolizes hypoxanthine into inosinate is identical to the process whereby HGPRT metabolizes 6-MP into 6-TIMP.[177] The Court provided no basis for this assumption. While the same enzyme may be used in both processes, enzymatic binding affinities and kinetic parameters likely vary between substrates. While differences between the processes may be subtle, they cannot be described as identical. The metabolism of the artificial substrate, 6-MP, to the pharmacologically active product, 6-TG, should not be considered a natural law but an exploitation of HGPRT's ability to metabolize its natural substrate. The inventive contribution of the patent claim can therefore be seen as the application of the enzyme's natural abilities to an artificial substrate.

The correlation described by the *Prometheus* claim was further removed from this already artificial reaction of the substrate analog. The maximum and minimum 6-TG levels indicated by the claimed process are parameters for controlling the artificial reaction correlated with drug efficacy and harmful side effects. The *Prometheus* Court stated that this correlation was itself a law of nature.[178] But there is nothing natural about drug efficacy or drug induced toxicity. There is no justification for the presumption that an

176. *Prometheus*, 132 S. Ct. at 1297.

177. *See id.* ("The relation [between drug metabolite concentration and drug toxicity] is a consequence of the ways in which thiopurine compounds are metabolized by the body—entirely natural processes.").

178. *Id.* at 1296.

artificial substance can cause a natural effect. Similarly, a correlation between an artificial metabolite blood level and an artificially induced effect should not be deemed a natural law.

2. *Preemption of an Imprecise Natural Law*

The vague "broadly preempts" standard implemented by *Prometheus* Court destabilizes the historic "wholly preempts" standard established by *Benson* and affirmed in *Bilski*.[179] The Court is unclear if the term "broadly preempts" is intended to capture the wholly preemptive standard articulated in *Benson* or if it suggests that a process claim might also be invalid when it preempts some subset of natural law applications but not the natural law in its entirety. Additionally, it is unclear if a process claim is invalid for lack of patentable subject matter if it includes nonconventional activity, and therefore contains an inventive concept, but is still broadly preemptive.

Benson applied the "wholly preempted" standard independent of any inventive concept analysis.[180] By relegating a claim that allows no "substantial practical application" of a natural law as unpatentable subject matter, future inventors can continue to discover novel applications without the hurdle of a patent over the natural law itself.[181] The *Flook* Court implemented the inventive concept requirement after acknowledging a claimed process did not wholly preempt the algorithm but should nonetheless be unpatentable subject matter.[182] The *Prometheus* Court may have attempted to capture the *Flook* criteria in formulating the "broadly preempt[s]" standard to indicate the claim need not wholly preempt the natural law when there is no inventive concept.[183] Alternatively, the *Prometheus* Court may have intended the broad preemption standard to be a separate analytical prong from the requirement of an inventive concept, rendering an applied natural phenomenon unpatentable subject matter because the application itself preempts any other future application of the natural law.

The *Prometheus* Court found the claims to be unpatentable because the "determining" step was conventional, as "scientists routinely measured metabolites as part of their investigations into the relationship between metabolite levels and efficacy and toxicity of thiopurine compounds."[184] It is,

179. *See* Gottschalk v. Benson, 409 U.S. 63, 72 (1972); Bilski v. Kappos, 130 S. Ct. 3218, 3231 (2010) (reasoning that a patent on "risk hedging would pre-empt use of this approach in all fields"); *see also* Ghosh, *supra* note 63, at 349–50.

180. *Benson*, 409 U.S. at 63.

181. *See Benson*, 409 U.S. at 71–72.

182. *See* Parker v. Flook, 437 U.S. 584, 589–90 (1978).

183. *Prometheus*, 132 S. Ct. at 1294.

184. *Id.* at 1298.

however, imaginable that in a similar claim, an applicant develops a diagnostic test where determining the concentration of a particular drug metabolite is as novel and nonconventional as the application of the results. This would pass the inventive concept test even if a natural law were included, as the "determining" step would be nonconventional. But the preemptive weight of the claim would not be any different. If the nonconventional elements of the claim render the claim patentable subject matter, then the preemption standard becomes meaningless. If, on the other hand, the broadly preemptive nature of the claim alone renders the claim unpatentable, the nonconventional aspect of the claim becomes meaningless.

The *Prometheus* Court did not indicate an answer to whether or not a nonconventional step may sustain a claim even if it is preemptive of a natural law.[185] The Court did, however, suggest that new drugs and new methods of using an existing drug would remain patentable.[186] Given the Court's willingness to broadly define a natural law, a method of using a drug surely preempts some natural law.[187] Presumably it's the nonconventional nature of the drug that allows it to be patentable subject matter rather than its non-preemptive aspects.

3. The Inventive Concept and the False Harmonization of Flook and Diehr

Even if the *Prometheus* Court's formulation of the natural law within the claims at issue are correct, the Court failed to set forth a clear test to indicate enough has been added to the natural law to make it a patentable application. *Prometheus* emphasized the need for an "inventive concept" by attempting to harmonize *Flook* and *Diehr*.[188] The Court concluded that the "case for patentability . . . [of the *Prometheus* claim] is weaker than the (patent-eligible) claim in *Diehr* and no stronger than the (unpatentable) claim in *Flook*."[189] To reach this conclusion, the *Prometheus* Court separately examined each of the process steps and determined that none consisted of anything more than "well-understood, routine, conventional activity" and that "those steps, when

185. *Id.* at 1302 ("We need not, and do not, now decide whether were the steps as issue here less conventional, these [preemptive] features of the claims would prove sufficient to invalidate them.").

186. *See id.* at 1302 (stating that new drugs or methods of using an existing drug are not a claim over the natural laws).

187. The fact that a drug molecule of a particular size, shape, and electrostatics inhibits a particular enzyme active site could be construed as a natural law. Once the drug is ingested, the laws of physics allow the particular drug to inhibit the particular enzyme through no human activity. Any patent on a particular inhibitor of a particular enzyme preempts a very narrow physical law. This result is, of course, absurd.

188. *Prometheus*, 132 S. Ct. at 1294.

189. *Id.* at 1299.

viewed as a whole, add nothing significant beyond the sum of their parts taken separately."[190] The *Prometheus* Court reiterated the requirement in *Diehr* that the claim should be analyzed as a whole, and even emphasized that a novel combination of known steps may still be patentable.[191] But in application, the Court dissected the claims and examined each step for something more than conventional activity, precisely the methodology used in *Flook*.

As discussed in Section I.B, *supra*, there is significant tension between analyzing a claim as a whole, as emphasized in *Diehr*, and the point of novelty approach, utilized in *Flook*. Ignoring this conflict, the Court laid *Diehr* and *Flook* on a patentability spectrum, where the rubber curing process in *Diehr* is an application and therefore patentable subject matter, while the alarm-limit calculation in *Flook* is a non-patentable law of nature with non-inventive conventional activity. Attempting to rationalize the inconsistency between *Flook* and *Diehr*, the *Prometheus* Court seemed to revise the *Diehr* opinion thirty years after it was decided. In referring to the *Diehr* claims *Prometheus* stated, "[the *Diehr* Court] nowhere suggested that all these steps, or at least the combination of those steps, were in context obvious, already in use, or purely conventional."[192] Of course the reason *Diehr* did not make a determination as to the novelty or obviousness of the added steps was because *Diehr* flatly rejected the point of novelty approach of *Flook*.[193]

The vastly different approaches taken by *Flook* and *Diehr* render the *Prometheus* analysis internally inconsistent. An analysis under *Diehr* would not require an inquiry as to whether or not the "administering" and "determining" steps were conventional or novel but would require an inquiry into what was being claimed as a whole. At no point was there an evaluation of the *Prometheus* claim as a whole. The Court examined the "administering" and "determining" steps individually and found them to be "conventional." The only novel element, according to the Court, was a law of nature, which was insufficient to render the conventional steps patentable. This was the methodology used in *Flook*.

Another way to consider the misapplication of *Flook* and *Diehr* by the *Prometheus* Court is to consider the starting points of each claim. In *Flook*, the

190. *Id.* at 1298.

191. *Id.* ("[A] new combination of steps in a process may be patentable even though all of the constituents of the combination were well known and in common use before the combination was made." (quoting Diamond v. Diehr, 450 U.S. 175, 188 (1981))).

192. *Id.* at 1299.

193. *See Diehr*, 450 U.S. at 188–89 (rejecting the use of "novelty" in making a determination of patentable subject matter).

Court noted the use of a mathematical formula within the claim and asked if the other steps in the process brought the claim into the realm of patentable subject matter. That is, did the additional steps narrow the scope of the claim enough to make it patentable subject matter, or was it "insignificant post-solution activity?" In *Diehr*, the focus was directed towards the process as a whole. The question for the Court then became whether or not the mathematical formula brought the rest of the process out of the scope of patentable subject matter. The other steps of the rubber curing process were undoubtedly patentable subject matter without the mathematical formula, even if the steps were conventional (and thus unpatentable under § 102 and § 103). Since an accepted doctrine of patent law is that additional elements narrow the scope of the claim, the addition of a mathematical formula should not move an otherwise patentable process into the sphere of non-patentable subject matter.[194] However this is precisely the conclusion reached by the *Prometheus* Court. It appears the *Prometheus* Court represents a shift back towards the *Flook* approach under the false pretext of uniform jurisprudence.

III. BIOLOGICAL CORRELATIONS AS NATURAL LAWS

Any test for patentable subject matter should be viewed in the context of the constitutional mandate to promote the progress of science and technology. Ideally, each circumstance would be viewed with an eye towards determining how much patent incentive is required to promote innovation, and to what degree patents cause more harm to technological development than help it. It is therefore important not to grant patents on the "basic tools of scientific and technological innovation,"[195] as overly broad claims may inhibit innovation more than encourage it. But it does not logically follow that a patent over any correlation will inhibit innovation more than a patent incentive would help spur it.

The judicially created natural law doctrine is an often-used approach to balancing the scope of patentable subject matter and inventor incentive, although it is not without critics.[196] Professor Risch, for example, argues that inconsistent and unclear jurisprudence guiding the doctrine generates a destabilizing effect that outweighs any benefit of a bright-line rule.[197] Instead,

194. *See* Robert A. Armitage, *A Prometheus, Playing With Fire, Gets Burned*, 4 LANDSLIDE 1, 11 (2012).

195. *See* Gottschalk v. Benson, 409 U.S. 63, 267(1972).

196. *See* Michael Risch, *Everything is Patentable*, 75 TENN. L. REV. 591, 624–28 (2008) (arguing patent scope is better contained through strict enforcement of patentability restrictions rather than patent eligible subject matter restrictions).

197. *See id.* at 645–50.

Risch argues that cases questioning patentable subject matter are more appropriately decided through rigorous application of the other patentability requirements of novelty (§ 102), nonobviousness (§ 103), and written description and enablement (§112).[198] Other commentators disagree, arguing that the natural phenomenon doctrine provides a unique hurdle for patent validity.[199]

Ultimately, viewing many biotechnology patents through the lens of the natural phenomenon doctrine is overly cumbersome to administer and generally inappropriate. The above analysis on the *Prometheus* decision suggests that part of the struggle in applying the doctrine may be caused by a misunderstanding of what should be considered a natural phenomenon. Even if a natural phenomenon was properly identified, it is not clear that the natural phenomenon doctrine is the best method to control the scope of patentable subject matter and balance inventor incentives. In biotechnology, the distinction between natural and non-natural phenomena is often subtle, and there is no reason to believe a patent on a non-natural phenomenon would be helpful for technological development and a patent on a natural phenomenon would be ultimately destructive.

A. DISTINGUISHING NATURAL AND NON-NATURAL PHENOMENA

Before future courts and inventors can properly evaluate a patent claim for broad preemption or inventive concept under the natural phenomenon doctrine, they must first clearly define the natural phenomenon at issue. A poor definition of the natural phenomenon could cause an application of a natural law to be improperly categorized as the natural phenomenon itself. Such a determination should not be made in hindsight view of the patent claims, although this is often difficult when inventions are created contemporaneously with the discovery of the natural phenomena.

The rapidly growing field of personalized medicine exploits correlations between biomarkers, genes, and synthetic metabolites and the efficacy or toxicity of treatment regimens. *Prometheus* broadly categorized these correlations as natural laws and therefore not patentable subject matter.[200] This was an error.[201] All correlations can ultimately be expressed as a simple mathematical relationship between two or more variables and, as such, cannot be patentable under *Benson*. But this view may be too simplistic for the developing Information Age. *Chakrabarty* delineated inventions "made by

198. *See id* at 598.
199. *See* Ghosh, *supra* note 63, at 357–58.
200. Mayo Collaborative Servs. v. Prometheus Labs., Inc., 132 S. Ct. 1289, 1297 (2012).
201. *See supra* Section II.C.1.

man" from discoveries of pre-existing natural phenomena.[202] Therefore, correlated variables invented through human efforts should be distinguished from those naturally existing or entirely abstract. The variables in *Benson* and *Flook* were too abstract to allow the algorithm to be considered non-natural.[203] In contrast, many biological correlations can be distinguished by examining the non-natural variables. When a variable itself is non-natural and inventive, such as the 6-MP drug in *Prometheus*, a correlation arising form this variable is likewise non-natural and inventive. In these circumstances, the correlations would not exist without human influence, and these correlations should not be considered natural.

Medical diagnostics often analyze either natural or non-natural biomarker correlations to evaluate an appropriate therapeutic treatment for a patient.[204] Diagnostics that determine the onset of a disease or a probability of contracting a disease are generally natural correlations. These associations remain true whether or not a doctor has exerted any human influence on the patient. When the correlation is between a synthetically introduced compound and an observed result, however, the correlation can no longer be considered natural. Such correlations do not exist in nature because, by their very definition, they are controlled by a non-natural variable.

Once natural and non-natural correlations are properly distinguished as a factual matter, the significance of applying the natural phenomenon doctrine can be considered as a matter of policy. Discovery of both natural and non-natural correlations are important for medical technology and, as such, should be encouraged under the constitutional mandate. However there is no clear indication that a patent incentive for non-natural correlations but not natural correlations would be the most efficient mechanism for inducing their discovery. Both natural and non-natural correlations used to diagnose a patient may be more appropriately defined as methods of diagnosis rather than the "basic tools of scientific and technological work."[205] This questions the utility of the natural phenomenon doctrine in the biotechnology field.

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202. *See* Diamond v. Chakrabarty, 447 U.S. 303, 309 (1980) (holding that which is "made by man" as patentable subject matter); *see also* Funk Bros. Seed Co. v. Kilo Inoculant Co., 333 U.S. 127, 130 (1948).

203. *See* Diamond v. Diehr, 450 U.S. 175, 186 (1981) ("The [*Flook*] claims were drawn to a method for computing an 'alarm limit.' An 'alarm limit' is simply a number and the Court concluded that the application sought to protect a formula for computing this number.").

204. *See, e.g.*, Agata Zieba et al., *Molecular Tools for Companion Diagnostics*, 29 NEW BIOTECHNOLOGY 634 (2012) (describing how biomarkers can be used to determine the appropriateness of administering Herceptin to a particular patient).

205. Gottschalk v. Benson, 409 U.S. 63, 67 (1972). This Note focuses on the economic incentive theory of patents and does not consider the public policy rationale of categorically

B. NATURAL CORRELATIONS AND DISEASE DIAGNOSTICS

Doctors diagnose many diseases by correlating the presence or absence of naturally existing biomarkers with a particular disease. HIV, for example, is commonly diagnosed by detecting antibodies present in a patient. These antibodies would not exist without infection, although they would exist without human interaction with the patient. The presence of an antibody biomarker is a natural result of HIV infection, and the correlation of biomarker with HIV diagnosis is a natural correlation. Likewise, diagnosing a disease by comparing the abnormal level of a naturally occurring biomarker to the normal level is an observation of a natural correlation.[206] For example, an elevated hemoglobin A1c measurement (> 6.5%) in a patient may allow a doctor to diagnose diabetes.[207] Since the onset of diabetes is a natural process, the physiological response (elevated hemoglobin A1c levels) is likewise a natural phenomenon.

Justice Breyer was correct in *Metabolite* when he unequivocally stated that the correlation between elevated homocysteine levels and vitamin deficiency was a natural phenomenon.[208] While measuring homocysteine levels is an indirect measurement of vitamin deficiency, the correlation would exist without human knowledge or discovery of the correlation. Furthermore, no human action is required to bring the correlation into existence. It is therefore a natural correlation and not patentable subject matter under the natural phenomenon doctrine.

C. CORRELATIONS WITH GENETIC SEQUENCES

Genetic markers can also be used to diagnose a disease through correlation, although the ability to construct synthetic manifestations of the genetic material poses an added complication to the natural correlation analysis. The genetic sequence of an individual can be compared to a genetic

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banning methods of diagnosis from patentable subject matter to increase medical access, as other patent systems have done. *See, e.g.*, Convention on the Grant of European Patents, art. 53(c), Oct. 5, 1973, 1065 U.N.T.S. 254 (as amended Nov. 29, 2000), *available at* http://documents.epo.org/projects/babylon/eponet.nsf/0/7bacb229e032863dc12577ec004ada98/$FILE/EPC_14th_edition.pdf.

206. *See In re* Grams, 888 F.2d 835 (Fed. Cir. 1989) (describing the diagnosis of an abnormality by comparing level of a marker in an individual to normal levels as a mathematical algorithm).

207. Christopher D. Saudek & Jessica C. Brick, *The Clinical Use of Hemoglobin A1c*, 3 J. DIABETES SCI. & TECH. 629, 632 (2009).

208. Lab. Corp. of Am. Hlds. v. Metabolite Labs., Inc, 548 U.S. 124, 135 (2006) (Breyer, J., dissenting). Even the patent owners acknowledged this correlation is a natural phenomenon because "[i]t is an observable aspect of biochemistry in at least some human populations." *Id.*

sequence from a non-diseased individual, and certain differences in the sequence can be correlated with a disease. This type of genetic comparison was at issue in *Association Molecular Pathology v. U.S. Patent and Trademark Office* (*Myriad Genetics*).[209] In *Myriad Genetics*, the inventors claimed an "isolated DNA coding for a BRCA1 polypeptide" and a method of comparing *BRCA1* gene in a tumor sample to a *BRCA1* gene in a non-tumor sample.[210] Three different types of genetic manifestations were covered by the claim: DNA, mRNA, and cDNA. DNA is the genetic material that is passed from parent to child and retains information pertaining to how the body functions. Parts of the DNA, called genes, serve as templates for the formation of mRNA through a natural biochemical process called transcription. Not all parts of the gene are used as a template for the final mRNA product,[211] but only those parts that will actually be used by downstream cellular processes to express proteins. mRNA is therefore generally shorter than the DNA gene in humans, but exists as a result of natural cellular processes. cDNA can be synthesized by scientists using an mRNA template, forming a more stable manifestation of the mRNA.[212] cDNA does not exist naturally, as it can only be synthetically generated through laboratory manipulation.

Myriad Genetics distinguished "natural DNA" from "isolated DNA," with the former being unpatentable subject matter and the latter being patent eligible.[213] The Federal Circuit noted the different chemical makeup of isolated DNA[214] and cDNA and determined they were both non-natural "man-made composition[s] of matter."[215] The Federal Circuit also held, however, that methods of "comparing" a genetic sequence of a tumor sample to a genetic sequence of a non-tumor sample, and correlating this difference to a genetic alteration of the tumor sample, are unpatentable "abstract mental processes."[216] While this step of comparing genetic

209. Ass'n Molecular Pathology v. U.S. Patent and Trademark Office, 689 F.3d 1303 (2012), *cert. granted*, 133 S. Ct. 694 [hereinafter *Myriad Genetics*].

210. *Id.* at 1309–10.

211. The gene serves as a template for RNA transcription, but sections of the RNA transcript are excised through a process called splicing. Additional biochemical modifications are made to the RNA transcript before it is considered mature mRNA.

212. cDNA contains bases complementary to those found in the mRNA. mRNA is highly prone to degradation, whereas cDNA generally can last longer in a laboratory environment, making it the preferred method of storing information contained within mRNA.

213. *Myriad Genetics*, 689 F.3d at 1333.

214. Isolated DNA is removed from naturally occurring DNA through the breakage of covalent phosophodiester bonds in the backbone of the DNA. *See id.* at 1328.

215. *Id.* at 1330.

216. *Id.* at 1334.

sequences may be an unpatentable mental step, the Federal Circuit did not directly confront the issue of whether the correlation itself should be considered a natural phenomenon.

By clearly distinguishing natural and non-natural correlations, the method claims in *Myriad Genetics* can be analyzed for patentable subject matter under the natural phenomenon doctrine in addition to the abstract mental steps doctrine. The correlation between naturally occurring DNA and mRNA with disease diagnosis or disease propensity is not difficult to establish as a natural correlation. Such a correlation would exist without inventive effort because the variables of the correlation naturally exist. Since both the disease and the DNA are naturally occurring, the correlation between the two can properly be categorized as a natural correlation. Isolated DNA and cDNA, however, are not naturally existing molecules, and any correlation between these molecules and a disease diagnosis cannot naturally exist. Therefore the existence of a non-natural correlation is dependent upon the status of the DNA being correlated: either a naturally occurring DNA sequence or a non-natural isolated DNA or cDNA. The patent eligibility of isolated DNA and cDNA molecules is currently pending review by the Supreme Court,[217] and a reversal of *Myriad Genetics* likely will affect the correlations' status as non-natural.

The result that a correlation between a natural DNA and a disease should be a natural phenomenon while the correlation between an isolated DNA and a disease should be considered a man-made phenomenon is surprising. After all, the genetic information used to generate the correlation is fully contained within the naturally occurring DNA. This is dissimilar to the drug metabolites in *Prometheus*, which disseminate information that no natural metabolite could provide. When the *Myriad Genetics* examined similar process claims comprising "analyzing" or "comparing" genetic sequences, it found them to be unpatentable subject matter because they were "abstract mental steps."[218] The mental steps doctrine, not the natural phenomenon doctrine, led the Federal Circuit to its result.[219] The mental steps of simply observing a man-made correlation may be independently unpatentable subject matter, but this does not make the man-made correlation a natural phenomenon.

217. Ass'n Molecular Pathology v. Myriad Genetics, 133 S. Ct. 694 (2012).

218. *Myriad Genetics*, 689 F. 3d at 1334.

219. *Id.*; *see also* Donald S. Chisum, *The Patentability of Algorithms*, 47 U. PITT. L. REV. 959, 981 (1986) ("[T]here is no basis for lumping together phenomena of nature and abstract concepts with 'mental steps.' A process consisting partially or wholly of 'mental steps' does not exist in nature and can be quite specific.").

In some cases, the correlations exploited by medical diagnostics are properly categorized as natural phenomena. This often occurs, for example, when the correlation used to diagnose a particular disease, for example diabetes or HIV. With the advancement of technology, however, medical diagnostics exploit correlations between diseases and genetic material. Proper categorization of these correlations as natural phenomena or man-made correlations is dependent upon how the courts categorize DNA molecules as either natural or non-natural. After the Federal Circuit's decision in *Myriad Genetics*, these correlations ought to be considered non-natural and should not be excluded under the natural phenomenon doctrine.

D. CORRELATIONS IN PERSONALIZED MEDICINE

Personalized medicine is a general umbrella term used for designing medical treatments more specifically tailored to an individual's need than is available in current practice.[220] An individual patient may be more or less responsive to a particular drug than any other patient. Many different factors may be responsible for drug efficacy including bioavailability, diet, environment, age, physical activity, or genetic makeup.[221] Personalized medicine can increase treatment efficacy, reduce side effects, lower healthcare costs, and bring drugs to market faster.[222] Drugs may also be more likely to pass FDA screening with a companion diagnostic because the diagnostic can identify particular subpopulations for which the drug is effective, eliminating those subpopulations for which the drug may be ineffective.[223] This can reduce healthcare costs by ensuring that each patient gets the appropriate treatment instead of being treated on a trial-and-error basis.

Personalizing a dosage regimen may require iterative testing of a biomarker or metabolite and adjusting the drug dosage in accordance with a

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220. *See* Margaret A. Hamburg, *The Path to Personalized Medicine*, 336 NEW ENGLAND J. MEDICINE 301 (2010).

221. *See, e.g.*, Qiang Ma & Anthony Y. H. Lu, *Pharmacogenetics, Pharmacogenomics, and Individualized Medicine*, 63 PHARMACOLOGICAL REVS. 437, 438 (2011).

222. *See* Christopher P. Leamon & Mike A. Sherman, *The Rise of Companion Diagnostics: A Step Towards Truly Personalized Medicine*, ONCOLOGY BUS. REV. 6 (May 2012), *available at* http://www.oncbiz.com/documents/OBR_0512_v3_COMPDIAG.pdf; *A Push for Personalized Medicine Encourages New Companion Diagnostics*, GLOBALDATA.COM (June 25, 2012), http://www.globaldata.com/PressReleaseDetails.aspx?PRID=215&Type=Industry&Title=Medical+Devices.

223. For example, the drug Selzentry, marketed by Pfizer, is effective in CCR5-tropic HIV-1, but not CXCR4-tropic HIV-1. An important companion diagnostic would be able to determine which viral tropism a particular patient is infected with. *See Viral Tropism*, SELZENTRY, http://www.selzentry.com/hcp/viral-tropism.html (last visited Nov. 3, 2012).

known correlation. As can be seen from the *Prometheus* claims, 6-thiopurine drug dosage may be increased or decreased in order to increase the efficacy of the drug or reduce side effects in accordance with 6-TG metabolite levels.[224] Another method is the growing field of pharmacogenomics, where a patient's genome can be correlated with drug efficacy or toxicity.[225] By sequencing a patient's genetic code, the treating physician can more appropriately select an effective drug treatment.

Often, a natural biomarker is iteratively used to determine drug efficacy. Hemoglobin A1c levels, for example, are not only used to diagnose diabetes, but are regularly measured to assess the treatment regimen. Two different correlations can be considered in this circumstance. The first correlation is a natural correlation between hemoglobin A1c level and the disease of diabetes, as discussed in *supra* Section III.B. The second correlation is a correlation between hemoglobin A1c level and drug efficacy. But determining whether or not this second correlation is a natural phenomenon or not is largely semantic. Is this a correlation between drug efficacy and the diabetic state? Or is this second correlation little more than monitoring the drug's impact on the first correlation and therefore should not be thought of as a separate, man-made correlation? This correlation may still be a patent eligible application of the natural correlation as the use of the correlation is non-conventional under *Prometheus*.

A growing trend in personalized medicine focuses on a patient's individual genetic information to select the appropriate drug or dosage regimen. Pharmacogenetics studies the efficacy or toxicity of a drug correlated to an individual's variation of a particular gene, while pharmacogenomics studies how a larger system of genes may affect drug efficacy or toxicity.[226] The inventors of the *Prometheus* claims found genetic variation of the TMPT gene correlated with different metabolic rates of the thiopurine drug, developing one of the first applications of pharmacogenetics.[227] Given the rapid growth of pharmacogetics and pharmacogenomics in developing drug treatment regimens, along with the ever-increasing ease of genome sequencing, it is important to carefully

224. *See supra* Section II.B.1.

225. *See* William E. Evans & Mary V. Realling, *Pharmacogenomics: Translating Functional Genomics Into Rational Therapeutics*, 286 SCIENCE 487 (1999).

226. *See generally* Richard M. Weinshillboum & Liewei Wang, *Pharmacogenetics and Pharmacogenomics: Development, Science, and Translation*, 7 ANNUAL REV. GENOMICS & HUMAN GENETICS 223, 224–25 (2006).

227. *See* Dubinsky, *supra* note 117. The correlation referred to here is different correlation than at issue in the *Prometheus* claims discussed in *supra* Section II.C.1. The pharmacogenetic correlation relates the genetic variation to the rate of drug metabolism.

consider when such correlations should be patentable subject matter. But when the drug analyzed is non-naturally occurring and the isolated genes being analyzed are themselves non-natural under *Myriad Genetics*, it seems difficult to consider the correlation between the variables as a natural phenomenon.

E. INVENTION AND DISCOVERY OF BIOLOGICAL CORRELATIONS

Natural phenomena were excluded from patentable subject matter because, in part, the applicant did not invent anything and the mere discovery of the natural phenomenon did not warrant a patent.[228] At the same time, it is believed to strike the proper balance between inventor incentives and ensuring other inventors can further innovate in the field. This justification, however, fails to exclude the discovery of a man-made correlation from patentable subject matter, even if such a discovery is neither invented nor applied. The fact that the correlation would not exist without human creation of the variables means that it cannot be natural. A man-made correlation cannot be said to "broadly preempt" any natural law or "basic tools of scientific and technological innovation" because it is itself synthetic. For this reason, judges and patent examiner should proceed cautiously before labeling any correlation a natural phenomenon.

Distinguishing between natural and non-natural correlations provides a starting point for courts applying the natural phenomenon doctrine but still does not establish whether or not the doctrine is even necessary for inventions in biotechnology. Both natural and non-natural correlations in the field of biotechnology serve overlapping goals of diagnosing and treating patients. There is little reason to believe they should be approached differently with respects to a patent incentive. At the same time, the non-natural correlations should not be deemed unpatentable subject matter because they are not the "basic tools of science and technological work." Natural correlations useful for diagnosing HIV, diabetes, or vitamin deficiency allow doctors to treat patients and are inarguably beneficial for society. There are many other diseases, lupus for example, for which natural biomarker correlations are still being sought to help improve diagnosis.[229] Yet

228. *See* Funk Bros. Seed Co. v. Kilo Inoculant Co., 333 U.S. 127, 130 (1948) ("He who discovers a hitherto unknown phenomenon of nature has no claim to a monopoly of it which the law recognizes. If there is to be invention from such a discovery, it must come from the application of the law of nature to a new and useful end.").

229. Lupus has historically been difficult to diagnose, with no clear biomarker or set of biomarkers currently known. *See* George K. Bertsias et al., *Therapeutic Opportunities in Systemic Lupus Erythematosus: State of the Art and Prospects for the New Decade*, 69 ANNALS RHEUMATIC DISEASES 1603 (2010).

despite numerous researchers in the field, the need for an efficient lupus diagnostic has not been met.[230] If a correlation is to be found it will likely be a natural correlation, and a patent would be prohibited by the natural phenomenon doctrine. Perhaps the patent incentive is what is needed to continue encouraging investment and research in the field.

IV. CONCLUSION

The natural phenomenon doctrine attempts to strike a necessary balance between incentivizing inventors to develop new and useful processes and ensuring too many patents are not granted, generating more hurdles to innovation than incentives. If the boundary of patentable subject matter is set at natural phenomena, however, it is prudent that courts be clear on what precisely is a natural phenomenon. Unfortunately, the *Prometheus* decision did not provide such clarity. In addition to confusing what must be added to a natural phenomenon to make it patentable subject matter, *Prometheus* confused the very understanding of a natural phenomenon itself. As this Note attempts to demonstrate, it is improper to call any correlation a natural phenomenon. In many cases, the correlation would not exist if it were not for the activities of man, and such correlations are no more natural than its synthetic components. Personalized medicine is a growing sector within the biotechnology industry and relies, in significant part, on correlations. Some of these correlations may be described as natural, but many arise only through human activities and should not be considered as a type of natural phenomenon.

230. *See id.*

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FAIR USE & MASS DIGITIZATION: THE FUTURE OF COPY-DEPENDENT TECHNOLOGIES AFTER *AUTHORS GUILD V. HATHITRUST*

Angel Siegfried Diaz†

From the wisdom contained in oral tradition to the artistic breakthroughs stored and shared on the cloud, societies continually benefit from preservation and access to the knowledge contained in original content. The Digital Age has enabled individuals around the world to store, organize, and share everything from photographs and videos to their academic writing and correspondence. Yet, for all of the information accessible via the Internet, the archived collections of university libraries remain out of reach to many, and the price of digitization remains largely cost-prohibitive.[1] In 2004, Google Inc. announced its intention to scan and digitize the collections of several leading university libraries.[2] The project would create a product that allows users to search across the entire corpus of scanned works.[3] For works still under copyright, the results page would present the user with the word that was queried in addition to some of the phrases surrounding it in order to give the user context.[4] The results page would also provide links to where the work could be legally purchased. Rights holders that did not wish to participate in the project could opt-out from the project, but works in the public domain would be fully viewable and available for download.[5] The universities partnering with Google and the Internet Archive established HathiTrust, an organization that would facilitate "collective action on a grand

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1. *See* Peter Menell, Knowledge Accessibility and Preservation Policy for the Digital Age, 44 HOUS. L. REV. 1013, 1015 n.2 (2007) ("The University of Michigan estimates that, using the technology and resources at its disposal, it would have taken more than 1,000 years to fully digitize its seven million volume collection."). Some European countries have undergone similar efforts with success, but none have undergone a project at the scale of the Google Books project.

2. Press Release, GOOGLE, Google Checks out Library Books (Dec. 14, 2004), http://googlepress.blogspot.com/2004/12/google-checks-out-library-books.html.

3. GOOGLE BOOKS LIBRARY PROJECT, books.google.com/googlebooks/library/index.html (last visited Mar. 28, 2013).

4. *Id.*

5. *Id.*

scale" and engage in projects that put the digital scans from Google to novel uses.[6]

However, several rights holders complained that the unauthorized scanning of their works infringed their copyright and filed suit against Google and HathiTrust. Now, after eight years of waiting and speculation, the case against HathiTrust resulted in the first opinion to apply a fair use analysis to unauthorized scanning for purposes of creating a full-text search index.[7] Largely aligning itself with the increasing body of case law privileging technologies that serve educational and research purposes, the court held that HathiTrust's index was a transformative use that did not serve the same expressive purposes as the underlying copyrighted works.[8] Additionally, the court held that HathiTrust's use of the digital scans to make copies for the print-disabled[9] was fair; it served a market not contemplated by the copyright holder and was also privileged under § 121 of the Copyright Act.[10]

This Note discusses the future of digital libraries and other products reliant on mass digitization in the wake of the *HathiTrust* decision. First, this Note presents an overview of U.S. copyright protection and the ways in which its goal of incentivizing authors has consistently been balanced by efforts to protect preservation, access, and fair use. Next, the Note explores early formalities and the establishment of the national archive before discussing the modern Copyright Act and its series of statutory exemptions. After outlining the statutory provisions, the Note then discusses the fair use doctrine, focusing on its application to cases involving use for educational and research purposes.

Second, this Note discusses the trial court opinion in *Authors Guild, Inc. v. HathiTrust* and the court's fair use finding regarding the full-text search index and copies for the print disabled. The Note argues that this decision rightly solidifies the growing body of jurisprudence protecting uses that have a transformative purpose and that pose no threat of artistic substitution while providing a public benefit. However, the Note also argues that the same consideration cannot be applied to HathiTrust's copies for the print-disabled

6. *See HathiTrust's Past, Present, and Future*, HATHITRUST DIGITAL LIBRARY, http://www.hathitrust.org/blogs/perspectives-from-hathitrust/hathitrusts-past-present-and-future (last visited Mar. 28, 2013).

7. *See* Authors Guild, Inc. v. HathiTrust, No. 11 CV-4351 (HB), 2012 WL 4808939 (S.D.N.Y. Oct. 10, 2012).

8. *Id.* at *14.

9. This Note uses "print-disabled" to refer to individuals that cannot read printed materials due to visual or physical disabilities.

10. *HathiTrust*, 2012 WL 4808939, at *15.

and that the trial court's fair use application and interpretation of § 121 may be narrowed or corrected on appeal.[11]

Third, this Note discusses the *HathiTrust* decision's effect on the future of the Google Books case and argues that the fair use ruling paves the road for a similar finding while also giving Google leverage in its ongoing settlement negotiations.[12] The Note argues that Google's fair use defense is equally as strong as HathiTrust's despite Google's commercial exploitation because no artistic substitution exists and Google Books helps rather than harms the market for the copyrighted works.

Fourth, after exploring the judicial efforts to protect useful technologies as a matter of public policy, this Note explores legislative solutions that would better advance copyright's goals of promoting education, research, preservation, and access. The Note advocates for (1) expansion of § 108 library privileges to cover mass digitization and noncommercial exploitation; (2) expansion of protected entities that may make copies for the print-disabled under § 121; (3) establishment of a regulatory board to govern the exploitation of orphan works; and (4) categorical protection for technological uses that make use of copyrighted works in a way that does not substitute for the original's expressive content.

I. AN OVERVIEW OF U.S. COPYRIGHT LAW: PROMOTING THE USEFUL ARTS AND SCIENCES VIA ACCESS, PRESERVATION, AND FAIR USE

The U.S. Constitution grants Congress the power to "promote the Progress of Science and useful Arts" by granting authors and inventors "exclusive [rights] to their respective Writings and Discoveries."[13] While the clause focuses on incentivizing authors, its purpose is much broader. The founders also intended to promote progress by facilitating learning through public access and a protected public domain.[14] This Section traces the development of U.S. copyright protection. From the formalities that premised early copyright laws to the statutory exemptions scattered across

11. A copy of the Plaintiff's February 25, 2013, opening appellate brief is available at http://thepublicindex.org/docs/cases/hathitrust-2ndcir/41-ag-brief.pdf.

12. *See* Compl., Author's Guild v. Google Inc., 770 F. Supp. 2d 666 (S.D.N.Y. 2011), *available at* https://www.eff.org/node/53647.

13. U.S. CONST. art. I §8.

14. *See* L. Ray Patterson & Craig Joyce, *Copyright in 1791: An Essay Concerning the Founders' View of the Copyright Power Granted to Congress in Article I, Section 8, Clause 8 of the U.S. Constitution*, 52 EMORY L.J. 909, 946 (2003).

the modern Copyright Act, access, preservation, and fair use are considerations that persistently inform the scope of protection and liability.

A. EARLY U.S. COPYRIGHT LAW: THE ROLE OF FORMALITIES AND CATALOGUING

1. The Deposit Requirement and the Smithsonian Institution Promote Preservation and Access to Copyrighted Work

Beginning with the earliest versions of the Copyright Act, statutory requirements sought to promote preservation and access to copyrighted works through cataloging and with the establishment of a Library of Congress. Under the 1790 Act, authors of registered works were required to publish a copy of their registration "in one or more newspapers" within two weeks of registration and were required to run the notice "for the space of four weeks."[15] Moreover, authors forfeited copyright protection unless they deposited a printed copy of their work "in the clerk's office of the district court where the author or proprietor shall reside."[16] Primarily intended to defeat future claims of authorship, the notice and deposit requirement also became a way to ensure copyrighted works were archived and accessible to the public.[17] Shortly thereafter, Congress established the Smithsonian Institution[18] and expanded the deposit requirement by providing that a copy of copyrighted works needed to be deposited with the newly formed Smithsonian as well as with the Librarian of Congress[19] within three months of publication.

Unlike the district court's deposit requirement, the Smithsonian and Librarian of Congress copies were not necessarily preconditions to copyright.[20] Consequently, the copies for the Smithsonian and Librarian of Congress were primarily aimed at expanding the national collection for preservation and public access. To that end, Congress made it easier for authors to deposit their works by allowing them to mail their copies free of postage.[21] Unfortunately, while new works began flooding into the Smithsonian, few of them came from major publishers of creative and scholarly works.[22] Instead, most of them were works such as textbooks and

15. Act of May 31, 1790, ch. 15, § 3, 1 Stat. 124, 125 (1790).
16. *Id.*
17. Menell, *supra* note 1, at 1026–27.
18. Act of Aug. 10, 1846, ch. 178, § 10, 9 Stat. 102, 106 (1851).
19. *Id.*
20. *See* Jollie v. Jacques, 13 F. Cas. 910, 912 (S.D.N.Y. 1850).
21. *See* Act of Mar. 3, 1855, ch. 201, § 5, 10 Stat. 683, 685.
22. *See* Menell, *supra* note 1, at 1027.

prints, which carried little archival value and were difficult to store.[23] A legislative overhaul of the national library aimed to tackle the early inefficiencies of the archival initiatives by repealing the deposit requirement and transferring copyright records and deposits to the Department of the Interior.[24] Authors were no longer required to deposit a copy of their works with the district court, only with the Librarian of Congress.

2. *Transforming the Library of Congress into a National Repository*

With later amendments to copyright law, Congress sought to better enable the Library of Congress to serve as a repository of the nation's works that would be available to the public. In 1865, Congress empowered the Librarian of Congress to make written demand of authors who failed to comply with the deposit requirement within one month of registration.[25] Authors that did not comply with the deposit requirement by one month after receiving the written demand lost copyright protection.[26] Five years later, Congress added a monetary fine for failure to submit a copy of registered works.[27] By 1870, Congress centralized authority for all copyright business with the Librarian of Congress[28] and required the office to create a catalogue of deposited works in addition to an annual report to Congress.[29] The 1870 Act specified that authors must deposit a copy of their work within ten days of registration to receive copyright protection.[30] The Act also continued to issue free postage for deposits[31] and imposed a fine for failure to comply with the deadline.[32] These changes allowed the Library of Congress to quickly swell in size as new works poured into the collection.

This Congressional update coincided with a shift in university education that stressed original research—a change that also increased the amount of new works just as the stricter deposit requirement was expanding the size of

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23. *See* Menell, *supra* note 1 (citing Smithsonian Institution Annual Report 40 (1856)).

24. *See* Menell, *supra* note 1, at 1027 (citing Act of Feb. 5, 1859, ch. 22, §§ 5–6, 11 Stat. 379, 280.

25. Copyright Act of 1856, ch. 126, § 3, 13 Stat. 540, 540 *amended by* Copyright Act of 1909, ch. 329, § 63, 35 Stat. 1075, 1088 (1856).

26. *Id.*

27. *See* Act of Feb. 18, 1867, ch. 43, § 1, 14 Stat. 395, 395 (1867) (empowering the Library of Congress to impose a $25 fine on authors that fail to deposit a work within one month of publication).

28. *See* Act of July 8, 1870, ch. 230, §85, 16 Stat. 212.

29. CONG. GLOBE, 41st Cong., 2d Sess. 2684 (1870).

30. *Id.* at 2683.

31. Act of July 8, 1870, ch. 230, § 95, 16 Stat. 212.

32. *Id.* § 94.

the national collection.[33] Predicting that the educational shift would increase demand for access to the national collection, Congress amended the Copyright Act in 1891 and required the Library of Congress to publish catalogues of their collections at regular intervals to enable the public to conduct research.[34] Despite their limited utility, the late 19th century amendments to U.S. copyright law reflected Congress's growing focus on public benefit instead of private monopoly.

B. MODERN U.S. COPYRIGHT LAW: STATUTORY EXEMPTIONS AND THE FAIR USE SAFETY VALVE

Copyright law has changed dramatically since the turn of the 20th century. In 1909, Congress made the first significant changes to the copyright law by enacting a new copyright act ("1909 Copyright Act"). The 1909 Copyright Act was the 20th century's first major revamp of copyright law. In the legislative history leading up to the Act, the House Committee on Patents Report noted that Congress designed copyright law "[n]ot primarily for the benefit of the author, but primarily for the benefit of the public."[35] While the 1909 Copyright Act was the first attempt to modernize U.S. copyright law, its effect was less than dramatic. Moreover, the proliferation of new technologies and the increasing international market for copyrighted works created new concerns and questions about the scope of copyright protection. These new questions regarding the scope of copyright protection led the Copyright Office to fund a series of thirty-five studies to investigate the various functions of U.S. copyright law and its differences from the international community.[36] However, from the growing influence of motion picture and television industry to the possibilities and challenges presented by photocopying technology, competing interests stalled Congressional reaction to the Copyright Office's various studies.[37]

The studies and negotiations eventually produced the 1976 Copyright Act. This Section explores the provisions of the 1976 Copyright Act, subsequent updates to the Act, and the role of the fair use doctrine. The 1976 Copyright Act largely maintained the features of the 1909 Copyright Act but reinforced the importance of preservation and access for research

33. *See* Menell, *supra* note 1, at 1028–29.

34. *Id.* at 1029.

35. H.R. Rep. No. 60-2222, at 7 (1909).

36. *See* Harry G. Henn & Walter J. Derenberg, *Introduction* to 1 STUDIES ON COPYRIGHT ix, ix (Arthur Fisher Memorial ed. 1963).

37. *See* Menell, *supra* note 1 (quoting H.R. Rep. No. 89-2237, at 31–32 (1966) (discussing the inability of current copyright law to accommodate new technologies)).

purposes by maintaining the deposit requirements,[38] creating the Television and Radio Archives within the Library of Congress,[39] and establishing statutory protections for libraries that allowed them to engage in non-commercial photocopying.[40] Later, the spread of digital technology led Congress to once again create a series of statutory protections for preservation and access under the DMCA.[41] Lastly, the fair use doctrine—first codified in the 1976 Copyright Act—continues to function as a safety valve for uses of copyrighted works that promote education, research, and archival purposes.

1. *The Modern Role of the Copyright Office: A Focus on Preservation and Archiving*

While the 1976 Copyright Act kept the deposit requirement, it no longer preconditioned copyright protection on deposit.[42] Instead, Congress focused on the requirement's successful effect on preservation and attempted to ensure the continuous flow of new works into the national archive by continuing to impose fines for failure to comply with the deposit requirement: $250 per work and an additional $2,500 for willful violations.[43] Similarly, the 1976 Act continued to charge the Copyright Office with maintaining and publishing a catalog of copyrighted works and instructed the Register of Copyrights to produce catalogs "on the basis of practicability and usefulness" for each individual medium.[44]

2. *Section 108 Protections for Libraries & the Expansion of the National Archives*

As the role of formalities shifted and the national archive faced problems maintaining an exhaustive and usable record, private and public universities began making use of new technological tools that help their patrons get better access to works in the libraries' collections. Congress encouraged this behavior by enacting §§ 108 and 121 of the 1976 Copyright Act, which

38. *See* Copyright Act of 1976, § 101, 90 Stat. 2579.

39. *See* American Television and Radio Archives, Pub. L. No. 94-553, § 113, 90 Stat. 2541, 2601 (1976).

40. *See* Copyright Act of 1976, § 108, 90 Stat. 2541.

41. *See* Digital Millennium Copyright Act, Pub. L. 105-304, § 404, 112 Stat. 2860, 2890 (1998).

42. *See* Copyright Act of 1976, § 101, 90 Stat. at 2579 (current version at 17 U.S.C. §407 (2000)).

43. *See id.* (current version at 17 U.S.C. § 407(d) (2000)).

44. Copyright Act of 1976, Pub. L. No. 94-553, § 101, 90 Stat. 2541, 2592–93 (current version at 17 U.S.C. § 707(a) (2000)).

created a series of statutory exemptions withholding copyright liability for libraries.

The § 108 exemption grows out of the "photocopying revolution," which held the promise of increasing access and knowledge but also presented the possibility that mass replication would harm the market for copyrighted works.[45] Rather than subject library photocopying to uneven application under the fair use doctrine, discussed *infra* Section I.B.3, Congress established a detailed statutory exemption that allows libraries to engage in non-commercial photocopying without fear of direct or indirect liability.[46] This statutory exemption represents Congress's effort to balance the social utility of technological advancement with the need to protect authors.

Libraries and archives seeking § 108 protection must follow the statute's itemized requirements.[47] First, the photocopying must be done "without any purpose of direct or indirect commercial advantage."[48] Second, the libraries and archives must be open to the public, or at least to persons doing research in the specialized field that is the subject of the collection.[49] This requirement incentivizes libraries of all kinds to become more accessible, promoting the Congressional goal of ensuring that copyright remains "for the benefit of the public."[50] Third, all copies and distributions of copyrighted works are required to contain a notice of copyright.[51] Moreover, while § 108(d)(1) presumes that the library requests are for research purposes, it requires libraries to turn away patrons suspected of a different purpose.[52]

On balance, § 108 and the expansion of the national archive reflect the potential utility of allowing libraries and archives to make use of developing technologies in ways that enrich their collections and make them more useful to the public without harming the market for the copyrighted works. This

45. *See* 2-8 MELVILLE B. NIMMER & DAVID NIMMER, NIMMER ON COPYRIGHT, § 8.03 (1992); *see also* 17 U.S.C. § 108.

46. *Id.*

47. Copyright Act of 1976, §108, Pub. L. No.94-553, 90 Stat. at 2546.

48. *Id.* at § 108(a)(1). Notably, the meaning of "commercial intent" refers to the purpose of the reproduction or distribution, not to the nature of the library. This expands the scope of the exemption beyond non-profit libraries to also include those belonging to businesses and proprietary institutions. Within the language of the statute, "commercial purpose" refers to the motivation for the act of copying or distribution itself. Consequently, even if a proprietary institution's library makes photocopies that are used for a commercial service, the copying is protected.

49. *Id.* at § 108(a)(2).

50. *See* H.R. Rep. No. 60-2222, at 7 (1909).

51. Copyright Act of 1976, §108.

52. *Id.*

balance of competing interests continued to inform subsequent efforts to empower libraries to preserve and disseminate knowledge.[53]

In addition to § 108, the first Congressional attempt to regulate copyright through the DMCA similarly exempted libraries from the DMCA's anti-circumvention provision.[54] Congress intended this exemption, codified in § 1201, to protect copyright owners by prohibiting the evasion of technological steps taken to restrict access to digital copies.[55] However, § 1201 exempts library circumvention only to the extent the activity is done to help the library decide whether or not to include the work in its collection.[56]

3. Fair Use and Non-Expressive Use

In addition to the statutory exemptions carved out in the 1976 Copyright Act, Congress also codified the fair use doctrine, a long-used affirmative defense to copyright infringement.[57] The preamble to the statute further promotes the goals of access and education by directing courts to favor uses related to "criticism, comment, news reporting, teaching (including multiple copies for classroom use), scholarship, or research."[58] In its latest treatment of the doctrine, the Supreme Court held that fair use is intended to ensure copyright law does not "stifle the very creativity which the law is intended to foster."[59]

Section 107 requires courts to consider four factors when evaluating a fair use defense:

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53. For example, in 1998, Congress added twenty years to the term of copyright protection in the Sonny Bono Copyright Term Extension Act. This longer period of protection was balanced by an extension of library privileges under§ 108(h). *See* The Sonny Bono Copyright Term Extension Act, Pub. L. 105-298 (1998). The exemption in §108(h) allowed libraries and archives to reproduce and distribute copies of out of print and orphan works during the last twenty years as long as the use was for purposes of research and preservation. But Congress sought to further protect copyright owners by only granting the exemption after libraries took reasonable steps to conclude that 1) the work was not being commercially exploited, 2) could not be secured at a fair price, and that 3) the copyright holder had not informed the Register of Copyright where the work was available.

54. Digital Millennium Copyright Act, Pub. L. 105-304, § 103, 112 Stat. at 2866 (1998) (current version available at 17 U.S.C. § 1201(d) (2006)).

55. *Id.*

56. *Id.*

57. Copyright Act of 1976, § 107, Pub. L. No.94-553, 90 Stat. at 2546 (current version available at 17 U.S.C. § 107 (2006)). Codification was not intended to "change, narrow, or enlarge [the doctrine] in any way."). 4-13 MELVILLE B. NIMMER & DAVID NIMMER, NIMMER ON COPYRIGHT § 13.05 (1992).

58. 17 U.S.C. § 107 (2006).

59. Campbell v. Acuff-Rose Music, Inc., 510 U.S. 569, 577 (1994).

> (1) the purpose and character of the use, including whether the use is of commercial nature or is of a nonprofit educational purpose;
>
> (2) the nature of the copyrighted work;
>
> (3) the amount and substantiality of the portion used in relation to the copyrighted work as a whole; and
>
> (4) the effect of the use upon the potential market for or value of the copyrighted work.[60]

These four fair use factors are meant to be illustrative guideposts for trial courts, but they are not exhaustive or determinative.[61] Moreover, courts consider the factors in relation to one another in order to decide whether a particular use is fair in light of the purposes of copyright.[62] While each factor has its own set of considerations, no one factor is dispositive; they must be all be explored with their results weighed together against the purposes of copyright.[63]

The considerations and implications of each factor are explored below, with particular focus on technological fair uses that depend on the use of copyrighted work for a different (often non-expressive) purpose.

a) Factor 1: "Purpose and Character" of the Use

Under the first factor, purpose and character of the use, courts primarily consider whether the use of the copyrighted work is transformative and also whether the use is commercial or not for profit. Although not clear-cut, many courts utilize a sliding scale approach to evaluate the first factor: the more transformative a work, the less important the commercial aspect becomes.

A transformative use is one in which the purpose of the use is different from the purpose for which the copyrighted work was originally created.[64] Much of the Supreme Court's fair use jurisprudence focuses on transformative uses that supplement the original work with new expression that "provide[s] social benefit by shedding light on an earlier work, and in the process, creates a new one."[65] Subsequent appellate decisions have expanded the scope of transformative uses to include using works in entirely new contexts—privileging uses that supersede the scope of the original

60. 17 U.S.C. § 107 (2006).
61. *Campbell*, 510 U.S. 569 (1994).
62. *Id.* at 578.
63. *Id.*
64. *Id.* at 579.
65. *Id.* at 579.

expression while staying mostly within the context of commentary on the original work.[66] For example, courts have deemed indexing of copyrighted works by search engines to be transformative.[67]

Courts also consider whether the use is commercial or for non-profit purposes under the first factor.[68] The Supreme Court previously proclaimed that commercial use is "presumptively unfair," but the Court has since stepped back and clarified that commercial use does not present "hard presumptive significance."[69] Further, fair use case law shows that the commercial nature of a use is more properly studied under the fourth fair use factor (harm to the market for the copyrighted work).[70]

b) Factor 2: "Nature of the Copyrighted Work"

Under the second fair use factor, courts consider the nature of the underlying copyrighted work; creative works that are closer to the core of copyright should be afforded more protection from copying.[71] Consequently, the scope of protection for creative works such as novels and paintings is larger than works that are mostly functional, such as repair manuals.[72]

In addition to whether the work is creative or functional, courts weighing the second factor may also consider whether the work is out of print. In the Senate Report for the 1976 Copyright Act, the legislature noted that works that are "out of print" and therefore unavailable for purchase through "normal channels" are more likely to qualify for fair use.[73] Following a line of cases that found contradictory rulings based on this report, Congress added a paragraph to the end of § 107 that qualifies the weight of unpublished works: "[t]he fact that a work is unpublished shall not itself bar a finding of fair use if such finding is made upon consideration of all the above factors."[74] This amendment assured that use of unpublished and out of print works would

66. *See* Perfect 10, Inc. v. Amazon.com, Inc., 508 F.3d 1146 (9th Cir. 2007); *see also* Kelly v. Arriba Soft Corp., 336 F.3d 811 (9th Cir. 2003).

67. *See id.*

68. 17 U.S.C. 107(1) (2006).

69. *Campbell*, 510 U.S. at 585.

70. Matthew Sag, *Copyright and Copyright and Copy-Reliant Technology*, 103 NW. U. L. REV. 1607, 1646 (2009).

71. 4-13 MELVILLE B. NIMMER & DAVID NIMMER, NIMMER ON COPYRIGHT § 13.05[2][a] (1992).

72. *Id.*

73. *Id.* at § 13.05[2][b][i].

74. Act of Oct. 24, 1992, Pub. L. No. 102-492, 106 Stat. 3415 (current version at 17 U.S.C. § 107 (2006)).

not categorically be deemed fair, thus protecting against instances where the work is made deliberately unavailable.[75]

c) Factor 3: "Amount and Substantiality" of the Use

Under the third factor, courts consider the quantity and quality of the original work that is being used. Consideration of the "amount of substantiality" of the use must be considered "in relation to the copyrighted work as a whole."[76] This analysis does not rest on the substantial similarity between the two works but on whether the amount taken "is reasonable in light of the purpose and the likelihood of market substitution."[77] Consequently, while a review that takes "the heart of the book" may not be fair because it is likely to lessen the demand for the copyrighted work,[78] it may be fair to copy entire photographs when the secondary use only displays small copies in order to connect internet users to websites hosting the image.[79] Similarly, intermediate copying through reverse engineering can be fair use when the entire work is copied in order to uncover the "functional elements of [a software program]" that are embedded within the completed work.[80]

d) Factor 4: The Effect on the "Potential Market for" the Copyrighted Work

The last fair use factor directs courts to consider the use's effect on the "potential market or value of the copyrighted work."[81] According to the Supreme Court, the fourth factor is "undoubtedly the single most important element of fair use."[82] However, just because a potential licensing market

75. 4-13 MELVILLE B. NIMMER & DAVID NIMMER, NIMMER ON COPYRIGHT § 13.05[b][iii] (1992).

76. 17 U.S.C. § 107(3) (2006).

77. Peter Letterese & Assoc. v. World. Inst. of Scientology Enters., 533 F.3d 1287, 1314 (11th Cir. 2008).

78. Harper & Row Publishers, Inc. v. Nation Enters., 471 U.S. 539, 565 (1985).

79. Perfect 10, Inc. v. Amazon.com, Inc., 508 F.3d 1146, 1168 (9th Cir. 2007) (finding that while the amount taken did not favor either party, it was reasonable in light of the minimal potential harm for "the downloading of reduced-size images for cell phones"). *See also* Kelly v. Arriba Soft Corp., 336 F.3d 811, 821 (9th Cir. 2003) (holding that copying an entire photograph is reasonable when the purpose is for connecting users to websites via an image search engine).

80. Sega Enter. Ltd. v. Accolade, Inc., 977 F.2d 1510, 1528 (9th Cir. 1992).

81. 17 U.S.C. § 107(4) (2006).

82. *Harper & Row*, 471 U.S. at 566; *see also* 4-13 MELVILLE B. NIMMER & DAVID NIMMER, NIMMER ON COPYRIGHT § 13.05[4] (1992) ("[I]f one looks at the fair use cases, if not always to their stated rationale, [the fourth factor] emerges as the most important, indeed, central fair use factor.").

could develop does not mean the factor automatically favors the copyright owner.[83] Rather, courts limit the potential licensing revenues by considering only "traditional, reasonable, or likely to be developed markets when examining and assessing a secondary use."[84] For example, in *Campbell v. Acuff-Rose Music, Inc.*, the Court held that a licensing market for "critical reviews or lampoons" was unlikely to develop.[85] Likewise, the *Campbell* Court held that the Copyright Act does not protect against criticism that destroys demand for the original work.[86] Similarly, in *Perfect 10, Inc. v. Amazon.com, Inc.*, the Ninth Circuit rejected plaintiff's claim that Google's transformative search index would damage its market for reduced-size cell phone photographs.[87]

4. Applying Fair Use

a) Transformative Uses in the Technology Sector: Search Engines and Anti-Plagiarism Software

Perfect 10 provides one of the early tests of the fair use doctrine on transformative technologies.[88] At issue in that case was Google's image search engine, which returns thumbnails of images based on their relevance to a user's search query.[89] The lower-resolution thumbnails are transformed into links; when a user clicks on the image, embedded HTML instructions direct the user's Internet browser to the web address where a larger version of the image is republished and stored.[90] Perfect 10 is a business that earns revenue by selling subscriptions to its website that contains copyrighted images of nude models.[91] Perfect 10's website could not be crawled or indexed by Google's image search engine, but it could identify and return results of the images that were stored on third party websites.[92] Because of this, Perfect 10 filed suit against Google for copyright infringement.[93]

The Ninth Circuit held that Google's use of the images as thumbnails was highly transformative because the purpose of the use "served a different function" than artistic expression: it provided a social benefit by

83. American Geophysical Union v. Texaco, 60 F.3d 913, 930 n.17 (2d Cir. 1994).
84. *Id.* at 930.
85. Campbell v. Acuff-Rose Music, Inc., 510 U.S. 569, 592 (1994).
86. *Id.*
87. Perfect 10, Inc. v. Amazon.com, Inc., 508 F.3d 1146, 1168 (9th Cir. 2007).
88. *Id. See also* Kelly v. Arriba Soft Corp., 336 F.3d 811 (9th Cir. 2003).
89. *Id.* at 1156.
90. *Id.*
91. *Id.* at 1157.
92. *Id.*
93. *Id.* at 1157.

transforming the image into "an electronic reference tool."[94] Moreover, the court held that it did not matter that Google copied the entire image because it was placed "in a new context to serve a different purpose."[95] Lastly, the court rejected the speculative harm to Perfect 10's market for thumbnail cell phone downloads, reasoning that the plaintiff failed to establish that Google users have actually downloaded images onto their cell phones.[96] On balance, the court's fair use analysis focused on the search engine's "significant benefit to the public," finding that its utility outweighed the harms by a speculative market for cell phone downloads.[97]

One year after *Perfect 10*, in *AV ex rel. Vanderhye v. iParadigms, LLC*, two high school students filed copyright suits over the use of their essays and other papers by iParadigms, a company that provides anti-plagiarism software to educational institutions.[98] iParadigms operates the Turnitin software, which provides high schools and universities an automated way to ensure their students' work is original.[99] Instructors submit a body of current and past student work into a database.[100] Once the works are submitted, instructors can check for unaccredited copying by comparing the paper against the database in addition to sources available on the Internet.[101] Like the court in *Perfect 10*, the Fourth Circuit held that the plagiarism detection service was a highly transformative use: academic expression versus plagiarism detection.[102] iParadigms also copied the entire work, but the court found that it was fair considering the purpose, in addition to the fact that the program only displayed portions that enabled users to see the unaccredited copying.[103] Lastly, the court rejected any speculative harm to the market, finding that no market existed for the student papers[104] and that the four factors balanced toward fair use.[105]

As both *Perfect 10* and *iParadigms* demonstrate, courts have used the fair use doctrine to protect uses that enable the public to access and spread

94. *Id.* at 1165.

95. *Id.* (citing Kelly v. Arriba Soft Corp., 366 F.3d at 819; Mattel, Inc. v. Walking Mountain Prods., 353 F.3d 792, 796–98 (9th Cir. 2003)).

96. *Id.* at 1168.

97. *Id.*

98. A.V. ex rel. Vanderhye v. iParadigms, LLC, 562 F.3d 630, 634 (4th Cir. 2009).

99. *Id.*

100. *Id.*

101. *See id.*; TURN IT IN, http://www.turnitin.com/en_us/products/originalitycheck (last visited February 5, 2013).

102. A.V. ex rel. Vanderhye v. iParadigms, LLC, 562 F.3d 630, 639 (4th Cir. 2009).

103. *Id.* at 642.

104. *Id.*

105. *Id.*

learning. This preference promotes the overarching Congressional intent of promoting progress and science through knowledge preservation and accessibility. The next Section discusses fair use in the context of two universities making use of the Internet to reproduce copyrighted content for educational purposes.

b) Protection for Educational Reproduction: Streaming Video and E-Reserves

In *Assn. for Info. Media & Equip. v. Regents of the University of California*, the trial court granted defendant's motion to dismiss following an alleged breach of license and subsequent copyright infringement.[106] There, plaintiffs entered into a licensing agreement with University Regents and various individuals within the University of California, Los Angeles ("UCLA") for use of their collection of DVDs.[107] Defendants at UCLA subsequently changed the format of the DVDs in order to make them available via online streaming to students and faculty with access to the UCLA network.[108] Plaintiffs filed suit after UCLA refused to cease the practice.[109] The court granted defendant's motion to dismiss, finding that the agreement allowed UCLA to "publicly perform" the licensed work, not only allowing them to show the work in its DVD format but also to make it available to its community through online streaming.[110] Without much explanation, the court claimed that the making of short term copies was fair use.[111] The court cited *Perfect 10* for this proposition, but UCLA's use was markedly different. Whereas Google displayed thumbnail copies that functioned as a reference tool for internet users,[112] here, the copy was being used for the same primary purpose as the original: viewing its expressive content.

The court also quickly dismissed plaintiff's claim that UCLA's circumvention of protective measures placed on its DVDs was a violation of the DMCA.[113] The court based its dismissal on the fact that plaintiffs could present no more than speculative allegations that UCLA contracted with a third party to bypass the DVD protection system.[114] It is certainly possible

106. Ass'n for Info. Media & Equip. v. Regents of the Univ. of California, CV 10-9378 CBM MANX, 2011 WL 7447148 (C.D. Cal. Oct. 3, 2011) No. CV-10-9378 CBM (MANX), 2011 WL 7447148, at *1 (C.D. Cal. Oct. 3, 2011).

107. *Id.*

108. *Id.*

109. *Id.*

110. *Id.* at *6.

111. *Id.*

112. Perfect 10, Inc. v. Amazon.com, Inc., 508 F.3d 1146, 1156 (9th Cir. 2007).

113. *Assn. for Info. Media & Equip.*, 2011 WL 7447148, at *7.

114. *Id.*

that further discovery could have produced more information relating to UCLA's particular use, but the court's hasty dismissal at the 12(b)(6) stage demonstrates the degree to which courts seek to ensure that universities are empowered to increase access to copyrighted works for educational purposes.

Most recently, in *Cambridge University Press v. Becker*, a trial court largely protected Georgia State's use of copyrighted works in its e-reserve system.[115] Three publishers specializing in academic works (backed by the Association of American Publishers and the Copyright Clearance Center) sued Georgia State for its e-reserve policy, alleging that making unlicensed copies of portions of their copyrighted content and distributing it to students infringed their copyrights.[116] Though many of the plaintiffs' claims failed due to their inability to provide a chain of title, the court's fair use analysis found that the purpose of the use, while not transformative, strongly favored George State because it was for teaching purposes at a non-profit educational institution.[117] The court's analysis of the nature of the protected work found that the factor favored the defendants because the works were "intended to inform or educate," making it worthy of less protection than highly creative works such as fictional novels.[118] Analyzing the amount and substantiality of the use, the court disapproved of the university's overly stringent policy for copying but stated that copying small amounts of the works was favored, finding that copying less than ten percent of the underlying work is "decidedly small," and leads toward a finding of fair use.[119] Lastly, the court found that the effect on the market favored the publishers in instances where they could establish a licensing market for digital excerpts.[120] For all other instances, the court held that the factor weighs in favor of Georgia State; without establishing a licensing market, the court found that plaintiffs could not prove that the students would substitute online excerpts by purchasing the complete work.[121] According to Professor James Grimmelmann, this decision, if upheld, would likely lead to the wider exploitation of orphan

115. Cambridge University Press v. Becker, 863 F. Supp. 2d 1190 (N.D. Ga. 2012).

116. *Id.* at 1201.

117. *Id.* at 1225.

118. *Id.* at 1227.

119. *Id.* at 1254. According to James Grimmelmann, this essentially established a bright-line rule that copying less than ten percent of a work guarantees a finding of fair use. *See* James Grimmelmann, *Inside the Georgia State Opinion*, LABORATORIUM, *available at* http://laboratorium.net/archive/2012/05/13/inside_the_georgia_state_opinion (last visited Nov. 11, 2012).

120. *Id.* at 1254.

121. *Id.* at 1256.

works, as there would be no available copyright owner from whom to license (or buy a hard copy from).[122]

As shown above, both congressional and judicial decisions have shown a preference for protecting the uses of copyrighted works for purposes of preservation, access, education, and research.

II. *AUTHORS GUILD V. HATHITRUST*

The second of two suits targeting the Google Books project, *Authors Guild, Inc. v. HathiTrust*, focuses on the defendant's use of digital copies it received in exchange for allowing Google to digitize the works in its collection.[123] HathiTrust placed these copies into the HathiTrust Digital Library ("HathiTrust").[124] The HathiTrust treats works within its collection differently depending on whether the work (1) has a known author, (2) is an orphan work, or (3) is in the public domain.[125]

For in-copyright works with a known author, the HathiTrust stores a digital copy of the work for preservation but also allows its members to conduct full-text searches across the entire collection and allows print-disabled patrons to access the works in the collection.[126] However, while users have the ability to search across the entire collection, the search engine returns only the page numbers on which a particular search term is found in addition to the number of times it appears on the page.[127]

Prior to the suit, the HathiTrust made orphan works fully searchable and available to its users. However, this was only ensuring that the work was not available for sale and that the copyright owner could not be reached—even after publishing the bibliographic information for these orphan works for ninety days.[128] This approach was abandoned following the suit.[129]

The Authors Guild sued HathiTrust for copyright infringement, claiming that (1) the mass digitization violated §§ 108 and 106 of the Copyright Act; (2) the fair use defense was not available to libraries also invoking § 108; (3) injunctive relief was necessary to prevent HathiTrust libraries from making

122. James Grimmelmann, *Inside the Georgia State Opinion*, LABORATORIUM, *available at* http://laboratorium.net/archive/2012/05/13/inside_the_georgia_state_opinion (last visited Nov. 11, 2012).

123. Authors Guild, Inc. v. HathiTrust, No. 11 CV-4351(HB) 2012 WL 4808939, at *1 (S.D.N.Y Oct. 10, 2012).

124. *Id.*

125. *Id.* at *2.

126. *Id.*

127. *Id.*

128. *Id.*

129. *Id.*

their works available to the Google Books project; (4) the planned orphan works project would lead to mass infringement and should therefore be prohibited from continuing; and (5) HathiTrust should be ordered to return all of the unauthorized digital copies within its possession.[130]

The trial court made no ruling on the orphan works project, finding the project unripe for discussion.[131] However, the court quickly disposed of plaintiff's claim that the fair use defense is unavailable to libraries also seeking protection under § 108, holding that the "clear language of Section 108 provides the rights to libraries *in addition* to fair use rights that might be available."[132] Applying § 107 to HathiTrust's use, the court found that both the search indexing and the providing of access to print-disabled individuals are protected by the fair use doctrine.

A. PURPOSE AND NATURE OF THE USE

The court found that the first fair use factor strongly favors HathiTrust because both its search index and access for print-disabled patrons are highly transformative works.[133] Focusing its inquiry on whether the secondary use serves an entirely different purpose, the court held that the search index served an entirely different function than the copyrighted works in that it provided "superior search capabilities."[134] Similarly, the court found that access for printed-disabled users was also transformative because the lack of market for print-disabled individuals demonstrated that their market was not contemplated during the creation of the underlying work, a finding that tended to show the secondary use was substantively different than the original.[135]

B. NATURE OF THE COPYRIGHTED WORK

Although the books at issue were close to "the core of intended copyright protection," the court followed the Second Circuit's instruction in *Bill Graham Archives v. Dorling Kindersley Ltd.* and found that second factor has limited utility when the use is highly transformative.[136]

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130. *Id.* at *3.
131. *Id.*
132. *Id.* at *8.
133. *Id.* at *11.
134. *Id.*
135. *Id.* The cursory treatment of this function is more thoroughly analyzed in light of the use's effect on harm to potential markets.
136. *Id.* at *12 (citing Bill Graham Archives v. Dorling Kindersley Ltd., 448 F.3d 605, 612 (2d Cir. 2006) ("the second factor may be of limited usefulness where the creative work is being used for a transformative purpose")).

C. AMOUNT OF THE WORK COPIED

As with the second factor, the court found that the third fair use factor, the amount and substantiality of the use of the original, did not weigh in favor of either party due to the transformative nature of HathiTrust's use.[137] While the entire work was copied, the court considered whether the extent of the copying "was reasonable in relation to the purpose."[138] Finding that copying the entire work was necessary to make the search index and to ensure print-disabled accessibility, the court held that the factor did not favor the Authors Guild.[139]

D. EFFECT ON THE MARKET FOR OR VALUE OF THE WORKS

Due to the non-commercial nature of HathiTrust's use, the court found that the Author's Guild was required to show "by a preponderance of the evidence that some meaningful likelihood of future harm exists."[140] First, the court found that purchasing additional copies would not have allowed HathiTrust to engage in its transformative use and that the plaintiff's claim that HathiTrust's security measures were inadequate was unsupported."[141] Second, discussing the harm to a potential licensing market, the court limited the analysis to "traditional, reasonable or likely to be developed markets."[142] The court found that, while a collective licensing market could develop through the Copyright Clearance Center, the law did not require it to consider potential markets.[143] The court also found that a licensing market to provide print-disabled individuals access to works on the scale of the HathiTrust project was unlikely[144] and pointed to Congressional efforts to protect print-disabled individuals via the Americans with Disabilities Act.[145]

On balance, the court concluded that the fair use factors suggested that enhanced search capabilities, the preservation of fragile works, and the enablement of print-disabled individuals to access the collection's wide body of work all support copyright's goal of promoting the useful arts and

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137. *Id.*

138. *Id.* (citing Sony Corp. of Am. v. Universal City Studios, Inc., 464 U.S. 417, 449–50 (1984)).

139. *Id.*

140. *Id.* at *13 (citing *Sony*, 464 U.S. at 451).

141. *Id.*

142. *Id.* at *13 (citing American Geophysical Union v. Texaco, Inc., 60 F.3d 913, 930 (2d Cir. 1994)).

143. *Id.* at *14 (citing Sony, 446 U.S. at 456).

144. *Id.*

145. *Id.*

sciences.[146] The court held that, in comparison to the large social utility promised by the uses, "the authors stand to gain very little if the public is deprived of this resource."[147]

Lastly, the trial court held that HathiTrust's reproduction of "published non-dramatic works" for print-disabled individuals was protected by the Chafee Amendment to the Copyright Act, which protects the reproduction and distribution of copies of non-dramatic works "in specialized formats exclusively for use by the blind or other persons with disabilities."[148] While the exemption is only available to an "authorized entity," which is a non-profit organization or governmental agency with a "primary mission to provide specialized services" for disabled individuals, the court found that HathiTrust qualifies for the exemption because it has a goal of providing access for print-disabled individuals.[149]

III. THE AFTERMATH OF *HATHITRUST V. AUTHORS GUILD*: WHAT NOW?

The *HathiTrust* decision solidifies a growing judicial commitment to protecting libraries and educational instructions in their efforts to make use of technology to increase preservation efforts, modernize their pedagogy, and facilitate better research. Combined with earlier judicial efforts to protect web crawling and image search tools in order to connect the public with the vast repository of information available on the Internet, courts are slowly removing barriers to using the technological advancements of the Digital Age.

However, these new judicial protections are not free from problems. In an attempt to protect useful technologies, courts have strained the language of various statutes to allow projects to move forward. Stretching existing laws to achieve favorable results, although seemingly helpful, leaves opinions vulnerable on appeal. Moreover, the results reached in these cases may be better implemented by Congressional redrafting. But given the slim possibility that Congress will take action, the judiciary's patches become increasingly important as they signal to competing interests the ways in which they must coexist.

146. *Id.*

147. *Id.* at *15 (quoting Library Amici Brief, Authors Guild, Inc. v. HathiTrust, No. 11 CV 6351 HB, 2012 WL 4808939 (S.D.N.Y. Oct. 10, 2012)).

148. *Id.* (citing 17 U.S.C. § 121 (2006)).

149. *Id.*

Unfortunately, many of the decisions regarding the use of technology for educational and archival purposes are still in their infancy. Most of these cases are certain to face appeals, and it may be several years before we have judicial opinions that carry sufficient weight to settle questions regarding mass digitization and copy-dependent technology. The Authors Guild filed its notice of appeal in the *HathiTrust* decision less than a month later after the trial court's opinion, and the opinion faces some difficult questions that may narrow the scope of the fair use ruling.[150] First, this Section discusses the future of the *HathiTrust* decision on appeal and the decision's potential effect on the Authors Guild's case against Google. The Section argues that both uses should be found fair because they are transformative works with a useful public benefit that outweighs the harm to the Authors Guild. Given the growing impetus towards protecting technologies that enable preservation and access, an appellate decision from the Second Circuit is desirable because it will largely settle the law in the wake of Congressional inaction. Lastly, this Section discusses updates to the Copyright Act that would enable competing interests to coexist in the Digital Age.

1. *HathiTrust on Appeal: Protecting the Search Index Brings the Second Circuit in Line with the Third Wave of "Transformative" Uses*

More than twenty years have passed since Judge Leval's "Toward a Fair Use Standard" emphasized the purpose and nature of a secondary work as "the soul of fair use."[151] According to Judge Leval, transformative uses should be favored because they promote the creation of new works and encourage interaction with the works that came before them—"[adding] value to the original."[152] These active engagements promoted the progress of science and the useful arts by using the primary work "as raw material" and transforming it through the "the creation of new information, new aesthetics, new insights and understandings" that the fair use doctrine must protect "for the enrichment of society."[153] Following the publication of Judge Leval's article, courts around the country began taking on a more expansive view of "transformative" and employed the idea to protect new technological uses of copyrighted works that provided a public benefit.

150. Gary Price, *Authors Guild Appeals HathiTrust Decision, Library Copyright Alliance Issues Statement*, INFODOCKET (Feb. 2, 2013, 11:37 PM), http://www.infodocket.com/2012/11/09/authors-guild-appeals-hathitrust-decision-library-copyright-alliance-issues-statement.

151. Judge Pierre N. Leval, *Toward A Fair Use Standard*, 103 HARV. L. REV. 1105 (1990).

152. *Id.* at 1111.

153. *Id.*

The first wave of these decisions sought to protect intermediate copying for purposes of reverse engineering. For example, in *Sega Enterprises Ltd. v. Accolade, Inc.*, the Ninth Circuit protected Accolade's reverse engineering of Sega's source code in order to create video game cartridges that would run on Sega's Genesis player.[154] There, Accolade was seeking to learn the "functional" aspects of the Sega Genesis so that it could take that information and create its own original video games that were compatible with Sega's console.[155] While there was no commentary or engagement with the previous work, implicit in the court's rationale was the feeling that society would be well-served by not allowing Sega to monopolize the market for both the console and the games that ran on it.

The second wave of cases protected secondary works that made slight alterations to copyrighted works and incorporated them into their secondary uses. In *Bill Graham Archives v. Dorling Kindersley, Ltd.*, the Second Circuit held that the fair use doctrine protected the incorporation of a copyrighted poster into a new work depicting the famous 1960s band, the Grateful Dead.[156] There, the defendant created a 480-page coffee table book that told the story of the Grateful Dead along a timeline that ran throughout the whole work, which contained reduced-size prints of the posters and tickets along with text and other graphic art.[157] The court found that the purpose of the concert posters was to provide information regarding upcoming concerts, whereas the book used the posters and tickets as a historical artifact in its documentation of the bands history.[158] Unlike the *Sega* line of decisions, where the challenged uses competed for the same market, the *Bill Graham* wave of decisions protected works that used the underlying work for a different purpose and competed in different markets.

Most recently, a third wave of fair use decisions have favored transformative technologies that use copyrighted works for a different purpose that ultimately provides a useful public benefit. Beginning with *Kelly v. Arriba Soft Corp.* and continuing with *Perfect 10, Inc. v. Amazon.com, Inc.*, the Ninth Circuit protected two online service providers that indexed thumbnails of copyrighted works and transformed them into pointers that connected

154. Sega Enter. Ltd. V. Accolade, Inc., 977 F. 2d 1510, 1527 (9th Cir. 1992). *See also* Sony Computer Entm't v. Connetix Corp., 203 F.3d 596, 602 (9th Cir. 2000) (protecting reverse engineering that made PlayStation games compatible with PC operating systems).

155. *Id.* at 1523.

156. Bill Graham Archives v. Dorling Kindersley Ltd., 448 F.3d 605, 615 (2d Cir. 2006).

157. *Id.* at 607.

158. *Id.* at 609.

users with copyrighted content available on the Internet via image search.[159] In both cases, the purposes were commercial and contained no commentary along with the original work.[160] Nonetheless, the indexing and resulting search capabilities provided a substantial public service by connecting users with the vast amount of content available on the Internet.[161] As discussed in Part I, promoting access to copyrighted works has long been a goal of copyright law, and on balance, the technologies promoted the progress of science and the useful arts by enabling the public to find a plethora of "raw material" to use in the creation of new works. Subsequent to the *Perfect 10* decision, the Fourth Circuit also protected technology that used copyrighted works in its plagiarism detection software because it did not seek to display its expressive content but rather to cross-check works for originality.[162]

HathiTrust's searchable index of library collections provides a substantial public benefit, as it provides an accessible database that far eclipses the search-ability of any existing library index. Moreover, with the inevitable deterioration facing aging collections, HathiTrust's digital collection ensures that large-scale preservation efforts can be successful. Lastly, by making its collection available to print-disabled individuals, it empowers an underrepresented segment of the population to access thousands of books that would have otherwise remained unavailable.

Judge Baer's decision in *HathiTrust* mentioned each of these benefits, signaling the extent to which the court aligned itself with the decisions from the Ninth and Fourth Circuits. The Authors Guild's appeal provides the Second Circuit the opportunity to create clear case law on whether the fair use doctrine protects technologies that use copyrighted works to connect users with information instead of expressive content. Indeed, the trial court quoted *Bill Graham*, *Perfect 10*, and *iParadigms* in its fair use analyses, embracing the more expansive interpretation of "transformative use."[163] The trial court held that HathiTrust's database served "an entirely different purpose than the original works: the purpose is superior search capabilities rather than actual access to copyrighted material."[164] The search capabilities

159. *See* Perfect 10, Inc. v. Amazon.com, Inc., 508 F.3d 1146 (9th Cir. 2007); Kelly v. Arriba Soft Corp., 336 F.3d 811 (9th Cir. 2003).

160. *Id.*

161. *Id.*

162. *See infra* Section I.B.4.

163. Authors Guild, Inc. v. HathiTrust, No. 11 CV-4351(HB) 2012 WL 4808939, at *11 (S.D.N.Y Oct. 10, 2012).

164. *Id.* at *12.

of the HathiTrust database have already given rise to new methods of academic inquiry, such as text mining.[165]

The trial court's fair use opinion will likely be upheld on appeal. Judge Baer's opinion did a thorough job grounding the fair use finding in the existing body of jurisprudence inside and outside the Second Circuit. His ruling reflects the growing sentiment that there is something notably different that motivates the unauthorized copying behind non-expressive use that should place it outside the scope of copyright protection. Indeed, as Professor Matthew Sag said, "once the pivotal nature of expressive substitution is properly understood, the implications for copy reliant technologies crystallize: the non-expressive use of a copyright work should not ordinarily result in copyright infringement."[166] However, not all aspects of the trial courts opinion are free of problems. In that vein, the next Section discusses the fair use ruling regarding copies for the print-disabled.

2. *The Trial Court's Fair Use Protection for Print-Disabled Individuals May Be Vulnerable on Appeal*

Applying the same logic that protected HathiTrust's search index, the trial court also held that making copies for the print-disabled was fair.[167] Whereas much of the rationale regarding transformative use applied to the search index, it is not so readily applicable to copying for the print-disabled. Unlike the index—which only displayed the pages on which a search term appeared—the print-disabled copies reproduced the copyrighted works in their entirety. Consequently, while transformative, the print-disabled copies still reproduced the original works' expressive content—a right reserved to copyright owners under their derivative work right.[168]

As if anticipating objection, the court cited the Americans with Disabilities Act ("ADA") privileges under § 121.[169] Unfortunately, that analysis is also vulnerable, as it depends on an expansive interpretation of who qualifies as a "protected entity" under the statute. Section 121 states that protection is conditioned on being a non-profit or governmental organization whose "primary mission" is to provide "specialized services relating to training, education, or adaptive reading or information access needs of blind or other persons with disabilities."[170] Moreover, the statute

165. *Id.* at *14.

166. Matthew Sag, *supra* note 70, at 1638 (2009).

167. Authors Guild, Inc. v. HathiTrust, No. 11 CV-4351(HB) 2012 WL 4808939 (S.D.N.Y Oct. 10, 2012).

168. *See* 17 U.S.C. § 106(2) (2006).

169. *HathiTrust*, 2012 WL 4808939, at *15.

170. 17 U.S.C § 121.

only protects the reproduction of "nondramatic literary works" intended as training and vocational material.[171] Given that "approximately 76 percent of the identified works are fiction," it is unclear whether HathiTrust's copies qualify for protection under § 121.

Nonetheless, there are strong policy considerations that justify upholding Judge Baer's ruling. First, as noted by the trial court opinion, the print-disabled community is dramatically under-served. Less than five percent of copyrighted works are accessible for the print-disabled, and a market to make these works available via licensing has not emerged.[172] This may be the result of low market demand; according to the University of Michigan, only thirty-two students had signed up to access its print-disabled copies.[173] It is likely that a significant market may never develop, and the Second Circuit should protect HathiTrust's use given the motivations behind the ADA. However, it is also possible a judge will read the statute strictly to hold that it is not the judiciary's role to expand the scope of protection that Congress provided. Nonetheless, given no threat of market substitution and copyright's goal of promoting creativity and learning, § 121 should protect the print-disabled community and allow them to access the enormous body of works that have remained unavailable to them for decades; a narrow ruling may finally prompt Congress to revise the statute.

3. *Same Song, Different Tune: Implications for the Case Against Google Books*

Google Books takes the scans of millions of books held in library collections and makes them fully searchable by anyone with an Internet connection.[174] The product also provides links to where a book may be borrowed from a library or purchased from a bookseller.[175] The corpus contains everything from fiction and nonfiction to reference books and cookbooks.[176] The product is available for free, but Google places ads next to the search results.[177]

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171. *Id.*

172. *HathiTrust*, 2012 WL 4808939, at *14.

173. *Id.*

174. *See Google Books Library Project*, ABOUT GOOGLE BOOKS, http://www.google.com/googlebooks/library.html (last visited Mar. 28, 2013).

175. *Id.*

176. Def.'s Mem. Supp. Mot. for Summ. J. at 7, Authors Guild, Inc. v. Google Inc., 770 F. Supp. 2d 666 (S.D.N.Y. 2011) (No. 05 CV 8136(DC)).

177. *Id.* at 8.

When a user enters a query, the program returns a list of books where the search term appears.[178] In some situations, users will also see snippets from the book to provide context for where the term appears.[179] Google places security measures so that the book cannot be reconstructed, and the results are presented as an image, so they cannot be copied and pasted.[180] Public domain works are fully viewable on Google Books, and publishers may request that certain pages be viewable for advertising purposes.[181] Indeed, many publishers already do this because of the significant marketing benefit.[182]

Applying *HathiTrust*'s fair use analysis to Google Books yields similar results. Google Books's use is highly transformative, and its commercial nature should be of limited importance given the extent to which it promotes copyright's goal of increasing preservation and access in order to promote the progress of science and the useful arts.

First, Google Books does not display copyrighted content for its artistic expression but to connect users to works that are relevant to their queries. In many ways, Google Books represents a card catalog for the Digital Age. But rather than being limited by the categories chosen by librarians, Google Books empowers users to search for specific words and phrases and across millions of seemingly unrelated books. Admittedly, Google Books goes beyond a card catalog by displaying the text of the work in addition to information about it, but only to provide context for the location where a term appears; the snippets never reveal enough context to allow a user to substitute for purchasing the work or borrowing a copy from a library.[183]

Second, Google Books contains millions of works with varying degrees of copyright protection. Some works, such as the challenged fictional works, are closer to the core of copyright and entitled the broader protection.[184] But others, such as academic works (which make up a majority of the corpus), instruction manuals, and dictionaries, have a thinner scope of protection because of the underlying facts they creatively express and arrange.[185]

178. *Id.*
179. *Id.* at 1.
180. *Id.* at 10.
181. *Id.* at 11.
182. *Id.* at 17.
183. *Id.* at 10.
184. *See* Campbell v. Acuff-Rose Music, Inc., 510 U.S. 569, 586 (1994).
185. Indeed, a partnership of professors has filed an amicus brief objecting to the class certification sought by the Authors Guild, arguing that the class inadequately represents the interest of academic writers that wish to have Google Books upheld as a fair use. *See* Brief of Amici Curiae Academic Authors in Support of Defendant-Appellant and Reversal, *available*

Nonetheless, as the court held in *HathiTrust*, the nature of the copyrighted works is of limited importance when dealing with highly transformative works.[186]

Third, the search functionality only provides useful results if the entire work is scanned. However, rather than minimizing the importance of this factor, challenged uses should be analyzed to ensure that the amount and substantiality used is fair, especially if the secondary use is commercial. Here, Google must use the entire copyrighted work for its search index. This use is not expressive because the product is not designed to display the copyrighted work. However, the search results contain snippets of the work in order to provide users with the context in which their search terms appear. The amount of the work that gets displayed should be analyzed in order to ensure it does not reproduce enough of the work to produce harm to the copyright owner. As in *Cambridge*, where the court held that the amounts of copyrighted articles displayed were reasonable for its educational purpose, here Google Books displays only enough to provide context and blocks out enough of an overall work to ensure that its expressive content cannot be recreated. In light of Google's research purpose, the amount and substantiality taken and displayed is fair.

Fourth, Google Books enhances the market for copyrighted works by connecting readers with books relevant to their interests and queries. By providing users with links to where they can obtain the works, Google Books expands the demand for books that could otherwise remain obscure. Whereas HathiTrust did not harm the market because it was only available to its library patrons, Google Books expands the market for the underlying works in its corpus. Google Books provides a service that combines modern search with the casual browsing that typified thumbing through a book at a bookstore.

Neither HathiTrust nor Google engage in a direct commercialization of copyrighted content. As the Supreme Court held in *Sony Corp. of America v. Universal City Studios, Inc.*, a use that has no demonstrable effect upon the potential market for or the value of the copyrighted work need not be prohibited in order to protect the author's incentive to innovate.[187] The potential loss from licensing revenue should not prevent the Google Books project from moving forward because the speculative market does not exist, and the product provides a significant public benefit that enables wide-scale

at http://thepublicindex.org/docs/cases/authorsguild-2ndcir/32-academic-amicus.pdf (last visited Feb. 5, 2013).

186. *HathiTrust*, 2012 WL 4808939, at *12.

187. Sony Corp. of America v. Universal City Studios, Inc., 464 U.S. 417, 450 (1984).

preservation and access. As the Second Circuit held in *Bill Graham*, "were a court automatically to conclude in every case that potential licensing revenues were impermissibly impaired simply because the secondary user did not pay a fee for the right to engage in the use, the fourth factor would always favor the copyright owner."[188] Instead, the harm to potential licensing revenues should be measured by balancing the public benefit with the negative effect it may have on authors' incentive to create new works.

Balancing the four factors, Google Books's fair use defense is likely as strong as HathiTrust's. While Google's service goes beyond the preservation and research purposes of HathiTrust, it provides access to the public, enabling large-scale preservation, access, and search-ability that is unparalleled (even by the Library of Congress). Balancing the public benefit against the potential loss of revenue, protecting Google Books does far more to protect the promotion of the arts and useful sciences. Given the current inability of Congress to provide meaningful copyright reform for technologies with highly transformative purposes that facilitate the goals of § 107's preamble, fair use is the best place for judicial bodies to protect useful technologies that pose relatively small threats to the incentive for innovation.

IV. CONGRESSIONAL REFORM, WHILE IDEAL, IS UNLIKELY

Congressional updates to the Copyright Act, although an unlikely solution, could ensure that copyright law is compatible with the technological advancements of the Digital Age. First, this Part suggests that Congress consider updating the statutory exemptions available to libraries and research institutions under § 108 of the Copyright Act to enable increased access, ensure preservation, and enable research. Second, this Part suggests that Congress expand the number and scope of "protected entities" under § 121 of the Copyright Act. Lastly, this Part suggests that Congress consider categorically removing non-expressive uses from the realm of copyright.

A. EXPANDING § 108 FOR LIBRARIES AND EDUCATIONAL INSTITUTIONS

Just as the original exemptions for libraries under § 108 grew out of the "photocopying revolution," the Internet Age has dramatically expanded the scope of reproduction and distributions due to new technology, often resulting in a sharp decrease in cost.[189] The challenges to book digitization and college e-reserves are just two examples of the impediments caused by

188. Bill Graham Archives v. Dorling Kindersley Ltd., 448 F.3d 605, 614 (2d Cir. 2006).
189. *See* Matthew Sag, *supra* note 70, at 1612.

the current law's inability to properly keep up with the pace at which libraries and universities are modernizing their practices.

Rather than allowing the effect of isolated court decisions to slowly trickle down, a reformation of the Copyright Act should be completed. Section 108 privileges for libraries is a logical point at which to begin this modernization effort because Congress has already allowed libraries to engage in non-commercial photocopying without fear of direct or indirect liability for copyright infringement.[190] As before, the Copyright Office should issue a study that obtains input from libraries, educational institutions, technology companies, and copyright holders to determine the extent and scope of any changes to § 108.

First, the modernization of § 108 should expand the scope of protected entities from "libraries and archives" to also include "educational institutions." Each of these entities should be privileged in their use of digital copies for expressive and non-expressive uses for purposes of research, access, education, and preservation. Just as the existing § 108 dealt with the concern that technological advances would eclipse the market for their works, the expanded § 108 would require strict compliance with statutory provisions in order to obtain protection. Moreover, the statutory requirements could be supplemented to ensure library and educational copying is limited to the amount necessary for its purpose. A statutory update would be a better place for a bright line rule similar to the one mentioned by Judge Evans in *Campbell*.[191] This would ensure that the amount used properly reflects the underlying needs without requiring librarians and educators to engage in speculative fair use analyses that even well-versed judges cannot agree on.

As a tradeoff for the restrictions on use, the expanded § 108 should also exempt transformative uses that require copying the entire work. This protection is necessary to ensure the projects such as the HathiTrust search index retain social utility for the public. Under the aegis of § 108, institutions seeking to enable users to query across their entire collections would not have to implement an opt-out mechanism that compromises their ability to provide a truly useful and comprehensive search index. This allows public and private universities to continue Congress's goal of increasing preservation and access in order to promote the progress of science. The benefit available to the public substantially outweighs the potential harm to

190. *See* Copyright Act of 1976, § 108, 90 Stat. 2541.

191. Cambridge Univ. Press v. Becker, 863 F. Supp. 2d 1190, 1236 (N.D. Ga. 2012) (holding that using less than 10% of a copyrighted work is likely to constitute fair use for educational purposes).

the market for the books because the search functionality is not an expressive substitution for the creative expression in the works.

B. EXPANSION OF § 121 PROTECTION

Section 121 should be expanded to allow print-disabled individuals to access the large volumes of works that have remained inaccessible to them for decades. Reproduction of copyrighted works for individuals with print-disabilities is made easier by the advent of digital copies. As noted by the court in *HathiTrust*, there is no market for providing print-disabled individuals access to the vast body of works that are housed in our nation's libraries.[192] Unfortunately, the language of § 121 only protects "authorized entities," which are nonprofit organizations or governmental agencies with a "primary mission" to provide print-disabled individuals with "specialized services relating to training, education, or adaptive reading or information access."[193] It is difficult to imagine an interpretation of the purposes of copyright law that would not promote connecting every member of the public with the vast and expansive body of works. Given that there has been no attempt to establish a commercial market, § 121 should be expanded to protect the reproduction and distribution of copyrighted content for print-disabled individuals. Moreover, the meaning of "authorized entities" should be expanded to include all non-commercial uses. This would enable Google Books to also make its corpus available to the print-disabled minority, albeit a special version that does not contain ads. As stated by Judge Baer,[194] the absence of a market is proof that the benefit of this service cannot be outweighed by a potential loss to the copyright owner. Indeed, the authors have allowed the loss to occur for decades.

V. CONCLUSION

Digital libraries provide the promise of superior search capabilities and a more effective way to connect readers around the world with the places where they can purchase and borrow books. This technical breakthrough decentralizes the collection of knowledge from university archives, allowing all users to have access. While neither Google Books nor HathiTrust provides a digital public library, each makes use of mass digitization in a way that advances the purposes of copyright by facilitating large-scale preservation and enabling the public to access a wide range of material. The

192. Authors Guild, Inc. v. HathiTrust, 11 CV 6351 HB, 2012 WL 4808939, at *15 (S.D.N.Y. Oct. 10, 2012).

193. 17 U.S.C. § 121(d)(1) (2006).

194. *HathiTrust*, 2012 WL 4808939, at *15.

concern for access and preservation informed all iterations of the Copyright Act, and its evolution has consistently sought to be for the benefit of the public. Education and research provide the means by which authors can create new works of science and useful arts; technologies that facilitate these goals without expressing the underlying content of copyrighted works should be protected.

Emerging technology will continue to challenge copyright law. Consequently, updates to the Copyright Act will periodically prove necessary. The fair use doctrine provides the flexibility necessary to weigh the benefits of disruptive technologies against the importance of securing limited monopolies to the authors of copyrighted work. The *HathiTrust* decision solidifies a growing preference for educational and research institutions making use of technologies reliant on copying to facilitate learning.

However, for all the promise of emerging technology, judicial reaction to the litigation signals to competing interests the degree to which they must coexist. The Google Books project represents a product that was designed cognizant of incoming lawsuits, and its design is one that sought to balance rights holder concerns by displaying no more than is necessary for user queries and installing security measures that prevent the product from substituting the demand for copyrighted content. This type of behavior must be encouraged, as the scope of transformative use must be balanced by the incentive provided to authors by providing them with exclusive rights regarding reproduction. It is that balance that will ensure that copyright law continues to foster the creation and dissemination of original work.

REMITTITUR AND COPYRIGHT

Casey Hultin†

Recently, decisions on peer-to-peer file sharing copyright infringement cases have come down from the First and Eighth Circuit Courts of Appeals. The defendants in these cases are normal, everyday people, but there is nothing everyday about the damage awards, which sometimes amount to over $1,000,000. The courts in both of these decisions utilized the common law doctrine of remittitur. The doctrine of remittitur allows the court to lower the amount of damages when those damages are grossly excessive based on evidence presented to the jury. When the court grants remittitur, the party who receives the damage award has the option to accept the remitted damage award or choose to have a new trial if the party is unhappy with the remitted amount. In *Sony BMG Music Entertainment v. Tenenbaum*, the court did not find remittitur appropriate where the defendant moved for remittitur after the jury awarded the plaintiff $675,000 in damages for the defendant's downloading of thirty-four songs.[1] In contrast, in *Capitol Records, Inc. v. Thomas-Rasset*, the District Court of Minnesota granted the defendant's motion for remittitur after the jury awarded the plaintiff $1,920,000 in damages, equal to $80,000 per song the defendant downloaded.[2] The court in that case held that remittitur was appropriate, and the plaintiff moved for a new trial instead of accepting the remitted amount.[3]

This Note proceeds in three parts. Part I examines the history of the doctrine of remittitur. Part II next examines the doctrine's interaction with copyright law. Finally, Part III explores the future potential applications of the doctrine. Recently, the Recording Industry Association of America ("RIAA") has stated that it will no longer pursue litigation against individual infringers, leaving suits against facilitators as the best means for recovering damages for online copyright infringement. Independent filmmakers also have ongoing lawsuits against downloaders from peer-to-peer file sharing networks. Whether or not remittitur will play a role in these cases remains to

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1. Sony BMG Music Entm't v. Tenenbaum (*Tenenbaum III*), No. 07-11446-RWZ, 2012 WL 3639053 (D. Mass. Aug. 23, 2012).

2. Capitol Records, Inc. v. Thomas-Rasset (*Thomas-Rasset V*), 692 F.3d 899, 904 (8th Cir. 2012).

3. *Id.*

be seen. Because the damage amounts in lawsuits against facilitators are less likely to be grossly excessive and shocking to the conscious, remittitur will unlikely factor into those cases.

I. REMITTITUR BACKGROUND

Remittitur allows the court to lower the amount of damages awarded to the plaintiff "when the verdict is so grossly excessive as to shock the conscience of the court."[4] In deciding whether or not the verdict is excessive, the court "can rely on its own reading of all the trial evidence presented."[5] If, after reviewing the trial evidence and concluding that the verdict was "grossly excessive,"[6] a court issues a remittitur, the plaintiff has the choice of whether or not to accept the remitted amount. If the plaintiff chooses not to accept the remitted damage award, the plaintiff may instead proceed to a new trial.[7] There has been some disagreement among circuit courts as to whether or not a plaintiff may appeal the remitted amount if he does not choose to have a new trial.[8]

This Part will first walk through the history of remittitur, specifically examining Supreme Court jurisprudence on the doctrine. Next, this Part will discuss the constitutionality of remittitur under the Seventh Amendment.

A. THE HISTORY OF REMITTITUR

Remittitur first appeared in federal courts in 1822, in *Blunt v. Little*.[9] In that case, the defendant moved for a new trial after the jury returned a verdict for allegedly excessive damages.[10] The court determined the appropriate amount of damages and instructed the plaintiff that he could

4. *See* Eich v. Bd. of Regents for Cent. Mo. State Univ., 350 F.3d 752, 763 (8th Cir. 2003).

5. Capitol Records Inc. v. Thomas-Rasset (*Thomas-Rasset II*), 680 F. Supp. 2d 1045, 1050 (D. Minn. 2010) (citing Schaefer v. Spider Staging Corp., 275 F.3d 735, 738 (8th Cir. 2002)).

6. *Eich*, 350 F.3d at 763.

7. *See* Korotki v. Goughan, 597 F. Supp. 1365, 1387 (D. Md. 1984).

8. *See* Gilbert v. St. Louis-San Francisco R.R. Co., 514 F.2d 1277, 1280–81 (5th Cir. 1975) (holding that a plaintiff who accepted remittitur under protest could still appeal the remitted amount). *But see* Collum v. Butler, 421 F.2d 1257, 1258 (7th Cir. 1970) (holding that when a plaintiff accepts the remitted amount instead of opting for a new trial, he has waived his right to appeal the remitted amount).

9. *See* Suja A. Thomas, *Re-Examining The Constitutionality of Remittitur Under the Seventh Amendment*, 64 OHIO ST. L.J. 731, 731–32 (2003) (citing Blunt v. Little, 3 F. Cas. 760 (C.C.D. Mass. 1822)).

10. *See id.*

accept this amount or have a new trial.[11] The Supreme Court later accepted the court's power to remit a verdict in *Northern Pacific Railroad Company v. Herbert*.[12] The rationale for remittitur is not only to help control excessive jury verdicts but also to limit time spent in court. With remittitur, parties can come to an agreeable solution without having to try the entire case over, which would impose substantial additional costs to both sides.

Before its application in federal court, remittitur appeared in English Common Law. There is some case law from the 1700s to suggest that remittitur and its former counterpart, additur,[13] were parts of English Common Law.[14] Additionally, Mayne's Treatise on Damages, originally published in 1856, notes that the doctrine may have stemmed from an unofficial solution judges often employed to prevent the necessity of a new trial:

> When an excessive verdict is given, it is usual for the judge to suggest to counsel to agree on a sum, to prevent the necessity of a new trial. In the absence of agreement the Court has no power to reduce the damages to a reasonable sum instead of ordering a new trial. It would seem also from what was said in the case in which this was recently decided, that where the damages are too small, the Court cannot with the defendant's consent increase them, if the plaintiff asks for a new trial.[15]

Furthermore, in applying additur or remittitur, the court generally did so when the damages were more certain, such as in debt cases, as opposed to cases where the damages were more subjective, such as in personal injury cases.[16] Much like in English Common Law, the doctrine of remittitur does not frequently appear in federal court decisions. Despite this infrequency, the application of remittitur has been shaped by key Supreme Court decisions. As set forth below, these Supreme Court decisions formulated rules that frame remittitur analysis and implementation today.

1. Dimick v. Schiedt *Outlaws Additur, but Upholds Remittitur*

Dimick v. Schiedt examined the constitutionality of additur, the increase of the jury's damage award, but also considered the constitutionality of

11. *See id.*
12. *See* Northern Pac. R.R. Co. v. Herbert, 116 U.S. 642, 646–47 (1886).
13. Additur occurs when the court increases the jury's verdict.
14. *See generally Blunt*, 3 F. Cas. 760.
15. *Id.* (citing JOHN DAWSON MAYNE, MAYNE'S TREATISE ON DAMAGES, 580 (1st ed. 1856)).
16. *See* Dimick v. Schiedt, 293 U.S. 474, 480 (1935).

remittitur in the context of its relationship to additur.[17] In that case, the plaintiff won a $500 verdict due to the defendant's negligent car operation.[18] The plaintiff moved for a new trial on the basis of the verdict being inadequate.[19] The trial court judge agreed and ordered a new trial unless the defendant would agree to an award of $1500 instead.[20] The defendant agreed, but the plaintiff appealed this decision, arguing that he should have the right to try the case again in front of a jury.[21] The court of appeals reversed the decision, holding that additur was unconstitutional.[22] The Supreme Court ultimately agreed, holding additur unconstitutional under the Seventh Amendment.[23]

The Supreme Court considered the constitutionality of remittitur while considering whether or not the doctrine of additur existed under common law at the time of the adoption of the U.S. Constitution in 1791.[24] The Court determined that additur was not sufficiently established under English Common Law for it to satisfy this requirement.[25] The Court next considered the argument that because federal courts used the analogous doctrine of remittitur, additur should similarly be constitutional.[26] To aid in their analysis, the Court also considered the constitutionality of remittitur.[27] From its research of treatises dating earlier than 1791 and a sampling of common law cases, the court determined that there was sufficient support to show the existence of remittitur in 1791.[28] Since *Dimick*, courts have uniformly continued to accept the power of federal courts to remit damage awards.[29]

2. *The Trial Court Has Discretion in Deciding Remittitur*

In *Neese v. Southern Railway Co.*, the Supreme Court upheld the trial court's decision to remit $10,000 of a verdict for $60,000 because remittitur grants

17. *See id.* at 474.
18. *See id.*
19. *See id.* at 475.
20. *See id.*
21. *See id.*
22. *See id.*
23. *See id.*
24. *See id.*
25. *See id.*
26. *See id.* at 482.
27. *See id.*
28. *See id.* at 477–87 (finding that the treatises constituted sufficient evidence of remittitur's existence under Common Law).
29. *See, e.g.*, Denholm v. Houghton Mifflin Co., 912 F.2d 357, 361 (9th Cir. 1990); Evers v. Equifax, Inc., 650 F.2d 793, 797 (5th Cir. 1981); Johnson v. Rogers, 621 F.2d 300, 306 (8th Cir. 1981); Holmes v. Wack, 464 F.2d 86 (10th Cir. 1972).

the trial court discretion in deciding the appropriate remitted amount.[30] In that case, after the jury returned a verdict for the plaintiff, the defendant moved for a new trial due to excessive damages.[31] Instead of granting this motion, the trial court decided that remittitur would be more appropriate.[32] While the plaintiff accepted the amount, the defendant appealed the remittitur, arguing that the trial court abused its discretion.[33] The court of appeals agreed with the defendant, holding that the trial court did abuse its discretion.[34] However, the Supreme Court reversed the decision of the court of appeals, holding that the trial court did not abused its discretion when its basis for remittitur was strongly supported by the record.[35]

3. *Consideration of F.R.C.P. Rule 59 Is Appropriate When Deciding How To Remit Damages*

Over thirty years after the Supreme Court's decision in *Neese*, the Supreme Court again discussed the trial court's power to use, or decline to use, remittitur in *Browning-Ferris Industries, Inc. v. Kelco Disposal, Inc.*, and held that courts should look to the guidelines outlined in Federal Rule of Civil Procedure ("FRCP") 59 to aid them in their decision.[36] In that case, the defendant appealed the jury's award of $6,000,000 in punitive damages for an antitrust action.[37] The court of appeals affirmed the damage amount, holding that the trial court did not abuse its discretion in denying the defendant's motion for a new trial or for remittitur.[38] The Supreme Court upheld the decision by the court of appeals, holding that denying a motion for remittitur of punitive damages of $6,000,000, when the actual damages were $51,000, was not an abuse of discretion.[39] The Court stated that in determining whether or not remittitur was appropriate, the trial court should consider the guidelines provided by FRCP 59.[40] In stating that the consideration of Rule 59 is the appropriate way to decide whether or not the damage amount is excessive with regard to potentially granting a motion for a new trial or

30. *See* Neese v. Southern Ry. Co., 350 U.S. 77, 77 (1955).
31. *Id.*
32. *Id.*
33. *Id.*
34. *Id.*
35. *Id.* at 78.
36. Browning-Ferris Indust., Inc. v. Kelco Disposal, Inc., 492 U.S. 257, 279 (1989) (noting that FRCP 59 outlines that the inquiry should be into whether or not the district court abused discretion in refusing to grant the motion).
37. *Id.* at 259.
38. *Id.* at 262.
39. *Id.*
40. *Id.* at 278.

remittitur, the Court declined to create a rule that would limit the proportionality of punitive damages to compensatory damages.[41]

B. REMITTITUR AND THE SEVENTH AMENDMENT

Since *Dimick*, there has been some scholarly analysis as to whether or not remittitur is constitutional under the Seventh Amendment.[42] The Seventh Amendment defines the jury's role in civil trials and outlines when the court can make decisions that potentially alter a decision the jury has already made.[43] Currently, under *Dimick*, remittitur is constitutional and does not violate the Re-examination Clause of the Seventh Amendment.[44]

The Re-examination Clause states, "In suits at common law . . . no fact tried by a jury, shall be otherwise re-reexamined in any court of the United States, than according to the rules of the common law."[45] Practically, this means that it may be unconstitutional for the court to deem a jury's verdict excessive. However, the analysis of remittitur's constitutionality differs depending on the interpretation of the Re-examination Clause.[46] Some analysis by scholars of remittitur's constitutionality considers "the rules of the common law" to be the rules that existed under English Common Law at the time of the enactment of the U.S. Constitution.[47] Other analysis considers "the rules of common law" fluid and malleable and not locked down to one particular time period.[48] Criticism of the constitutionality of remittitur comes primarily from the view that common law must have existed in 1791.[49] This argument asserts that the Court did not conduct sufficient case law research on remittitur within that time period in England and as a result did not have enough support to assert that it existed to a degree sufficient enough to satisfy the Reexamination Clause.[50] This argument has some basis in *Dimick*, in which the Court cited similar authority prior to 1791 regarding the existence of remittitur and additur and held both to be unconstitutional

41. *Id.* at 279.
42. *See* Thomas, *supra* note 9.
43. *See id.* at 732.
44. *See* Dimick v. Schiedt, 293 U.S. 474, 480 (1935).
45. U.S. CONST. amend. VII.
46. *See* Thomas, *supra* note 9, at 763–64.
47. *See id.*
48. *See* Kenneth S. Klein, *The Myth of How to Interpret the Seventh Amendment Right to a Civil Jury Trial*, 53 OHIO ST. L.J. 1005, 1025 (1992) (citing Galloway v. United States, 319 U.S. 372, 390 (1943)).
49. *See id.*
50. *See id.* at 734.

under the Seventh Amendment.[51] However, at the time of *Dimick*, precedent in federal courts established remittitur and its function, and the Supreme Court reasoned that remittitur and additur interacted differently with the purpose of the Seventh Amendment.[52] The Supreme Court has declared repeatedly that the purpose of the Seventh Amendment is to preserve the substance of trial by jury, not necessarily the procedure.[53] The Court in *Dimick* articulated that in the case of remittitur, the jury, by way of approving a higher amount, has necessarily found the reduced amount to be insufficient, whereas with additur, the jury, by way of not approving the higher amount, has implicitly found the lower amount to be sufficient.[54]

1. *Codified State Equivalents of Remittitur Are Constitutional Under the Seventh Amendment*

In *Gasperini v. Center for Humanities, Inc.*, the Supreme Court held that it was proper for the Second Circuit to apply New York State's codified equivalent of remittitur in determining whether or not the trial court erred in using its discretion to lower the damage amount.[55] In that case, Gasperini, who sued the Center for Humanities for infringing the copyright of his photographic slides, appealed to the Supreme Court, arguing that New York's laws, specifically New York Civil Practice Law and Rules ("CPLR") section 5501(c), controlling compensation awards were unconstitutional under the Seventh Amendment.[56] CPLR section 5501(c) evaluates the excessiveness of damages by determining whether the verdict "materially deviates from what is reasonable compensation."[57] This standard differs from the traditionally applied "shock the conscience" standard under common law.[58]

The Supreme Court examined the basis for the initial damage award.[59] At trial, Gasperini called an expert witness who testified that the $1500 per photographic slide "industry standard" value was based on the amount that

51. *See id.*; Dimick v. Schiedt, 293 U.S.474, 482 (1935). The court in *Dimick* cites English case law to show the existence of both remittitur and additur in almost equal amounts but still holds that additur is unconstitutional because it was not sufficiently established in 1791 English Common Law.

52. *See Correction of Damage Verdicts by Remittitur and Additur*, 44 Yale L.J. 318, 323–24 (1934).

53. *See id.*

54. *See Dimick*, 293 U.S. at 490–91.

55. *See* Gasperini v. Ctr. for Humanities, Inc., 518 U.S. 415, 419 (1996).

56. *See id.* at 421.

57. *See id.* at 415.

58. *See id.* at 416.

59. *See id.* at 422.

the slide owner could earn for a license fee on the slide during the creator's lifetime plus fifty years.[60] However, the Second Circuit held that this testimony regarding the "industry standard" was insufficient to establish such a high amount of damages and that the uniqueness of the photos and a showing of actual earnings, such as a future book deal displaying the images from the slides, were necessary.[61] The Supreme Court granted certiorari in this case in order to decide the appropriate standard to determine the excessiveness of a jury's verdict in an action for damages.[62] The Supreme Court held that in order to determine whether or not the verdict was excessive under New York law, the trial court needed to consider other relevant New York decisions.[63] In doing so, the Supreme Court also considered whether or not appellate courts could remit the amount themselves under the Seventh Amendment.[64] Interestingly, while the Court ultimately concluded that appellate courts could remit the damage amount, in this case, the Court vacated the judgment of the Second Circuit and remanded the decision back to the District Court to revisit the damages in light of the uniqueness of the photographs and other relevant factors.[65] This decision by the Supreme Court suggests that federal appellate courts sitting under diversity jurisdiction do not have the power to remit damages under the Seventh Amendment.[66]

As the Court has not reconsidered the constitutionality of common law remittitur since 1934, it remains constitutional under the Seventh Amendment. To this extent, given the infrequency with which remittitur appears as an issue in the Supreme Court, it will likely remain constitutional for the foreseeable future.

II. REMITTITUR AND COPYRIGHT

Remittitur has recently reappeared in two key peer-to-peer file sharing copyright infringement cases.[67] While both cases applied a "shock the conscious" standard and had similar damage awards, the cases reached

60. *See id.* at 420.
61. *See id.* at 419.
62. *See id.*
63. *See id.* at 438.
64. *See id.* (noting that the Seventh Amendment explains the role of the court in civil jury trials).
65. *See id.*
66. *See id.* at 439 (Stevens, J., dissenting).
67. *See Tenenbaum III*, No. 07-11446-RWZ, 2012 WL 3639053, at *1 (D. Mass. Aug. 23, 2012); Capitol Records, Inc. v. Thomas-Rasset (*Thomas-Rasset V*), 692 F.3d 899, 905 (8th Cir. 2012).

different conclusions on the appropriateness of applying remittitur.[68] Copyright damages are dictated by statute, which provides a range of amounts per infringed work. This Part will discuss how statutory damages function under copyright law while further exploring the changing role of courts in determining statutory damages after the decision in *Feltner v. Columbia Pictures Televisions, Inc.* Next, this Part will examine, through the lens of peer-to-peer file sharing cases *Sony BMG Music Entertainment v. Tenenbaum* and *Capitol Records, Inc. v. Thomas-Rasset*, how remittitur interacts with statutory damages under the Copyright Act.

A. STATUTORY DAMAGES UNDER THE COPYRIGHT ACT

Under the Copyright Act, plaintiffs can elect to receive statutory damages any time prior to final judgment.[69] These damages range from $750 to $150,000 per infringed work.[70] The upper range of statutory damages, from $30,000 to $150,000 per infringed work, is only awarded where the infringement was willful.[71] The purpose of statutory damages in copyright law has historically been to provide some means of compensating a plaintiff when actual damages are hard to prove, as they often are in copyright infringement cases.[72] However, under the current version of the Copyright Act, statutory damages are only available to those who have registered their copyright within three months of publication, thus giving statutory damages the additional purpose of encouraging registration.[73] Congress additionally reformed the Copyright Act to provide statutory damages "per infringed work" as opposed to "per infringement" in order to ensure that the damages do not become too excessive, while still providing a deterrent to potential infringers.[74] However, due to the large range of potential damage awards "per infringed work," this protection does not ensure that the award will not be excessive.[75] Congress does not provide guidance within the act for how to determine the amount of statutory damages, outside of the provision that damages ranging from $30,000 to $150,000 per infringed work be reserved for willful infringers.[76] This creates a wide range of possible damage amounts

68. *See Tenenbaum III*, 2012 WL 3639053, at *1; *Thomas-Rasset V*, 692 F.3d at 905.
69. 17 U.S.C. § 504(c) (2006).
70. *Id.*
71. *Id.*
72. Pamela Samuelson & Tara Wheatland, *Statutory Damages in Copyright Law: A Remedy in Need of Reform*, 51 WM. & MARY L. REV. 439, 446 (2009).
73. 17 U.S.C. § 504(c).
74. *See* Samuelson & Wheatland, *supra* note 72, at 453.
75. *Id.*
76. 17 U.S.C. § 504(c).

for copyright infringement, and because of the lack of clear guidelines, the court's best option to award more reasonable damages is through remittitur.

1. Feltner *Eliminates The Court's Role in Determining Statutory Damages*

Originally for damages under the Copyright Act, the court in *Feltner* decided statutory damages after a jury trial on whether or not the defendant infringed the plaintiff's copyright.[77] In the case, after a jury found that the defendant willfully infringed the plaintiff's copyright by continuing to broadcast television shows after Columbia Pictures revoked the license to do so, the trial court judge awarded the maximum of $20,000 for each infringement, totaling $8,800,000 in damages.[78] On appeal, the Ninth Circuit upheld the award.[79] When the Supreme Court examined the issue, they determined that under the Seventh Amendment, statutory damages were an issue to be examined by the jury.[80] The Supreme Court remanded the case and ordered a jury trial on statutory damages.[81] On remand, the jury awarded the plaintiff $72,000 for each infringement, totaling $31,680,000, three and a half times the damages from the initial bench decision.[82]

The defendant appealed the award again to the Ninth Circuit, arguing that the award was unconstitutional because the language of the Copyright Act required that statutory damages be decided by a judge.[83] The Ninth Circuit rejected this argument, holding that the Supreme Court's decision did not render the statutory damages provision of the Copyright Act unconstitutional.[84]

The *Feltner* decision removed what was previously an avenue for judges to control statutory damages and keep them from becoming grossly excessive.[85] After 1998, judges were left with remitting statutory damage awards or deeming them unconstitutionally excessive. Statutory damages left to juries tend to result in higher awards for the plaintiff, oftentimes at

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77. *See* Feltner v. Columbia Pictures Televisions, Inc., 523 U.S. 340, 346 (1998).

78. *Id.* at 344.

79. *Id.*

80. *Id.* at 355.

81. *Id.*

82. Columbia Pictures Television, Inc. v. Krypton Broad. of Birmingham, Inc., 259 F.3d 1186, 1195 (9th Cir. 2001).

83. *Id.* at 1192.

84. *Id.* at 1198. Feltner subsequently petitioned the case to the Supreme Court, but certiorari was denied. Columbia Pictures Television, Inc. v. Krypton Broad. of Birmingham, Inc., 259 F.3d 1186 (9th Cir. 2001), *cert. denied sub nom.* Feltner v. Columbia Pictures Television, Inc., 534 U.S. 1127 (2002).

85. Samuelson & Wheatland, *supra* note 72, at 456.

shocking amounts when the defendant is an individual infringer.[86] In these cases, remittitur provides a way for judges to reign in grossly excessive damages to an amount that bears a more reasonable relationship to actual harm. This role of remittitur plays out in the following copyright cases.

B. *SONY BMG MUSIC ENTERTAINMENT V. TENENBAUM*

The court in *Sony BMG Music Entertainment* considered remitting the damage award at the request of the court of appeal and ultimately deemed the amount to be inappropriate for the defendant, Joel Tenenbaum. In 1999, Joel Tenenbaum, a college student, began downloading songs from the Internet using a peer-to-peer file-sharing program.[87] After he downloaded the songs, he made them available for others to download by placing them in his shared songs folder.[88] Initially, Tenenbaum used Napster to download files, but after the service was shut down due to contributory copyright infringement, Tenenbaum turned to other services such as Limewire and Kazaa to satisfy his music needs.[89] In 2002, while attending Goucher College, his father warned him that downloading songs using peer-to-peer networks was illegal copyright infringement.[90] Additionally, Goucher College warned students about the legal risks of downloading music files from the Internet.[91] Despite his awareness that his actions were illegal, he continued using these services until 2007.[92] In 2005, he received a letter from a law firm. The letter notified Tenenbaum that the firm was aware he had illegally downloaded songs and that he could either settle or be sued.[93] He responded by offering to settle for $500.[94] The firm rejected his offer and countered with a $12,000 settlement amount.[95] Instead of settling, Tenenbaum decided to go to court.[96]

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86. *See Columbia Television Pictures*, 259 F.3d at 1195. The original statutory damages found Feltner liable for $20,000 per infringed work, while the jury trial on remand found Feltner liable for $72,000 per infringed work. *Id.*

87. *See* Sony BMG Music Entm't v. Tenenbaum *(Tenenbaum I)*, 721 F. Supp. 2d 85, 90 (D. Mass. 2010).

88. *See id.*

89. *See id.*

90. *See* Sony BMG Music Entm't v. Tenenbaum *(Tenenbaum II)*, 660 F.3d 487, 489 (1st Cir. 2011).

91. *See id.*

92. *See id.*; *Tenenbaum I*, 721 F. Supp. 2d at 90.

93. *See Tenenbaum I*, 721 F. Supp. 2d at 90.

94. *See id.*

95. *See id.*

96. *See id.*

1. *Damages and Remittitur at the Trial Court*

At trial, the judge directed a verdict for the plaintiffs, leaving the jury only to answer whether or not Tenenbaum willfully infringed, and if so, what damages were appropriate.[97] The plaintiffs presented evidence that Tenenbaum had illegally downloaded thousands of songs; however, the plaintiffs only focused on thirty songs.[98] Under 17 U.S.C. § 504(c), the plaintiff has the right to elect to take statutory damages as opposed to actual damages.[99] Unlike actual damages, plaintiffs may collect statutory damages even in the absence of a showing of actual harm or a showing of profit by the defendant.[100] Statutory damages can be as low as $750 or as high as $30,000 or $150,000 per song, depending on whether or not the jury finds the infringement willful.[101] The trial court instructed the jury that "willful infringement means that a defendant had knowledge that his actions constituted copyright infringement or acted with reckless disregard for the copyright holder's rights."[102] The jury found that Tenenbaum willfully infringed when he downloaded songs from the Internet and then shared them. Strikingly, the jury awarded the plaintiffs $22,500 per song for each of the thirty songs the plaintiffs focused on during litigation.[103]

Tenenbaum filed a motion for a new trial or remittitur on the grounds that these damages were excessive, regardless of the fact that these damages were within the statutory limits set for both willful and non-willful infringement.[104] The court applied the standard for remittitur articulated in *Segal v. Gilbert Color Systems, Inc.*, reviewing the jury award to determine if it was "grossly excessive, inordinate, shocking to the conscious, or so high that it would be a denial of justice to permit it to stand."[105] The plaintiffs made it clear that they would not accept a remitted amount.[106] Instead of lowering the amount using remittitur, the trial court instead considered the defendant's argument that the damage award violated his due process rights.[107]

While both remitting a damage award and finding a damage amount unconstitutionally excessive result in the reduction of a damage award, only

97. *See id.* at 87.
98. *See id.* at 90.
99. *See id.*
100. *See id.*
101. *See id.*
102. *See Tenenbaum II*, 660 F.3d 487, 507 (1st Cir. 2011).
103. *See Tenenbaum I*, 721 F. Supp. 2d at 87.
104. *See id.* at 88.
105. *See id.* (quoting Segal v. Gilbert Color Sys. Inc., 746 F.2d 78, 81 (1st Cir. 1984)).
106. *See id.*
107. *See id.* at 89.

remittitur requires the plaintiff's participation.[108] Finding the damages unconstitutionally excessive does not give the plaintiff an opportunity to reject the lowered amount; instead, their only recourse is to appeal the decision.[109]

In this case, the trial court held that the damage amount, totaling $675,000, was unconstitutionally excessive.[110] The trial court acknowledged that because the damage amount fell within the range set by Congress, Tenenbaum was on notice as to how much he could potentially pay if he fought the charges in court.[111] However, the trial court weighed this against the amounts that most juries award in copyright infringement cases.[112] The trial court determined that the damages awarded in this case were significantly above what is normally awarded and that the amount was larger than necessary to serve the governmental interests underlying statutory damages.[113] The trial court reduced the damages from $22,500 per song to $2,500 per song.[114] Both parties appealed.[115]

2. *The First Circuit Holds that the Trial Court Should Have Considered Remittitur*

The First Circuit struck down the trial court's decision, finding that the trial court violated the principle of constitutional avoidance—the principle that the court must avoid deciding the constitutionality of an issue when there is another issue that could be decided instead.[116] The First Circuit also considered and rejected Tenenbaum's argument regarding the constitutionality of the Copyright Act and the applicability of the statutory damages provision to his conduct.[117] Because the First Circuit held that the trial court erred in considering the constitutionality of the damages before considering the appropriateness of remittitur, the First Circuit remanded the decision back to the trial court to consider remittitur.[118]

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108. *See id.* at 93.
109. *Id.*
110. *See id.* at 89.
111. *See id.* at 88.
112. *See id.* at 89.
113. *See id.*
114. *See id.*
115. *Tenenbaum II*, 660 F.3d 487, 489 (1st Cir. 2011).
116. *See id.*
117. *See id.*
118. *See id.* at 490.

3. *The Trial Court Reconsiders Remittitur, but Still Does Not Find It Appropriate*

On remand, Judge Zobel considered remittitur, after the retirement of Judge Gertner, the original trial court judge.[119] Judge Zobel stated that "[r]emittitur is appropriate only when the award exceeds any rational appraisal or estimate of the damages that could be based on the evidence before the jury, where such evidence is viewed in the light most favorable to the prevailing party."[120] Judge Zobel considered the appropriateness of remittitur under the same standard articulated originally by the trial court, which quoted *Segal*.[121] Based on the key phrases "grossly excessive" and "shocking to the conscious," Judge Zobel held that there was no basis for remittitur in this case.[122] The trial court began by considering the non-exhaustive list of factors provided to the jury for its determination of the damage award.[123] The factors included:

> The nature of the infringement, the defendant's purpose and intent, the profit that the defendant reaped if any, and/or the expense that the defendant saved; the revenue lost by the plaintiff as a result of the infringement; the value of the copyright; the duration of the infringement; the defendant's continuation of infringement after notice or knowledge of copyright claims and the need to deter this defendant and other potential infringers.[124]

First, the trial court held that based on these factors, the evidence supported the damage verdict.[125] Evidence showed that "music recording companies' primary source of revenue stems from their exclusive rights to copy and distribute the musical works of their contracted artists."[126] This evidence weighed on the factor regarding the revenue lost by the plaintiffs, as well as the value of the copyright.[127] Furthermore, the plaintiffs presented evidence of how peer-to-peer file sharing networks operate and facilitate illegal downloading, particularly music records.[128] This evidence helped

119. *See Tenenbaum III*, No. 07-11446-RWZ, 2012 WL 3639053, at *1.
120. *See id.* at *2 (internal quotes omitted).
121. *See id.*
122. *See id.*
123. *See id.*
124. *See id.*
125. *See id.*
126. *See id.*
127. *See id.*
128. *See id.*

support the need for a deterrence factor.[129] Finally, the plaintiffs also presented evidence of the duration and severity of Tenenbaum's downloading activities, which spanned eight years and included thousands of songs.[130]

The evidence further supported that Tenenbaum willfully infringed.[131] He continued to download illegal music despite multiple warnings that his conduct could result in a lawsuit.[132] Judge Zobel found that the evidence sufficiently supported the damages and denied Tenenbaum's motion for remittitur or a new trial.[133]

Tenenbaum illustrates that even though damage awards may be incredibly large, particularly relative to the amount the defendant would have paid to legally purchase the plaintiffs' infringed works, the damage awards might not "shock the conscious" under remittitur analysis.

C. *CAPITOL RECORDS, INC. V. THOMAS-RASSET*

Capitol Records, on the other hand, shows how courts that employ a remittitur analysis can properly remit damage awards in peer-to-peer file sharing cases. In 2005, Capitol Records, Inc. and other recording companies investigated the suspected infringement of their music copyrights by hiring MediaSentry, an online investigative firm.[134] The firm discovered a user by the name of "tereastarr" sharing files on Kazaa.[135] MediaSentry found over 1,700 music files in tereastarr's shared folder, which included songs that users have downloaded and shared with other Kazaa users.[136] MediaSentry attempted to notify tereastarr of their awareness of tereastarr's infringement, but tereastarr never responded.[137]

The RIAA issued a subpoena to get the name of the person associate with tereastarr's IP address, and the RIAA was informed that the user's name was Jammie Thomas-Rasset.[138] RIAA sent Thomas-Rasset a letter and hoped to initiate a settlement.[139] Thomas-Rasset contacted them as instructed, but the parties were unable to come to an agreement.[140] In 2006, Capitol Records

129. *See id.*
130. *See id.*
131. *See id.* at *3.
132. *See id.*
133. *See id.*
134. *See Thomas-Rasset V*, 692 F.3d 899, 903 (8th Cir. 2012).
135. *See id.* at 904.
136. *See id.*
137. *See id.*
138. *See id.*
139. *See id.*
140. *See id.* at 903.

and others sued Thomas-Rasset for violating their exclusive rights to reproduction and distribution under 17. U.S.C. § 106, as well as for willfully infringing their copyright under 17 U.S.C. § 101.[141]

Thomas-Rasset acknowledged that tereastarr is her frequent username for Internet and other computer accounts.[142] In college, prior to the trial, Thomas-Rasset wrote a case study on the legality of Napster and was aware that Napster was ultimately shut down due to its illegality.[143] Despite this research, Thomas-Rasset denied knowledge of Kazaa's existence before this case and stated that she had never used Kazaa.[144]

Thomas-Rasset has, at different times, provided alternative theories for who may have downloaded the files.[145] At her deposition, she stated that her hard drive was replaced and perhaps someone else had downloaded the files on it earlier.[146] She also tried to blame the infringement on her husband and two sons.[147] The recording companies offered to settle with Thomas-Rasset initially for $5,000,[148] which she declined.[149]

At the first trial in October 2007, the jury found Thomas-Rasset liable for willful infringement, and awarded the plaintiffs damages of $222,000.[150] However, the trial court erred because it provided a jury instruction that gave the wrong explanation of what was required to establish "distribution" under the Copyright Act.[151] The court granted a new trial as a result of this error, not ruling on whether or not the damages awarded were constitutional.[152]

1. *The Trial Court Grants Remittitur in the Second Trial*

The second trial began in June 2009.[153] For Thomas-Rasset, No Doubt's "Bathwater" and other songs from the 1990s only got more expensive.[154] The

141. *See id.* at 905.
142. *See id.*
143. *See id.*
144. *See id.*
145. *See id.*
146. *See id.*
147. *File-Sharer Says Kid May Have Done It*, CBS NEWS (June 22, 2009), http://www.cbsnews.com/2100-502303_162-5103122.html.
148. Sara Yin, *Jammie Thomas Refuses to Pay $1.5 Million Fine For Illegal Downloads*, PC MAG (Nov. 5, 2010), http://www.pcmag.com/article2/0,2817,2372230,00.asp.
149. *See* Capitol Records, Inc. v. Thomas-Rasset *(Thomas-Rasset I)*, 579 F. Supp. 2d 1210, 1227 (D. Minn 2008).
150. *See id.* at 1213.
151. *See id.*
152. *See id.*
153. *See* Capitol Records, Inc. v. Thomas-Rasset (*Thomas-Rasset II*), 680 F. Supp. 2d. 1045, 1050 (D. Minn. 2010).

jury this time returned a verdict for $1,920,000—$80,000 per song for twenty-four songs—based on the statutory damages provisions of the Copyright Act.[155] Thomas-Rasset asked the court to set aside the damages, arguing that the statutory damages provision of the Copyright Act did not apply to her because she is an individual infringer and that the statutory damages were so excessive and shocking that they should be remitted or, in the alternative, she should be granted a new trial.[156]

The court first considered Thomas-Rasset's motion for remittitur.[157] When deciding whether or not to order remittitur, the court applied the standard articulated in *Eich v. Board of Regents for Central Montana State University*: "[a] verdict is not considered excessive unless there is plain injustice or a monstrous or shocking result."[158] The recording companies argued that the trial court did not have the power to remit the statutory damage award because remittitur violates the Seventh Amendment.[159] The court disagreed, holding that remittitur did not interfere with the plaintiffs' right to a jury trial, which the Seventh Amendment protects, because the plaintiffs had the option to choose a new trial instead of accepting the remitted amount.[160]

In deciding whether or not remittitur was appropriate, the court next considered whether or not the statutory damages met the grossly excessive standard.[161] In its consideration, the court looked at the relationship between statutory damages and actual damages.[162] Thomas-Rasset provided evidence that the ratio between statutory damages and actual damages in this case was at least 1:5,333 (based on legally purchasing the entire album) and possibly as large as 1:62,015 (based on purchasing the songs as singles).[163] The plaintiffs pointed out that statutory damages under the Copyright Act do not require any showing of actual harm. The court disagreed, however, noting that because statutory damages do have "in part, a compensatory purpose, assessed statutory damages should bear some relation to the actual damages

154. *See id.* No Doubt's "Bathwater" is one of the songs Thomas-Rasset downloaded on Kazaa.

155. *See id.*

156. *See id.*

157. *See id.*

158. *See id.* (citing Eich v. Bd. of Regents for Cent. Mo. State Univ., 350 F.3d 752, 763 (8th Cir. 2003)).

159. *See id.*

160. *See id.* at 1051.

161. *See id.*

162. *See id.* at 1052.

163. *See id.*

suffered."[164] The plaintiffs further contested Thomas-Rasset's calculation of the ratio between statutory damages and actual damages and argued that their actual damages were significantly higher than the one-time purchase cost of a song or album for each of the twenty-four infringing files.[165] They argued that because Thomas-Rasset kept these files in the shared folder, she made them available for download to millions of other users, multiplying the one-time purchase amount every time another person downloaded the song from her shared folder.[166] These other users would likely in turn place their files in their shared folder, making them available to an even greater number of users.[167] Thomas-Rasset responded by arguing that punishing her for the shared folder would essentially be the same as punishing her for the entire system of illegal music downloading, which would be unconstitutional.[168]

The court then considered the evidence of willfulness and the factor of deterrence in this case.[169] Willfulness and deterrence contribute to determining the appropriate amount of statutory damages under 17 U.S.C. § 504.[170] The court noted that the jury found that due to Thomas-Rasset's research on Napster in college, she was aware that downloading copyrighted music was illegal.[171] The court cited Thomas-Rasset's reluctance to take responsibility for her actions—in which she initially denied ever using peer-to-peer file sharing programs on her computer and later implicated her children and ex-boyfriend—as a factor showing "the need for strong deterrence" in this case.[172]

The court then weighed these considerations against each other to determine the appropriateness of remittitur.[173] The court held that because Thomas-Rasset was not operating for a profit and merely operating with the intent of downloading free music, the vast majority of the damages were for deterrence purposes.[174] Considering this, the court reasoned that the need for deterrence could not possibly justify two million dollars in damages for "stealing and illegally distributing 24 songs for the sole purpose of obtaining free music."[175] The court also reasoned that the plaintiffs could not support a

164. *See id.* at 1050 (internal citation omitted).
165. *See id.*
166. *See id.*
167. *See id.*
168. *See id.* at 1053.
169. *See id.*
170. *See id.*
171. *See id.*
172. *See id.*
173. *See id.*
174. *See id.*
175. *See id.*

verdict of that size based on their evidence of actual damages. While the Copyright Act did not require a showing of actual damages, the plaintiff must still show some correlation between statutory damages and actual damages.[176] While the plaintiffs provided evidence of the difficulty of calculating the actual damages caused by Thomas-Rasset's infringement and by online infringement generally, the court held that "$2 million for stealing [twenty-four] songs for personal use is simply shocking."[177]

After deciding to remit the damages, the court next determined the proper amount of damages.[178] Thomas-Rasset requested that the amount be remitted to $18,000.[179] To determine the proper amount, the court applied the "maximum recovery rule," whereby the court remits the damages to "the maximum amount the jury could properly have awarded."[180] The court reasoned that remittitur is not meant to substitute the reasoning of the jury but instead serves to bring the damages to "the maximum amount sustainable by the record, so that the statutory damage award is no longer shocking or monstrous."[181] While the plaintiffs argued that the court should look to other jury verdicts in similar cases, essentially looking only to *Tenenbaum*, the court noted that the Eighth Circuit already decided that doing so was not appropriate when deciding damages because each case should be decided "within the framework of its distinctive facts."[182] Further, the court noted that because the court in *Tenenbaum* was also considering whether or not to remit the damage award, the case would bear little weight even if it were to be considered.[183]

The court ultimately decided to remit the damages to three times the statutory minimum per infringed sound recording, based on the precedent of using treble damages for willful behavior.[184] The court was careful to note that they were not trying to create a treble damages provision within the Copyright Act; the court merely tried to find an amount of damages that did not "veer into the realm of gross injustice" for noncommercial infringers.[185] The plaintiff had the choice of accepting an award of $2,250 per song or

176. *See id.* at 1053–54.
177. *See id.* at 1054.
178. *See id.*
179. *See id.*
180. *See id.* (citing K-B Trucking Co. v. Riss Int'l Corp., 763 F.2d 1148, 1163 (10th Cir. 1985)).
181. *See id.* at 1055.
182. *See id.* (citing Vanskike v. Union Pac. R.R. Co., 725 F.2d 1146, 1150 (8th Cir. 1984)).
183. *See id.*
184. *See id.* at 1056.
185. *See id.*

scheduling a new trial.[186] Thomas-Rasset moved for reconsideration of the remittitur order, which was denied.[187] The record companies declined the remitted amount and instead opted for a new trial.[188]

1. *The Trial Court Refuses to Consider Remittitur Again Because the Plaintiff Will Not Accept the Remitted Award*

In the third trial, the jury only determined the amount of statutory damages.[189] The jury awarded $62,500 per song, totaling $1,500,000 in damages.[190] Thomas-Rasset again moved to alter the judgment, and the court again granted the motion, lowering the damage award to $2,250 per song.[191] However, because the plaintiffs demonstrated in the previous two trials that they were unwilling to accept remittitur, the court instead lowered the damage award on the basis that $1,500,000 was unconstitutionally excessive.[192] This decision elicited an appeal to the Eighth Circuit.

2. *The Eighth Circuit Court of Appeal Does Not Comment on Remittitur*

Both parties appealed the new statutory damages amount.[193] The recording companies argued that the jury's original damage award from the first trial of $222,000 should be reinstated, while Thomas-Rasset argued that any statutory damages in this case would be unconstitutional.[194] The Eighth Circuit vacated the judgment and remanded the case "with directions to enter a judgment for damages of $222,000."[195] However, the opinion did not discuss remittitur outside of its reiteration of the procedural history of the case.[196]

The courts in *Tenenbaum* and *Thomas-Rasset* considered similar factors to determine whether or not the awards were sufficiently excessive for remittitur.[197] The largest factor considered in both cases was whether or not

186. *See id.* at 1061.

187. *See* Capitol Records, Inc. v. Thomas-Rasset (*Thomas-Rasset III*), No. 06–1497 (MJD/LIB), WL 4286325, at *1 (D. Minn. Oct. 22, 2010).

188. *See* Capitol Records, Inc. v. Thomas-Rasset (*Thomas-Rasset IV*), 799 F. Supp. 2d 999, 1001 (D. Minn. 2011).

189. *See id.*

190. *See id.*

191. *See id.*

192. *See id.* at 1003.

193. *See Thomas-Rasset V*, 692 F.3d 899, 902 (8th Cir. 2012).

194. *See id.*

195. *See id.* at 916.

196. *See id.*

197. *See Thomas-Rasset II*, 680 F. Supp. 2d 1045, 1053–54 (D. Minn. 2010); *Tenenbaum III*, No. 07-11446-RWZ, 2012 WL 3639053, at *2–3 (D. Mass. Aug. 23, 2012).

there was sufficient evidence for the jury to base its verdict.[198] While the court in Tenenbaum stopped its inquiry there, finding that there was sufficient evidence for the jury to base its verdict, the court in Thomas-Rasset looked to further factors such as the relationship between statutory damages and actual damages, factual support for actual damages inflicted, evidence of willfulness, and the need for deterrence.[199]

III. FUTURE APPLICATIONS OF REMITTITUR IN COPYRIGHT

The RIAA stated in 2008 that it will no longer pursue litigation against individual infringers from file sharing websites.[200] As a result, the RIAA's strategies for recouping some of its losses from peer-to-peer file sharing have changed.[201] Instead of suing the individual infringers, the RIAA has been going after the facilitators of that infringement.[202] Facilitators range from the ISP providers of individual downloaders to sites like YouTube that allow users to upload their own content.[203] The remaining litigation between copyright owners and individual peer-to-peer file sharers largely comes from smaller, independent filmmakers.[204] Whether or not a judge in these situations could apply remittitur remains to be examined. This Part will explore the possible application of remittitur in two of the more common internet copyright infringement scenarios. First, Section III.A will discuss the application of remittitur in a hypothetical scenario based on *Viacom v. YouTube* but where the parties went to trial on damages. Second, Section III.B will discuss the application of remittitur in the case of suits brought by small, independent filmmakers against individual peer-to-peer file sharers.

A. *VIACOM V. YOUTUBE*

In *Viacom v. YouTube*, Viacom sued YouTube for allowing users to upload its copyrighted videos for free.[205] The district court granted YouTube's

198. *See id.*

199. *See Thomas-Rasset II*, 680 F. Supp. 2d at 1053–54; *Tenenbaum III*, 2012 WL 3639053, at *2–3.

200. Eliot Van Buskirk, *RIAA to Stop Suing Music Fans, Cut Them Off Instead*, WIRED (Dec. 19, 2008), http://www.wired.com/business/2008/12/riaa-says-it-pl.

201. *See id.*

202. *See id.*

203. *See id.*; Viacom Int'l, Inc. v. YouTube, Inc., 676 F. 3d 19, 25–26 (2d Cir. 2012).

204. *See* Lee Gesmer, *Porn Movies, Copyright Trolls and Joinder (Yes, Joinder)*, MASS L. BLOG (Oct. 31, 2012), http://www.masslawblog.com/copyright/porn-movies-copyright-trolls-and-joinder-yes-joinder.

205. *See Viacom*, 676 F. 3d at 28.

motion for summary judgment, holding that YouTube's activities fell under the Safe Harbor provision of the Digital Millennium Copyright Act.[206] The Safe Harbor provision of the Digital Millennium Copyright Act limits the liability for copyright infringement of service providers if the actions of the service provider meet a set of threshold criteria and specific safe harbor requirements.[207] On appeal, the Second Circuit vacated the order granting summary judgment and remanded the case to the trial court to determine whether YouTube had knowledge, awareness, or was willfully blind to specific instances of infringement.[208] Neither the Second Circuit nor the trial court considered the potential damages from the posting of copyrighted videos on YouTube.[209] If the case does go to trial, and Viacom's claims succeed, the damage awards could be astronomical, leading to the question of whether remittitur may apply.

1. *If Viacom Succeeds on Remand, Will YouTube Possibly Have Success with Remittitur?*

Because no trial court has heard Viacom's evidence of YouTube's infringement, it is difficult to predict whether or not a trial court will potentially remit the amount.[210] Nevertheless, the factors the trial courts in *Tenenbaum* and *Thomas-Rasset* considered in determining the appropriateness of remittitur provide useful guidance.[211]

Part of what the *Thomas-Rasset* court found most troubling about the damage award was that it was disproportionate to the actual damages.[212] Particularly problematic for the court was the fact that if it were to decide that the statutory damages were not disproportionate to the actual damages, the actual damages the court would use for comparison would have to be for illegal downloading as a whole, not just for Thomas-Rasset's actions.[213] This differs from the scenario in *Viacom*, where as a facilitator of copyright

206. *See id.* at 29.

207. *See id.* at 27. The court stated that the threshold criteria includes whether the party is a service provider, whether it has a repeat infringer policy, and whether it has a mechanism in place to identify copyright infringement. *Id.* The court also stated that the specific safe harbor requirements include lack of actual knowledge of infringing material, lack of financial benefit from infringement, and removal of the infringing work upon notice of infringement. *Id.*

208. *See id.* at 41–42.

209. *See id.*

210. *See id.*

211. *See Thomas-Rasset II*, 680 F. Supp. 2d 1045, 1053–54 (D. Minn. 2010); *Tenenbaum III*, No. 07-11446-RWZ, 2012 WL 3639053, at *2–3 (D. Mass. Aug. 23, 2012).

212. *See Thomas-Rasset II*, 680 F. Supp. 2d at 1053–54.

213. *See id.*

infringement on the Internet, YouTube has touched a greater amount of the infringement directly.[214] Unlike in *Thomas-Rasset*, where it was next to impossible to determine the actual damages resulting from Thomas-Rasset's infringement, the court could more easily calculate the amount of damage YouTube facilitated through its website.[215] By taking the number of infringed works, the number of times the video was viewed, and the amount of money the plaintiffs would have earned otherwise, the court could create a more accurate estimation.[216] That is not to say calculating damages would be trivial, just that since YouTube's infringement is more readily quantifiable through uploading, viewing, and sharing data, it would be easier to attribute the infringement costs to YouTube than it would be to Thomas-Rasset.[217]

Many of the other factors analyzed in *Tenenbaum* and *Thomas-Rasset* would likely militate against using remittitur as well.[218] The standard of "grossly excessive" will, perceptibly, be harder to meet when the defendant is a large company with large profits.[219] Viacom sued YouTube for $1 billion.[220] Considering that YouTube's purchase price in 2006 was $1.65 billion[221] and that YouTube generated approximately one billion dollars for Google in its 2012 fiscal year,[222] the damage amount seems less shocking compared with Thomas-Rasset's liability.[223] While Thomas-Rasset may have saved some money by downloading songs from the Internet, the amount of money she saved did not come close to $1,250,000.[224] Because the amount of damages here is closer to how much revenue YouTube generates[225] and because

214. Unlike an individual infringer who only touches what they download or upload, a facilitator or service provider touches every piece of uploaded content.

215. *See* Rob Reid, *The Numbers Behind the Copyright Math*, TED BLOG (Mar. 20, 2012) http://blog.ted.com/2012/03/20/the-numbers-behind-the-copyright-math (estimating the amount of damages caused by other infringement facilitators by looking at the losses in revenue between the years prior to their existence and after, specifically Napster).

216. *See Thomas-Rasset II*, 680 F. Supp. 2d at 1053–54 (considering how to calculate an individual infringer's damage contribution by a similar formula).

217. *See id.*

218. *See id.*; *Tenenbaum III*, No. 07-11446-RWZ, 2012 WL 3639053, at *2–3 (D. Mass. Aug. 23, 2012).

219. *See Thomas-Rasset II*, 680 F. Supp. 2d at 1053–54 (discussing the relationship between statutory damages and actual damages).

220. *See* Frederick Townes, *Viacom Sues YouTube for $1 Billion… The End of the Tube?*, MASHABLE (March 13, 2007), http://www.mashable.com/2007/03/13/viacom-youtube/.

221. *See* Viacom Int'l, Inc. v. YouTube, Inc., 676 F. 3d 19, 25–26 (2d Cir. 2012).

222. *See* Erick Schonfeld, Citi: Google's YouTube Revenues Will Pass $1 Billion in 2012 (And So Could Local), TECHCRUNCH, (Mar. 21, 2011), http://www.techcrunch.com/2011/03/21/citi-google-local-youtube-1-billion.

223. *See Thomas-Rasset II*, 680 F. Supp. 2d at 1053–54.

224. *See id.*

225. *See* Townes, *supra* note 220; *Viacom*, 676 F.3d at 28.

YouTube derives profits from infringing videos,[226] the amount of damages is less likely to shock the conscious.[227] When the amount is less likely to shock the conscious, remittitur is less likely to be a viable option.[228] Even if remittitur is appropriate, Viacom could still choose to reject remittitur.

2. *Viacom May Reject Remittitur in Favor of a New Trial*

Even if the trial court grants remittitur, as in *Thomas-Rasset*, Viacom may still choose to reject remittitur in favor of a new trial.[229] If Viacom were to reject the remitted amount, there would be a new trial, and if they again were awarded damages, it would be unlikely that remittitur would be granted a second time, given that Viacom would have shown its unwillingness to accept a remitted amount.[230] It seems unlikely that a company as large as Viacom, who has already spent large amounts of money pursuing this litigation,[231] would choose to accept a remitted amount instead of pursuing another opportunity to receive a higher damage award. This seems especially unlikely given that choosing a new trial would provide a greater bargaining position for settlement and allow plaintiffs to negotiate for a damage award higher than the remitted amount.[232] Because remittitur itself is unlikely in Viacom, and Viacom's potential acceptance of the remitted amount is equally unlikely, remittitur does not appear to have a significant role in this litigation.

B. INDEPENDENT FILMMAKER CASES

The remaining category of copyright infringement lawsuits where remittitur is likely to apply concerns suits against individual infringers by independent filmmakers. Lawsuits brought by independent filmmakers tend to be brought by the makers of independent motion pictures, such as *The*

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226. *See* Ellen Seidler, YouTube (and Netflix) monetize online piracy, VOX INDIE, (Jan. 26, 2013), http://voxindie.org/YouTube-netflix-monetize-piracy.

227. *See Thomas-Rasset II*, 680 F. Supp. 2d at 1053–54.

228. *See id.* at 1050.

229. *See id.*

230. *See Thomas-Rasset IV*, 799 F. Supp. 2d 999, 1001 (D. Minn. 2011).

231. *See* Lisa Lerer, *Viacom's Expensive Suit*, FORBES (Mar. 27, 2007), http://www.forbes.com/2007/03/27/youtube-viacom-google-tech-cx_ll_0328google.html (estimating that Viacom's legal fees will be upwards of $350 million for its lawsuit against YouTube and Google).

232. *See* Greg Sandoval, *Jammie Thomas Rejects RIAA's $25,000 Settlement Offer*, CNET (Jan. 27, 2010), http://news.cnet.com/8301-31001_3-10442482-261.html?tag=mncol;9n. After the court remitted Thomas-Rasset's damages to $52,000, Capitol Records attempted to settle with Thomas-Rasset, offering her an amount even lower than the remitted damages, but she rejected the amount. The $25,000 settlement is higher than the initial settlement offer of $2,000.

Hurt Locker,[233] or the makers of pornographic films.[234] Both groups have tried a new litigation strategy—going after users downloading their films from torrent streams, where the filmmakers attempt to join multiple downloaders of the copyrighted work as defendants, usually without naming the parties first.[235] So far, neither group has had much success.[236]

In these lawsuits, plaintiffs file a suit against multiple "John Doe" defendants, sometimes even thousands of them,[237] listing only the IP address corresponding to each "Doe," since that is the only information the plaintiffs have at that time.[238] Once they file the lawsuit, they subpoena the Internet Service Provider for the personal details belonging to the IP addresses.[239] After they have the personal details, the plaintiffs then send a letter to the defendants, offering to settle for a small amount.[240] This settlement allows the defendants to avoid being named in the lawsuit. Notably, when the copyrighted material is pornographic, many defendants are willing to pay to avoid personal embarrassment.[241] However, if a defendant moves to sever the case, the plaintiffs often drop him as a defendant completely.[242] These cases are yet to make it to trial and to be heard on damages.[243]

1. *If Independent Motion Picture Filmmakers Take Peer-to-Peer File Sharers to Trial, Remittitur May Be Appropriate*

If an independent producer of a film such as *The Hurt Locker* took a peer-to-peer file sharer to trial, the analysis for damages would likely look similar

233. *See* Ernesto, *Hurt Lock BitTorrent Lawsuit Dies, But Not Without Controversy*, TORRENTFREAK (Dec. 22, 2011), torrentfreak.com/hurt-locker-bittorrent-lawsuit-dies-but-not-without-controversy-111222.

234. *See* Gesmer, *supra* note 204.

235. *See id.*

236. After Vontage Pictures tried to subpoena the personal details of various IP addresses, a large number of these addresses were dismissed from the case. Ernesto, *supra* note 233. *See also* Third Degree Films v. Does 1–47, 286 F.R.D. 188, at *4 (D. Mass. Oct. 2, 2012) (holding that the plaintiff cannot join "John Doe" defendants in a single action, the plaintiff instead must file individual suits); SBO Pictures, Inc. v. Does 1–3036, No. 11-4220 SC, 2011 WL 6002620, at *3–4 (N.D. Cal. Nov. 30, 2011) (holding that allowing plaintiffs to join multiple defendants who downloaded sexually explicit material has a coercive affect and should not be allowed).

237. *See SBO Pictures*, 2011 WL 6002620, at *1. SBO Pictures tried to sue 3,036 defendants in one suit. *Id.*

238. *See id.*

239. *See* Gesmer, *supra* note 204.

240. *See id.*

241. *See id.*

242. *See id.*

243. *See id.*

to the analysis in *Tenenbaum* and *Thomas-Rasset*.[244] Using film retail prices, producers could demonstrate how much money they would have made had those who downloaded the films from peer-to-peer file sharing purchased or rented the films instead.[245] If the jury were to come back with a verdict where the damages did not bare some relationship to that demonstrable harm, like in *Thomas-Rasset*, the judge could deem remittitur appropriate and lower the damages.[246]

2. *If Pornography Filmmakers Take Peer-to-Peer File Sharers to Trial, Remittitur Is Unlikely to Be Appropriate Because Damages from the Jury Will Likely Be Lower*

Remittitur is much less likely to be utilized within the context of suits filed by pornography filmmakers, namely because it is unlikely the case would even go to trial.[247] For these filmmakers, the lawsuits themselves are their source of revenue.[248] They do not seek damages to make up for the money lost as a result of peer-to-peer file sharing, as many of the producers of these adult films do not sell them in the first place.[249] Instead, these lawsuits are designed to extract a settlement from the defendants, not to actually take them to trial.[250] The cost of filing the lawsuit is $350, no matter how many "Doe's" are defendants.[251] If a plaintiff filmmaker offers to settle with each of the defendants individually for $5000, then the moment the first "Doe" settles, the plaintiff has already recouped the cost of filing the lawsuit.[252] The "Doe's" have a large incentive to settle. If they do not, their Internet Service Provider may be subpoenaed, and the defendant may become a named party in the lawsuit.[253] Rare is the individual who would like to be a named defendant, for instance, in a lawsuit for infringing the copyright of "Big Butt Oil Orgy 2."[254]

If a defendant does not settle, then the calculus for a plaintiff to proceed with litigation changes dramatically. Because courts thus far have been

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244. *See Thomas-Rasset II*, 680 F. Supp. 2d 1045, 1053–54 (D. Minn. 2010); *Tenenbaum III*, No. 07-11446-RWZ, 2012 WL 3639053, at *2–3 (D. Mass. Aug. 23, 2012).

245. *See id.*

246. *See id.*

247. *See* Gesmer, *supra* note 204.

248. *See* James DeBriyn, *Shedding Light on Copyright Trolls: An Analysis of Mass Copyright Litigation in the Age of Statutory Damages*, 19 UCLA ENT. L. REV. 79, 86 (2012).

249. *See id.*

250. *Third Degree Films*, 286 F.R.D. at 190.

251. *See* Gesmer, *supra* note 204.

252. *See* DeBriyn, *supra* note 248.

253. *See* Gesmer, *supra* note 204.

254. *Third Degree Films*, 286 F.R.D. at 190.

reluctant to allow joinder in these cases, the plaintiff would likely have to pursue separate lawsuits against these defendants.[255] The plaintiff would then have to incur the legal costs associated with going to trial, significantly more than the $350 filing fee.[256] It is easier for adult filmmakers to continue to sue "Doe" defendants and extract settlements than to incur the cost of going to trial seeking statutory damages.[257]

IV. CONCLUSION

While remittitur did make an appearance in the peer-to-peer music file-sharing copyright infringement cases *Tenenbaum* and *Thomas-Rasset*—and seems to be a useful tool for judges to have some control over statutory damages after *Feltner*—it is unlikely to continue to make appearances in copyright trials. Remittitur is not likely to be appropriate in lawsuits against the facilitators of peer-to-peer file sharing because the damages sought bear more of a relationship to actual harm and are less likely to shock the conscious. While remittitur could play a role if lawsuits filed by independent filmmakers go to trial, it will not play a role in lawsuits filed by adult filmmakers due to the incentives those filmmakers have to not go to trial.

255. *See* Gesmer, *supra* note 204.
256. *See id.*
257. *See id.*

LEVELING PAINS: CLONE GAMING AND THE CHANGING DYNAMICS OF AN INDUSTRY

Nicholas M. Lampros†

In May of 2009, Xio Interactive, Incorporated, a small company formed by recent college graduate Desiree Golden, released a video game called *Mino* for what was then the iPhone OS operating system.[1] Within a few months, Xio released a second version of the game called *Mino Lite*.[2] According to accompanying descriptive text published with the game listings, the two games had much to recommend them: a variety of input control options, an original musical score, two standard play modes, mobile multi-player connectivity, and even social chat rooms where players could discuss strategy or watch games in progress.[3] Description of the actual game play, however, was sparse; *Mino* was summed up as simply a "Tetromino game" with "fast-paced, line-clearing features."[4] And at the very bottom of the description came a disclaimer: "Mino and Xio Interactive are not affiliated with Tetris (tm) or the Tetris Company (tm)."[5]

This disclaimer, of course, helps explain why further description of the game-play was unnecessary—and also what would happen next. To anyone with even casual familiarity with video game history, the screen shots and descriptions, sparse as they were, made it immediately apparent that *Mino* had deep similarities to *Tetris*, the wildly popular puzzle game that has sold millions of units on various gaming platforms since it was originally published in the 1980s.[6] How similar, exactly, soon became a question of law,

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1. *See* Tetris Holding, LLC v. Xio Interactive, Inc., 863 F. Supp. 2d 394, 397 (D.N.J. 2012). The iPhone OS was renamed to iOS with the release of version 4.0 in June of 2010. David Chartier, *iPhone OS Gets New Name, Video Calling*, MACWORLD (June 7, 2010, 11:56 AM), http://www.macworld.com/article/1151812/iphone_os_4_wwdc.html.

2. *Tetris Holding*, 863 F. Supp. 2d at 397.

3. Because of subsequent litigation, the two games have been removed from the iTunes App Store, where they were originally sold. *See id.* This text is taken from the website 148apps.com, which maintains listings for the games for archival purposes. *App Detail – Mino*, 148APPS, http://www.148apps.com/app/315238201 (last visited Dec. 18, 2012).

4. *Id.*

5. *Id.*

6. About Tetris, TETRIS HOLDING, LLC, http://www.tetris.com/about-tetris/index.aspx (last visited Dec. 18, 2012).

as Tetris Holding, LLC ("Tetris, LLC"), the company that manages the licensing of Tetris, sent a takedown notice under the Digital Millennium Copyright Act to the iTunes App Store, where the game was sold.[7] Shortly thereafter, pursuant to the App Store's policy at the time that applications would not remain taken-down unless a lawsuit had been filed, Tetris, LLC filed a lawsuit alleging copyright and trademark infringement by Xio.[8] In May of 2012, the district court of New Jersey granted summary judgment in favor of Tetris, LLC.[9] So ended the short life of Xio Interactive.

But the story of Ms. Golden, Xio, and *Tetris* is far from unique. Rather, it represents one of the most recent examples of the trend of copyright litigation currently resonating throughout the video game industry. This trend, dubbed the "Clone Wars" in popular media and scholarship,[10] brings into focus once more the limitations of copyright law when it comes to the protection of software. Copyright law's approach to clones, such as the one Ms. Golden's company was found to have produced, is far from groundbreaking; over time, many commentators have acknowledged that the exact scope of copyright in software should remain narrow and fact-specific by necessity, in order to allow courts to strike the proper balance between protections that are too thin to properly incentivize innovation on one side, and protections that are too thick to permit further innovations on the other.[11]

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7. *Tetris Holding*, 863 F. Supp. 2d at 397.

8. *Id.*

9. *See id.* at 396.

10. *See, e.g.*, Simon Parkin, *Clone Wars: Is Plagiarism Killing Creativity in the Games Industry?*, GUARDIAN (Dec. 23, 2011), http://www.guardian.co.uk/technology/gamesblog/2011/dec/21/clone-wars-games-industry-plagiarism; Erik Kain, *Clone Wars: Zynga vs. EA and the Baffling Laziness of Copycat Games*, FORBES (August 10, 2012), http://www.forbes.com/sites/erikkain/2012/08/10/clone-wars-zynga-vs-ea-and-the-baffling-laziness-of-copycat-games/; Shaun Spaulding, *Indie Video Game Developers: The Clone Wars*, HEAVY TARGETS, http://www.heavytargets.com/copyright-law/indie-video-game-developers-the-clone-wars/ (last visited Feb. 2, 2013). While "cloning" has been used in the copyright infringement context for years, the term "Clone Wars" itself was actually popularized by George Lucas' *Star Wars* film franchise, most notably the film STAR WARS: EPISODE II—ATTACK OF THE CLONES (20th Century Fox 2002) and the spin-off animated series STAR WARS: CLONE WARS (Cartoon Network Studios 2003). This author's best explanation for the frequent application of the term to video game copyright infringement litigation is that some journalists and scholars may assume that there is some significant overlap between fans of *Star Wars* and the video game playing public.

11. *See, e.g.*, Peter S. Menell, *Envisioning Copyright Law's Digital Future*, 46 N.Y.L. SCH. L. REV. 65–66 (2002–2003) ("Copyright law provides a thin layer of protection for computer software . . . ."); Pamela Samuelson, Randall Davis, Mitchell D. Kapor, & J.H. Reichman, *A Manifesto Concerning the Legal Protection of Computer Programs*, 94 COLUM. L. REV. 2308, 2360

What makes the not-so-curious case of Ms. Golden noteworthy is the video game ecosystem it emerged from, and what that ecosystem suggests about the role that copyright law can play when presented with rapidly evolving information distribution technologies. Changing dynamics in the video game industry have eliminated many of the mechanisms that would have prevented potentially infringing clones from making it to market, and the increasingly digital video game marketplace has granted access to a larger number of developers than ever before. Without traditional gatekeepers to the marketplace—such as brick-and-mortar retailers and hardcopy distributors—copyright law has been forced into a more reactive posture. Put another way, a gaming industry copyright attorney cannot keep a clone off the shelves because the shelves have gone digital, and the processes for filling them are increasingly automated.[12] While the specter of infringement litigation still hangs over any developer whose game, like Xio's, comes too close to an existing product, this threat is increasingly a symbolic one, acted out through distribution platform takedown notices and settlement negotiations.[13]

This Note describes contemporary issues in software copyright through the lens of the video game industry's so-called Clone Wars. Doing so will not only provide a greater understanding of the changing dynamics of the video game industry, but also suggest how copyright protection for software more generally can continue to adapt to the digital information age. Part I outlines the current state of the video game industry with a particular eye toward how new developments have created an ecosystem that is particularly fertile for cloning. Part II describes copyright law's approach to protecting software. Part III discusses takedown procedures on some of the most significant video game distribution platforms. Part IV examines how all these factors play out in practice by examining several case studies that are representative of the dominant categories of litigation. Part V offers some concluding thoughts on what can be learned from the Clone Wars that may have broader applications to the wider scope of copyright law.

I. THE NEW VIDEO GAME ECOSYSTEM

While the pertinent copyright law for clone gaming remains relatively settled, the video game industry itself is in a state of flux. New distribution models, increased accessibility to the marketplace, and a boom in mobile and

(1994) (citing the Second Circuit's decision in Computer Associates International, Inc v. Altai Inc. as "turn[ing] the tide" away from an improperly broad approach).

12. *See* discussion *infra* Part I.

13. *See* discussion *infra* Part III.

social gaming have created a rapidly changing environment that is particularly fertile for clone developers. This Part discusses the changing demographics and economics of the industry, the growth of digital distribution platforms, the new styles of games being produced by these conditions, and how the cloning phenomenon fits in.

A. THE NEW VIDEO GAME MARKETPLACE

It has become a cliché to say that information travels more quickly today than ever before, but it remains true nonetheless.[14] The proliferation of high speed wireless internet allows people to access the large volumes of data necessary to run complicated programs—like video games—from their computer, tablet, or phone wherever they might be, whenever they might choose to do so. The ubiquity of mobile connectivity on devices that need not be wholly devoted to gaming—most notably smart phones and, more recently, tablets—is in the process of revolutionizing the industry. The days when the video gaming industry could be discussed purely in the context of console gaming or arcade machines are long over.

Like many other forms of commerce, the video game economy is going largely online. One market study suggests that online distribution of video games could surpass retail sales as soon as this year.[15] One of the largest online distribution hubs, Apple's iTunes App Store, receives well over 100 new applications a day from would-be game developers seeking to distribute their products on the iTunes marketplace.[16] New video game developers spring up daily, both in the form of small indie shops and well-heeled investors; in 2011 consumers spent over sixteen billion dollars on video games.[17] This number actually represents a small decline from 2010, but that

14. *See, e.g.*, Menell, *supra* note 11, at 109–11 ("[M]ore efficient file formats and compression technology reduce the memory capacity and bandwidth necessary to access and store such content"); Terrence O'Brien, *How Fast Information Travels, From 1805 Until Today*, SWITCHED (Sept. 6, 2009), http://www.switched.com/2009/09/06/the-speed-of-information-over-the-last-200-years (analyzing a chart comparing how quickly news of global events reached London over time); *see generally* Dale N. Hatfield, *The Challenges of Increasing Broadband Capacity*, 63 FED. COMM. L.J. 49 (2010–2011) (discussing the technical challenges posed in meeting contemporary demands for broadband services).

15. James Brightman, *Online Game Sales to Surpass Retail by 2013, Total Worldwide Game Sales at $81 Billion in 2016 – DFC*, INDUSTRYGAMERS (Sept. 7, 2011), http://www.industrygamers.com/news/online-game-sales-to-surpass-retail-by-2013-total-worldwide-game-sales-at-81-billion-in-2016---dfc.

16. App Store Metrics, 148APPS.BIZ, (Sept. 2012), http://148apps.biz/app-store-metrics/?mpage.

17. This number comes from the NPD Group Industry report for the 2011 year. NPD's monthly sales figures are the most cited economic indicators for the industry. *See 2011 Total Consumer Spend on All Games Content in the U.S. Estimated Between $16.3 to $16.6*

can likely be attributed to the sluggish hardware sales that typically follow at the end of the console cycle.[18]

One crucial characteristic of the changing video game marketplace is demographic expansion. In 2012, the Entertainment Software Association ("ESA"), an industry organization that caters to the business and public affairs needs of video and computer game publishers, released its annual demographic survey of the industry.[19] This study found that the average age of gamers is thirty years old, that 68% of gamers are over eighteen, and 47% are women.[20] These statistics suggest that several of the unfair stereotypes that society has attached to gamers—the pimply-faced teenager, for example, or the disaffected loner—do not have even the most basic claims to validity today.[21] Meanwhile the youth and console markets remain strong—a separate study conducted by the NPB Group in 2011 found that a remarkable 91% of children aged two to seventeen played games of some kind. Much of this demographic expansion can be attributed to the growth of multi-purpose mobile platforms, most notably smart phones and tablets.[22] It makes intuitive sense that an adult with no prior history of gaming would be more likely to spend ninety-nine cents purchasing Fruit Ninja[23] for the iPhone he already owns than he would be to invest upwards of $200 on an Xbox 360 and games[24]—let alone purchase an Atari 2600 for a comparable price in 1977 dollars.[25]

A second characteristic of the broadening video game marketplace dovetails along with the demographic expansion: the rise of social

Billion, PRESS RELEASE NPD GROUP, (Jan. 12, 2012), https://www.npd.com/wps/portal/npd/us/news/press-releases/pr_120116/.

18. *Id.*; *see also* Jeff Taylor, *NPD Games Sales: Not the Full Story*, SEEKING ALPHA, (Apr. 6, 2012) http://seekingalpha.com/article/482571-npd-game-sales-not-the-full-story (offering a more in-depth look behind the sales numbers).

19. *2012 Essential Facts About the Computer and Video Game Industry*, Electronic Software Association, http://www.theesa.com/facts/gameplayer.asp (last visited Dec. 19, 2012).

20. *Id.*

21. For an examination—and dismissal—of the stereotype of the gamer as antisocial loner through the context of a sociological study of players of the MMO EverQuest 2, see Dmitri Williams, Nick Yee, and Scott E. Caplan, *Who Plays, How Much, and Why? Debunking the Stereotypical Gamer Profile*, 13 J. COMPUTER-MEDIATED COMM. 993 (2008).

22. *The Video Game Industry is Adding 2–17 Year-Old Gamers at a Rate Higher Than That Age Group's Population Growth*, PRESS RELEASE NPD GROUP, (Oct 11, 2011), https://www.npd.com/wps/portal/npd/us/news/press-releases/pr_111011/.

23. Fruit Ninja by Halfbrick Studios, ITUNES PREVIEW, https://itunes.apple.com/us/app/fruit-ninja/id362949845?mt=8 (last updated Dec. 19, 2012).

24. Xbox 360, MICROSOFT STORE, http://www.microsoftstore.com/store/msstore/cat/categoryID.50606600 (last visited Nov. 5, 2012).

25. Atari 2600 History, ATARI AGE, http://www.atariage.com/2600/index.html?SystemID=2600 (last visited Nov. 5, 2012).

networking. That same 2012 ESA study noted that 62% of gamers now play multi-player games, while 33% play social games and another 33% play on smart phones.[26] Social network gaming and mobile gaming are widely considered to be two of the major future growth sectors of the industry. An estimated 70% to 80% of mobile downloads are game apps,[27] and one research firm suggests that the mobile gaming industry could be valued as high as $54,000,000,000 by 2015.[28] Mobile and social gaming have also added a new revenue model to the gaming industry: the pay-in-game or "freemium" model.[29] Freemium games are available to the general public at no cost.[30] Instead, the games make money through the sale of premium in-game perks, items, and advantages to players via an in-game currency that can be acquired over time or purchased for real money.[31] Although it is only a small percentage of freemium players who actually invest real money into the games, those players that do tend to spend significant amounts.[32] Combined with the traditional video game revenue models—retail and subscription payments—this new business model is enabling publishers to monetize game content in more diverse and extensive ways than previously possible. When combined with a broader demographic base to draw from, these trends suggest an industry ripe with the potential for future growth, as well as continued change.

B. THE GROWTH OF DIGITAL DISTRIBUTION

The second key to the growth of the video game marketplace is the rise of digital distribution platforms. Historically, video game developers have been heavily reliant on physical distribution and retail sales to monetize their games. Although some early attempts were made in the 1980s and 1990s to transfer video game data across modem connections, it was not until broadband Internet became more commonplace that widespread digital

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26. *See* ESA, *supra* note 19.

27. Mobile Gaming is Dominating the Gaming Industry, GEEKAPHONE, (July 27, 2011), http://geekaphone.com/blog/mobile-games-by-the-numbers/.

28. *Press Release: Mobile Entertainment Service Revenues to Reach $54 billion by 2015 Propelled by Surge in Consumer Smartphone Adoption*, JUNIPER RESEARCH, (Mar. 2, 2011), http://juniperresearch.com/viewpressrelease.php?pr=233.

29. *See* Yannick Lejacq, *Something for Nothing: How the Videogame Industry Is Adapting to a 'Freemium' World*, INT'L BUS. TIMES, (Sept. 15, 2012), http://www.ibtimes.com/something-nothing-how-videogame-industry-adapting-freemium-world-789466.

30. *See Freemium Gaming Metrics 2012, Casual Games Sector Report*, CASUAL CONNECT, *available at* http://casualconnect.org/research-reports/ (last visited Dec. 19, 2012) (providing a more extensive breakdown of the economic model of freemium or free-to-play games).

31. *See id.*

32. *See id.*

distribution became feasible.[33] And, of course, the ubiquity of wireless connectivity was a necessary precursor to the explosion of mobile and social gaming.

To better understand the changes wrought by digital distribution on video game sales and subsequent infringement litigation, one can return to the story of Xio and Desiree Golden. Traditionally, the process of bringing a video game to market could be broken down into seven stages: financing, development, production, publishing, manufacturing, distribution, and retailing.[34] Had Ms. Golden sought to develop the exact same version of *Mino* in, say, 1994, she would first have had to pitch the game to a publisher to secure financing for the game's development and production. The publisher would then publish and market the game and then either produce and distribute the game to retailers itself or contract with a manufacturer and a distribution company. [35] The distribution company would then produce and distribute the game to retailers on the publisher's behalf.[36] Finally, the retailer would decide whether or not to purchase the game, how many units to purchase, and how aggressively to promote the games to its customers.

For a developer, this model has many drawbacks: it imposes several layers of industry players who must be convinced of the market viability of the product; it lengthens the time it takes a game to travel from development to market; and it costs money to navigate these obstacles, costs which must either be absorbed by the developer or passed on to the consumer.[37] The total effect of these drawbacks is to create barriers of artificial selectivity between a developer and the market for the developer's product. Gatekeepers at the publishing, distribution, and retail levels have to make independent decisions that the developer's product deserves to make it to the marketplace before it can ever test the waters.

Digital distribution has pierced that membrane and created something more closely resembling a free market. The Internet now serves as the lone intermediary for most game downloads, and several platforms have come to dominate the marketplace. Valve's Steam platform is the undisputed leader in personal computer game content.[38] The iTunes App Store and Google Play

33. *See* Menell, *supra* note 11, at 109.

34. *See* KILLIAN J. MCCARTHY, MAYA FIOLET & WILFRED DOLFSMA, THE NATURE OF THE NEW FIRM: BEYOND THE BOUNDARIES OF ORGANISATION AND INSTITUTIONS 102 (2011).

35. *See id.*

36. *See id.*

37. *See id.* at 103.

38. In 2009, one competitor estimated that Steam had seventy percent of the PC digital downloading market share. John Funk, *Steam is 80% of PC Digital Distribution Market*, THE

are the leaders in mobile gaming technology for the iOS and Android operating systems, respectively. Finally, Facebook is the key player in the social gaming sector, while also overlapping somewhat into the mobile market. These platforms all follow their own individual protocols for reviewing prospective games, but each offers a highly desirable level of speed in bringing games to market.[39] A developer need only submit a game or app, and it may soon be online, available for download or purchase by potential customers. And while these platforms all charge for the privilege,[40] the costs to the developer are generally offset by the money saved by avoiding traditional physical distribution and the benefit of being able to deliver a new product to the consumer on a much shorter timeframe. In strict economic terms, this system also places fewer restrictions upon the marketplace; anyone with a game to sell can sell it, allowing the market more freedom to reward developers based on the superiority of their product and pricing, rather than on the arbitrary influence of distributors or retailers.

But a more open marketplace has its drawbacks. The democratizing effect of online distribution, which allows anyone to distribute a game without the need for industry connections or access to a brick and mortar distribution network, creates an ecosystem that is more difficult to police. Although the gatekeepers that once operated at the publishing and distribution levels arguably inhibited market freedom, they did serve at least one useful purpose: they could choose not to publish or distribute a game that bore the marks of unlawful cloning. While a video game distributor

ESCAPIST, (Nov. 20, 2009), http://www.escapistmagazine.com/news/view/96259-Steam-Is-70-of-PC-Digital-Distribution-Market. While some suspect that Steam has lost some ground since then, it still remains the PC leader, and has announced plans to move into the hardware market with the release of a console styled PC-package. Jason Schreier, *Gabe Newell: Living Room PCs will Compete with Next-Gen Consoles*, KOTAKU, (Dec. 8, 2012), http://kotaku.com/5966860/gabe-newell-living-room-pcs-will-compete-with-next+gen-consoles.

39. Steam, for example, is currently transitioning from an in-house committee review process for potential game submissions to a more community-oriented approach called "Steam Greenlight." Under the Greenlight model, prospective game developers submit a small number of descriptions, screenshots, and descriptive text of their games. Then community members can "vote up" game concepts they would like to see released on the Steam platform. There is a small submission fee required, but it is primarily designed to discourage non-serious submissions; all proceeds from the submission fee go to the Child's Play charity. *See* Steam Greenlight, STEAM, http://steamcommunity.com/workshop/about/?appid=765&section=faq (last visited Dec. 22, 2011).

40. Apple and Google, for example, each take a 30% cut of the sale price for all apps sold over their respective platforms. *Distribute your App—iOS Developer Program*, APPLE, https://developer.apple.com/programs/ios/distribute.html (last visited Feb. 4, 2013); *Transaction Fees*, *Android Developer Help*, GOOGLE, https://support.google.com/googleplay/android-developer/answer/112622?hl=en& (last visited Feb. 4, 2012).

might not precisely understand the legal standards for copyright infringement, any game-savvy professional could easily look at a game like *Mino* and feel some concern that its design was simply too similar to *Tetris*. Additionally, as digital distribution allows more and more developers to access the online gaming marketplace, the need for individual parties to maintain upright, cordial relationships among one another becomes less crucial, which increases the likelihood of the kind of sharp dealing that often leads to actionable cloning.[41] And whereas only a handful of companies previously had access to the technological resources to design a video game, anyone with access to a basic suite of design tools can now create a product and put it in the market.[42] Not only does this skyrocket the raw number of developers who might potentially engage in cloning, but the disparities in size and resources between established industry players and small start-up developers create warped power dynamics that lessen the likelihood that disputes will be resolved on the actual legal merits. On one side, a start-up company designing games in a dorm room—not unlike Xio—may have little to lose from knocking off an established game property. That company may easily reach the conclusion that the short-term benefits of putting out a successful game by borrowing heavily from a known success—money, notoriety, goodwill with customers—may outweigh any long-term legal consequences. From the other side, if that same small company develops a truly innovative new game at great personal cost, it may not have the resources to pursue legal action to protect its property, whether from industry heavyweights or other small developers.

C. REASONS FOR PESSIMISM

There are some larger trends running through the video game industry that, while not strictly related to the cloning phenomenon, can help provide context for it. Despite the broadening of the marketplace, a number of

41. It is not uncommon for cloning litigation to arise from failed business dealings. The recent case of *6Waves v. Spryfox* offers an instructive example of this. In that case, 6Waves and Spryfox engaged in extensive talks for Spryfox to develop a version of its popular *Triple Town* game for 6Waves. Negotiations ultimately broke down, however, and shortly thereafter 6Waves released its own game, *Yeti Town*, which bore marked similarities to *Triple Town*. Spryfox filed copyright infringement charges against 6waves, and the two parties ultimately settled. *See* Andy Chalk, *6waves Settles Yeti Town Cloning Lawsuit*, THE ESCAPIST (Oct. 11, 2012), http://www.escapistmagazine.com/news/view/120080-6waves-Settles-Yeti-Town-Cloning-Lawsuit.

42. *See About the Application Development Process*, MAC DEVELOPER LIBRARY, http://developer.apple.com/library/mac/#documentation/General/Conceptual/ApplicationDevelopmentOverview/Introduction/Introduction.html#//apple_ref/doc/uid/TP40011186-CH1-SW1 (last visited Jan. 21, 2013).

industry leaders have seen declining market valuations in the past year, suggesting concern among investors about the financial health of the industry. Zynga[43] has made the most headlines with plummeting stock prices since going public in December of 2011,[44] along with heavy layoffs through October of 2012.[45] Other large gaming companies like Electronic Arts[46] and THQ[47] have also lost significant market valuation. While this may be partially driven by Zynga's post-IPO problems and normal market fluctuation downward at the end of the console life cycle,[48] at least one commentator within the industry believes that the freemium social gaming rush may have been a bubble that is now correcting.[49] And just like movie studios, the fortunes of major video game developers can hinge heavily on a single successful or unsuccessful release; Electronic Arts has blamed some of its recent backslide on the disappointing results of *Medal of Honor: Warfighter*,[50] while Zynga has seen a noticeable uptick in its fortunes thanks to the success of *Farmville 2*.[51] Still, it is worth noting that while the marketplace as a whole may be expanding, that expansion has brought with it significant upheaval. Although the future of the industry as a whole looks strong, how well the industry's current players adjust to the new market conditions remains to be seen.

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43. Zynga is a common party to cloning litigation, both as plaintiff and as defendant. *See infra* Section IV.3.

44. All stock valuation data was taken from Google Finance. NASDAQ:ZNGA, Zynga, Inc., GOOGLE FINANCE, http://www.google.com/finance?cid=481720736332929 (last visited Dec. 19, 2012).

45. Zynga CEO Mark Pincus Confirms Layoffs: 5% of Workforce, Potential Closures for U.K., Japan Offices, TECHCRUNCH, (Oct. 23, 2012), http://techcrunch.com/2012/10/23/zynga-ceo-mark-pincus-confirms-layoffs-5-of-workforce-potential-closures-for-u-k-japan-offices.

46. NASDAQ:EA, Electronic Arts, Inc., GOOGLE FINANCE, http://www.google.com/finance?q=NASDAQ%3AEA&ei=9V_WULDaMKCclwOoVQ (last visited Dec. 19, 2012).

47. PINK:THQI, THQ, Inc., GOOGLE FINANCE, http://www.google.com/finance?q=NASDAQ%3ATHQI&ei=c2HWUODUA5f0lgOv9gE (last visited Dec. 19, 2012).

48. *See* Taylor, *infra* note 69.

49. Kyle Orland, *Gameloft CFO Warns of Social Gaming 'Bubble,'* GAMASUTRA, (May 20, 2011), http://gamasutra.com/view/news/34764/Gameloft_CFO_Warns_Of_Social_Gaming_Bubble.php#.UNZkbbbD7cE.

50. Dean Takahashi, *EA acknowledges Medal of Honor: Warfighter sales will be below expectations*, VB/GAMESBEAT, (Oct. 30, 2012), http://venturebeat.com/2012/10/30/ea-acknowledges-medal-of-honor-warfighter-sales-will-be-below-expectations/.

51. Owen Thomas, *Suddenly, Zynga is the Farmville Company Again*, BUSINESS INSIDER, (Oct. 24, 2012), http://www.businessinsider.com/farmville-2-zynga-2012-10.

D. NEW GAME+

It is worth touching briefly on the new types of games that have thrived in this changing marketplace. Examining some of the most successful single games and dominant types reveals a few underlying characteristics that are often seen in clone lawsuits.

Simplicity. While there is still a strong market for the complicated sort of games that require a console game controller or a computer keyboard and mouse, social networks and mobile phone and tablets tend to require more limited controls. Hence, the interface for any game seeking to succeed in those markets must be minimal—generally nothing more than a touch screen or mouse in the case of social network games. Having a game that evokes simple, universal themes through its subject matter and artwork is also beneficial, since these themes appeal to the broadening demographic gaming groups.

Ease of Use. The same ubiquitous connectivity that allows mobile and social gaming to succeed also leans against involved games that require excessively complicated mechanics or long blocks of continuous game play. While a principal goal of any game is to be enjoyable enough that people want to keep playing it, building in mechanics that allow players to pick the game up and put it down quickly, while still getting a rich experience, caters better to the more casual mobile or social gamer. Asynchronous multiplayer functionality—whereby players can interact and play with one another without needing to be playing at the exact same time—has also seen a surge in popularity.[52]

Sociability. The whole point of ubiquitous connectivity is to remain connected. That is why more and more developers are going out of their way to build in multi-player social interactions in their games.[53] Although these interactions could be as direct as playing a game of *Words With Friends* against someone you know, games with a purely one-player interface often also include additional social functionality, such as a mechanic which rewards you

52. Ryan Rigney, *Asynced: Multiplayer Gaming's New Revolution*, GAMELIFE, WIRED, (Apr. 11, 2012, 3:00 PM), http://www.wired.com/gamelife/2012/04/asynced-gaming/.

53. Dean Takahashi, *Zynga CEO: We Aren't the Copycats on Bingo Social Game (exclusive interview)*, VENTURE/GAMESBEAT, (Jan. 31, 2012 9:00 AM), http://venturebeat.com/2012/01/31/zynga-mark-pincus-copycat-interview/ (Zynga CEO Mark Pincus saying that "our [company's] strategy since the beginning has been to develop the best game—most fun and most social—for every category of play"). *Compare with* Russ Pitts, *Don't Be a Hero—The Full Story Behind Spec Ops: The Line*, POLYGON, (Aug. 27, 2012 8:00 PM), http://www.polygon.com/2012/11/14/3590430/dont-be-a-hero-the-full-story-behind-spec-ops-the-line (one game designer comparing his game's multiplayer feature to a "cancerous growth").

in-game for inviting your friends to play the game. This, of course, has the added benefit to developers of encouraging players to do their marketing for them.[54] The collective display of in-game achievements is also a popular social mechanic.[55] Really just an evolution of the traditional high-score screen seen on an arcade game, achievements allow players to compete indirectly by showing off that they have completed certain goals or tasks. This represents one more way for games to combine game play with the players' existing social network.

In-game Economy that Translates to Real Dollars. While the accumulation of points, gold, or other currency is nothing new in gaming, in many contemporary games this currency can now be purchased with real world dollars in what are sometimes termed "microtransactions"[56] or "in-app purchases."[57] Once a player acquires the currency, she can then spend it to acquire additional privileges or advantages within the game.[58] Most obviously, this allows game developers a new way to monetize game content beyond the traditional pay-at-purchase and pay-for-time models. Many games also supplement this so-called freemium model with in-game obstacles that can be circumvented by advantages purchased in-game called "consumables."[59] Consumables often take the form of additional items for the player to use,[60] but the term can also be applied to an action limiting resource sometimes referred to in game-design circles as an "energy mechanic."[61] In games with an explicit energy mechanic, the player's actions consume a finite resource or

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54. While not speaking about games specifically, Mark Zuckerberg, CEO of Facebook, spoke of the desirability of this sort of application design in a 2007 interview. He said,

> Advertising works most effectively when it's in line with what people are already trying to do . . . . [T]hey share information with their friends, they learn about what their friends are doing—so there's really a whole new opportunity for a new type of advertising model within that. And I think we'll see more in the next couple months or years on that.

Laura Locke, *The Future of Facebook*, TIME (July 17, 2007).

55. *See Game Center Programming Guide: Achievements*, APPLE, http://developer.apple.com/library/ios/#documentation/NetworkingInternet/Conceptual/GameKit_Guide/Achievements/Achievements.html (last visited Feb. 5, 2013).

56. *See Steamworks – Microtransactions*, VALVE, http://www.steamgames.com/steamworks/ov_micro.php (last visited Feb. 5, 2013).

57. *See Getting Started With In-App Purchase*, APPLE, https://developer.apple.com/in-app-purchase/In-App-Purchase-Guidelines.pdf (last visited Mar. 8, 2013).

58. *See id.*

59. *See id.*

60. *See id.*

61. *See* Simon Parkin, *'Energy': A Black Spot on the Heart of Contemporary Game Design*, HOOKSHOT, INC. (July 2, 2012), http://www.hookshotinc.com/energy-black-spot-on-the-heart-of-contemporary-game-design/.

currency that replenishes slowly over time; once the player runs out, he can no longer act.[62] Normally this results in artificially limited game time, forcing players to log on regularly to play for short time periods, which is not an undesirable outcome for a mobile or social game. However, players can also choose to purchase more of the in-game resource with real-world money. Such a game functions off of the old truism that time equals money; by spending more money, players can play more in less time.

II. DEFINING THE SCOPE OF PROTECTION

Determining the exact scope of copyright protection for a given work requires drawing a line between the expressive elements of the work, which can be protected, and the underlying ideas in the work, which cannot be.[63] When it comes to software programs—which are fixed as literary works of code but are valued primarily for their performance of functional behaviors[64]—drawing this distinction is particularly challenging. Since the software industry grew to prominence in the 1970s and 1980s, copyright law has evolved rapidly to address the challenges posed by the new medium.[65] This Part provides general background on copyright law's approach to software by discussing the fundamental principles of copyright law and several pertinent, related doctrines. It then briefly outlines the landmark cases that set the standards still in place today.

A. THE BASICS OF COPYRIGHT PROTECTABLE SUBJECT MATTER

The foundation of copyright law comes from Article I, Section 8 of the Constitution, which grants to Congress the power "[t]o promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries."[66] This passage is generally understood to mean that the goals of patent and copyright laws are the public good served by incentivizing scientific and artistic advancement, respectively.[67] The private good of rewarding scientists

62. *See id.*
63. *See* Baker v. Selden, 101 U.S. 99, 103 (1879).
64. *See* Samuelson, Davis, Kapor, & Reichman, *supra* note 11, at 2315.
65. *See* Menell, *supra* note 11, at 65.
66. U.S. CONST. art. 1, § 8, cl. 8
67. *See* Mazer v. Stein, 347 U.S. 201, 219 (1954). The Supreme Court stated:

> The economic philosophy behind the clause empowering Congress to grant patents and copyrights is the conviction that encouragement of individual effort by personal gain is the best way to advance public welfare through the talents of authors and inventors in 'Science and useful Arts.'

and artists with the right to profit from their innovations is an important goal, but a secondary one.[68] Under the Copyright Act, copyright protection subsists only "in original works of authorship fixed in any tangible medium of expression."[69] The Act enumerates eight categories of works of authorship; the two categories most often implicated by video games are literary works and audiovisual works.[70] The Act also specifically exempts from protection "any idea, procedure, process, system, method of operation, concept, principle, or discovery, regardless of the form in which it is described, explained, illustrated, or embodied."[71] Although these exemptions were only added explicitly with the passage of the Copyright Act of 1976,[72] the so-called "idea-expression dichotomy," holding that copyright can protect only the expression of an idea and not the underlying idea being expressed, has been a longstanding foundational principle of the law.[73] This principle is buttressed by the doctrines of merger and *scènes à faire*.[74]

The doctrine of merger holds that any expression that is so closely tied to the idea being expressed that it can be said that the two have "merged" will not be protected.[75] Merger is rare and is most commonly found in works with a "utilitarian function" or in situations permitting only a very limited number of ways of expressing an idea, so that protecting one expression of the underlying idea effectively forecloses all others from using that idea.[76] Since the primary purpose of copyright is the promotion of progress in the arts and sciences for the public good, copyright law errs on the side of not protecting such expressions so that the underlying ideas can remain in the public domain.[77]

> Sacrificial days devoted to such creative activities deserve rewards commensurate with the services rendered.

Id.

68. *See* United States v. Paramount Pictures, 334 U.S. 131, 158 (1948).
69. 17 U.S.C. § 102(a) (2012).
70. *Id.*
71. *Id.* § 102(b).
72. 4 MELVILLE B. NIMMER & DAVID NIMMER, NIMMER ON COPYRIGHT § 2.03[D] (Matthew Bender, rev. ed. 2010).
73. Apple Computer, Inc. v. Franklin Computer Corp., 714 F.2d 1240, 1252 (3d Cir. 1983) ("This provision was not intended to enlarge or contract the scope of copyright protection but 'to restate . . . that the basic dichotomy between expression and idea remains unchanged.' " (citing H.R. Rep. No. 1476, 94th Cong., 2d Sess. 57, *reprinted in* 1976 U.S.C.C.A.N. at 5670)).
74. 4 NIMMER § 13.03[B][3],[4].
75. *See* Kay Berry, Inc. v. Taylor Gifts, Inc., 421 F.3d 199, 209 (3d Cir. 2005).
76. *See id.*
77. *See id.*

The *scènes à faire* doctrine states that stock characteristics of a category or genre cannot be protected by copyright. This doctrine has a similar rationale: future artists wishing to work in that category or genre must be able to access those stock characteristics.[78] Additionally, these stock elements do not generally have the requisite originality of expression that would justify the reward of a copyright.[79]

Taken together, this doctrinal framework expresses the underlying principles that must be navigated when determining the exact scope of copyright protection for any work, including software and video games. A series of landmark decisions in the 1980s and 1990s demonstrates how courts have applied this framework to the medium.

B. THE TOUCHSTONES OF COPYRIGHT IN SOFTWARE

This Section discusses the first wave of software copyright infringement cases. Section II.B.1 discusses the basic elements of a copyright infringement claim, while Section II.B.2 discusses the foundational software copyright cases: *Stern Electronics, Inc. v. Kaufman*;[80] *Apple Computer, Inc. v. Franklin Computer Corp.*;[81] *Whelan Associates Inc. v. Jaslow Dental Lab*;[82] and *Computer Associates International Inc. v. Altai Inc.*[83]

1. *The Elements of a Copyright Infringement Claim*

There are two key elements that a copyright holder must prove to succeed on a claim for copyright infringement: (1) ownership of a valid copyright and (2) unauthorized copying of that copyright on behalf of the defendant.[84] Each of these elements has sub-elements.

The components of copyright ownership that are most relevant to this Note are originality to the author and copyrightability of the subject matter. Proof of registration of a copyright is considered prima facie evidence of both these components in a copyright infringement suit. When the plaintiff provides proof of registration, the burden shifts to the defendant to rebut that evidence.[85] Defendants in cloning litigation commonly attack the

78. *See* Cain v. Universal Pictures Co., 47 F. Supp. 1013, 1017 (C.D. Cal. 1942).
79. 4 NIMMER § 13.03[B][4].
80. Stern Electronics, Inc. v. Kaufman, 669 F.2d 852 (2d Cir. 1982).
81. Apple Computer, Inc. v. Franklin Computer Corp., 714 F.2d 1240 (3d Cir. 1983).
82. Whelan Associates Inc. v. Jaslow Dental Lab, 797 F.2d 1222 (3d Cir. 1986).
83. Computer Associates International Inc. v. Altai Inc., 982 F.2d 693 (2d Cir. 1992).
84. 4 NIMMER § 13.01.
85. *See id.* § 13.01[A].

plaintiff's copyright on the grounds of lack of originality[86] or lack of copyright protectable subject matter. These are considered questions of law—not fact—meaning at trial they are decided by judge, not jury.[87]

Unauthorized copying also has two key components: a factual question of whether the defendant had access to the plaintiff's work and copied it, and a legal question of whether the similarities between the alleged infringing work and the plaintiff's work are sufficient to be actionable.[88] These two requirements are often referred to as "access" and "substantial similarity." Crucially, substantial similarity requires similarity between the allegedly infringing content and the protected subject matter; since no copyright can protect an idea, similarities at the idea level cannot be used to prove substantial similarity in an infringement action.[89]

2. *The Code and the Fixation*

Today, copyright protection for video games generally takes two forms: protection of the code itself as a literary work and protection of the game as an audiovisual work.[90] The lineage of this protection traces back to two cases from the early 1980s: *Apple Computer*[91] and *Stern Electronics*.[92]

In *Apple Computer*, the Third Circuit held that a computer program expressed either in source or object code is a "literary work" entitled to copyright protection.[93] In that case, Apple filed a copyright infringement suit against a computer company for allegedly copying the Apple operating system software in order to manufacture personal computers compatible with other Apple programs.[94] The court held that the category of literary works was broader than just words and could also include symbols and numbers of the type that might be included in source or object code.[95] Furthermore, the court rejected the argument, advanced by the district court below, that copyright protection could only extend to works that were

86. The defendant is basically asserting that the plaintiff actually took the disputed property from someone else, and therefore had no copyright to infringe.

87. *See* 4 NIMMER § 13.03[E][c][3] (citing Oravec v. Sunny Isles Luxury Ventures, L.C., 527 F.3d 1218, 1227 (11th Cir. 2008)).

88. *Id.* § 13.01[B].

89. *Id.* § 13.03[A][1].

90. *See* Tetris Holding, LLC v. Xio Interactive, Inc.,. 863 F. Supp. 2d 394, 400 (D.N.J. 2012).

91. Apple Computer, Inc. v. Franklin Computer Corp., 714 F.2d 1240 (3d Cir. 1983).

92. Stern Electronics, Inc. v. Kaufman, 669 F.2d 852 (2d Cir. 1982).

93. *Apple Computer*, 714 F.2d at 1249.

94. *Id.* at 1243.

95. *Id.* at 1249.

"designed to be 'read' by a human reader."[96] To reach this conclusion the Third Circuit relied primarily on the revised Copyright Act as amended following the CONTU Report,[97] pointing to the plain language of the statute that extended protection to "works in any tangible means of expression 'from which they can be perceived or otherwise communicated, either directly or with the aid of a machine or device.' "[98] The court went on to hold that "embodiment of a computer program in a ROM [Read-Only Memory]" is sufficient to meet the fixation requirement, even if it was not a "traditional writing."[99] Thus, computer programs can be protected as literary works when embodied in computer memory.

In *Stern Electronics*, copyright protection for software was challenged from a different angle: it was alleged that the audiovisual display component of a video game was not sufficiently fixed to meet the fixation requirement. [100] In that case, Stern Electronics had obtained an exclusive sub-license to market and sell the video game *Scramble* in North and South America from the exclusive licensee of Konami Industry Company, Limited, which had originally developed the game.[101] Stern obtained a preliminary injunction against Omni Videogames, preventing Omni from selling its own *Scramble* game, which was virtually identical both audibly and visually.[102]

On appeal, Omni acknowledged the copyright on the code as a literary work, but contended that the audiovisual elements were not properly subject to copyright protection since they were not fixed and depended on input from the player. Since Omni had written different code to recreate these elements, it contended that no infringement had occurred.[103] The Second Circuit rejected this argument and upheld the injunction on the ground that the audiovisual components were fixed enough by virtue of being "permanently embodied in a material object, the memory devices, from

96. *Id.* at 1248.

97. When the Copyright Act of 1976 was passed, it was widely criticized as inadequately addressing developing digital technologies. Consequently, Congress commissioned the National Commission on New Technology Uses of Copyrighted Works (CONTU) to research the topic. CONTU issued a Final Report in 1979 that recommended explicit inclusion of computer programs within the statute as copyright protectable works. This report was then formally adopted into the Act by Congress. *See generally* NATIONAL COMMISSION ON NEW TECHNOLOGICAL USES OF COPYRIGHTED WORKS, Final Report 1 (1979).

98. *Apple Computer*, 714 F.2d at 1248 (citing 17 U.S.C. § 102(a)).

99. *Id.* at 1249.

100. Stern Electronics, Inc. v. Kaufman, 669 F.2d 852, 855 (2d Cir. 1982).

101. *Id.* at 854.

102. *Id.* at 855.

103. *Id.*

which [they] can be perceived with the aid of the other components of the game."[104] The court further held that the game's reliance on input from a player did not remove it from copyright protection because the audiovisual aspects of the game remained constant and responded to inputs in a constant, systematic way, making the "repetitive sequence of images . . . copyrightable as an audiovisual display."[105]

Apple Computer and *Stern Electronics* helped establish the general principal that video games, as computer programs, can be protected as both literary works and as audiovisual displays, which—while not completely static—arise as the result of consistent player inputs that are sufficiently systematic to meet the standard of fixation necessary for protection.[106] What these cases do not adequately address, however, is how best to separate the protectable expression inherent in games from their unprotectable underlying ideas.[107]

3. *Abstraction and Filtration*

Two later cases helped to clarify the border between protectable expression and unprotectable ideas in the context of software: *Whelan*[108] and *Altai*.[109] In *Whelan*, the Third Circuit first articulated an abstraction approach for separating expression and idea—an approach that has been widely criticized but is, nonetheless, still good law in the Third Circuit.[110] The Second Circuit, in *Altai*, proposed an alternative approach involving abstraction, filtration, and comparison that has been more widely accepted.

In *Whelan*, the Third Circuit held that the proper approach to separating expression from idea was to abstract the core "purpose or function of a utilitarian work" as the idea and consider any functions not necessary to accomplishing that purpose to be protectable expression.[111] In that case, the Third Circuit held that "the idea is the efficient organization of a dental

104. *Id.* at 856.
105. *Id.* at 857.
106. *See* Menell, *supra* note 11, at 78 (quoting *Stern Electronics*, 669 F.2d at 885).
107. *See id.* at 79–80.
108. Whelan Associates Inc. v. Jaslow Dental Lab, 797 F.2d 1222 (3d Cir. 1986).
109. Computer Associates International Inc. v. Altai Inc., 982 F.2d 693 (2d Cir. 1992).
110. *See Altai*, 982 F.2d at 705 ("We think that *Whelan*'s approach to separating idea from expression in computer programs relies too heavily on metaphysical distinctions and does not place enough emphasis on practical considerations."); Plains Cotton Coop. Ass'n v. Goodpasture Computer Serv., Inc., 807 F.2d 1256, 1262 (5th Cir. 1987) (criticizing and declining to adopt *Whelan*); Sega Enters. v. Accolade, Inc., 977 F.2d 1510, 1525 (9th Cir. 1992) ("The Whelan rule, however, has been widely—and soundly—criticized as simplistic and overbroad."); Tetris Holding, LLC v. Xio Interactive, Inc., 863 F. Supp. 2d 394, 401 (D.N.J. 2012) ("Yet, even in the face of such criticism, the Third Circuit, sitting *en banc*, has declined to abandon its holding.").
111. *Whelan*, 797 F.2d at 1236.

laboratory . . . . Because there are a variety of program structures through which that idea can be expressed, the structure is not a necessary incident to that idea."[112] Thus, the court held that the Dentalab program at issue could be properly protected by copyright.[113]

The *Whelan* test—due in large part to over-reliance on the difficult and vague task of abstracting the core purpose of a program—has been widely criticized by both courts and commentators,[114] leading the Second Circuit to propose a different test in *Altai*, which has been more widely adopted.[115] In that case, a former employee of plaintiff Computer Associates developed a program for his new employer, defendant Altai, by drawing heavily from a program he had worked on while employed at Computer Associates.[116] In response to claims of copyright infringement, Altai directed different employees to rewrite the program using entirely new code based only on written descriptions of the desired functionality.[117] In evaluating the resulting programs to determine whether there was substantial similarity, the Second Circuit employed a new three-step approach consisting of abstraction, filtration, and comparison.[118] The court described the process of abstracting a computer program thus:

> A court should dissect the allegedly copied program's structure and isolate each level of abstraction contained within it. This process begins with the code and ends with an articulation of the program's ultimate function. Along the way, it is necessary essentially to retrace and map each of the designer's steps—in the opposite order in which they were taken during the program's creation.[119]

Once the allegedly infringed program has been properly abstracted, the court explained, the next step consisted of filtering out any unprotectable

112. *Id.* at 1240.

113. *Id.* at 1239.

114. *See, e.g.*, Stephen R. Englund, *Idea, Process, or Protected Expression?: Determining the Scope of Copyright Protection of the Structure of Computer Programs*, 88 MICH. L. REV. 866, 881 (1990); Peter S. Menell, *Analysis of the Scope of Copyright Protection for Application Programs*, 41 STAN. L. REV. 1045, 1087 (1989).

115. *See Altai*, 982 F.2d at 706; Atari Games Corp. v. Nintendo of Am. Inc., 975 F.2d 832, 839 (Fed. Cir. 1992) (employing Altai's abstraction-filtration-comparison method); Sega Enters. Ltd. v. Accolade, Inc., 977 F.2d 1510, 1525 (9th Cir. 1992) ("the Second Circuit's approach is an appropriate one"); Gates Rubber Co. v. Bando Chem. Indus., Ltd., 9 F.3d 823, 834 (10th Cir. 1993); Engineering Dynamics, Inc. v. Structural Software, Inc., 26 F.3d 1335, 1342–43 (5th Cir. 1994).

116. *Altai*, 982 F.2d at 699–700.

117. *Id.* at 700.

118. *Id.* at 706–11.

119. *Id.* at 707.

ideas from protectable expression; this process is highly fact-specific and should take place at each level of abstraction.[120] This process by necessity implicates the doctrine of merger: functions dictated by efficiency should generally not be protected, nor should elements dictated by outside factors or elements taken from the public domain.[121] Once all the unprotectable elements have been filtered out, the final step is to compare any remaining protected material to determine substantial similarity.[122] In applying this test to the facts of *Altai*, the court found the two programs to not be substantially similar.[123] While the Second Circuit's approach in *Altai* remains highly fact-specific, it has been widely adopted by other courts[124] and praised by commentators.[125]

III. THE RISE OF THE TAKEDOWN NOTICE

As large portions of the video game marketplace move to digital distribution platforms, the administrators of these platforms are becoming critical third parties in policing disputes between copyright holders and alleged infringers. While copyright law still ultimately controls, in practice much of the critical policing of these platforms plays out in the form of takedown notices and responses that are adjudicated by internal reviewers who work for the platform. Under the Digital Millennium Copyright Act ("DMCA"), Internet Service Providers like these digital distribution platforms can avoid third-party liability for infringing material if they "upon notification of claimed infringement . . . respond expeditiously to remove, or disable access to, the material that is claimed to be infringing."[126] Consequently, distribution platforms have adopted very clear procedures for taking down allegedly infringing games—procedures that generally mirror the specifications of the DMCA. Very few clone disputes, although legal in nature, actually make it to court. Instead they are often resolved by settlement negotiations that are influenced by how the third-party reviewers apply the law when responding to takedown notices. This Part discusses the

120. *Id.*

121. *Id.* at 707–10.

122. *Id.* at 710.

123. *Id.* at 714.

124. *See, e.g.*, Sega Enters. Ltd. v. Accolade, Inc., 977 F.2d 1510, 1525 (9th Cir. 1992) ("the Second Circuit's approach is an appropriate one"); Baystate Tech., Inc. v. Bentley Systems, Inc., 947 F. Supp. 1079 (D. Mass 1996).

125. *See, e.g.*, Bender, *Computer Associates v. Altai: Rationality Prevails*, 8 THE COMPUTER LAWYER 1 (Aug. 1992); Peter S. Menell, *The Challenges of Reforming Intellectual Property Protection for Computer Software*, 94 COLUM. L. REV. 2644, 2652 (1994).

126. 17 U.S.C. § 512(c)(1)(c) (2012).

takedown procedures of the most significant distribution platforms and the extent to which they incorporate copyright law.

A. VALVE'S STEAM

Developed by Valve, the Steam platform is the leading digital distributor for personal computer gaming.[127] Steam's website advises that any copyright holder who believes that her intellectual property has been infringed should contact Valve's copyright agent with the following information: (1) identification of the work allegedly infringed; (2) identification and location of the allegedly infringing work; (3) contact information; (4) a signed statement the submitting party has a good faith belief that the identified use of the material is not authorized, that the submitter is either the copyright holder or authorized to act for the copyright holder, and that all the information is correct.[128] A signature is also required. These requirements mirror the DMCA requirements for takedown notification.[129] The only guidance provided on what constitutes a valid copyright claim is a link to the website of the United States Copyright Offices.[130]

B. GOOGLE PLAY

The Google Play marketplace has almost identical requirements to Steam for submitting a takedown notice. But Play takes the added step of providing an electronic form with which the complaining party can contact Google's Copyright Agent, along with a digital signature system to expedite claims.[131] In its developer distribution terms of service, Google has an additional provision stating that it will take down any product which is found "in its sole discretion" to infringe the intellectual property of others.[132] In the event of such a removal, Google reserves the right to reimburse any customer who purchased the product in the previous year and charge the allegedly infringing party for the resulting costs.[133] Google also documents all

127. *See supra* note 38.

128. *Legal, Info*, VALVE, http://www.valvesoftware.com/legal.html (Dec. 22, 2012).

129. *See* 17 U.S.C. § 512(c)(3)(A)(i–vi).

130. *Legal Info*, *supra* note 128.

131. *Report Alleged Copyright Infringement*, GOOGLE HELP HOME, http://support.google.com/bin/request.py?&product=androidmarket&contact_type=lr_dmca (last visited Dec. 22, 2012.).

132. *Developer Distribution Agreement*, GOOGLE PLAY, http://play.google.com/about/developer-distribution-agreement.html#showlanguages (last visited Dec. 22, 2012).

133. *Id.*

takedown notices it receives by reporting them to third-party clearinghouses, or the public.[134]

C. THE iTUNES APP STORE

The iTunes App Store takedown protocols are nearly identical to Google's. The App Store provides a form with fields for the required information. Completed forms are then sent electronically to Apple's copyright agent.[135] On an adjacent page on its website, Apple provides general background information as to what constitutes a valid copyright, including the explanation that "[c]opyright exists in the expression of an idea, but not the idea itself."[136] In its App Store Review Guidelines, in addition to outlining various criteria pertaining to quality and content, Apple also advises that use of any "protected 3rd party material," such as copyrights, "requires a documented rights check which must be provided upon request."[137]

D. FACEBOOK

Facebook functions slightly differently from the other digital distribution platforms. While Steam, Google Play, and the App Store all offer customers direct downloads, Facebook users generally log on and play the games on the social network itself, either in their web browser or through the use of a mobile program. Still, Facebook's takedown procedures for allegedly infringing material are largely the same: they require the same statutory disclosures and also offer an electronic form for contacting their copyright agent.[138] Following the filing of a complaint, the agent processes the claim and considers whether or not to remove the allegedly infringing content.[139]

IV. SHORT STUDIES IN THE ART OF INFRINGEMENT

The previous Parts provide background as to the context of the Clone Wars, examining recent case studies can offer a clearer picture of how these concepts actually apply in practice. This Part examines three different examples of clone infringement to determine what they suggest about the

134. *Removing Content From Google*, GOOGLE, http://support.google.com/bin/static.py?hl=en&ts=1114905&page=ts.cs (last visited Feb. 4, 2013).

135. *Legal Questions—Claims of Copyright Infringement*, APPLE, http://www.apple.com/legal/contact/#copyright-infringement (last visited Dec. 22, 2012).

136. *Copyright Information*, APPLE, http://www.apple.com/legal/trademark/copyright.html (last visited Dec. 22, 2012).

137. *Id.*

138. *Reporting Copyright Infringements*, FACEBOOK, https://www.facebook.com/help/400287850027717 (last visited Feb. 5, 2013).

139. *Id.*

larger trend and the role of copyright law. First it presents a more detailed discussion of *Mino*. Second, it examines the rise and fall of *Scrabulous*. Finally, it addresses the larger series of cases involving social-gaming giant Zynga.

1. Tetris, By Any Other Name

Although the story of Xio Interactive helps demonstrate how many of the previously discussed ideas play out in practice, the same characteristic that makes it a useful instructional case also makes it a significant outlier from the general trend of clone litigation: it was resolved in court. The vast majority of clone infringement cases, however, end up settling well short of a trial. Obviously, high legal costs often motivate settlement. But, additionally, the fact-heavy nature of the dissection of expressions and ideas tends to rely on imprecise analytical steps such as how best to "abstract" a game, making litigation harder to predict.[140] Rather than leaving the fate of valuable intellectual property in the hands of a judge, many companies would prefer to negotiate a settlement instead.

In response to Tetris, LLC's infringement claims, Xio adopted what has become a fairly standard clone defense: that it had not copied any protected creative expression and instead copied only the unprotected rules and functionality of *Tetris*.[141] The court rejected Xio's legal arguments, holding that the "overall look and feel of the two games is identical" and that "[t]here is such similarity between the visual expression of *Tetris* and *Mino* that it is akin to literal copying."[142] The court also found infringement with regards to a number of gameplay elements present in both games. It held that "[n]one of these elements are part of the idea (or the rules or the functionality) of *Tetris*, but rather are means of expressing those ideas."[143]

Although this decision only comes from a district court, it still serves as an instructive new piece in the evolving landscape of video game copyright litigation. This case has much in common with other clone lawsuits, most notably that it features a larger video game company—with an established piece of intellectual property—claiming infringement against a smaller start-up company. Additionally, the games in question are mobile platform apps of

140. Tetris Holding, LLC v. Xio Interactive, Inc., 863 F. Supp. 2d 394, 399 (D.N.J. 2012).

141. *See* Eric Goldman, *Recent Ruling in Triple Town/Yeti Town Game App Dispute Provides Cautionary Lessons for Both EA and Zynga*, FORBES (Sept. 27, 2012), http://www.forbes.com/sites/ericgoldman/2012/09/27/recent-ruling-in-triple-townyeti-town-game-app-dispute-provides-cautionary-lessons-for-both-ea-and-zynga.

142. *Tetris Holding, LLC*, 863 F. Supp. 2d at 410.

143. *Id.* at 413.

a relatively simple nature, making the expressive and functional elements of the game more tightly interwoven.

But the outlier nature of the *Mino* case suggests that it may have only minimal predictive value. Most notably, Xio's product was an especially blatant clone: when looking at videos of the gameplay and screenshots, the court found that the similarities between the two were so great that they represented virtually identical copying, clearly establishing substantial similarity.[144] It was also clear that copying took place due to statements made by Ms. Golden, who admitted that her company downloaded several copies of *Tetris* while making *Mino* with the intent of making Xio's game as similar as possible.[145] Two other factors weighed against Xio's defense that it copied only unprotectable ideas. First, *Tetris* is a particularly established piece of intellectual property as far as video games are concerned, and *Tetris* had been mimicked—though rarely so blatantly—by other games before. This suggests that there are other ways of expressing the underlying ideas, thus weighing against any suggestion of merger.[146] Second, *Tetris* deals with falling blocks that interact in what the court called "wholly fanciful" ways—as opposed to having gameplay grounded in any depiction of reality—so the court held that this idea could have been expressed in many ways beside the one *Mino* chose to copy.[147]

It is also worth delving deeper into how the district court applied a substantial similarity analysis. Being in the District of New Jersey, the court was bound by *Whelan*.[148] However, the court opted to reconcile that approach somewhat with the *Altai* abstraction-filtration approach.[149] The court in *Tetris Holding* took the view that no matter how one chooses to articulate the steps of the process—whether through *Altai*'s abstraction-filtration or *Whelan*'s purpose-based description—the central task of the case was to "delineate between the copyrightable expression in *Tetris* and the unprotected elements of the program, then evaluate whether there is substantial similarity between such expression and Defendant's *Mino* game."[150] In abstracting *Tetris*, the court found that:

> *Tetris* is a puzzle game where a user manipulates pieces composed of square blocks, each made into a different geometric shape, that

144. *Id.* at 410.
145. *Id.* at 397.
146. *Id.* at 412.
147. *Id.* at 408.
148. Whelan Assocs., Inc. v. Jaslow Dental Lab, 797 F.2d 1222, 1234 (3d Cir. 1986).
149. *Tetris Holding*, 863 F. Supp. 2d at 403.
150. *Id.*

> fall from the top of the game board to the bottom where the pieces accumulate. The user is given a new piece after the current one reaches the bottom of the available game space. While a piece is falling, the user rotates it in order to fit it in with the accumulated pieces. The object of the puzzle is to fill all spaces along a horizontal line. If that is accomplished, the line is erased, points are earned, and more of the game board is available for play. But if the pieces accumulate and reach the top of the screen, then the game is over. [151]

From this abstraction, the court then took an interesting step: it reasoned that since any element of a game can be tied back to the rules of a game, Xio's defense that game elements related to rule functionality cannot be protected by copyright does not succeed.[152]

The case also demonstrates the takedown process in action. Originally posted to the iTunes App Store, *Mino* passed review and was made available to customers. It received largely positive reviews and was praised for possessing multi-player functionality that was actually superior to the contemporary version of *Tetris* available on the iTunes App Store at the time.[153] Nonetheless, *Mino* was taken down once Tetris, LLC notified iTunes of the alleged infringement.[154] The iTunes App Store, as part of its review process, informed Tetris, LLC that the game would be returned to the store unless more formal legal action was taken, leading to the lawsuit.[155] In this way, the iTunes App Store actually channeled its own review into the legal system by declining to render any verdict of its own as to the similarity of the games. That allowed the legal similarity of the games to be established in court. It is worth noting that at this point the costs of the dispute skyrocketed: developing and submitting the game was done inexpensively, and the takedown procedures initiated by Tetris, LLC required no significant fees. The introduction of legal fees changed the financial equation dramatically which, of course, helps explain why most similarly situated parties have chosen to settle before trial.

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151. *Id.* at 409.
152. *Id.*
153. *Mino*, 148APPS, http://www.148apps.com/reviews/mino/ (last visited Jan. 21, 2013).
154. *Tetris Holding*, 863 F. Supp. 2d at 397.
155. *Id.*

2. *S-C-R-A-B-U-L-O-U-S*

The story of the game *Scrabulous* tells a slightly different cloning story, one which demonstrates how timing, popularity, and a shrewd understanding of copyright law can work together to determine the success of a game.

The story begins in 2005, when Rajat and Jayant Agarwalla conceived of the idea to start a website where users could go to play the popular board game *Scrabble*, which they had both played frequently while growing up in India.[156] They launched their website in 2006 and at first had only a modest user base.[157] Looking to reach a larger audience, the brothers launched a Facebook application of the same name—and soon found themselves the proud owners of the most popular Facebook game, with over 700,000 daily users, which generated an estimated $25,000 a month.[158] Unsurprisingly, Hasbro, Inc., which owned the U.S. copyright in Scrabble, and Mattel, which owned the global copyright, took exception to someone else achieving overnight success with their intellectual property.[159] Rather than immediately filing suit, Hasbro and Mattel attempted to purchase *Scrabulous* in 2008, but the two brothers refused, reportedly holding out for a "multiple" of ten million dollars, well above what Hasbro was willing to pay.[160]

With the carrot unsuccessful, Hasbro switched to the stick, filing copyright and infringement lawsuits and pursuing takedown proceedings to remove the game from Facebook in July of 2008.[161] The Agarwallas removed the app from Facebook[162] and would eventually rebrand their game as *Lexulous*.[163] This was a similar spelling game but played on a different board, with different point totals allotted to the tiles and slightly altered rules.[164]

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156. Heather Timmons, *Online Scrabble Craze Leaves Game Sellers at Loss for Words*, N.Y. TIMES, (Mar. 2, 2008), *available at* http://www.nytimes.com/2008/03/02/business/02game.html?_r=0&sq=facebook%20scrabulous&st=cse&adxnnl=1&scp=10&adxnnlx=1356292130-QhTbl1Og0u6V8ESO5AoV4A.

157. *See id.*

158. *Id.*

159. *See id.*

160. *What Price Scrabulous?*, N.Y. TIMES (Mar. 4, 2008 7:52 AM), http://dealbook.nytimes.com/2008/03/04/scrabulous-founders-look-to-score-big-report-says/.

161. Brad Stone, *Hasbro Notches Triple-Word Score Against Scrabulous with 'Lawsuit,'* NYTIMES.COM, (July 24, 2008 12:38 PM), http://bits.blogs.nytimes.com/2008/07/24/hasbros-notches-triple-word-score-against-scrabulous-with-lawsuit/.

162. Vindu Goel, *Game Over: Scrabulous Shut Down on Facebook*, BITS, N.Y. TIMES, (July 29, 2008 8:47 AM), http://bits.blogs.nytimes.com/2008/07/29/facebook-shuts-down-scrabulous/.

163. *See* Stefan Fatsis and Michele Norris, *Word Score! Scrabulous Returns as Lexulous*, NPR (Jan. 14, 2009), http://www.npr.org/templates/story/story.php?storyId=99338221.

164. *See id.*

Satisfied that its copyright had been defended, Hasbro dropped the lawsuit in December of that year.[165]

Beginning in March of 2008, Mattel launched its own Facebook game, *Scrabble by Mattel*. As of March 9, 2013, Lexulous had 166,632 monthly average users,[166] while Mattel's *Scrabble*, developed by major video game developer Electronic Arts had 1,266,664.[167]

Although this may seem like an appropriate and unsurprising outcome, the story is slightly more complicated. In July of 2009, while the rebranded *Lexulous* and the officially-sanctioned *Scrabble* were both struggling to match the popularity of the original *Scrabulous*, a new player entered the tile-based word game space: Zynga. Its offering, *Words With Friends*, followed the *Lexulous* model, keeping the underlying idea of a tile-based spelling game but altering the layout of the board and the point values assigned to the tiles, just enough to avoid any copyright infringement liability. *Words With Friends* also offered a more streamlined interface and the ability to play randomly selected opponents. On the strength of these improvements, and having the benefit of Zynga's burgeoning Facebook market presence, *Words With Friends* quickly eclipsed both its forerunners in popularity. On March 9, 2013, it boasted 13,666,160 monthly average users.[168]

The respective rise and fall of these three games demonstrates the way that a savvy player can negotiate the thin protections copyright offers to video games in order to capitalize on the demands of the market. In the beginning, the Agarwallas struck upon a tremendous amount of untapped demand for an app-based spelling game like Scrabble. However, they lacked the legal wherewithal to know that producing an exact duplicate of Scrabble would expose them to infringement liability, leading them to drastically overvalue the worth of their game when Hasbro and Mattel sought to buy it. After those talks broke down, Mattel and Hasbro knew enough to continue to enforce their copyright but were not able to follow up with a game strong enough to adequately serve the demands of the market. Zynga, meanwhile,

165. *SCRABBLE Maker Hasbro Drops Lawsuit over Online Word Game*, AFP, GOOGLE, (Dec. 15, 2008), http://www.google.com/hostednews/afp/article/ALeqM5g5DtKdbBIfIzI9dDqor4B9tOmIgQ.

166. All application use statistics are taken from the website AppStats.eu, which tracks Facebook gaming application data. *Lexulous Word Game*, APPSTATS.EU, http://appstats.eu/apps/facebook/1000098-lexulous-word-game (last visited March 9, 2013).

167. *SCRABBLE*, APPSTATS.EU, http://appstats.eu/apps/facebook/1000466-scrabble (last visited Mar. 9, 2013).

168. *Words With Friends*, APPSTATS.EU, http://appstats.eu/apps/facebook/1005784-words-with-friends (last visited Mar. 9, 2013).

which neither produced a completely original intellectual property nor discovered an entirely new market, actually achieved the most commercial success of the three. By quickly producing and marketing *Words With Friends*, Zynga was able to capitalize on the underserved demand for spelling games of this type, while still implementing enough minor changes in how that concept was expressed to avoid any copyright liability. It would not be the last time Zynga would attempt to do so.

3. *Zynga, or How the Best Need Not Be First*

Zynga has become an industry leader in the mobile and social gaming space, while simultaneously becoming one of the most common parties in clone litigation suits; these two facts are not unrelated. The company has embraced the methodology exemplified by the *Words With Friends* success. CEO Mark Pincus even admitted as much in an internal memo, which said that "[w]e don't need to be first to market. We need to be the best in market . . . . We evolve genres by making games free, social, accessible and highest quality."[169] While that may be nothing more than a core statement of beliefs, those beliefs are almost exactly in line with copyright law's approach to software: protect it enough to encourage innovation but keep the protection narrow enough to allow later developers to push the innovative process forward.

Zynga has backed up Pincus's words with an aggressive stance toward litigation, one that has seen it on both sides of alleged infringement claims. Electronic Arts filed a lawsuit in 2012 alleging that Zynga's *The Ville* infringed Electronic Arts' *The Sims Social*,[170] while earlier that year Buffalo Studios accused *Zynga Bingo* of being a clone of its own *Bingo Blitz*.[171] Smaller developer Nimblebit eschewed legal action as too costly and took to the court of public opinion by releasing a graphical comparison of Zynga's *Dream Heights*, which Nimblebit felt infringed on its own *Tiny Tower*.[172] Zynga has responded harshly to these accusations. The company has frequently alleged infringement on the part of its accusers, and has adopted the general position that all games necessarily infringe to some degree upon the games that came

169. Keith Andrew, *We're Not the First but We Aim to be Best says Zynga CEO Pincus, Refuting Clonegate*, ZYNGA NEWS, POCKETGAMER.BIZ, http://www.pocketgamer.biz/r/PG.Biz/Zynga+news/news.asp?c=37418 (last visited Dec. 22, 2012).

170. *See* Complaint, Electronic Arts v. Zynga, 3:12-cv-04099 (N.D. Cal. filed Aug. 3, 2012).

171. *See* Takahashi, *supra* note 53.

172. *See* Paul Tassi, *Everything Wrong with Zynga in One Image*, FORBES, (Jan 25, 2012 11:04 AM), http://www.forbes.com/sites/insertcoin/2012/01/25/everything-wrong-with-zynga-in-one-image/.

before; this argument slots neatly into Zynga's attitude of innovation through improvement.[173]

This is not to say that Zynga does not vigorously protect its own intellectually property. In one case, Zynga sued Brazilian start-up Vostu for allegedly cloning its games so closely that Vostu even copied the bugs in the games.[174] Vostu responded that Zynga had been doing the same for years, that the two companies shared investors, and that the lawsuit was only retaliation for a failed business venture between the two to help Zynga expand its market in Brazil.[175] While Zynga's case was pending in U.S. court, Zynga also filed suit in Brazil, where a Brazilian judge quickly issued an injunction shutting down Vostu's games for forty-eight hours.[176] The U.S. judge—worried about having his jurisdiction over the case trumped by the Brazilian court—then attempted to enjoin the Brazilian court from issuing such an order on the grounds that Zynga was flouting U.S. jurisdiction.[177] While the case ultimately settled,[178] it demonstrates the strange flavor clone cases can take on when they intermingle with international copyright laws, although in this case the peculiarities were mostly jurisdictional.

There is less to be gleaned from Zynga's individual legal battles than there is from the larger trend. For the most part, the cases operate in much the same vein as *Words With Friends* did: a smaller company develops a successful game concept, which Zynga then duplicates with varying degrees of augmentation, then leverages across its larger market share to achieve greater commercial success. While there may be something unsavory about a business model that explicitly seeks to capitalize on the originality of others, that business model is not—at least in theory—out of line with the goal of copyright law. So long as Zynga is actually innovating upon those game concepts, it is difficult to argue that the promotion of the useful arts and

173. For a series of visual comparisons of Zynga offerings with the games some suspect them of cloning, see Paul Tassi, *A Photo Retrospective of the Games Developers Say Zynga Has Cloned*, FORBES, (Aug. 8, 2012 11:00 AM), http://www.forbes.com/sites/insertcoin/2012/08/08/a-photo-retrospective-of-the-games-developers-claim-zynga-has-cloned/.

174. Michael Arrington, *WAR! Zynga Sues the Hell Out Of Brazilian Clone Vostu*, TECHCRUNCH, (June 16, 2011), http://techcrunch.com/2011/06/16/war-zynga-sues-the-hell-out-of-brazilian-clone-vostu/.

175. Michael Arrington, *U.S. Judge Slaps Around brazilian Court in Zynga v. Vostu*, TECHCRUNCH (Aug. 11, 2011), http://techcrunch.com/2011/08/11/u-s-judge-slaps-around-brazilian-court-in-zynga-v-vostu/.

176. *Id.*

177. *Id.*

178. Leena Rao, *Zynga, Vostu Settle Copyright Lawsuit; Brazilian Gaming Company to Pay Up*, TECHCRUNCH, (Dec. 6, 2011), http://techcrunch.com/2011/12/06/zynga-vostu-settle-copyright-lawsuit-brazilian-gaming-company-to-pay-up/.

sciences is being thwarted. If anything, the inequities of the business model are more economic in origin than legal—Zynga's larger size allows it to promote games to a much greater extent than smaller developers, while the high legal costs of litigation insulate it from some of the liability it should perhaps face.

But one key flaw in Zynga's conception of its own innovation is that it relies on circular reasoning. It justifies its cloning on the grounds that it is making better games, and it proves that it is making better games by pointing to superior sales numbers; these sales numbers are often the direct result of cloning. Although strict capitalist economics would argue that selling more units is a strong indicator that the market considers a product to be superior, there is some danger in Zynga confusing correlation for causation.[179] It is not unreasonable to suppose that Zynga simply has better sales because it is already such a well-established brand in the mobile and social gaming markets that it can leverage its reputation and marketing power to connect with consumers and sell more games, regardless of whether those games are actually any better than their alleged source material. Without being able to control for the economic inequalities of the marketplace, it will likely remain difficult to tell if success is from marketing power or from game innovation, especially when cases so often settle before courts can apply a full legal analysis. But there is reason for skepticism whenever Zynga's supposed innovations begin to look a bit more like minor cosmetic tweaks to avoid the narrow scope of copyright protection.

The recently settled case *Electronic Arts v. Zynga* was thought by some to be the case to take Zynga to task for its "fast following" ways.[180] In that case, Maxis, a division of Electronic Arts—an even larger player in the video game industry than Zynga—alleged that Zynga's *The Ville* infringed on Maxis' *The*

179. Zynga has drawn criticism from some for being too concerned about increasing their player base and engineering new social mechanics to the detriment of its games' aesthetic, artistic, and gameplay elements. *See* Lejacq, *supra* note 29. One commentator labeled Zynga's repetitive, social gameplay elements as "coercive" and lacking in creativity and termed its place in the social gaming market as "The Zynga Abyss." Benajmin Jackson, *The Zynga Abyss*, THE ATLANTIC, (Jan. 24, 2012 3:41 PM), *available at* http://www.theatlantic.com/technology/archive/2012/01/the-zynga-abyss/251920/.

180. *See* Owen Thomas, *EA And Zynga Have Given Up On A Pointless Lawsuit Over An All-But-Dead Game*, BUS. INSIDER (Feb. 15, 2013), http://www.businessinsider.com/ea-zynga-the-ville-lawsuit-2013-2; Kain, *supra* note 10. In business terms, a "fast follower" is a company that does not engage in complete innovation, but instead closely follows innovators in order to incorporate and improve upon those innovative ideas, while not risking as much capital on research and development. *See* Ana Andjelic, *The Fast-Follower Digital Game Plan*, ADAGE DIGITAL (Dec. 4, 2012) http://www.cmo.com/articles/2012/12/7/the-fast-follower-digital-game-plan.frame.html.

Sims Social.[181] The alleged copying went fairly deep: not just game mechanics, but also character types, design, artwork, dimensions of rooms, and color schemes, down to the Red-Green-Blue values.[182] Initially, both sides seemed to have the determination and resources to see the case to trial, offering the possibility that this case could alter the landscape of clone video game litigation.[183] But even if the case had gone to trial, the extreme nature of the alleged copying might, even if proven, have presented only another narrow sort of holding, like the one seen in *Tetris Holding*. Alternatively, because the two games center around playing an everyday, normal person conducting normal, realistic activities, a court might also have held many aspects of the game uncopyrightable under the *scènes à faire* doctrine, under the rationale that Electronic Arts cannot be given a monopoly on simulating the real world. Ultimately—to the chagrin of those hoping for a landmark ruling to change the law[184]—the two companies settled out of court, leaving this case as just one more of Zynga's clone business dealings.[185]

V. THE BUSINESS OF CLONING

In surveying the supposed battlefields of the Clone Wars, one immediate conclusion is that they have been poorly named. From a legal standpoint, there's nothing particularly warlike about them. Rather, they represent the collision of a rapidly evolving marketplace with a narrow, fact-heavy legal standard, the outcome of which is difficult to predict outside of court. Meanwhile, costs are falling all around the video game industry. Technology has created the capability to conduct development, distribution, and retail for much less than ever before, allowing a tremendous influx of new participants into the industry.

But one price tag remains higher than ever: the legal costs of asserting or defending a copyright in court. While the quasi-legal review and appeal processes followed by digital distribution platforms in takedown proceedings

181. *See* Complaint, Electronic Arts v. Zynga, 3:12-cv-04099 (N.D. Cal. filed Aug. 3, 2012).

182. *See id.*

183. *See* Steve Peterson, *Zynga Slams EA in Court Filing, Calls Them "Desperate,"* GAMESINDUSTRY INT'L (Sept. 14, 2012), http://www.gamesindustry.biz/articles/2012-09-14-zynga-slams-ea-in-court-filing-calls-them-desperate.

184. *See* Ben Maxwell, *EA and Zynga Settle The Ville Legal Dispute Out of Court*, EDGE ONLINE (Feb. 18, 2013), http://www.edge-online.com/news/ea-and-zynga-settle-the-ville-legal-dispute-out-of-court/.

185. Frank Cifaldi, *EA and Zynga Settle The Ville Copycat Case Out of Court*, GAMASUTRA (Feb. 15, 2013), http://www.gamasutra.com/view/news/186789/EA_and_Zynga_settle_The_Ville_copycat_case_out_of_court.php#.UScXdOjD7cG.

offer a first step, for now the video game industry is continuing to expand and diversify, in part, on the strength of newcomers who simply do not have the financial resources to access the court system. Barring a dramatic plunge in legal costs or a surprising new ruling that sets a far firmer legal standard than the precedent suggests, the onus will continue to be on digital distribution platforms to develop takedown review and appeal regimes that are as robust as possible while still remaining consistent with the law. This will permit developers to at least get their rightful remedy in the marketplace, if not the courts.

Of course, this risks concentrating too much power in a small number of distribution platforms, while continuing to leave the copyright law as a trump card that only richer developers can play. This may be less than ideal, but it appears to be the most likely direction for the industry. While development becomes more accessible, the distribution platforms are poised to become the new gatekeepers of the realm, with considerable power to not only administer enforcement of copyright infringement claims, but also to control access to consumers. Over the long term, this could actually serve to help democratize development even further—as a few distribution platforms become increasingly influential, the ability of larger developers to dictate advantageous distribution terms may wane, creating an ecosystem where smaller, leaner developers with lower overhead can compete based on the quality of their games alone. Conversely, it is also possible that larger developers will leverage their superior resources to cut advantageous distribution deals, further exacerbating the imbalances of the system. For now, barring an unprecedented decision veering off-course in the scope of software protection, copyright law is unlikely to weigh in one way or the other. Instead, clone litigation will likely continue to migrate away from the courts and toward the review mechanisms set up by the digital distribution platforms. To the extent the Clone Wars really are a war, that is where the coming battles will be fought.

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RED IN THE EYE OF THE BEHOLDER: THE CASE FOR AESTHETIC FUNCTIONALITY

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The famous saying "[b]eauty is in the eye of the beholder"[1] aptly describes the doctrine of aesthetic functionality in trademark law. A product that consumers purchase because of a purely aesthetic feature cannot be protected as a trademark because of the aesthetic functionality doctrine.[2] Called an oxymoron by Thomas McCarthy,[3] the aesthetic functionality doctrine has puzzled practitioners, courts, and experts in trademark law since it emerged over seventy years ago.[4] Courts have criticized the doctrine as over-inclusive[5], and some have even failed to see the importance of having it at all. Fortunately, not all courts have given up on aesthetic functionality because they recognize the doctrine's place within intellectual property. The aesthetic functionality doctrine denies trademark protection of product

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1. MARGARET WOLFE HUNGERFORD, "THE DUCHESS," *Molly Bawn*, 140 (1878). Although the idea behind this maxim originated years before Hungerford wrote *Molly Bawn*, she is credited as the first to use the exact phrase. *See* Bridget Ilene Delaney, *Phrase Origins: Beauty is in the Eye of the Beholder*, YAHOO! VOICES (June 15, 2010), http://voices.yahoo.com/phrase-origins-beauty-eye-beholder-6194556.html.

2. Aesthetic products are

> chosen over competing products primarily because the design appeals visually, and purchased mainly for their decorative value. In this context, a competitor normally imitates the proven design not in the hope of inducing the consumer to believe he is buying the goods of the first manufacturer, but because that particular design is the one which embodies the essential thing the purchaser wants.

3 LOUIS ALTMAN & MALLA POLLACK, CALLMANN ON UNFAIR COMP., TR. & MONO § 19.9 (4th ed. 2012).

3. 1 J. THOMAS MCCARTHY, MCCARTHY ON TRADEMARKS AND UNFAIR COMPETITION § 7.81 (4th ed. 2012). McCarthy believes that aesthetic functionality is an "unwarranted expansion of the utilitarian functionality policy." *Id.* In his treatise, McCarthy states that appending both utilitarian and aesthetic to functionality is "misleading semantics." *Id.* He goes on to state that "[o]rnamental aesthetic designs are the antithesis of utilitarian designs." *Id.*

4. *See* Erin M. Harriman, *Aesthetic Functionality: The Disarray Among Modern Courts*, 86 TRADEMARK REP. 276, 276 (1996).

5. *See infra* notes 75–76 and accompanying text.

features that—if granted exclusively to a single producer—would put competitors at a significant non-reputation-related disadvantage.[6]

Trademark law guarantees consumers assurance that a particular entity made the product they are purchasing and protects aesthetic product features only to the extent that a decorative feature's "primary purpose is to identify and distinguish goods from others."[7] Aesthetic functionality balances the goal of preventing consumer confusion with the societal interest in preventing monopolies over product features that are desired for their aesthetic value rather than for their source-identifying value.[8] Notably, "aesthetic functionality is *independent* of source significance."[9] A feature that is deemed functional renders the feature unprotectable, whether or not that feature indicates source.[10] In functionality cases, trademark owners have argued that trademarked features—which defendants have challenged as functional—identify the sources of the features and therefore should not be found functional.[11] This argument, however, is not sufficient to support the claim that a product feature should be protected by trademark law; the argument does not address an important concern—whether competitors can compete effectively in a market without the use of the protected feature.

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6. TrafFix Devices, Inc. v. Mktg. Displays, Inc., 532 U.S. 23, 33 (2001) (quoting Qualitex Co. v. Jacobson Products Co., Inc., 514 U.S. 159, 165 (1995)).

7. Deborah J. Krieger, *The Broad Sweep of Aesthetic Functionality: A Threat to Trademark Protection of Aesthetic Product Features*, 51 FORDHAM L. REV. 345, 363 (1982).

8. *See* A. Samuel Oddi, *The Functions of "Functionality" in Trademark Law*, 22 HOUS. L. REV. 925, 927–28 (1985).

9. Brief for Law Professors as Amicus Curiae Supporting Defendants-Counter-Claimants-Appellees, Christian Louboutin S.A. v. Yves Saint Laurent Am. Holdings, Inc., 696 F.3d 206 (2d Cir. 2012) (No. 11-3303-cv), 2012 WL 59424, at *2 (emphasis added). Under the Lanham Act, functionality is a defense to infringement of marks, even against marks that have achieved incontestable status. 15 U.S.C. § 1115(b)(8) (2006); *see also* Michael Grynberg, *Things Are Worse than We Think: Trademark Defenses in a "Formalist" Age*, 24 BERKELEY TECH. L.J. 897, 920–21 (2009); Keith M. Stolte, *Functionality Challenges to Incontestable Trademark Registrations Before and After the Trademark Law Treaty Implementation Act*, 92 TRADEMARK REP. 1094, 1094–95 (2002).

10. *See TrafFix Devices, Inc.*, 532 U.S. at 33. The Supreme Court in *TrafFix* concludes that "[i]t is proper to inquire into a significant non-reputational-related disadvantage in cases of [a]esthetic functionality." *Id.* (internal quotation marks omitted). This inquiry is not focused on the reputational disadvantage of competitors' lack of access to source-identifying features protected by trademark, but instead is focused on if there is a "competitive necessity for the feature." *Id.* In other words, if trademark law protects this feature, could others compete fairly and effectively in the marketplace without the feature? If the answer is no, then a finding of aesthetic functionality is in order.

11. *See* Pagliero v. Wallace China Co., 198 F.2d 339, 340 (9th Cir. 1952); In re Owens-Corning Fiberglas Corp., 774 F.2d 1116, 1126–27 (Fed. Cir. 1985); Wallace Intern. Silversmiths, Inc. v. Godinger Silver Art Co., Inc., 916 F.2d 76, 80 (2d Cir. 1990).

The U.S. Supreme Court recognized the importance of competition in aesthetic functionality cases in *TrafFix Devices, Inc. v. Marketing Displays Inc.*[12] Specifically the Court declared that "[i]t is proper to inquire into a 'significant non-reputation-related disadvantage' in cases of [a]esthetic functionality . . . ."[13] Although some commentators and courts regard the Supreme Court's language as dicta,[14] the Court's recognition of aesthetic functionality legitimizes its place in trademark law.

The recent cases of *Maker's Mark Distillery, Inc. v. Diageo North America, Inc.* ("*Maker's Mark*")[15] and *Christian Louboutin S.A. v. Yves Saint Laurent America Holdings, Inc.* ("*Louboutin*")[16] have interpreted the doctrine of aesthetic functionality and applied the test set out by the U.S. Supreme Court in *TrafFix*.[17] In *Maker's Mark*, the Sixth Circuit took an appeal concerning the use of a red dripping wax seal by two different alcoholic beverage manufacturers—Makers' Mark bourbon and Reserva de la Famila tequila.[18] Maker's Mark Distillery—known for its famous bourbon—started using a red dripping wax seal on its bourbon bottles in the 1950s.[19] Jose Cuervo—a tequila maker—began selling Reserva de la Familia tequila in the United States in 2001.[20] Reserva de la Familia bottles were also closed with a red dripping wax seal.[21] Maker's Mark wanted to protect its use of red dripping wax seals in the alcohol industry, thus it sued Jose Cuervo for infringement of its trade dress.[22] As a defense to the infringement allegation, Jose Cuervo raised the aesthetic functionality defense, claiming that the red dripping wax seal was aesthetically functional.[23] A few months after the Sixth Circuit decided *Maker's Mark*, the Second Circuit also addressed the doctrine of aesthetic functionality.[24] Louboutin—the maker of pricey red-soled shoes

12. *TrafFix Devices, Inc.*, 532 U.S. at 33 (2001).
13. *Id.*
14. *See infra* notes 93–94 and accompanying text.
15. Maker's Mark Distillery, Inc. v. Diageo N Am., Inc. (*Maker's Mark II*), 679 F.3d 410 (6th Cir. 2012), *aff'g* 703 F. Supp. 2d 671 (W.D. Kent. 2010).
16. Christian Louboutin S.A. v. Yves Saint Laurent Am. Holdings, Inc. (*Louboutin II*), 696 F.3d 206 (2d Cir. 2012).
17. *TrafFix Devices, Inc.*, 532 U.S. 23 (2001).
18. *Maker's Mark II*, 679 F.3d at 414.
19. *Id.* at 417.
20. *Id.*
21. *Id.*
22. *See id.*
23. Maker's Mark Distillery, Inc. v. Diageo N. Am., Inc. (*Maker's Mark I*), 703 F. Supp. 2d 671, 686 (W.D. Kent. 2010).
24. *Louboutin II*, 696 F.3d 206 (2d Cir. 2012). The Second Circuit released its decision on Sept. 5, 2012, while the Sixth Circuit had decided *Maker's Mark II* on May 9, 2012. *Maker's Mark II*, 679 F.3d at 410.

often seen on the red carpet worn by celebrities—sued Yves Saint Laurent ("YSL")—another fashion powerhouse—after YSL announced its plan to make an entirely red shoe.[25] Like Cuervo in the Sixth Circuit, YSL also raised the aesthetic functionality defense, claiming that Louboutin's famous red soles were aesthetically functional.[26] Although courts rarely apply the doctrine, within the last year these two circuits have made aesthetic functionality central in their discussion of whether the color red should be protected by trademark law.[27]

This Note examines the aesthetic functionality doctrine, its important place within intellectual property law, and two courts' recent attempts at applying the doctrine. The Second Circuit correctly decided the case of *Louboutin* by finding that no per se rule forbids color from trademark protection in the fashion industry and by narrowing Louboutin's trademark protection to just the red sole. Applying the Supreme Court's aesthetic functionality test from *TrafFix*, the Second Circuit gave clarity to the fact-specific analysis needed in an aesthetic functionality case. In contrast, the Sixth Circuit in the *Maker's Mark* case failed to apply aesthetic functionality properly by disregarding the function that dripping wax seals play in the alcohol beverage industry. Its sparse reasoning did not set a clear precedent for lower courts to follow. Confusingly, the court refused to affirmatively acknowledge aesthetic functionality's place within its Circuit even though the court applied the doctrine.

Part I begins with an overview of the relationships between trademark law and the other branches of intellectual property. Then it traces the evolution of the aesthetic functionality doctrine. Part II provides a synopsis of the most recent cases applying the doctrine: *Maker's Mark* in the Sixth Circuit and *Louboutin* in the Second Circuit. Part III explains that the Sixth Circuit in *Maker's Mark* failed to apply aesthetic functionality correctly, whereas that the Second Circuit in *Louboutin* created a well-defined analytic framework for courts to follow when implementing the *TrafFix* aesthetic functionality test.

25. Casey Hall & Will Ashenmacher, *Trademarks and the Aesthetic Functionality Doctrine*, LEGAL CURRENT (Nov. 30, 2012), http://legalcurrent.com/2012/11/30/trademarks-and-the-aesthetic-functionality-doctrine/.

26. Louboutin S.A. v. Yves Saint Laurent Am., Inc. (*Louboutin I*), 778 F. Supp. 2d 445, 449 (S.D.N.Y. 2011).

27. *See Maker's Mark II*, 679 F.3d at 418.

I. THE EVOLUTION OF THE AESTHETIC FUNCTIONALITY DOCTRINE

A. SITUATING AESTHETIC FUNCTIONALITY WITHIN INTELLECTUAL PROPERTY LAW

The aesthetic functionality doctrine is situated in an area of substantial overlap between the three branches of intellectual property: patent, copyright, and trademark.[28] Due to this overlap, courts have found the doctrine to be confusing and difficult to apply.[29] However, the goals of trademark law illuminate the role of the aesthetic functionality doctrine within intellectual property law and suggest how it should be applied. The principal purpose of trademark law is to prevent consumers from mistakenly purchasing goods from the wrong manufacturer.[30] To prevent such consumer confusion, trademark law allows manufacturers exclusive use of a trademark to identify their goods. A trademark allows a manufacturer to distinguish his goods from those of others and prohibits other manufacturers from adopting any mark likely to be confused with the original trademark.[31] Trademarks also reduce "information and transaction costs by allowing consumers to estimate the nature and quality of goods before purchase."[32] Trademark law not only provides protection to words, phrases, logos, and symbols, but also provides protection for trade dress.[33] Trade dress is defined as "the design and packaging of materials, and even the design and shape of a product itself, if the packaging or product configuration serve[s] the same source-identifying function as trademarks."[34] Where a competitor has chosen to emulate a distinctive product trade dress in a way that causes consumer confusion, it has committed trademark infringement just as if it had copied

28. *See* Viva R. Moffat, *Mutant Copyrights and Backdoor Patents: The Problem of Overlapping Intellectual Property Protection*, 19 BERKELEY TECH. L.J. 1473, 1504–05 (2004); Mitchell M. Wong, *The Aesthetic Functionality Doctrine and the Law of Trade-Dress Protection*, 83 CORNELL L. REV. 1116, 1154–65 (1998); ROBERT P. MERGES, PETER S. MENELL & MARK A. LEMLEY, INTELLECTUAL PROPERTY IN THE NEW TECHNOLOGICAL AGE 908–09 (5th ed. 2010).

29. *See* Erin M. Harriman, *Aesthetic Functionality: The Disarray Among Modern Courts*, 86 TRADEMARK REP. 276, 276 (1996).

30. STEPHEN F. MOHR & GLENN MITCHELL, FUNCTIONALITY OF TRADE DRESS: A REVIEW AND ANALYSIS OF U.S. CASE LAW 1 (Int'l Trademark Ass'n 2d ed. 1994).

31. *Id.*

32. MERGES, MENELL & LEMLEY, *supra* note 28, at 733. Because trademark law focuses on consumers, there traditionally "has been nothing in trademark law analogous to the desire to encourage invention or creation that underlies (at least in part) patent and copyright law. . . . Rather, the fundamental principles of trademark law have essentially been ones of tort: unfair competition and the tort of deception of the consumer." *Id.* at 735.

33. MCCARTHY, *supra* note 3, § 8:1.

34. MERGES, MENELL & LEMLEY, *supra* note 28, at 744.

the product's brand name.[35] Discussion of the aesthetic functionality doctrine occurs almost exclusively in trade dress cases because a trade dress often encompasses not just a source indicator but also "a useful product feature [that should] not be unfairly monopolized."[36]

Trademark protection of distinctive product features creates a potential conflict with patent and copyright law.[37] Unlike copyrights and patents, trademarks are not mentioned in the Constitution.[38] The Constitution expressly authorizes Congress "[t]o promote the Progress of Science and the useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries."[39] The copyright and patent systems allow inventors to reap the benefits of their creative, new, or inventive work by providing a limited monopoly that creates strong rights for a limited time.[40] After the prescribed period of protection, works are made available to the public to freely copy.[41] This bargain balances the rights granted to inventors and creators against the costs to society of granting those rights.[42]

Trademarks serve a different purpose; they are not granted to protect new, useful, or creative works.[43] Instead, trademark law protects marks—sometimes indefinitely—to assist consumers in purchase decisions and to encourage trademark owners to establish their goods in the marketplace.[44] With each area having distinct goals, overlap should not occur between the different forms of intellectual property protection unless a product feature meets the separate requirements for more than one branch of intellectual

35. Joel W. Reese, *Defining the Elements of Trade Dress Infringement under Section 43(a) of the Lanham Act*, 2 TEX. INTELL. PROP. L.J. 103, 105 (1993–1994).

36. *See* ANNE GILSON LALONDE, 1 GILSON ON TRADEMARKS § 2A.04 (2012).

37. MCCARTHY, *supra* note 3, § 7.64.

38. MERGES MENELL &. LEMLEY, *supra* note 28, at 733; Krieger, *supra* note 7, at 354–56.

39. U.S. CONST. art. I, § 8, cl. 8.

40. *See* Mazer v. Stein, 347 U.S. 201, 219 (1954). The Supreme Court explained,

> The economic philosophy behind the clause empowering Congress to grant patents and copyrights is the conviction that encouragement of individual effort by personal gain is the best way to advance public welfare through the talents of authors and inventors in 'Science and useful Arts.' Sacrificial days devoted to such creative activities deserve rewards commensurate with the services rendered.

Id.

41. *See* Moffat, *supra* note 28, at 1484–86.

42. *See id.* at 1483–89.

43. *See id.* at 1488–89; MERGES, MENELL & LEMLEY, *supra* note 28, at 735.

44. *See* Gregory J. Battersby, *Intellectual Property under the Bright Lights of Broadway*, 67 N.Y. ST. B.J. 28, 30 (1995); MCCARTHY, *supra* note 3, § 2.2.

property protection.[45] However, unwarranted overlap does occur when trademarks protect product features better protected by patent and/or copyright law.[46] "Backdoor patents" and "mutant copyrights" can occur when manufacturers attempt to gain trademark protections for items that fall within the subject matter of patent or copyright.[47] If trademark protection is granted to features that fall within the purview of patent and copyright law, what was intended to be a limited yet strong monopoly can become a perpetual monopoly. The functionality doctrine prevents against such a misuse of intellectual property law.[48]

1. The Functionality Doctrine

To protect against this misuse of trademark law, courts developed the functionality doctrine, which prohibits parties from claiming exclusive rights in product features or packaging designs that are functional.[49] In 1938, in one of the earliest and most famous functionality cases, *Kellogg Co. v. National Biscuit Co.*, the U.S. Supreme Court denied trademark protection for National Biscuit Company's ("NABISCO") pillow-shaped biscuit in part due to the fact that the shape was functional.[50] The Court articulated the test for functionality as one of cost and quality of the article, holding that the pillow shape must be used by competitors or "the cost of the biscuit would be increased and its high quality lessened if some other form was substituted for the pillow-shape."[51] The court recognized NABISCO's right to a reward for its creation of the pillow-shaped process, but noted that NABISCO had already enjoyed a monopoly over its pillow-shaped design under an expired

45. *See* Wong, *supra* note 28, at 1156–61. "A feature that affects market demand for reasons other than the reputation of its source is presumed to be an aspect which ought not be monopolized by trademark." *Id.* at 1139.

46. *See* Moffat, *supra* note 28, at 1499, 1504–12.

47. *See id.* at 1475–76.

48. *See* Wong, *supra* note 28, at 1154 ("There are two apparent purposes for the functionality doctrine: (1) to prevent the perpetual monopolization of valuable product features, and (2) to partition the law of intellectual property between trademark and other forms of protection (e.g., copyright and patent).").

49. *See* MOHR & MITCHELL, *supra* note 30, at 2. Specifically, Mohr and Mitchell note:

> The doctrine of functionality in trademark law evolved out of the conflict between the need to protect the public from confusion as to the source of a product with a particular trade dress and the policy to encourage free and fair competition in the marketplace through the free use of unpatented product features that enhance a product's performance.

Id.; *see also* MCCARTHY, *supra* note 3, § 7.63 (noting that functionality was not codified until 1998); Oddi, *supra* note 8, at 928.

50. Kellogg Co. v. Nat'l Biscuit Co., 305 U.S. 111, 122 (1938).

51. *Id.*

patent.[52] The Court reasoned that once NABISCO's patent had expired, it was no longer entitled to exclusive rights under trademark law due to the public expectation that a patented process—like the pillow-shape design process—is free for all to copy at the end of its term.[53] Therefore, the Court used the functionality doctrine to deny trademark protection for a product with an expired patent to prevent a perpetual monopoly over the pillow-shaped biscuit.[54] Other courts applied this test to find products such as a two-colored match and a milk bottle cap to be functional and therefore undeserving of trademark's perpetual protection.[55]

In early functionality cases, courts took a strictly utilitarian approach: only those product features found absolutely necessary to the product's use were found functional and thus unprotectable under trademark law.[56] Courts focused on quality and cost in determining if a product feature was functional, asking (1) whether the feature is "essential to the use or purpose of the article," or (2) if it "affects the cost or quality of the article."[57] Aesthetic functionality evolved to complement utilitarian functionality in its effort to stop trademark protection from being granted to features better protected by patent or copyright.[58]

52. *Id.* at 119–20. "It is self-evident that on the expiration of a patent the monopoly granted by it ceases to exist, and the right to make the thing formerly covered by the patent becomes public property. It is upon this condition that the patent is granted." *Id.* (quoting Singer Mfg. Co. v. June Mfg. Co., 163 U.S. 169, 185 (1896)).

53. *Id.* at 122 (reasoning that it is not unfair that Kellogg shared in the goodwill of Shredded Wheat because "[s]haring in the goodwill of an article unprotected by patent or trade-mark is the exercise of a right possessed by all-and in the free exercise of which the consuming public is deeply interested").

54. *Id.*

55. *See* Diamond Match Co. v. Saginaw Match Co., 142 F. 727 (6th Cir. 1906) (holding that a two-colored match head serves an essential function); Goodyear Tire & Rubber Co. v. Robertson, 25 F.2d 833 (4th Cir. 1928) (holding that a design consisting of something mechanically functional is not registerable as a trademark); In re Walker-Gordon Lab. Co., 53 F.2d 548 (C.C.P.A. 1931) (holding that a milk bottle cap is a functional part of the bottle).

56. Krieger, *supra* note 7, at 359–62 (describing the history and progression of the utilitarian functionality standard through the years).

57. *Louboutin II*, 696 F.3d 206, 219 (2d Cir. 2012) (quoting Inwood Labs. Inc. v. Ives Labs., Inc., 456 U.S. 844, 850 n.10 (1982)).

58. Wong, *supra* note 28, at 1159–60; *see also* Reese, *supra* note 35, at 119 ("The legitimate purpose that the aesthetic functionality concept serves is that it prevents the protection of certain features which would not technically fit within the utilitarian definition, but which would still be necessary to effectively compete in the same product market.").

2. *Aesthetic Functionality's Beginnings*

The aesthetic functionality doctrine emerged in a comment in the 1938 Restatement (First) of Torts:[59] "When goods are bought largely for their aesthetic value, their features may be functional because they definitely contribute to that value and thus aid the performance of an object for which the goods are intended."[60] The comment noted that a candy box in the shape of a heart for Valentine's Day may be classified as aesthetically functional[61] because of the nearly universal association between love and the human heart.[62] Moreover, there are no alternative designs or shapes to satisfy the aesthetic desires of customers in the same way.[63]

The aesthetic functionality doctrine did not come to the forefront of trademark law until 1952 when the Ninth Circuit decided *Pagliero v. Wallace China Co.*[64] In *Pagliero*, the court held that floral designs printed on hotel china were functional because the designs appealed to consumers.[65] Therefore, the court denied trademark protection for Wallace's design.[66] Wallace had emphasized repeatedly that the floral design was an "essential selling feature" of the china and that consumers were buying the china because of the designs.[67] The court established and applied the "important ingredient" test.[68] Under this test, "if the particular feature is an important ingredient in the commercial success of the product, the interest in free competition permits its imitation in the absence of a patent or copyright."[69] When the court applied the "important ingredient" test to the facts of the case, the Ninth Circuit found Wallace's design functional.[70]

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59. MCCARTHY, *supra* note 3, § 7.79.

60. RESTATEMENT (FIRST) OF TORTS § 742 cmt. a (1938).

61. *Id.*

62. *See Heart (symbol)*, WIKIPEDIA, http://en.wikipedia.org/wiki/Heart_(symbol) (last modified Jan. 24, 2013).

63. *See* GILSON LALONDE, *supra* note 36, § 2A.04[5][a][i]. However, Newman in his article notes that a manufacturer of marbles could potentially trademark a heart-shaped box because the heart-shaped packaging would not give the same tremendous advantage over other marble producers as it would for candy producers on Valentine's Day. *See* Stephen J. Newman, *Kill the "Mere Color" Rule: Equal Protection for Color Under the Lanham Act*, 61 U. CHI. L. REV. 1595, 1602 (1994).

64. Pagliero v. Wallace China Co., 198 F.2d 339, 343 (9th Cir. 1952).

65. *Id.*

66. *Id.*

67. *Id.* The Ninth Circuit agreed that the floral design was essential and found that "[t]he attractiveness and eye-appeal of the design sells the china." *Id.* at 343–44.

68. *Id.* at 343.

69. *Id.*

70. *Id.* The court in *Pagliero* stated:

Although not mentioned by the Ninth Circuit in its decision, *Pagliero* was a case of a mutant copyright. Wallace could not protect the design via copyright because he failed to provide a copyright notice upon the first publication of his floral plate designs.[71] Only after losing the opportunity to protect his floral design under copyright and discovering that competitors were using his design without permission, did Wallace look to trademark law for protection.[72] As explained above, trademark law is not in place to grant a monopoly to the first person that produces an innovative or creative design; rather, it serves the purpose of indicating the origin of a product.[73] If the Ninth Circuit had allowed Wallace trademark protection over the floral plate designs, the court would in effect have granted protection for an unlimited amount of time to a design better protected by copyright law.[74]

Pagliero's "important ingredient" test created much controversy over the implementation of aesthetic functionality. Many courts found application of

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> If the particular feature is an important ingredient in the commercial success of the product, the interest in free competition permits its imitation in the absence of a patent or copyright. On the other hand, where the feature or, more aptly, design, is a mere arbitrary embellishment, a form of dress for the goods primarily adopted for purposes of identification and individuality and, hence, unrelated to basic consumer demands in connection with the product, imitation may be forbidden where the requisite showing of secondary meaning is made. Under such circumstances, since effective competition may be undertaken without imitation, the law grants protection.

Id.

71. MERGES, MENELL & LEMLEY, *supra* note 28, at 909 n.15.
72. *See Pagliero*, 198 F.2d at 342.
73. *See Louboutin II*, 696 F.3d 206, 216 (2d Cir. 2012). As the court noted,

> [T]rademark law is *not* intended to protect innovation by giving the innovator a *monopoly* over a useful product feature. Such a monopoly is the realm of patent law or copyright law, which seek to encourage innovation, and not of trademark law, which seeks to preserve a vigorously competitive market for the benefit of consumers.

Id. (citations omitted) (internal quotation marks omitted).

74. When discussing the concept of functionality in trademark law, many commentators only refer to the interplay between patents and trademarks thus, leaving the possibility of backdoor copyrights out of the discussion. However, such commentators fail to recognize that after a copyright expires, the owner could attempt to use trademark law to gain perpetual protection of an appealing design. The aesthetic functionality doctrine protects the public's dual interests in (1) protected functional designs eventually being released into the public domain for anyone to freely copy after their patent or copyright has expired and (2) functional designs not being protected at all if the designs do not fall within the domain of the patent or copyright system. *See* MERGES, MENELL & LEMLEY, *supra* note 28, at 909–10.

the test as encompassing too many trademarks.[75] Some commentators suggested that *Pagliero's* broad definition of aesthetic functionality would preclude protection for any product design that is aesthetically pleasing.[76] Since *Pagliero*, courts have taken various approaches to aesthetic functionality. Circuits that recognize aesthetic functionality—including the Ninth Circuit—have abandoned or limited *Pagliero's* interpretation of aesthetic functionality. Other courts have adopted a different test, while some courts have rejected aesthetic functionality altogether.[77]

Courts limiting the doctrine have attempted to "balance the source identification benefit of trade dress protection for aesthetic features against the threat to free competition posed by such protection" by "focusing on the extent to which trade dress protection forecloses alternative designs."[78] Many courts have relied on the test proposed in the Third Restatement, which attempted to narrow the scope of *Pagliero* and the original comment from the 1938 Restatement of Torts:

> A design is functional because of its aesthetic value only if it confers a significant benefit that cannot practically be duplicated by the use of alternative designs. Because of the difficulties inherent in evaluation of the aesthetic superiority of a particular design, a finding of aesthetic functionality ordinarily will be made only when the objective evidence indicates a lack of adequate alternative designs. Such evidence typically is available only when the range of alternative designs is limited either by the nature of the design feature or by the basis of its aesthetic appeal. The ultimate test of aesthetic functionality, as with utilitarian functionality, is whether the recognition of trademark rights would significantly hinder competition.[79]

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75. *See, e.g.*, Kleene Corp. v. Paraflex Indus. Inc., 653 F.2d 822, 825 (3d Cir. 1981) (rejecting the *Pagliero* test because it is overbroad and discourages creativity); Wallace Int'l Silversmiths, Inc. v. Godinger Silver Art Co., Inc., 916 F.2d 76, 80 (2d Cir. 1990) (noting that the *Pagliero* test "discourages both originators and later competitors from developing pleasing designs."); Ferrari S.P.A. v. Roberts, 944 F.2d 1235, 1247 (6th Cir. 1991) (also expressing criticism of the doctrine due to its discouragement of the development of appealing designs).

76. *See* MOHR & MITCHELL, *supra* note 30, at 12.

77. MCCARTHY, *supra* note 3, § 7.80. *See* Mark P. McKenna, *(Dys)Functionality*, 48 HOUS. L. REV. 823, 848–49 (2012) (explaining that the Federal Circuit, Eighth Circuit, and the Eleventh Circuit have refused protection for features on the basis of aesthetic functionality; other courts are skeptical of the doctrine; and the Ninth Circuit is not consistent with its application of the doctrine).

78. BARTON BEEBE ET AL., TRADEMARKS, UNFAIR COMPETITION, AND BUSINESS TORTS 101 (2011).

79. RESTATEMENT (THIRD) OF UNFAIR COMPETITION § 17 cmt. c (1995).

Another way that some courts have applied aesthetic functionality while limiting *Pagliero* is by looking at whether competitors can compete effectively without use of the product feature.[80] This analysis has often been used in conjunction with the available alternative designs test in courts' decisions of whether trademark protection would significantly hinder competition.[81]

The inconsistency in the application of the aesthetic functionality doctrine in the circuit courts was due in part to the lack of clarity from the Supreme Court on how to decide if a product feature was aesthetically functional or not.[82] Unfortunately as discussed below, even after the Supreme Court more clearly articulated the doctrine, confusion still existed among the circuits due to some courts and commentators interpreting the Court's words as dicta.[83]

It was not until 1995, that the U.S. Supreme Court recognized aesthetic functionality. In *Qualitex Co. v. Jacobson Products Co.*, the Court stated that the functionality doctrine "forbids the use of a product's feature as a trademark where doing so will put a competitor at a significant disadvantage because the feature is essential to the use or purpose of the article or affects its cost or quality."[84] The court endorsed the Restatement (Third) of Unfair Competition's view that the "ultimate test for aesthetic functionality . . . is whether the recognition of trademark rights would significantly hinder competition."[85]

In 2001, the Supreme Court revisited aesthetic functionality in the case of *TrafFix Devices, Inc. v. Marketing Displays, Inc.*, interpreting the central question in *Qualitex* to be one of aesthetic functionality.[86] The Court laid out a two-part test for functionality. First, a court must inquire if the product feature "is

80. *See* Erin M. Harriman, *Aesthetic Functionality: The Disarray Among Modern Courts*, 86 TRADEMARK REP. 276, 289, 291, 292 (1996).

81. *See* Wallace Int'l Silversmiths, Inc. v. Godinger Silver Art Co., Inc., 916 F.2d 76, 79–80 (2d Cir. 1990) (quoting Stormy Clime Ltd. v. ProGroup, Inc., 809 F.2d 971, 976–77 (2d Cir. 1987) (internal quotation marks omitted)); Abercrombie & Fitch Stores, Inc. v. American Eagle Outfitters, Inc., 280 F.3d 619, 642–44 (6th Cir. 2002).

82. The Supreme Court did not refer to aesthetic functionality until 1995 in *Qualitex Co. v. Jacobson Products Co., Inc.*, 514 U.S. 159 (1995) and did not clarify its two-part functionality test until 2001 in *TrafFix Devices, Inc. v. Mktg. Displays, Inc.*, 532 U.S. 23 (2001).

83. *See infra* notes 93–94 and accompanying text.

84. Qualitex Co. v. Jacobson Products Co., Inc., 514 U.S. 159, 169 (1995) (quoting Inwood Labs., Inc. v. Ives Labs., Inc., 456 U.S. 844, 850 n.10 (1982) (internal quotation marks omitted)).

85. *Id.* at 170 ("[I]f a design's aesthetic value lies in its ability to confer a significant benefit that cannot practically be duplicated by the use of alternative designs, then the design is functional." (internal quotation marks omitted) (quoting RESTATEMENT (THIRD) OF UNFAIR COMPETITION § 17 cmt. c (1995))).

86. TrafFix Devices, Inc. v. Mktg. Displays, Inc., 532 U.S. 23, 33 (2001).

essential to the use or purpose of the article or if it affects the cost or quality of the article."[87] This is considered the traditional utilitarian functionality test.[88] If the answer is yes, the inquiry stops and the product feature is found functional. If the answer is no, then the court "proceed[s] further to consider if there is a competitive necessity for the feature."[89] Proceeding to the second prong, the court should inquire if "exclusive use . . . would put competitors at a significant non-reputation-related disadvantage."[90] The *TrafFix* test separated the analyses courts should conduct for utilitarian functionality and aesthetic functionality.[91] After *TrafFix*, courts always inquire first if the product feature is functional the utilitarian way and then, if it survives the first inquiry, courts will determine if the feature is aesthetically functional.[92]

Although the Supreme Court articulated an aesthetic functionality test, some scholars argue that the Court has not created precedent for lower courts to follow because its comments on the doctrine were merely dicta and were not dispositive to the issue the Court was deciding in either of those cases.[93] This confusion has led to continuing reluctance of some circuit courts to apply the doctrine.[94] However, the Second Circuit in *Louboutin* provided some clarity on how the doctrine can be more effectively applied. The Second Circuit's approach creates a more reasonable balance between a company's interest in protecting its marks and the market's interest in protecting the use of product features that have functional purposes.

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87. *Id.* at 32 (quoting Inwood Labs., Inc. v. Ives Labs., Inc., 456 U.S. 844, 850 n.10 (1982)).

88. Orit Fischman Afori, *The Role of the Non-Functionality Requirement in Design Law*, 20 FORDHAM INTELL. PROP. MEDIA & ENT. L.J. 847, 857 (2009–2010).

89. *TrafFix*, 532 U.S. at 33.

90. *Id.* at 32 (quoting *Qualitex Co.*, 514 U.S. at 165).

91. *See* Au-Tomotive Gold, Inc. v. Volkswagen of Am., Inc., 457 F.3d 1062, 1071–72 (9th Cir. 2006); Dippin' Dots, Inc. v. Frosty Bites Distrib., LLC, 369 F.3d 1197, 1203 (11th Cir. 2004).

92. *See Louboutin II*, 696 F.3d 206, 220 (2d Cir. 2012).

93. *See, e.g.*, Yevgeniy Markov, *Raising the Dead: How the Ninth Circuit Avoided the Supreme Court's Guidelines Concerning Aesthetic Functionality and Still Got Away with It in Au-Tomotive Gold*, 6 NW. J. TECH. & INTELL. PROP. 197, 197 (2008) (explaining that the *TrafFix* court never "reached the issue of aesthetic functionality on the merits, but rather merely suggested its application to other related cases"); Alexandra J. Schultz, Comment, *Looks Can Be Deceiving: Aesthetic Functionality in Louboutin and Beyond*, 15 TUL. J. TECH. & INTELL. PROP. 261, 267 (2012) (noting that "the Supreme Court's language has been considered dicta by several commentators and has not been followed consistently.").

94. *See* Bd. of Supervisors for La. State Uni. Agric. & Mech. Coll. v. Smack Apparel Co., 550 F.3d 465, 487–88 (5th Cir. 2008) ("Our circuit has consistently rejected the concept of aesthetic functionality. . . . We do not believe that the Court's dictum in *TrafFix* requires us to abandon our long-settled view rejecting recognition of aesthetic functionality.").

II. 2012: THE YEAR OF AESTHETIC FUNCTIONALITY, BOURBON, AND SHOES

During the past year, high profile cases in the Second and Sixth Circuits have shined the spotlight on the aesthetic functionality doctrine.[95] Interestingly, both courts upheld the validity of the features after the plaintiffs had limited their marks from their original approved trademark applications.[96] Both circuits recognized the Supreme Court's discussion of the aesthetic functionality doctrine in *TrafFix*, but the Sixth Circuit stated in *Maker's Mark* that it was dicta while the Second Circuit followed it as binding precedent in *Louboutin*.[97]

A. MAKER'S MARK V. JOSE CUERVO: THE BATTLE FOR THE SEAL

Figure 1: Maker's Mark's Seal v. Jose Cuervo's Seal[98]

In *Maker's Mark*, the court examined whether the aesthetic functionality doctrine prohibited protection of a signature red dripping wax seal on a

95. *See* Katherine Laatsch Fink, *Seeing Red: Recent Developments in the Trademark Functionality Doctrine*, BANNER & WITCOFF INTELLECTUAL PROPERTY UPDATE FALL/WINTER 2012, http://www.bannerwitcoff.com/_docs/library/articles/Seeing%20Red%20%20Recent%20Developments%20in%20the%20Trademark%20Functionality%20Doctrine.pdf (last visited at Feb. 20, 2013).

96. Maker's Mark narrowed its trademark to only red dripping wax seals. Its original approved application included all dripping wax seals on the neck of a bottle regardless of color. *Maker's Mark II*, 679 F.3d 410, 417 (6th Cir. 2012). The Second Circuit in *Louboutin* modified Louboutin's trademark to only include the color red on the soles of the shoes. *Louboutin II*, 696 F.3d 206, 228 (2d Cir. 2012).

97. *Maker's Mark II*, 679 F.3d at 418; *Louboutin II*, 696 F.3d at 221.

98. *Maker's Mark Wins Trademark Protection for Signature Red Wax Seal*, TEQUILATOWN (May 9, 2012), http://www.tequilatown.net/news/makers-mark-wins-trademark-protection-for-signature-red-wax-seal/.

bourbon bottle.[99] Bourbon occupies a unique place in American culture and commerce, with Maker's Mark in the center of it.[100] The Samuels family—founder of Maker's Mark distillery—has produced whiskey since the eighteenth century.[101] In 1953, Bill Samuels, Sr. created the recipe for Maker's Mark bourbon.[102] Since 1958, the company has bottled bourbon for commercial sale using a red dripping wax on its Maker's Mark bourbon bottles.[103] Samuels' wife got the idea for the Maker's Mark's dripping wax from "antique cognac bottles that were commonly dipped in wax."[104] Maker's Mark's "purpose in adopting a dripping wax seal was to impart a sense of elegance and a hand-crafted image."[105] After the *Wall Street Journal* published an article about its bourbon and the red dripping wax seal, Maker's Mark gained national attention.[106] Consequently, Maker's Mark registered the seal as a trademark in 1985.[107]

Ten years after Maker's Mark registered the red dripping wax seal as a trademark, Jose Cuervo began producing a premium tequila called Reserva de la Familia.[108] Cuervo decided to use a red dripping wax seal on its bottles to create an artisan look.[109] In 2001, Jose Cuervo introduced Reserva de la Familia tequila to the United States in bottles with a red dripping wax seal vaguely similar to the Maker's Mark seal.[110] Because of Maker's Mark's existing trademark registration, Jose Cuervo's use of the red dripping wax set the stage for trademark litigation.

1. District Court Litigation

Two years after Jose Cuervo introduced Reserva de la Familia to the United States with a red dripping wax seal, Maker's Mark initiated a lawsuit against Cuervo seeking an injunction for state and federal trademark

99. *Maker's Mark II*, 679 F.3d at 417.
100. *Id.* at 416.
101. *Id.*
102. *Id.*
103. *Id.* at 417.
104. *Wax Museum History: 1958*, MAKER'S MARK, http://www.makersmark.com/#!/wax-museum/history/9-1958 (last visited Jan. 23, 2013).
105. Brief for the Appellants at 39, *Maker's Mark II*, 679 F.3d 410 (6th Cir. 2012) (Nos. 10-5508, 10-5586, 10-5819), 2011 WL 5320863 (referring to Samuels's testimony).
106. *Maker's Mark II*, 679 F.3d at 417.
107. *Id.*
108. *Id.*
109. *See* Brett Barrouquere, *Judge limits wax seal on liquors to Maker's Mark*, BUSINESSWEEK (Apr. 2, 2010, 4:31 PM), http://www.businessweek.com/ap/financialnews/D9ER586G0.htm.
110. *Maker's Mark II*, 679 F.3d at 417.

infringement.[111] Cuervo then discarded its use of the dripping wax seal and opted for a red, straight-edge wax seal.[112] In response to Maker's Mark's trademark infringement allegation, Cuervo challenged Marker's Mark's trademark registration claiming that the red dripping wax seal was functional under both utilitarian and aesthetic functionality doctrines.[113] The district court rejected the utilitarian functionality defense based on testimony from experts that "numerous functionally equivalent methods exist to seal a bottle."[114] Furthermore, the court found that Maker's Mark did not intend for its wax seal to serve any function.[115] With regard to aesthetic functionality, the district court found Cuervo's argument[116] unpersuasive and concluded that red is "not the only pleasing color of wax that competitors may employ on their product, nor does it put competitors at a significant non-reputation related disadvantage to be prevented from using red dripping wax."[117] Therefore, the court found that aesthetic functionality was inapplicable and did not invalidate Maker's Mark's trademark.[118] Unhappy with the decision, Cuervo appealed.[119]

2. *The Sixth Circuit Limits Red Dripping Wax Seals to Maker's Mark*

In an opinion that begins with the line, "All bourbon is whiskey, but not all whiskey is bourbon," Judge Boyce upheld the district court's decision to protect Maker's Mark's red dripping wax seal and also granted an injunction barring Cuervo from using a similar dripping wax seal.[120] Relying on the Supreme Court's discussion of aesthetic functionality in *TrafFix*, the Sixth Circuit stated that "where an aesthetic feature (like color), serves a significant

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111. *Id.*

112. *Maker's Mark I*, 703 F. Supp. 2d 671, 682 (W.D. Kent. 2010). Note that Maker's Mark brought a separate case before the district court concerning Cuervo's use of all red wax seals. *Id.* at 682 n.5.

113. *Id.* at 684–86.

114. *Id.* at 685.

115. *Id.*

116. Memorandum in Support of Defendants' Motion for Partial Summary Judgment at 15, *Maker's Mark I*, 703 F. Supp. 2d 671 (W.D. Kent. 2010) (No. 303CV00093), 2008 WL 2543463 (Cuervo argued that "[p]roduct functionality may encompass aesthetic features which confer benefits and cannot practically be duplicated by the use of alternative designs").

117. *Maker's Mark I*, 703 F. Supp. 2d at 686. The court further stated that "[t]here are other ways of making a bottle look artisanal or unique" and that it was not convinced that it would be difficult or costly to design around Maker's Mark's wax seal. *Id.*

118. *Id.* at 687. The district court thus declined to address if the aesthetic functionality doctrine is valid in the Sixth Circuit because the court found the doctrine inapplicable in this case. *Id.* at 687 n.15.

119. *Maker's Mark II*, 679 F.3d 410, 417 (6th Cir. 2012).

120. *Id.* at 414, 419.

function . . . courts should examine whether the exclusive use of that feature by one supplier would interfere with legitimate competition."[121] Next, the court put forth two tests under the competition theory of functionality: the comparable alternatives test and the effective competition test.[122] The comparable alternatives test asks whether protecting certain features would leave enough comparable alternatives for competitors to use.[123] The effective competition test asks whether protecting certain features would hinder a competitor's ability to compete effectively in the market.[124] After the court defined these tests, the court agreed with the district court on its findings and concluded that aesthetic functionality was not applicable here.[125] The court did not conduct its own factual analysis regarding aesthetic functionality but instead relied on the district court's findings.[126] Confusingly, the court questioned the validity of the doctrine in the Sixth Circuit choosing not to affirmatively recognize the doctrine while still applying it.[127] The court concluded that "even assuming we were to recognize aesthetic functionality doctrine, regardless of which test we would apply under that doctrine . . . Cuervo's appeal on this claim does not succeed."[128] Therefore, the court found that Maker's Mark's trademark was valid and that the company had exclusive use of the red dripping wax seal on all alcoholic beverage bottles.[129]

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121. *Id.* at 418 (quoting Antioch Co. v. W. Trimming Corp., 347 F.3d 150, 155 (6th Cir. 2003)).

122. *Id.* The court looked to a previous Sixth Circuit case, *Abercrombie & Fitch Stores, Inc. v. American Eagle Outfitters, Inc.*, which explained that the two most common tests of aesthetic functionality under the competition theory were the comparable alternatives test and the effective competition test. Abercrombie & Fitch Stores, Inc. v. American Eagle Outfitters, Inc., 280 F.3d 619 (6th Cir. 2002). The court in *Abercrombie & Fitch Stores, Inc.* had relied on Mitchell M. Wong's article, *The Aesthetic Functionality Doctrine and the Law of Trade Dress Protection*, to support its use of these tests. *Id.*; *see also* Wong, *supra* note 28, at 1144–49. Wong notes that the competition theory "is currently the prevailing theory in the courts and is embraced by the Restatement (Third) of Unfair Competition." Wong, *supra* note 28, at 1142. The Identification Theory, the original theory of functionality, was applied in *Pagliero* and has in the past years gone out of favor. *Id.* at 1132, 1142. Wong explains that "the competition theory allows more features to be trademarked than the identification theory." *Id.* at 1144.

123. *Maker's Mark II*, 679 F.3d at 418 (quoting *Abercrombie & Fitch Stores, Inc.*, 280 F.3d at 642).

124. *Id.* Notably, the court applies these tests without decisively the aesthetic functionality doctrine. *Id.*

125. *Id.* at 419; *see supra* Section II.A.1.

126. *Maker's Mark II*, 679 F.3d at 418–19.

127. *Id.* at 418.

128. *Id.*

129. *Id.* at 425.

B. LOUBOUTIN: A RED-LEATHER DECISION THAT PLEASES EVERYONE

Figure 2: Louboutin's Red Sole v. YSL's Red Shoe[130]

In *Louboutin*, the court examined whether a shoe company can trademark the color red on the outsole of its shoes, and if so, whether an entirely red shoe infringes on that mark.[131] Since 1992, Christian Louboutin has painted the outsoles of his women's high-heeled shoes with a high-gloss red lacquer.[132] Louboutin's unique design has paid off over the years by capturing the attention of the high-fashion industry. Film stars, A-list celebrities, and many other consumers pay "as much as $1000" to own a pair of the red-soled shoes.[133] In 2008, Louboutin registered his red outsole as a trademark with the U.S. Patent and Trademark Office ("USPTO").[134] As a result of his marketing efforts, Louboutin's red sole is today "instantly recognizable, to those in the know, as Louboutin's handiwork."[135] In 2011, Yves Saint Laurent (YSL)—another fashion powerhouse—created a line of monochrome shoes in a variety of colors: purple, green, yellow, and red.[136] Each shoe featured the same color on the entire shoe. For example, the red version is all red; including the insole, heel, upper, and outsole.[137] YSL's decision to create shoes with red outsoles caught the attention of Louboutin,

130. *Christian Louboutin and Yves Saint Laurent Finally Resolve the "Red Sole" Battle*, FOOYOH (Oct. 17, 2012), http://fooyoh.com/iamchiq_fashion_fashionshow/8055637.

131. *Louboutin II*, 696 F.3d 206, 211–12 (2d Cir. 2012).

132. *Id.* at 213.

133. *Louboutin I*, 778 F. Supp. 2d 445, 447–48 (S.D.N.Y. 2011).

134. *Louboutin II*, 696 F.3d at 211–12.

135. *Id.* at 213 (quoting the district court's finding that Louboutin's efforts have led to widespread recognition of his red sole shoes) (internal quotation marks omitted).

136. *Id.*

137. *Id.*

who worried that consumers would be confused by similarity between the two shoes.[138]

1. *District Court Litigation*

Louboutin initiated a lawsuit against YSL alleging trademark infringement and requesting a preliminary injunction against YSL barring marketing of any shoe with the identical red used by Louboutin or any red that could potentially cause consumer confusion.[139] YSL responded by seeking cancellation of Louboutin's mark on the grounds that red outsoles are aesthetically functional.[140] The district court denied Louboutin's request for an injunction and also stated a per se rule that color could not be protected by trademark in the fashion industry.[141]

The court reasoned that significant non-trademark functions existed in choosing the red color for the outsoles of the Louboutin shoes, including that the color red is sexy, engaging, and attracts men to women who wear the shoes.[142] Furthermore, the court reasoned that the use of the red outsoles served non-trademark functions other than source identifying and that protection would significantly hinder competition.[143] In its analysis, the district court considered implications beyond the high-fashion shoe market and beyond the color red on the outsole. The court envisioned a world in which—if protection was granted—Louboutin would be able to claim exclusive use of the particular shade of the color red on all shoes and possibly even other clothing.[144] Therefore, the court found the outsoles aesthetically functional.[145] Louboutin appealed the district court's decision.[146]

2. *The Second Circuit Reverses the Per Se Rule that Colors are Aesthetically Functional in Fashion*

The Second Circuit established a threefold functionality analysis. An inquiry regarding aesthetic functionality only occurs if the product feature first passes the test for utilitarian functionality.[147] First, courts should

138. *Id.*
139. *Id.*
140. *Id.* at 214.
141. *Louboutin I*, 778 F. Supp. 2d 445, 453–57 (S.D.N.Y. 2011).
142. *Id.* at 453–54 (reasoning that "[t]o attract, to reference, to stand out, to blend in, to beautify, to endow with sex appeal—all comprise nontrademark functions of color in fashion").
143. *Id.*
144. *Id.* at 454.
145. *Id.* at 457.
146. *Louboutin II*, 696 F.3d at 215.
147. *Id.* at 220.

"address the two prongs of the *Inwood* test: asking whether the design feature is either (1) essential to the use or purpose or (2) affects the cost or quality of the product at issue."[148] Next, courts should then turn to the competition inquiry set forth in *Qualitex* and ask whether the protected use would have a significant effect on competition.[149] According to the Second Circuit, this competition inquiry should only be made if the design passes the "traditional functionality" test, referring to utilitarian functionality.[150] Furthermore, the court noted that an ornamental feature is aesthetically functional and ineligible for protection when protection of the feature would significantly hinder competition, but clarified that "distinctive and arbitrary arrangements of predominantly ornamental features that do *not* hinder potential competitors from entering the same market with differently dressed versions of the product are non-functional[,] and [are] hence eligible for [trademark protection]."[151] After finding that the district court had not applied the aesthetic functionality test properly, the court reversed the district court's per se rule.[152] Then, the court modified Louboutin's trademark only to extend to the use of a red sole that contrasts with the adjoining upper portion of the shoe and ordered the USPTO to modify the mark accordingly.[153]

Not only did the Second Circuit find against the per se rule of functionality for color in the fashion industry, but it also set out considerations important in applying the aesthetic functionality doctrine in other arenas.[154] For example, the court reasoned that in making the determination that a product feature is aesthetically functional, "courts must carefully weigh the competitive benefits of protecting the source-identifying aspects of a mark against the competitive costs of precluding competitors from using that feature."[155] Because the aesthetic function and branding success could be difficult to distinguish, this analysis must be highly fact specific.[156] The court continued with the recognition that in conducting the aesthetic functionality inquiry, courts must consider both the trademark

148. *Id.*

149. *Id.*

150. *Id.*

151. *Id.* at 222 (quoting Fabrication Enters., Inc. v. Hygienic Corp., 64 F.3d 53, 59 (2d Cir. 1995 (quoting Stormy Clime Ltd. v. ProGroup, Inc., 809 F.2d 971, 977 (2d Cir. 1987)) (internal quotation marks omitted) (emphasis added).

152. *Id.* at 223–24.

153. *Id.* at 228. The court did not address whether the modified mark would be functional. *See* Ryan Davis, *USPTO Rebuffs Louboutin Bid to Broaden Red Sole Mark*, LAW360 (Jan. 18, 2013, 5:51 PM), http://www.law360.com/ip/articles/408586.f.

154. *Louboutin II*, 696 F.3d. at 221–24.

155. *Id.* at 222 (internal quotation marks omitted).

156. *Id.*

holder's right to enjoy benefits of its efforts and the public's right to a "vigorously competitive market."[157] The court also clarified that the functionality defense does not guarantee the greatest range for creative outlets but only the ability to compete fairly in the market.[158]

III. THE DIFFERENCE BETWEEN BOURBON AND SHOES

The recent decisions in the Sixth and Second Circuits have left trademark owners asking whether the aesthetic functionality doctrine is going to be a viable legal defense, and if so, how the doctrine will evolve. The Sixth Circuit in *Maker's Mark* declined to explore aesthetic functionality as it applies to the red dripping wax seal and instead adopted the district court's cursory reasons of why the dripping wax seal was not aesthetically functional. Choosing not to affirmatively recognize a much-needed doctrine in intellectual property, the question remains whether the doctrine is a viable defense in the Sixth Circuit.[159] Conversely, the Second Circuit in *Louboutin* chose to accept aesthetic functionality and the Supreme Court's rule in *TrafFix* while adding clarity to the future of aesthetic functionality. Although each circuit analyzed the color red and whether it was aesthetically functional, their analyses differed significantly.

The Sixth Circuit should have fully accepted aesthetic functionality as an important doctrine in trademark law. Instead, the court in *Maker's Mark* coyly noted that it had not yet adopted aesthetic functionality nor chosen which test(s) it would apply if it did adopt the doctrine.[160] Then, it proceeded to describe the tests under aesthetic functionality that it would use and the outcome under those tests.[161] Structuring its opinion this way does not provide helpful guidance to courts, trademark owners, or potential infringers. Of course, one could argue that the Sixth Circuit had already provided direction in this regard. In *Abercrombie & Fitch Stores, Inc.*,[162] the Sixth Circuit also dealt with the doctrine of aesthetic functionality. In a footnote explaining its acceptance of the competition theory, the court expressly adopted aesthetic functionality, contrary to its claims in *Maker's Mark*.[163] In *Abercrombie & Fitch Stores, Inc.*, the court cited *Antioch Co. v. W. Trimming*

157. *Id.*
158. *Id.* at 223.
159. *See* CALLMANN *supra* note 2, § 19:9 n.46.
160. *See Maker's Mark II*, 679 F.3d 410, 418 (6th Cir. 2012).
161. *See id.*
162. Abercrombie & Fitch Stores, Inc. v. American Eagle Outfitters, Inc., 280 F.3d 619, 641 (6th Cir. 2002).
163. *See id.* at n.16.

Corp.[164] for support.[165] Although the court in *Antioch Co.* discussed Thomas McCarthy's unfavorable view on aesthetic functionality, it did not expressly find the aesthetic functionality doctrine invalid.[166] Furthermore, the *Antioch Co.* case concerned utilitarian functionality and not aesthetic functionality, so the court's comments on McCarthy's views could be considered dicta on the subject of aesthetic functionality. Conversely, the court in *Abercrombie & Fitch Stores, Inc.* specifically stated that aesthetic functionality governed.[167] Given its inconsistent statements, the Sixth Circuit has not clearly announced its stance on aesthetic functionality. The *Maker's Mark* case provided the Sixth Circuit an important opportunity to affirm the doctrine, but instead the court questioned the validity of the doctrine.[168]

Additionally, the court in *Maker's Mark* did not allocate the space needed to conduct an in-depth fact-specific analysis, which the *Louboutin* court concluded is key to the application of aesthetic functionality.[169] Because this area of law lacks clarity and other courts will look to the *Maker's Mark* decision for guidance on the doctrine, the Sixth Circuit should have explained clearly and concisely why the red dripping wax seal was not aesthetically functional.[170] The court does not examine the industry in question or how an injunction on the use of the dripping wax seal would affect competitors.[171] Moreover, the court does not state why an injunction would not put competitors at a significant non-reputation related disadvantage.[172]

In applying aesthetic functionality to the red dripping wax seal, *Maker's Mark's* analysis fell flat. As with the heart-shaped candy box for Valentine's day, the purpose of the dripping wax seal in the alcohol industry is to convey emotions that are not easily conveyed by other bottle seals.[173] The Sixth

164. Antioch Co. v. W. Trimming Corp., 347 F.3d 150, 156 (6th Cir. 2003).

165. *Maker's Mark II*, 679 F.3d at 418.

166. *See Antioch Co.*, 347 F.3d at 156.

167. *Abercrombie & Fitch Stores*, 280 F.3d at 641.

168. *See Maker's Mark II*, 679 F.3d at 418–19.

169. *See Louboutin II*, 696 F.3d 206, 222 (2d Cir. 2012); *Maker's Mark II*, 679 F.3d at 418.

170. *See* Brian Wright, *Sixth Circuit Declines to Clarify Aesthetic Functionality Test (or Even Whether the Doctrine has been Adopted in this Circuit): Maker's Mark's Wax Seal Trademark Protected and not Functional*, FARUKI IRELAND & COX P.L.L. INTELLECTUAL PROPERTY, (May 21, 2012 3:10 PM), http://businesslitigationinfo.com/intellectual-property/archives/sixth-circuit-declines-to-clarify-aesthetic-functionality-test-or-even-whether-the-doctrine-has-been-adopted-in-this-circuit-makers-marks-wax-seal-trademark-protected-and-not-functional/.

171. *See Maker's Mark II*, 679 F.3d at 419.

172. *See id.*

173. *See supra* notes 59–63 and accompanying text; *Adhesive Wax Seals*, NOSTALGIC IMPRESSIONS, http://www.nostalgicimpressions.com/Adhesive_Wax_Seals_s/4.htm (last visited Feb. 11, 2013).

Circuit in *Maker's Mark* concluded that the red dripping wax seal was not aesthetically functional due to the availability of other alternative seals for competitors in the market.[174] Yet as numerous witnesses testified, dripping wax seals in various colorings including red, "communicate to consumers that the product is hand-crafted, vintage, and of high quality—and do so in a way that cannot practically be duplicated by the use of alternative designs."[175] By continuing protection of Maker's Mark's red dripping wax seal, the court granted Maker's Mark a monopoly over a way to convey a message to consumers that its product is artisanal and handcrafted.[176] Other alcoholic beverage companies, beyond the bourbon industry—where real confusion might have existed—can now only use straight wax seals of red color.[177] The court took away the ability to convey the style and nostalgia that consumers want while sipping a glass of liquor from an old fashioned bottle of whiskey, bourbon, or tequila.

As the Second Circuit noted in *Louboutin*, "a product feature's successful source indication can sometimes be difficult to distinguish from the feature's aesthetic function."[178] However, in *Maker's Mark*, the red wax should have been found to be aesthetically functional because colors other than red do not convey the same message of artisanal or familiarity as the red color on a wax seal.[179] Wax seals have historically been of the color red or black.[180] Maker's Mark knew[181] or should have known this when they created their name and bottle, and Maker's Mark probably used the red dripping wax seal

174. *Maker's Mark II*, 679 F.3d at 418.

175. *See* Brief for the Appellants at 35, *Maker's Mark II*, 679 F.3d 410 (6th Cir. 2012) (Nos. 10-5508, 10-5586, 10-5819), 2011 WL 5320863.

176. *See Bar Fight: Cuervo and Maker's Mark Duke it Out Over Red Wax*, BLOOMBERG LAW – YOUTUBE (May 23, 2012), http://www.youtube.com/watch?v=9Pgl4V9AURU. Just after the seven minute mark of this audio, Chris Springman, law professor at the University of Virginia School of Law tells Bloomberg Law's Josh Block about the case and that the wax seal sends a message about the quality of the liquor as well as a sense that the product is handcrafted. *Id.*

177. *See* Jonathan Stempel, *Update 1 – Maker's Mark Wax Seal Deserves Trademark – Court*, REUTERS, (May 9, 2012 2:59 PM), http://www.reuters.com/article/2012/05/09/makers mark-seal-lawsuit-idUSL1E8G9G2U20120509 (stating that Maker's Mark's dripping seal is "off limits to competitors").

178. *See Louboutin II*, 696 F.3d 206, 222 (2d Cir. 2012).

179. *See* Christine Meyer, *The History of Melting Wax for Seals*, EHOW, http://www.ehow.com/about_6584557_history-melting-wax-seals.html (last visited Jan. 30, 2013) (noting that the most common colors for wax seals were red and black, the colors used by artisans since the 11th century).

180. *See id.*

181. *See Wax Museum History: 1958 supra* note 104 (stating that Samuel's wife got the idea for the red dripping wax from an antique cognac bottle).

due to its artisanal connotations.[182] If the Sixth Circuit had found Maker's Mark's dripping red wax seal functional, the effect would be that other alcoholic beverage companies could use a dripping wax seal.[183] Importantly, this would not take away Maker's Mark right to sell its bourbon, and most likely Maker's Mark would still keep its protection on its overall bottle design. Maker's Mark would not lose its ability to protect its goodwill, but would lose its ability to monopolize an aesthetically pleasing way to seal a bottle.[184]

A few months after *Maker's Mark*, the Second Circuit's *Louboutin* decision removed critics' fears that aesthetic functionality would be applied too broadly in the fashion industry, leaving little room for creativity in source indication. By interpreting the Supreme Court's language on aesthetic functionality in both *TrafFix* and *Qualitex* as validating the doctrine, the Second Circuit paved the way for other circuits to apply the aesthetic functionality doctrine.[185] Moreover, the court managed to do this without granting an unlimited monopoly for Louboutin on the color red. Instead, the court narrowed its finding of protection only to the outsole of the shoes and therefore allowed the fashion industry to continue to use the aesthetically pleasing red color in other ways.[186] This Solomonic result pleased everyone—the court upheld Louboutin's trademark but allowed YSL to sell its all-red shoes.[187]

The Second Circuit correctly acknowledged the purpose of the functionality doctrine: to prevent trademark law from granting a monopoly

182. One of Maker's Mark's arguments against finding its dripping wax seal aesthetically functional—allowing other alcoholic beverage companies to use a dripping wax seal—could be the amount of time, money, and effort the company spent in creating its brand and image around this dripping wax seal. This argument fails because functionality disregards source indication in its analysis. If courts allowed perpetual monopolies for any design that came *first* even if it was functional, companies would start using and commercializing features that they knew would hinder competition from fellow companies in their market.

183. *See Bar Fight: Cuervo and Maker's Mark Duke it Out Over Red Wax*, *supra* note 176. Just after the three minute and thirty second mark, Professor Springman explains that if a mark is found functional, the trademark is invalid. Therefore, it is available to be freely copied.

184. If a feature is found functional, it loses trademark protection and therefore its monopoly over use of the feature.

185. *See Louboutin II*, 696 F.3d 206, 221 (2d Cir. 2012).

186. *Id.* at 224 (embracing the view that "[t]he purpose of the functionality defense is to prevent advances in functional design from being *monopolized* by the owner of the mark . . . in order to encourage competition and the broadest dissemination of useful design features" (internal quotation marks omitted)).

187. Hannah Elliott, *Both Sides Claim Victory in YSL v. Louboutin Shoe Case*, FORBES (Sept. 5, 2012, 5:31 PM), http://www.forbes.com/sites/hannahelliott/2012/09/05/both-sides-claim-victory-in-ysl-v-louboutin-shoe-case/.

to a useful product feature.[188] The court noted that both forms of functionality—utilitarian and aesthetic—are needed to prevent problematic monopolies and protect the public domain.[189] This reasoning is in line with the original creation of the doctrine by the courts.[190] By accepting aesthetic functionality and reiterating its purpose to protect against unwarranted monopolies, the Second Circuit legitimized aesthetic functionality. However, the court did not stop there; it also explained that aesthetic functionality should be examined only if a product feature has passed the utilitarian functionality test.[191] The Second Circuit rightly stated this standard and gave greater guidance on how to apply aesthetic functionality.[192]

Conducting a thorough, fact-specific analysis, the Second Circuit held that a mark is aesthetically functional and therefore ineligible for trademark protection *only* if protection of the mark significantly undermines competitors' ability to compete in the relevant market.[193] The court explained that it must balance the " 'competitive benefits of protecting the source-identifying aspects' of a mark against the 'competitive costs of precluding competitors from using the feature.' "[194] It also noted some concerns about confusion of successful source identification and functionality.[195] Being aware of these concerns stops courts from finding a product feature aesthetically functional "merely because it denotes the product's desirable source."[196] Although the fact that the feature indicates a product's source is not dispositive in the aesthetic functionality analysis, it is important not to confuse good branding with features needed to compete in the market.[197] Furthermore, the Second Circuit crucially noted that the doctrine does not guarantee the greatest range for competitors' creative outlets but instead only the ability to compete fairly in a given market.[198]

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188. *See Louboutin II*, 696 F.3d at 218.

189. *See id.* at 218–19.

190. *See supra* Part I.

191. *See Louboutin II*, 696 F.3d at 219–20.

192. Lisa Shuchman, *Louboutin Red-Shoe Decision Clarifies 'Aesthetic Functionality' IP Doctrine*, CORPORATE COUNSEL (Sept. 7, 2012), http://www.law.com/corporatecounsel/PubArticleCC.jsp?id=1202570408982&Louboutin_RedShoe_Decision_Clarifies_Aesthetic_Functionality_IP_Doctrine&slreturn=20121026213527.

193. *Louboutin II*, 696 F.3d at 222. In an article written about the *Louboutin* decision, attorney Michelle Mancino Marsh of Kenyon & Kenyon explains that the Second Circuit's decision will help other courts because it sets out a test. Shuchman, *supra* note 192.

194. *See Louboutin II*, 696 F.3d at 222.

195. *See id.*

196. *See id.*

197. *See id.*

198. *See id.* at 223–24.

The straightforward test described and applied by the court can accomplish the sometimes-conflicting consumer goals of "being assured enough product differentiation to avoid confusion as to source and in being afforded the benefits of competition among producers."[199] Although the Second Circuit did not apply the functionality test to Louboutin's court-modified mark (limited to the red-sole only), the court's test creates an opportunity for other courts to apply the doctrine effectively because the opinion clarifies what considerations are important.[200] Moreover, the Second Circuit confirms that the analysis is highly fact-specific.[201] This approach serves as an answer to critiques that the doctrine is too broad and is over-inclusive because it provides courts with the flexibility needed to address different cases of aesthetic functionality. The Second Circuit's analytic framework prevents courts from creating per se rules forbidding protection of colors and encourages courts to do a more fact-specific analysis that considers the characteristics of the market and whether or not a particular feature has aesthetic value that would be unfair to protect.

Louboutin proves an exemplary application of the aesthetic functionality doctrine. In the fashion industry, color is likely to be labeled as functional because it is perceived as available to everyone in the industry.[202] As both the district court and Second Circuit noted, "color can serve as a tool in the palette of a designer, rather than as mere ornamentation."[203] This leads to the possibility of color being useful to the creator to express a value that consumers want, such as red being known for energy, passion, and sex appeal.[204] Therefore, the Second Circuit correctly limited Louboutin's trademark to the shoe's red sole only. The court's holding ensures that other competitors in the high-fashion shoe industry can still use the vibrant red color.

Louboutin's red outsole differs from Maker's Mark's red dripping wax seal because while Louboutin created the distinction that the red outsole is synonymous with quality, Maker's Mark used an existing symbol of quality and artisanal value and incorporated it in the design of its bourbon bottle.[205]

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199. *See id.* at 224 (quoting Stormy Clime Ltd. v. ProGroup, Inc., 809 F.2d 971, 978–79 (2d Cir. 1987)).

200. *See id.* at 212.

201. *See id.* at 222.

202. *See Louboutin I*, 778 F. Supp. 2d 445, 450 (S.D.N.Y. 2011).

203. *See Louboutin II*, 696 F.3d at 223 (citing *Louboutin I*, 778 F. Supp. 2d at 452–53).

204. *See Louboutin I*, 778 F. Supp. 2d at 452.

205. *See* Tyler Baker and Ted Max, *Second Circuit Digs its Heels into Louboutin Dispute; Finds 'Red Sole' Trademark Protectable, but Limited in Scope*, FASHION & APPAREL L. BLOG, (Sept. 19, 2012), http://www.fashionapparellawblog.com/2012/09/articles/ipbrand-protection/

Louboutin constructed a design to indicate that the shoes with the red outsoles were shoes made by Louboutin. Consumers interested in high fashion shoes do not buy the red sole shoes because they find two-toned shoes aesthetically pleasing; they buy the shoes because they want to be seen wearing Louboutins.[206] Conversely, part of the appeal of Maker's Mark's bourbon is that the red dripping wax indicates value, not just source. Although the wax does indicate that the bourbon is made by Maker's Mark, it also attracts consumers to purchase the bottle of bourbon because of the artisanal quality that the red wax seal conveys.[207] Unlike Louboutin's red sole, the red dripping wax seal should be available to other competitors because it has an aesthetic value important to the industry and significant beyond source identification.

IV. CONCLUSION

For many years, courts, practitioners, academics, and the public have misunderstood the doctrine of aesthetic functionality. Criticizing it as confusing and unnecessary, some courts refused to recognize the doctrine, therefore allowing the possibility of indefinite protection for product features intended only for the limited protection of patent or copyright law. In 2001, the Supreme Court, in its *TrafFix* decision legitimized the doctrine by offering its view on the test that should be applied. In 2012, application of the aesthetic functionality doctrine by the Second Circuit and the Sixth Circuit illuminated the fact that doctrine has an important place within trademark law and intellectual property more generally. Although the Sixth Circuit failed to apply the aesthetic functionality test properly and did not explicitly recognize the doctrine in its Circuit, the Second Circuit provided clarity on how the doctrine should be applied. In the future, courts should avoid following the Sixth Circuit's analysis in *Maker's Mark* because the court wrongly decided that the red dripping wax seal was not functional. Moreover, the Sixth Circuit did not conduct an in-depth factual analysis, which is critical

second-circuit-digs-its-heels-into-louboutin-dispute-finds-red-sole-trademark-protectable-but-limited-in-scope/.

206. *See* Irene Rubaum-Keller, *Are Louboutins Really Worth the Splurge? An Investigative Report (Sort Of)*, THE BLUSH (Mar. 27, 2012), http://theblush.com/2012/03/27/are-those-louboutin-shoes-really-worth-the-money/.

207. *See* Aaron B. Thalwitzer, *Maker's Mark Trademark Battle: Jose Cuervo Can't Use Dripping Red Wax*, TACTICALIP (June 4, 2012 6:00 PM), http://tacticalip.com/2012/06/04/makers-mark-trademark-battle-jose-cuervo-cant-use-dripping-red-wax/ ("Anyone who has seen a bottle of Maker's Mark knows the temptation. You just want to touch that shiny, rubbery, and oh-so-red wax with its I-don't-give-a-damn drips around the neck of the bottle.").

to the application of the aesthetic functionality doctrine. Rather, courts should follow the precedent set by the Second Circuit in *Louboutin*, because it serves as a model for how to thoroughly and carefully apply the Supreme Court's aesthetic functionality test.

DECIPHERING *ROSETTA STONE*: WHY THE LEAST COST AVOIDER PRINCIPLE UNLOCKS THE CODE TO CONTRIBUTORY TRADEMARK INFRINGEMENT IN KEYWORD ADVERTISING

Sarah Wells Orrick†

Technological innovation will always outpace the law: it is impossible to legislate or litigate an innovation that does not yet exist. Litigating new technology becomes problematic when the harm is obvious, but existing law provides no clear remedy. The past decade has seen a flood of cases concerned with trademark infringement on the Internet. As courts struggle to apply existing trademark law, they have reached confusing and contradictory results.

This Note discusses contributory trademark infringement in the realm of keyword advertising, as highlighted in *Rosetta Stone Ltd. v. Google, Inc.*[1] Although *Rosetta Stone* settled in November of 2012, the case remains significant because it directly addresses the challenges of analyzing contributory trademark infringement in a swiftly changing environment: the Internet. This Note argues that courts considering claims of contributory trademark infringement for keyword advertising should look to tort law—trademark infringement's predecessor—for guidance.

"Keyword advertising" describes the process by which companies like Google use proprietary search algorithms to connect a searched-for word or phrase with relevant advertisements that run alongside the results of the search.[2] Much of Google's revenue comes from this advertising.[3] Advertisers purchase the space through an online auction system.[4] In 2010, Rosetta Stone sued Google for allowing advertisers to bid on trademarked terms, alleging that Google's policy constituted trademark infringement.[5]

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1. Rosetta Stone Ltd. v. Google, Inc., 676 F.3d 144 (4th Cir. 2012) (*Rosetta Stone II*) *aff'g in part* 730 F. Supp. 2d 531 (E.D. Va. 2010) (*Rosetta Stone I*).
2. *Id.* at 150–51.
3. Corrected Brief for eBay Inc. & Yahoo! Inc. as Amici Curiae Supporting Appellee, Rosetta Stone Ltd. v. Google, Inc. No. 10-2007, 2010 WL 4956286, at *2.
4. *Rosetta Stone II*, 676 F.3d at 151.
5. *Rosetta Stone I*, 730 F. Supp. 2d at 531.

Rosetta Stone comes at what may be the tail end of keyword advertising litigation. Eric Goldman, Professor of Intellectual Property at Santa Clara University Law School, recently wrote that "[l]awsuits over the sales of keyword advertising seem so . . . *2005*."[6] His sentiment reflects the fact that the technology and basic structure of keyword advertising remains the same, although the cases have evolved due to changes in practices and jurisprudence. However, courts have yet to articulate a clear standard for evaluating trademark owners' claims alleging contributory infringement by a search engine.

Part I of this Note begins with an explanation of the origins of trademark law, from common law cause of action to statutory right. Next, Part II explains the basic tenets of keyword advertising and its ecosystem of players, aims, and issues. Part III of this Note discusses *Rosetta Stone*, focusing on Rosetta Stone's claim of contributory infringement. Lastly, Part IV demonstrates the benefit to applying the tort principle of the least cost avoider to the case at hand, arguing that Google can and has made similar accommodations in the past.[7] Google—as the least cost avoider—should take steps to fix the current situation. More broadly, courts should apply the principle of the least cost avoider in trademark law where no precedent specific to an evolving technology exists.

I. REDISCOVERING THE ORIGINS OF TRADEMARK

In 1982, the Supreme Court affirmed contributory trademark infringement as a cause of action in *Inwood Laboratories v. Ives Laboratories*.[8] This was thirty-six years after passage of the Lanham Act, the most modern codification of federal trademark law. But American courts recognized harms stemming from trademark infringement long before the Lanham Act.[9] In the nineteenth century, litigants brought trademark infringement claims under the torts of deception and fraud.[10] The Supreme Court permitted the claim of contributory trademark infringement in 1924, well before the passage of the

6. Eric Goldman, *Fourth Circuit's Rosetta Stone v. Google Opinion Pushes Back Resolution of Keyword Advertising Legality Another 5–10 Years*, TECH. & MARKETING L. BLOG (Apr. 10, 2012, 7:58 AM), http://blog.ericgoldman.org/archives/2012/04/fourth_circuits.htm.

7. The least cost avoider theory holds that the party who can most cheaply prevent an accident should do so. *See infra* notes 113, 114.

8. Inwood Labs. v. Ives Labs., 456 U.S. 844 (1982).

9. AT&T Co. v. Winback & Conserve Program, Inc., 42 F.3d 1421, 1433 (3d Cir. 1994), *vacating* 851 F. Supp. 617 (D.N.J. 1994) (stating that the Lanham Act "generally and purposefully [comes] from the common law tort of unfair competition").

10. *See id.*; *see also infra* Section I.A.

Lanham Act.[11] The interweaving of tort and trademark law is not new, and it suggests a way to approach trademark infringement on the ever-changing Internet.

A. AN EVOLVING AREA OF TORT: TRADEMARK LAW BEFORE THE LANHAM ACT

The Founding Fathers recognized the need for patent and copyright protection, authorizing Congress to create protection for these rights in the Constitution.[12] Not so for trademark.[13] Early trademark infringement cases specified deception and fraud as the causes of action: how a person perpetrated the fraud mattered less. Cases such as *Coats v. Holbrook*[14] and *Partridge v. Menck*[15] feature what today would be considered classic trademark infringement fact patterns: one competitor copied the mark or product that another had established. At the time, the New York Court of Chancery characterized this harm as deception, a common early approach to trademark infringement.[16] Most nineteenth century cases were restricted to "prevent[ing] competitors from dishonestly diverting customers who otherwise would have gone to the senior user of a mark."[17] Similarly, the class of potential infringers was smaller: "[s]pecifically, a trademark owner was entitled to relief only against competitors that dishonestly marked their products and passed them off as those of the mark owner."[18] The scope of trademark protection was narrower than it is today, but well established.[19]

Statutory protection came late to trademark. In 1870, Congress passed the Trademark Law, contending that the Copyright Clause of the Constitution provided for congressional oversight of trademarks.[20] The

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11. William R. Warner & Co. v. Eli Lilly & Co., 265 U.S. 526 (1924).

12. *See* U.S. CONST. art. I, § 8, cl. 8 ("The Congress shall have power . . . . To promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries.").

13. *Id.* Note that although the Constitution does not explicitly delineate trademark as a right that may be protected by Congress, other parts of the Constitution, such as the Commerce Clause, give Congress the power to oversee trademarks. *See* U.S. CONST. art. I, § 8, cl. 3.

14. Coats v. Holbrook, Nelson & Co., 2 Sand. Ch. 586 (N.Y. Ch. 1845) (holding that one person who intended to "attract to himself the patronage that without such deceptive use of such names . . . would have inured to the benefit of that other person").

15. Partridge v. Menck, 2 Barb. Ch. 101 (N.Y. Ch. 1847).

16. *Coats*, 2 Sand. Ch. at 594.

17. Mark P. McKenna, *The Normative Foundations of Trademark Law*, 82 NOTRE DAME L. REV. 1839, 1843 (2007).

18. *Id.* at 1848.

19. *See id.* at 1859–60.

20. *In re Trade-Mark Cases*, 100 U.S. 82 (1879).

Supreme Court disagreed, striking down the law in a set of decisions known as the Trade-Mark Cases.[21] Congress retaliated by passing a second trademark law in 1881, this time based on the Commerce Clause and more limited in scope.[22]

Despite Congressional attempts to provide statutory protection for trademarks, in the late nineteenth and early twentieth centuries, trademark claims were still litigated as torts. Courts considered trademark claims a form of fraud and unfair competition.[23] Oliver R. Mitchell wrote in the Harvard Law Review in 1896, "[l]ogically speaking, the fact is that Unfair Competition is properly a generic title, of which trade mark is a specific division."[24] The Sixth Circuit echoed this sentiment, holding, "[t]he entire substantive law of trade-marks . . . is a branch of the broader law of unfair competition."[25]

As tort law swelled to encompass contributory liability, common law trademark claims expanded to include contributory trademark infringement. In *William R. Warner & Co. v. Eli Lilly & Co.*, the Supreme Court explained contributory trademark infringement as a species of tort,[26] holding that "[o]ne who induces another to commit a fraud and furnishes the means of consummating it is equally guilty and liable for the injury."[27] The Court's language gave rise to a line of cases standing for the proposition that a party who did not directly infringe a trademark could be liable for the direct infringer's actions in certain circumstances.[28] Between 1924 and 1946, multiple courts permitted contributory infringement claims in trademark disputes.[29]

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21. ROBERT P. MERGES, PETER S. MENELL, AND MARK A. LEMLEY, INTELLECTUAL PROPERTY IN THE NEW TECHNOLOGICAL AGE 764 (6th ed. 2012).

22. *See id.*

23. Frischer & Co. v. Bakelite Corp., 39 F.2d 247, 268 (C.C.P.A. 1930) (explaining that "[t]rade-mark infringement, when found by the courts, enters into the law of unfair competition"); *see also* MERGES, *supra* note 21, at 765 (stating that "the fundamental principles of trademark law have essentially been ones of tort: unfair competition and the tort of deception of the consumer").

24. Oliver R. Mitchell, *Unfair Competition*, 10 HARV. L. REV. 275, 275 (1896). But note that Mitchell then explains that trademark law had developed earlier than the specific type of "unfair competition" that was then new.

25. G. & C. Merriam Co. v. Saalfield, 198 F. 369, 373 (6th Cir. 1912).

26. William R. Warner & Co. v. Eli Lilly & Co., 265 U.S. 526 (1924); *see also* John T. Cross, *Contributory Infringement And Related Theories Of Secondary Liability For Trademark Infringement*. 80 IOWA L. REV. 101, n.1 (2008).

27. *Warner*, 265 U.S. at 530–31 (citing Hostetter Co. v. Brueggeman-Reinert Distilling Co., 46 F. 188 (E.D. Mo. 1891)).

28. Cross, *supra* note 26, at 101.

29. *See, e.g.*, Smiling Irishman, Inc. v. Juliano, 45 N.Y.S.2d 361, 369 (Sup. Ct. 1943); Irwin v. Fed. Trade Comm'n, 143 F.2d 316, 325 (8th Cir. 1944); Champion Spark Plug Co. v.

B. MODERN TRADEMARK LAW

Although Congress had previously considered tort law sufficient protection for trademark owners and consumers, legislators realized the need for codification of existing law by the mid-1940s.[30] The expansion of the American economy and increased mobility of the average American had largely erased local geographic distinctions. As a result, businesses that once peacefully co-existed became fierce rivals for overlapping territory. Only a strong federal law could place those in all states on an equal playing field.

Congress enacted the Lanham Act in 1946 to codify a federal trademark law, drawing heavily from existing common law. In doing so, legislators imported the tort principles that were already woven into trademark common law. For example, § 1114 of the Lanham Act codified contributory trademark infringement as a cause of action:

> 15 U.S.C.A. § 1114. Remedies; infringement; innocent infringement by printers and publishers
>
> (1) Any person who shall, without the consent of the registrant—
>
> (a) use in commerce any reproduction, counterfeit, copy, or colorable imitation of a registered mark in connection with the sale, offering for sale, distribution, or advertising of any goods or services on or in connection with which such use is likely to cause confusion, or to cause mistake, or to deceive; or
>
> (b) reproduce, counterfeit, copy, or colorably imitate a registered mark and apply such reproduction, counterfeit, copy, or colorable imitation to labels, signs, prints, packages, wrappers, receptacles or advertisements intended to be used in commerce upon or in connection with the sale, offering for sale, distribution, or advertising of goods or services on or in connection with which such use is likely to cause confusion, or to cause mistake, or to deceive,
>
> shall be liable in a civil action by the registrant for the remedies hereinafter provided. Under subsection (b) hereof, the registrant shall not be entitled to recover profits or damages unless the acts

Emener, 16 F. Supp. 816 (E.D. Mich. 1936); Chesebrough Mfg. Co. v. Old Gold Chem. Co., 70 F.2d 383, 385 (6th Cir. 1934). Note that not all courts found that contributory infringement had occurred in each case: they merely accepted that it was an actionable claim in the abstract.

30. *See* S. Rep. No. 1333, 79th Cong., 2d Sess. 3 (1946), *reprinted in* 1946 U.S. Code Cong. Serv. 1274, 1275 ("However, trade is no longer local, but is national. Marks used in interstate commerce are properly the subject of Federal regulation. It would seem as if national legislation along national lines securing to the owners of trade-marks in interstate commerce definite rights should be enacted and should be enacted now.").

> have been committed with knowledge that such imitation is intended to be used to cause confusion, or to cause mistake, or to deceive.[31]

The statute does not explain how to identify contributory trademark infringement or how to analyze or resolve such cases. The corresponding legislative history, however, stated that the "present bill preserves the things which have demonstrated their usefulness,"[32] so lower courts looked to trademark precedent that predated the Lanham Act to interpret the statute.[33]

The Supreme Court did not rule on contributory trademark infringement until *Inwood Labs* in 1982.[34] *Inwood Labs* presented a fairly straightforward contributory trademark infringement case, not unlike *Warner*. Inwood Laboratories, a pharmaceutical manufacturer, discovered that pharmacists were substituting a generic, identical-looking pill for Inwood's more expensive original, Cyclospasmol.[35] Instead of filing suit against individual pharmacists, Inwood sued the creator of the generic pill for trademark infringement.[36] The Supreme Court held that "liability for trademark infringement can extend beyond those who actually mislabel goods with the mark of another."[37] In so holding, the Court recognized contributory trademark infringement as a cause of action:

> As the lower courts correctly discerned . . . . if a manufacturer or distributor intentionally induces another to infringe a trademark, or if it continues to supply its product to one whom it knows or has reason to know is engaging in trademark infringement, the manufacturer or distributor is contributorially responsible for any harm done as a result of the deceit.[38]

The Court also created a two-part test for contributory trademark infringement.[39] To meet the standard for contributory trademark infringement, the party must have either (1) intentionally induced trademark

31. 15 U.S.C. § 1114 (2006).
32. *See* S. Rep. 1333, *supra* note 30.
33. *See* Cross, *supra* note 26, at 101. *See, e.g.*, SK & F, Co. v. Premo Pharm. Lab., Inc., 625 F.2d 1055 (3d Cir. 1980); Upjohn Co. v. Schwartz, 246 F.2d 254 (2d Cir. 1957); Teledyne Indus., Inc. v. Windmere Prods., Inc., 433 F. Supp. 710 (S.D. Fla. 1977); Mattel, Inc. v. Goldberger Doll Mfg. Co., 200 F. Supp. 517 (E.D.N.Y. 1961); Coca-Cola Co. v. Snow Crest Beverages, Inc., 64 F. Supp. 980. (D. Mass. 1946), *aff'd*, 162 F.2d 280 (1st Cir.), *cert. denied*, 332 U.S. 809, *reh'g denied*, 332 U.S. 832 (1947).
34. *Inwood Labs*, 456 U.S. 844 (1982).
35. *Id.*
36. *Id.* at 847–48.
37. *Id.* at 853.
38. *Id.* at 853–54.
39. *Id.* at 854.

infringement or (2) knew or should have known that it was supplying products to a party infringing another's trademark.[40] The *Inwood Labs* test remains the standard today.

Trademark owners continue to litigate contributory trademark infringement. However, courts consistently struggle to assess contributory trademark infringement as applied to new technologies. The rate of change of the Internet and technology outdistances even the quickest conception, creation, and passage of a federal law; further, the common law application of precedent regarding previous technology does not always provide the best remedy.

II. THE KEY IS IN THE WORDS: WHY KEYWORD ADVERTISING PRESENTS A NEW SET OF PROBLEMS, AND HOW TRADEMARK OWNERS RESPOND

Most search engines profit not from charging users per search, but from selling advertising space that runs alongside search results.[41] In the early days of search engines, websites sold advertising space without regard for the content of the user's search. Most search engines now employ keyword advertising, where the search term that the user enters will "trigger" which advertisements to display.[42] Google's AdWords program is typical of the revenue structure of a search engine. Google auctions space according to an advertiser's bid: the highest bid on a specific search term generally receives the most valuable placement, and lower bids receive less preferential placement.[43] The bid denotes the amount that the advertiser will pay Google each time a user clicks on the advertisement, or "cost-per-click."[44] Because Google only benefits if a user finds an advertisement relevant, Google has a vested interest in providing a high volume of highly targeted advertising.[45]

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40. *Id.*

41. Corrected Brief for eBay Inc. & Yahoo! Inc. as Amici Curiae Supporting Appellee, *supra* note 3, at *2.

42. *Rosetta Stone II*, 676 F.3d 144, 150–51 (4th Cir. 2012).

43. *Id.* at 151. For example, a company that sells widgets might want its advertisement to show up when a person searches "where to buy widgets?" Thus, the company would bid on the phrase "where to buy widgets?" However, there may be many widget companies that might want to purchase those terms. Note that if the advertisement is irrelevant to the search term, even the highest bid might not receive top placement.

44. *Id.* In the example in the previous footnote, anyone who wants his ad to appear when the phrase "where to buy widgets" appears can bid on that term. The relevant highest bid will be featured at the top of the page, the next-highest bid will be slightly lower, et cetera.

45. *Id.*

Since creating AdWords, Google has changed two significant policies regarding trademark use.[46] In 2004, Google permitted any interested party to bid on a trademark as a triggering search term, regardless of whether the bidding party owned the trademark in question.[47] For example, the change would have allowed Nordstrom to bid on the term "Neiman Marcus" to trigger advertisements for Nordstrom: when a user searched for "Neiman Marcus," advertisements for Nordstrom, among others, would appear. Such micro-targeting appeals to cost-conscious advertisers since consumers searching for one company are likely to be interested in their competitors. Allowing bids on trademarks increases the number of potential bidders. The higher the number of bidders, the greater the competition for search terms. The resulting higher-priced bids increase Google's revenue.[48] To aid advertisers, Google's program suggests related terms based on an advertiser's initial trigger terms, including trademarks.[49] The second change came in 2009, when Google altered its policy on the permitted content of advertisements, allowing advertisers to use trademarks in the text of their advertisements, again regardless of who owned the trademark.[50]

These two changes made it harder for trademark owners to guard the use of their marks.[51] Now, instead of policing brick-and-mortar establishments or small stands on Manhattan's Canal Street,[52] trademark owners must also comb the Internet for infringing advertisements.[53] The challenges inherent in searching for trademark infringement on the Internet are different than the challenges of searching for it on the street. It is easier to infringe a trademark on the Internet. It is cheap to set up a website and use Google's AdWords

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46. *Id.*

47. *Id.*

48. *See* GOOGLE'S KEYWORDS TOOL, https://adwords.google.com/o/Targeting/Explorer?__c=1000000000&__u=1000000000&ideaRequestType=KEYWORD_IDEAS (last visited Jan. 23, 2012).

49. *See id.*

50. *Rosetta Stone II*, 676 F.3d at 151–52.

51. A fact that Google's amici point out. *See* Corrected Brief for eBay Inc. & Yahoo! Inc. as Amici Curiae Supporting Appellee, *supra* note 3, at *3.

52. Canal Street is well known as a location for purchasing counterfeit handbags. Willy Staley, *The Bag Men of Chinatown*, N.Y. TIMES' THE SIXTH FLOOR BLOG (Feb. 8, 2013, 10:05am), http://6thfloor.blogs.nytimes.com/2013/02/08/the-bag-men-of-chinatown/. The problem is not limited to Manhattan: in Los Angeles, Santee Street, among others, provides a similar experience. *See* Shan Lee, *Counterfeit Gap joins the counterfeit Gucci*, L.A. TIMES, (Feb. 3, 2012), http://articles.latimes.com/2012/feb/03/business/la-fi-cheap-fakes-20120204.

53. A fact that Rosetta Stone's amici curiae point out. *See* Brief for Convatec et al. as Amici Curiae Supporting Appellant at *2, *Rosetta Stone II*, 676 F.3d 144 (No. 10-2007), 2010 WL 4306013; Brief for Volunteers of America, Inc. as Amicus Curiae Supporting Appellant at *4–5, *Rosetta Stone II*, 676 F.3d 144 (No. 10-2007), 2010 WL 4317118.

program to readily profit from trademark infringement or piracy.[54] Rosetta Stone was one such victim. Rosetta Stone found advertisements on Google promoting counterfeit Rosetta Stone software.[55] The pirates used the Rosetta Stone trademark to lure customers because there was no powerful check restricting trademark use. Google's changes decreased trademark owner control of marks, and increased the instances of trademark infringement in advertisements on Google's search pages.

Keyword advertising is one of several areas of the Internet particularly prone to contributory trademark infringement. Trademark owners have responded to these situations in two ways. In some instances, trademark owners sued the individual actors who infringed their marks.[56] In others, trademark owners sued the search engines and other entities that facilitated the individual infringements.[57]

Trademark owners sue individual actors when a discrete group of actors has infringed a trademark, as in *Hearts on Fire v. Blue Nile*.[58] Hearts on Fire, the trademark owner, sued Blue Nile, a quasi-competitor in the diamond supply business, for bidding on Hearts on Fire's trademark, "hearts on fire," as a trigger for keyword advertising, and for using the mark in the text of keyword advertisements.[59] The company feared that Blue Nile's sale of diamond jewelry to consumers would confuse and mislead consumers to Hearts on Fire's detriment.[60] Because Hearts on Fire only wanted to stop Blue Nile's infringement, the company could—and did—sue Blue Nile directly. Hearts on Fire had no need to sue Google to stop Blue Nile, and doing so would have been an indirect and expensive way to achieve this goal.

Where there are unknown or numerous infringers, trademark owners have sued search engines instead of individual actors.[61] A review of these

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54. First Amended Complaint at ¶ 2, *Rosetta Stone II*, 676 F.3d 144 (No. 10-2007), 2010 WL 835474.

55. *Id.* ¶ 31.

56. *See infra* note 58.

57. *See infra* note 61.

58. *See, e.g.*, Brookfield v. W. Coast Entm't, 174 F.3d 1036 (9th Cir. 1999); Savin Corp. v. Savin Group, 391 F.3d 439 (2d Cir. 2004); Australian Gold v. Hatfield, 436 F.3d 1228 (10th Cir. 2006); Hearts on Fire v. Blue Nile, 603 F. Supp. 2d 274 (D. Mass. 2009).

59. *Hearts on Fire*, 603 F. Supp. 2d at 278–79.

60. *Id.*

61. *See, e.g.*, Lockheed Martin Corp. v. Network Solutions, Inc., 194 F.3d 980 (9th Cir. 1999); Playboy Enters. v. Netscape Commc'ns Corp., 354 F.3d 1020 (9th Cir. 2004); Gov't Emps. Ins. Co. v. Google, Inc., 330 F. Supp. 2d 700 (E.D. Va. 2004); 800-JR Cigar, Inc. v. GoTo.com, Inc., 437 F. Supp. 2d 273 (D.N.J. 2006); 1-800 Contacts, Inc. v. WhenU.Com, Inc., 414 F.3d 400 (2d Cir. 2005); Google Inc. v. Am. Blind & Wallpaper, C 03-5340JF(RS), 2007 WL 1159950 (N.D. Cal. Apr. 18, 2007); Tiffany Inc. v. eBay Inc., 600 F.3d 93 (2d Cir.

cases illustrates that for these plaintiffs, ferreting out the infringers might have transformed into a high-stakes game of Whac-A-Mole: expending copious resources on multiple cases without an end in sight. Just as the trademark owner had identified and stopped one infringer, another would pop up. Instead, trademark owners focused on the common denominator: the entity facilitating infringement. As with a Hi-Striker carnival game, the outcome depends entirely on a single blow.

Tiffany[62] is one such example of this Hi-Striker strategy. Famed luxury jeweler Tiffany filed suit against eBay, a large online auction site, alleging contributory trademark infringement.[63] eBay both passively allows users to post items and actively promotes categories of these items through paid advertising.[64] Tiffany asserted that permitting sale of secondhand Tiffany items and advertising the availability of these products constituted contributory trademark infringement because eBay knew that some of the products were likely counterfeit.[65] The Second Circuit found for eBay, holding that Tiffany could not control the market for its goods after they had been sold, even if counterfeit items riddled the market.[66]

The Second Circuit used the test from *Inwood Labs* to determine whether eBay was "culpably facilitating the infringing conduct of the counterfeiting vendors."[67] Because Tiffany did not contest the first prong of the *Inwood Labs* test, the Second Circuit focused on the second prong, whether eBay "continue[d] to supply its [service] to one whom it [knew] or had reason to know [was] engaging in trademark infringement."[68] Tiffany argued that eBay knew or had reason to know it was liable for trademark infringement, since "counterfeit Tiffany goods were being sold ubiquitously on its website."[69] The district court found that eBay had only "generalized notice that some

2010); Rescuecom Corp. v. Google, Inc., 562 F.3d 123 (2d Cir. 2009). Note that these cases were litigated at the same time as the cases against individual infringers, and do not illustrate a shift in litigation strategy. Courts considered different factors in these cases—for example, *American Blind* partially turned on the distinctiveness of the mark in question, while *Rescuecom* was primarily concerned with the definition of "use in commerce."

62. *Tiffany*, 600 F.3d at 93.

63. *Id.*

64. *Id.* at 97, 101.

65. *Id.* at 101.

66. *Id.* at 97.

67. *Id.* at 103. As explained in Part I, the two prongs of the *Inwood Labs* test ask whether the party either (1) intentionally induced trademark infringement or (2) knew or should have known that it was supplying products to a party infringing another's trademark. Inwood Labs. v. Ives Labs., 456 U.S. 844, 854 (1982).

68. *Tiffany*, 600 F.3d at 106 (quoting *Inwood Labs.*, 456 U.S. at 854).

69. *Id.* at 106.

portion of the Tiffany goods . . . might be counterfeit."[70] The *Inwood Labs* test, the court concluded, "explicitly imposes contributory liability on a defendant who 'continues to supply . . . to one who it knows or has reason to know is engaging in trademark infringement.' "[71] The court reasoned that eBay "consistently took steps to improve its technology and develop anti-fraud measures as such measures became technologically feasible and reasonably available,"[72] including creating tools to detect fraudulent postings, promptly removing listings that Tiffany found fraudulent, and allowing Tiffany several hours to preview listings before they went live.[73] Therefore, eBay was only liable for those postings that Tiffany or eBay's internal program explicitly marked as fraudulent. Tiffany's argument that the number of fraudulent postings should trigger liability for every Tiffany-related posting was, the Second Circuit concluded, an overbroad reading of *Inwood Labs*, and such information did not create constructive knowledge on the part of eBay.[74]

The interplay between the three actors in this environment—the trademark owner, the immediate infringer, and the facilitator—was present when Rosetta Stone filed a complaint against Google in 2010.

III. IT'S ALL GREEK TO ME: MISUNDERSTANDING A NEW TECHNOLOGY CONFOUNDED THE DISTRICT COURT IN *ROSETTA STONE*

Rosetta Stone creates the most popular language-learning software on the market, offering multiple levels of over thirty different language programs.[75] Rosetta Stone dominates its competition both in sales and in recognition. According to one consumer survey, seventy-four percent of consumers recognized Rosetta Stone, while twenty-three percent recognized its closest competitor.[76] As a product that must be purchased to be experienced, Rosetta Stone relies on the strength of its brand and quality of its product to move sales. Rosetta Stone has advertised with Google since 2002.[77] Because

70. *Id.*
71. *Id.* at 107.
72. *Id.* at 100.
73. *Id.* at 99–100.
74. *Id.* at 107–08. The Second Circuit also rejected the arguments of Tiffany and amici that this ruling would encourage eBay to practice willful blindness, contending that private market forces would be sufficient to keep eBay honest. *Id.* at 109–10.
75. Rosetta Stone II, 676 F.3d 144, 150 (4th Cir. 2012); First Amended Complaint, *supra* note 54, ¶ 14.
76. *Rosetta Stone II*, 676 F.3d at n.2.
77. *Id.* at 150.

its products are both relatively expensive and cost-efficient to duplicate, Rosetta Stone has become a popular target for software pirates.[78] The pirates and copy-makers also advertise their illicit copies with Google.[79] As a result of these advertisements, consumers confuse shoddy, counterfeit products with the genuine product, and sometimes purchase the counterfeit item based on this confusion.[80] Rosetta Stone cannot feasibly track every infringing ad and litigate against every pirate: it would have to expend an enormous amount of resources to do so. Instead, Rosetta Stone sued Google.

Rosetta Stone alleged that Google's AdWords tool should not have suggested or permitted Rosetta Stone's trademarks to be used either as triggers for advertisements or in the text of advertisements.[81] Rosetta Stone filed five claims: trademark infringement, contributory trademark infringement, vicarious trademark infringement, trademark dilution, and unjust enrichment.[82] Rosetta Stone's claim for contributory infringement regarded "the infringing use of the Rosetta Stone Marks by the third-party advertisers who use the Rosetta Stone Marks to trigger the display of 'Sponsored Links.' "[83] Google denied encouraging or having reason to know of infringing use of third-party advertisers.[84]

The Eastern District of Virginia found for Google on Rosetta Stone's five claims in summary judgment.[85] The Fourth Circuit affirmed the district court's dismissal for two of Rosetta Stone's claims, but remanded the remaining three (direct infringement, trademark dilution, and contributory infringement).[86] The case settled in early November of 2012,[87] but remains worthy of examination because it illustrates the problems inherent in applying trademark law to new technology.

78. First Amended Complaint, *supra* note 54, ¶¶ 105, 122.

79. *See supra* notes 54–55.

80. *Rosetta Stone II*, 676 F.3d at 156–58.

81. First Amended Complaint, *supra* note 54, ¶ 6.

82. Rosetta Stone II, 676 F.3d at 149.

83. First Amended Complaint, *supra* note 54, ¶ 85.

84. Def.'s Mem. Supp. Mot. Summ. J. at *12, *Rosetta Stone II*, 676 F.3d 144 (No. 10-2007) 2010 WL 1404259.

85. *Rosetta Stone I*, 730 F. Supp. 2d 531, 552 (E.D. Va. 2010).

86. *Rosetta Stone II*, 676 F.3d at 173.

87. Joe Mullin, *Google settles Rosetta Stone lawsuit, its last major dispute over AdWords*, ARS TECHNICA (Nov. 1, 2012, 10:35 AM), http://arstechnica.com/tech-policy/2012/11/google-settles-rosetta-stone-lawsuit-its-last-major-dispute-over-adwords/.

A. THE DISTRICT COURT DECISION

The district court considered trademark doctrine, precedent, and real-world analogy—traditional and accepted ways of judicial reasoning in trademark cases. But it failed to grasp the essence of the dispute. The district court compared Google's trademark infringement mitigation methods with eBay's mitigation methods in *Tiffany* and found them sufficiently similar.[88] Yet, at summary judgment, it was inappropriate for the court to make such a finding of fact. The court also misapplied the doctrine of functionality, belying its misunderstanding of the purpose of the doctrine.[89] The district court's most problematic pronouncements, however, stemmed from misunderstanding keyword advertising.

The district court compared Google's activity to that of billboard owners in Times Square.[90] In doing so, the court illustrated its fundamental inability to grasp the nature of the dispute between Google and Rosetta Stone. The court concluded,

> Given Times Square's high pedestrian and vehicular traffic, billboards located there offer advertisers great visibility, just as Google's popular search engine offers third party advertisers a great opportunity to display their advertisements for goods and services. Aside from their location and size, advertisement by billboards also allows creative 'customizing' through extensions and embellishments, a feature similar to a third party advertiser's ability to create the content of their Sponsored Link on Google's website.[91]

This analogy misses the mark. Advertisers purchase billboards based on the local population demographics, in addition to the physical location of the billboard.[92] This is similarly true for the advertisements that appear on Google's search pages. In both media, advertisers will likely reach more people than are interested in the product. It is not against the law for Lowe's to post billboards directly next to a Home Depot store, or for Lowe's to post billboards directly next to all Home Depot billboards. However, Lowe's, in this example, would not be basing its decisions on where the Home Depot trademark appeared, but instead on where Home Depot had visibly

88. *Rosetta Stone I*, 730 F. Supp. 2d at 548–49 (comparing Google's actions to eBay's as described in Tiffany Inc. v. eBay Inc., 600 F.3d 93, 98–100 (2d Cir. 2010)).

89. *Id.* at 545–46.

90. *Id.* at 550.

91. *Id.*

92. *See Outdoor Advertising & Billboard Advertising Costs*, CBSOUTDOOR.COM, https://www.cbsoutdoor.com/outdoor101/rates.aspx (last visited Feb. 22, 2013).

expended its resources, either in advertising or in a store location. Lowe's would be using the actions of Home Depot to inform its decisions, not incorporating Home Depot's trademark as a means of implementing its decisions. In contrast, a trademark keyword triggers an advertisement on Google AdWords: not only does the advertiser not need to pay until the advertising succeeds, but the advertisement only appears because an internet user's search query included the trademark. The underlying cause is different.

The court also held that the content of the billboard is within the purview of the advertiser, equating it to the content of the advertisement's text, which misleads.[93] Rosetta Stone did not contend that advertisements on Google should not have text or be customized, but that the text should not infringe on its trademark. The same argument against trademark infringement could be made against billboards, and, in fact, has been made—though not successfully.[94] Further, there is very limited space in Times Square to display advertisements. The Internet essentially contains unlimited space. Thus, the analogy of a billboard in Times Square is inaccurate and inappropriately describes the disagreement between Google and Rosetta Stone.

B. THE FOURTH CIRCUIT OPINION

The Fourth Circuit partially affirmed the district court's findings. It upheld the district court's opinion as to the dismissal of Rosetta Stone's claims of vicarious infringement and unjust enrichment, but vacated and remanded the opinion as to the dismissal of direct infringement, contributory infringement, and dilution.[95] The Fourth Circuit held that the district court's reliance on *Tiffany* was inappropriate at this juncture.[96] However, it did not fault the district court for embarking on that analysis.

The Fourth Circuit's decision does not foreclose the possibility that Google's current AdWords policy constitutes trademark infringement. Although this case has settled, at least one author has argued that Google will likely continue to face similar lawsuits from other companies until it changes its trademark policy or receives a significant legal victory.[97] The Fourth Circuit's willingness to entertain these claims puts Google in an unenviable

93. *Rosetta Stone I*, 730 F. Supp. 2d at 550.

94. *See* Mike Masnick, *Legal Fight Over Billboards About Trademarks On The Hotness Of Your Wife*, TECHDIRT (Jan. 25, 2010, 10:38 AM), http://www.techdirt.com/articles/20100113/2330097747.shtml.

95. *Rosetta Stone II*, 676 F.3d 144, 149–50 (4th Cir. 2012).

96. *Id.*

97. *See* Goldman, *supra* note 6.

position: without a firm rejection of the possibility that the AdWords policy does constitute infringement, Google may remain the target of litigation.[98]

Where courts struggle to apply a law, they look to the statute, legislative history, and precedent. Here, the statute, legislative history, and precedent are of little help. One scholar contends that "courts [are] struggling with an unruly body of law that offers little guidance in confronting issues surrounding new technologies that are capable of facilitating mass infringement of copyrights and trademarks."[99] However, the Fourth Circuit pointed out that "[c]ontributory infringement is a judicially created doctrine that derive[s] from the common law of torts."[100] Additionally, the Fourth Circuit's decision did not fault the district court's reasoning but, rather, the incorrect standard that it applied.

Although recent contributory infringement cases do not offer precedent that is factually identical, they offer a framework for evaluating these cases. That framework is the least cost avoider.

IV. TRANSLATING THE CODE: HOW THE LEAST COST AVOIDER BRIDGES THE GAP FROM PROBLEM TO SOLUTION

As shown in Part III, *supra*, the district court struggled to apply precedent, illustrating the difficulty courts face when technology evolves ahead of the machinery of the law. Instead of trying to determine which real-world scenario fit closest, the court ought to have hewed to an older principle:

> [when] it is not clear how the doctrine applies to people who do not actually manufacture or distribute the good that is ultimately palmed off as made by someone else[,] . . . we have treated trademark infringement as a species of tort and have turned to the common law to guide our inquiry into the appropriate boundaries of liability.[101]

If trademark is already treated as a tort, courts should apply the least cost avoider principle to solve the identified problem.

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98. Eric Goldman posits that additional cases are likely to be filed in the wake of Rosetta Stone but that they are unlikely to succeed because they have less merit. *See id.*

99. Mark Bartholomew, *Copyright, Trademark and Secondary Liability After Grokster*, 32 COLUM. J.L. & ARTS 445, 446 (2009).

100. *Rosetta Stone II*, 676 F.3d at 163 (internal citations and quotations omitted).

101. Hard Rock Cafe Licensing Corp. v. Concession Servs., Inc., 955 F.2d 1143 (7th Cir. 1992).

In seeking to determine the appropriate remedy for the harm, tort law considers both policy and economic effects. Google and Rosetta Stone marshaled important policy arguments, so an additional factor needs to be considered. Contributory infringement is, as demonstrated in Part I, the statutory equivalent of contributory liability. Courts have long analyzed contributory liability by applying the least cost avoider equation to determine who should bear the cost. The least cost avoider theory has been applied in similar cases, and is well-suited to address this question. In *Rosetta Stone*, Google can avoid this harm most cheaply, and therefore should pay the cost of doing so.

A. THE COMPETING POLICY GOALS OF GOOGLE AND ROSETTA STONE

Google and its amici marshal four policy arguments why Google's keyword advertising policies do not infringe trademarks. First, they assert that the advertisements fund search engines, which aid the public in navigating the Internet, and therefore the value of having a search engine should outweigh the cost of the infringement.[102] Second, they contend that the First Amendment protects their business practices, which promote disseminating information to consumers.[103] Third, they represent that keyword advertising fosters competition between trademark owners.[104] While a "small minority" of consumers may "lack . . . sophistication," their confusion should not outweigh "the value that society obtains from comparative advertising, and the truthful expression of keyword advertisers who buy access to Internet users who have evinced interest in learning more about 'Rosetta Stone.' "[105] Fourth, they maintain that Rosetta Stone—as the trademark owner—must police its marks: Google is not responsible for the infringing activities of its users.[106]

Rosetta Stone and amici disagree. They charge that Google is better positioned to fix this issue,[107] that Google profits from this infringement,[108]

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102. Corrected Brief for eBay Inc. & Yahoo! Inc. as Amici Curiae Supporting Appellee, *supra* note 3, at *2.

103. Brief for Public Knowledge & Electronic Frontier Foundation as Amici Curiae Supporting Appellee, *Rosetta Stone II*, 676 F.3d 144. (No. 10-2007), 2010 WL 4952558, at *21.

104. *See* Corrected Brief for eBay Inc. & Yahoo! Inc. as Amici Curiae Supporting Appellee, *supra* note 3, at *6; Brief for Public Knowledge & Electronic Frontier Foundation as Amici Curiae Supporting Appellee, *supra* note 103, at *2.

105. Brief for Public Citizen as Amicus Curiae Supporting Appellee at *29, *Rosetta Stone II*, 676 F.3d 144 (No. 10-2007), 2010 WL 4931029.

106. Corrected Brief for eBay Inc. & Yahoo! Inc. as Amici Curiae Supporting Appellee, *supra* note 3, at *3.

107. For changing the business model, see Brief for Convatec et al. as Amici Curiae Supporting Appellant, *supra* note 53, at *22. For policing trademarks, see Brief for Carfax et

and that Google is in fact the only actor that can substantially keep infringement from occurring.[109] Some object that if the court does not make Google change, it will continue to infringe.[110] Others argue that the benefits of keyword advertising do not outweigh the damage done to trademark owners.[111] Trademark law evolved—in part—to lift the burden on the consumer. If the infringement confuses or troubles consumers, then this aim is not met.

When public policy goals point to one outcome, it is tempting to make a determination of wrongdoing based on those principles alone. However, the dueling goals in this case do not lend themselves to reconciliation. Here, the twin aims of trademark law seem to reach different conclusions: protecting consumers appears to lead to a judgment in favor of Rosetta Stone, and promoting competition may lead to a judgment favoring Google.

B. WHY THE LEAST COST AVOIDER EQUATION SHOULD BE APPLIED

There are many ways to attribute fault or cost in a tort case. However, not all fit every situation. This case has three actors: the injured, the injurer, and the facilitator or third party. The injured party can take steps to prevent the harm. Here, it can litigate. The injurer can take steps to prevent the harm as well, by simply not engaging in harmful activities. But where the injurers are numerous and likely judgment proof, and deterring one injurer does little to deter another, the facilitator becomes the next most plausible defendant. The injurers could not complete their activities without the help of the facilitator. As between the injured party and the facilitator, therefore, the facilitator can best avoid infringement.

When both parties can avoid the harm, courts turn to the theory of the least cost avoider and "place the burden of covering the costs of the accident on the individual who can avoid the accident at the lowest cost, no matter whether it is the injurer, the victim, or a third party."[112] The theory of the least cost avoider is most commonly attributed to then-Professor (now

al. as Amici Curiae Supporting Appellant, at *21–22, 676 F.3d 144 (No. 10-2007), 2010 WL 4306014. For consumer confusion, see *id.* at *22.

108. *See* Brief for Convatec et al. as Amici Curiae Supporting Appellant, *supra* note 53, at *2–3; *see also* Brief for Volunteers of America, Inc. as Amici Curiae Supporting Appellant, *supra* note 53, at *4–5.

109. Brief for Carfax et al. as Amici Curiae Supporting Appellant, *supra* note 107, at *22.

110. *Id.* at *3.

111. *See* Brief for Convatec et al. as Amici Curiae Supporting Appellant, *supra* note 53, at *22 (arguing that "the possibility that a trademark infringer might be forced to tweak its business is not a reason to allow infringement to continue").

112. TORT LAW AND ECONOMICS (ENCYCLOPEDIA OF LAW AND ECONOMICS) 16 (Michael G. Faure, ed., 2009).

Judge) Guido Calabresi, in his 1970 work *The Cost of Accidents*.[113] He argued that in cases where both parties can prevent an accident, the party that could have prevented the accident most cheaply should be found to be the party at fault.[114] This future-focused approach encourages actors to avoid accidents as best they can, thereby hopefully resulting in fewer accidents.[115] Although online contributory trademark infringement differs from real-world accidents, in both situations, both injured and injurer can prevent the harm from taking place.

Such an approach in trademark infringement is not new, particularly in the realm of new technology: the Second Circuit followed it in *Tiffany*.[116] After a lengthy bench trial,[117] the Second Circuit evaluated the multiple programs, systems, and policies that eBay had created to help intellectual property rights owners protect their brands, products, and trademarks.[118] For buyers, eBay created buyer protection programs, where eBay would reimburse customers who purchased counterfeit goods.[119] For brand owners, eBay created a notice-and-takedown system called the "Verified Rights Owner" program that permits rights owners to report potentially infringing listings to eBay, who would then review and delete the listings.[120] eBay also allowed rights owners to create "About Me" pages to communicate directly with eBay users, and to review and flag advertisements for infringement by delaying buyers' ability to view certain brand listings for six to twelve hours and restricting other types of actions.[121] Internally, eBay established a "Trust and Safety" department of 4,000 employees to monitor a "fraud engine" that identifies illegal listings and uses filters not only to find more subtle

113. GUIDO CALABRESI, THE COST OF ACCIDENTS: A LEGAL AND ECONOMIC ANALYSIS (1970).

114. Judge Calabresi and his co-author, Douglas Melamed, sum the approach up neatly in *Property Rules, Liability Rules, And Inalienability: One View Of The Cathedral*, 85 HARV. L. REV. 1089, 1096–97 (1972) They state:

> [I]n particular contexts . . . this suggests putting costs on the party or activity which can most cheaply avoid them . . . that in the absence of certainty as to who that party or activity is, the costs should be put on the party or activity which can with the lowest transaction costs act in the market to correct an error in entitlements by inducing the party who can avoid social costs most cheaply to do so . . . .

Id.

115. TORT LAW AND ECONOMICS, *supra* note 112, at 84.

116. *See* Tiffany Inc. v. eBay Inc., 600 F.3d 93, 98–100 (2d Cir. 2010).

117. *Rosetta Stone II*, 676 F.3d 144, 165 (4th Cir. 2012).

118. *Tiffany*, 600 F.3d at 99.

119. *Id.*

120. *Id.*

121. *Id.*

advertisements but also Tiffany-specific filters; attached special warning messages when seller attempted to list a Tiffany item and flagged such the listings for review if ultimately posted; and suspended sellers who were suspected of engaging in infringing conduct.[122] Although eBay technically controls its website, it did not have perfect control of user-generated content. However, it had tools to identify fraudulent products. Despite the extent of effort that eBay had put into keeping the site free from fraudulent products, Tiffany claimed that it would be impossible for eBay to know if it sold counterfeit items unless it ceased to feature Tiffany products altogether. The district court decided that Tiffany did not have the right to control the entire secondhand market for its products, regardless of the amount of counterfeit items on the market.[123] Because eBay appeared to have done all that it could to identify fraudulent postings—short of ceasing sale of all Tiffany merchandise on its website—the district court found that eBay did not fulfill the "knows or has reason to know" prong of the *Inwood Labs* test. Thus, eBay was not liable for contributory trademark infringement.[124]

Despite the substantial amount of energy and resources that eBay expended, eBay remained the least cost avoider in creating backend technology to prevent the infringement in the future. As expensive as it was for eBay, if Tiffany were to dedicate a department to search for infringing listings, purchase all goods that purported to be Tiffany products, or create computer software that would search for infringing listings, the cost would be astronomical. Without help from eBay, Tiffany can do little more than identify the offending listings: it cannot block consumers from seeing such listings, block users from uploading these listings, or identify the listings before they go online. Placing Tiffany as the bearer of the technology burden would waste effort and resources. However, Tiffany remains the best evaluator of counterfeit items. eBay does not have sufficient expertise in Tiffany goods, nor any other branded goods, to correctly identify products that are counterfeit or genuine. The cost for eBay of retaining an expert on each brand that might be listed for sale on eBay's website would be equally disproportionate to the harms that Rosetta Stone suffered. Therefore, the Court split the burden between the two—each company shouldering the burden it was best able to bear.

Google and Rosetta Stone are in a similar position to eBay and Tiffany. The trademark owner desires the immediate and permanent cessation of all

122. *Id.*

123. *Id.* at 97. The Second Circuit rejected Tiffany's in-house study about the percentage of fraudulent postings as unscientific.

124. *Id.* at 109.

use of its trademark. The injurers are numerous and uneconomical to track down. The third party exercises some control over the website, but leaves much to the user. As in *Tiffany*, there are two choices. Either Google can change its trademark policies in its advertising program, or Rosetta Stone can dedicate a squad of employees to track down infringing advertisements and outbid all other advertisers for all of its trademarks.

C. *ROSETTA STONE V. GOOGLE*: A LEAST COST AVOIDER ANALYSIS

Like eBay, Google has at least a nominal amount of power in this situation, and is best suited to solve this problem. First, Google has the capability to fix this issue as the sole owner and manager of its AdWords program. Second, Google has fixed similar problems before: Google made changes to its copyright policy and has been unofficially evolving its trademark policy. Third, Google is the least cost avoider: Rosetta Stone is far less equipped to patrol and fix these issues. There are several strategies within Google's control that could mitigate trademark infringement. The least cost avoider analysis leads to an unambiguous conclusion: Google can fix this problem, has fixed this problem, and should fix this problem.

1. *Google Can Fix This Problem*

As the creator, owner, and manager of the AdWords program, Google has sole control over the advertisements that are placed. Google screens these advertisements using a computer program and in some instances a person.[125] The entire process takes place in-house once an advertiser has submitted an ad. Google can remove the advertisements at any time.[126] Google's policies delineate specific guidelines with which advertisers must conform.[127] Rosetta Stone, on the other hand, had no insight or input into Google's processes until filing its complaint and reaching discovery, because Google's information is propriety and subject to protective order.[128] Currently, Rosetta Stone's only opportunity to comment, complain, or

125. Interview with former advertising employee, Google, in Berkeley, Cal. (Dec. 14, 2012).

126. *See Help for Trademark Owners*, GOOGLE ADVERTISING POLICIES, https://support.google.com/adwordspolicy/answer/2562124?hl=en&ref_topic=1346940 (last visited Mar. 11, 2013) (explaining that trademark owners may file complaints over trademarks used in AdWords advertisements, which implies that Google retains the ultimate control over removing an advertisement).

127. AdWords Policy Center, GOOGLE ADVERTISING POLICIES, https://support.google.com/adwordspolicy/answer/1316548?rd=1 (last visited Mar. 11, 2013).

128. In fact, not even this author was able to learn more about Google's policies than what was publically available, despite contacting a number of Google employers. The records at trial were sealed.

otherwise engage with Google regarding any infringing advertisements occurs after an advertisement has been placed online. For Rosetta Stone to conform with Google's assertion of proper mark policing, it would need to dedicate significant resources to constantly searching for infringing advertisements. After identifying the advertisements, Rosetta Stone would then need to notify Google. Even then, its comments would only receive as much attention as Google wanted to give.

2. Google Has Fixed This Problem

Google has fixed this problem before. Until August 2012, Google's search algorithm completely ignored the legal nature of a website's media content: whether it was properly licensed, owned, or if it infringed the owner's copyright.[129] As a result of pressure from the entertainment industry, Google announced that it would begin to factor into its search engine algorithm legitimate takedown notices filed by copyright owners.[130] Further, Google refuses to advertise certain products entirely, such as tobacco, and has successfully avoided having those advertisements appear.[131]

Google has begun to change the way that it triggers and displays advertisements. Rosetta Stone's complaint specifically described not only the display of the advertisements but also described Google's policy and how it was enforced.[132] However, the complaint no longer accurately reflects the current state of the AdWords system. There are, today, far fewer—if any—advertisements when a person searches for a trademarked term.[133] Google claims that it has not changed its trademark policy but only reorganized it for a more comprehensive understanding.[134] This assertion is at odds with the reality of search results. The change in the number of advertisements displayed when a trademark is searched extends to arbitrary trademarks such as Lululemon and bumble and bumble, to some suggestive marks such as

129. Amy Chozick, *Under Copyright Pressure, Google to Alter Search Results*, N.Y. TIMES' MEDIA DECODER BLOG (Aug. 12, 2012, 06:58 PM), http://mediadecoder.blogs.nytimes.com/2012/08/10/google-to-alter-search-results-to-reflect-a-sites-history-of-copyright-infringement/.

130. *See id.*; *see also* Julianne Pepitone, *SOPA explained: What it is and why it matters*, CNNMONEY (Jan. 20, 2012, 12:44 PM), http://money.cnn.com/2012/01/17/technology/sopa_explained/index.htm.

131. *See Tobacco products*, GOOGLE ADVERTISING POLICIES, http://support.google.com/adwordspolicy/bin/answer.py?hl=en&answer=176038&topic=1310883&ctx=topic (last visited Feb. 23, 2013).

132. First Amended Complaint, *supra* note 54, at ¶¶ 28, 31, 51, 52.

133. This author documented this change as early as September 2012.

134. *See AdWords Trademark Policy*, GOOGLE ADVERTISING POLICIES, http://support.google.com/adwordspolicy/bin/answer.py?hl=en&answer=6118&topic=1346940&ctx=topic (last visited Oct. 23, 2012).

Citibank and Mustang,[135] and to descriptive marks including Books, Inc. and Radio Shack.[136]

The timing of the Fourth Circuit's remand in April 2012 and the settlement between Rosetta Stone and Google in November 2012 appears relevant. Although the terms of the settlement remain secret, the timing suggests that the settlement motivated changes to Google's AdWords policies. Google's specific changes imply that it has undertaken an internal least cost avoider analysis and decided that it would be better to make changes internally, following eBay's example, than to continue to have to litigate.

3. *Google Should Fix This Problem*

As explained in Section IV.B, *supra*, the least cost avoider is the appropriate analysis for this case and for others like it. Google and eBay provide valuable commodities. Because much of their content consists of user-generated material, they do not have perfect control over what users post. To hold these innovative companies strictly liable for the harms caused by their users' actions would unfairly penalize them and deter them from doing business. This result is undesirable. Courts should encourage innovative companies—such as Google—to act responsibly towards trademarks, without overly discouraging their business models. The least cost avoider theory evaluates how both parties might prevent the same harm from taking place. Because, in this case, Google is best positioned to avoid trademark infringement in keyword advertising in the cheapest manner, Google should bear the responsibility to fix this problem. There are several ways that Google might do so.

Google could reverse the changes that it made to its AdWords policy in 2004 and 2009. The 2004 policy permitted non-trademark owners to purchase trademarked terms as triggers.[137] The 2009 policy permitted non-trademark owners to use trademarked terms in the text of their advertisements.[138] Reversing the 2004 policy would be more effective for two reasons. First, it would remove any advertisements from being displayed when a trademarked term was searched. This would solve Rosetta Stone's concern over "efforts by certain companies to free ride on Rosetta Stone's

135. This does apply to all suggestive marks. For instance, "playboy" returned one other advertisement that did not seem to be owned by Playboy Enterprises.

136. This author documented this change as early as September 2012, by conducting these and other searches on Google. These results reflect the author's personal experimentation.

137. *Rosetta Stone II*, 676 F.3d 144, 151 (4th Cir. 2012).

138. *Id.*

brand," as well as remove "[m]arks or terms confusingly similar to those marks."[139] Second, if a consumer were savvy enough to type in the specific trademarked term, then only Rosetta Stone advertisements would appear. Less sophisticated consumers would need to surf through the advertisements. This would permit comparative advertising and other legal uses of trademarks while recognizing Rosetta Stone's trademark ownership. Trademark owners would not held hostage by Google and forced to bid on their own marks. The decline in revenue in advertising sales might be costly in the short term, but it stands to reason that the advertisers who previously bought trademarked terms as triggers will remain interested in advertising through AdWords.[140] Advertisers would simply be bidding on different terms. Google could also set a threshold price for trademark owners, using criteria such as similar triggers, their other advertisements, or the likelihood that the search would occur. Then trademark owners that wanted to purchase their own trademarks as triggers would do so at a fair value for Google, and trademark owners that did not want to purchase advertising would not feel forced to do so.

Reversing the 2009 policy without including some review goes too far in the opposite direction. The policy illustrates that Google was already careful about trademark use in text. As the Fourth Circuit explained,

> In 2009, Google changed its policy to permit the limited use of trademarks in advertising text in four situations: (1) the sponsor is a reseller of a genuine trademarked product; (2) the sponsor makes or sells component parts for a trademarked product; (3) the sponsor offers compatible parts or goods for use with the trademarked product; or (4) the sponsor provides information about or reviews a trademarked product. Google's policy shift came after it developed the technology to automatically check the linked websites to determine if the sponsor's use of the trademark in the ad text was legitimate.[141]

Rejecting any advertisement that uses any trademarked term would grant trademark owners far more control than the law currently allows. Fair use permits the use of trademarked terms in advertisements of non-trademark

139. First Amended Complaint, *supra* note 54, ¶¶ 2, 5.

140. Internet advertising strategies focus on the number of impressions (the number of times the ad is shown on a page). The higher the number of impressions, the more likely the consumer will remember the product. Bidding on one's own mark increases consumer exposure to the mark through both organic and paid search results, and therefore provides an extra boost to brand recognition.

141. *Rosetta Stone II*, 676 F.3d at 151–52.

owners. To ban them completely would grant trademark owners an unequal amount of power.

One way to strike a balance that incorporates fair use concerns would be to implement a program similar to that of eBay. It seems that a similar program for advertisement text review would be beneficial. Google could set up a tool that automatically sends any ad containing the text "Rosetta Stone" to Rosetta Stone. Then, Rosetta Stone could review each ad and make its objections to Google before the ad was posted online. If Google then reviewed the flagged ad and disagreed with Rosetta Stone, they could follow a mutually agreeable procedure to resolve the issue. This solution is more laborious but places the bulk of the work of identifying infringing advertisements on Rosetta Stone. This makes sense since Rosetta Stone has a greater interest in policing the use of its mark than Google does.

According to one former Google employee, Google has a similar system for copyright concerns, though it is not often used.[142] The changes in trademark use, though not reflected by changes to Google's official policy, likely reflect Google's increasing ability to discover infringing uses.[143] These changes are at odds with Google's assertions in court. Google's changes, perhaps, reflect an internal evaluation along the lines of the least cost avoider, and Google's recognition that it can avoid these harms. If so, Google's behavior conforms to what it has done in the realm of copyright. This approach illustrates that Google is becoming a partner—not an adversary—to trademark owners. It is good for Google, and good for Rosetta Stone.

V. SOLVING THE NEXT PUZZLE

The least cost avoider analysis points to Google as the party responsible for avoiding trademark infringement in *Rosetta Stone*. Google controls the entire process by which keyword advertising takes place. While implementing review processes and filters may strain Google's current business model, Rosetta Stone cannot take action until the trademark infringement has occurred. Only Rosetta Stone can determine which uses of its trademark are appropriate and which are infringing. However, only Google can create the backend technology to prevent infringement from happening. Creating this technology would take significant resources, as seen through eBay's example, but the alternative is untenable. If eBay—a company whose revenue averaged over two billion dollars per quarter the year of the case decision—can afford to implement the strategies mentioned earlier, then Google—whose revenue

142. *See supra* note 125.
143. *Id.*

averaged well over ten billion dollars per quarter this year—certainly can afford to do so.[144]

This Note suggests that the least cost avoider is the appropriate analysis for contributory trademark infringement in evolving technologies. This Note's conclusions should not be extended to mean that Google should always be found liable in contributory trademark infringement cases. Instead, courts should apply the least cost avoider analysis to the individual facts of each case. Practically speaking, in keyword advertising cases regarding contributory trademark infringement, Google may be the least cost avoider in terms of creating the backend technology to identify trademark use in AdWords. However, the rapid rate of change in Internet use, experience, and technology may cause the next wave of advertising technology to require trademark owners to change their way of doing business. Looking to case law about previous trademark law decisions on the Internet has resulted in a body of law that is complex and unwieldy. The least cost avoider analysis provides the best solution.

144. *See eBay Revenue Quarterly*, YCHARTS.COM, http://ycharts.com/companies/EBAY/revenues (last visited Jan. 23, 2013); *Google Revenue Quarterly*, YCHARTS.COM, http://ycharts.com/companies/GOOG/revenues (last visited Jan. 23, 2013).

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FOOL ME ONCE: *U.S. V. ALEYNIKOV* AND THE THEFT OF TRADE SECRETS CLARIFICATION ACT OF 2012

Robert Damion Jurrens†

On a warm, humid evening in July of 2009,[1] FBI agents swarmed an unassuming computer programmer named Sergey Aleynikov at Newark Liberty International Airport.[2] Returning from what he thought was a routine business trip to meet with his new employer in Chicago, Aleynikov was arrested and charged with stealing trade secrets from his former employer, multinational investment banking firm Goldman Sachs. On the eve of Independence Day, in an airport whose very name evokes images of freedom, Sergey Aleynikov faced a significant interruption of his own personal liberty. Aleynikov's theft of trade secrets led to charges under the Economic Espionage Act of 1996 ("EEA"), a rarely invoked criminal statute whose vagueness had been challenged by a number of high-profile cases.[3] Convicted in a jury trial in the Southern District of New York, Aleynikov faced ninety-seven months in federal prison.[4]

Fate intervened in the form of a "dangerous loophole"[5] in the EEA, and the Court of Appeals for the Second Circuit delivered a controversial opinion that ultimately freed Aleynikov and shocked Congress into action.[6] The Second Circuit held that the high frequency trading ("HFT") code stolen by Aleynikov was not a "product produced for [or] placed in interstate or

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1. *See History for Newark, NJ, Friday, July 3, 2009*, WEATHER UNDERGROUND, http://www.wunderground.com/history/airport/KEWR/2009/7/3/DailyHistory.html?req_city=Newark+International&req_state=NJ&req_statename=New+Jersey/.

2. U.S. v. Aleynikov (*Aleynikov I*), 785 F. Supp. 2d 46, 54 (S.D.N.Y. 2011).

3. *See infra* Section I.A.3.

4. *See Former Goldman Sachs Computer Programmer Sentenced in Manhattan Federal Court to 97 Months in Prison for Stealing Firm's Trade Secrets, New York Field Office*, FEDERAL BUREAU OF INVESTIGATION (Mar. 18, 2011), http://www.fbi.gov/newyork/press-releases/2011/former-goldman-sachs-computer-programmer-sentenced-in-manhattan-federal-court-to-97-months-in-prison-for-stealing-firm2019s-trade-secrets/.

5. 158 Cong. Rec. H00000-52, 2012 WL 6605649 (2012) (statement of Rep. Smith).

6. *Id.* ("The Second Circuit's Aleynikov decision revealed a dangerous loophole that demands our attention. . . . We must also take action in response to the Second Circuit's call and ensure that we have appropriately adapted the scope of the EEA to the digital age.").

foreign commerce," and therefore not subject to the EEA.[7] Though liberated from his federal conviction, New York State has since filed its own charges and continues to pursue the matter under state computer crime statutes.[8]

In the wake of the Second Circuit's controversial opinion in *U.S. v. Aleynikov*, Congress moved quickly and efficiently to close a gaping hole in the EEA. The Theft of Trade Secrets Clarification Act[9] ("TTSCA") lived up to its name, altering a few simple words in the EEA in an effort to fortify the only existing federal criminal cause of action for trade secret misappropriation. Congress addressed the Second Circuit's opinion directly, noting that the court had "held that the federal statute prohibiting the theft of trade secrets does not apply to computer source code in some circumstances."[10] Signed into law on December 28, 2012, the TTSCA ushers in a refreshed version of the EEA—one whose less-vague verbiage would almost certainly have sustained Aleynikov's conviction.

But the TTSCA left two important issues unresolved. First is the case of Samarth Agrawal, whose path is eerily similar to that of Aleynikov—computer programmer steals HFT code from financial services behemoth in New York City and gets convicted under the EEA—except that the Second Circuit has not yet handed down a decision in *U.S. v. Agrawal*.[11] Will the Second Circuit uphold *Agrawal* where it reversed *Aleynikov* simply due to unfortunate timing? Or will the U.S. Constitution's explicit prohibition of ex post facto laws leave him with a fighting chance to overturn his conviction?

Second, Congress failed to address the explicit lack of preemption in the EEA.[12] Though most states have enacted criminal laws regarding trade secret misappropriation that are substantially similar to the EEA, there is nothing protecting a defendant from conviction under both state law and the EEA.[13] Such was the case with Sergey Aleynikov, who eluded conviction under the EEA only to find himself hauled before a trial court judge under New York State charges.[14] And even if the Second Circuit strikes down Samarth

7. U.S. v. Aleynikov (*Aleynikov II*), 676 F.3d 71, 82 (2d Cir. 2012) (internal quotations omitted).

8. *See* Kim Zetter, *Goldman Sachs Programmer Back in Court on New Charges*, WIRED (Aug. 9, 2012 2:46 PM), *available at* http://www.wired.com/threatlevel/2012/08/sergey-aleynikov-new-charges/.

9. Theft of Trade Secrets Clarification Act, Pub. L. No. 112-236, 126 Stat 1627 (2012).

10. 158 Cong. Rec. H00000-52 (statement of Rep. Scott).

11. *See* U.S. v. Agrawal, No. 11-1074 (2d Cir. filed Dec. 30, 2011).

12. *See* 18 U.S.C. § 1838 (2012).

13. *See id.*

14. *See generally infra* Part II.

Agrawal's conviction, similar state charges almost certainly await him. Without preemption of state laws, defendants faced with charges under the EEA could also find themselves charged under state trade secret misappropriation statutes. And, given the borderless nature of the Internet, such a defendant could face charges under statutes in several different states.[15]

This Note analyzes the effect of the TTSCA, and argues that Congress should continue to cast a watchful eye on the EEA. Part I examines the EEA in detail, including its rocky history with the void for vagueness doctrine. Part II details the plight of Sergey Aleynikov and his arduous path through the federal court system, culminating in his recent arrest under New York State law. Part III examines the TTSCA's scope and the unintended concomitant confusion it created in *Agrawal*—tried under one version of the EEA, but likely to be decided under another ex post facto. Finally, Part IV analyzes potential outcomes in the *Agrawal* case and argues that federal preemption is crucial to the healthy operation of the EEA. In order to ensure justice under the EEA, federal preemption—rather than the uncertainty of a mixed bag of state statutes—is necessary.

I. LEGISLATIVE BACKGROUND AND A BRIEF HISTORY OF THE EEA

Trade secret protection in the United States does not have strong roots in criminal law. In fact, misappropriation of a trade secret was historically the bailiwick of tort law.[16] Originally codified in the Restatement of Torts, much modern trade secret law still resides in civil courts.[17] In 1979, the National Conference of Commissioners on Uniform State Laws created a model statute for trade secret protection, known as the Uniform Trade Secrets Act ("UTSA").[18] The UTSA is a wholly civil statute and some version of it has been codified in forty-six states and the District of Columbia.[19]

Criminalizing the theft of classified commercial information emerged as a priority in American law in the mid-1960s.[20] Many states have since enacted

15. *See infra* Section III.B.

16. ROBERT P. MERGES, PETER S. MENELL, AND MARK A. LEMLEY, INTELLECTUAL PROPERTY IN THE NEW TECHNOLOGICAL AGE 35 (5th ed. 2009).

17. *See id.*

18. *Id.* at 36.

19. *Id.*

20. *See* Eli Lederman, *Criminal Liability for Breach of Confidential Commercial Information*, 38 EMORY L.J. 921, 930 (1989).

laws to combat acts involving computer data,[21] and more than half have enacted statutes that regulate trade secret misappropriation.[22] These statutes vary widely from state to state, and there is no one model for protection or punishment.[23] Prior to the enactment of the EEA in 1996, there was no federal cause of action for trade secret misappropriation.

A. ECONOMIC ESPIONAGE ACT

The EEA makes trade secret theft a federal crime.[24] It is composed primarily of two sections that cover foreign and domestic intellectual property theft.[25] The first section criminalizes trade secret theft committed to benefit a foreign government, instrumentality, or agent (thus the "espionage" moniker).[26] The second section criminalizes the theft of trade secrets related

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21. *See id.* at 931; *see, e.g.*, 18 U.S.C. § 1030(a)(5) (Supp. V 1987); ALASKA STAT. § 11:46.740(a)(2) (Supp. 1988); ARIZ. REV. STAT. ANN. § 13-2316(B) (1978); ARK. STAT. ANN. § 5-41-104(a) (Supp. 1987); CAL. PENAL CODE § 502(c)(1), (4) (West 1988); CONN. GEN. STAT. ANN. § 53a-251(e) (West 1985); DEL. CODE ANN. tit. 11, § 935(2)(a) (1987); FLA. STAT. ANN. § 815.04(1), (2) (West Supp. 1989); GA. CODE ANN. § 16-9-93(b) (1988); IDAHO CODE § 18-2202(2) (1987); ILL. REV. STAT. ch. 38, paras. 16D-3(a)(3), 16D-5(a)(2) (1987); IOWA CODE § 716A.3 (Supp. 1989); KY. REV. STAT. ANN. § 434.845(1) (Michie/Bobbs-Merrill 1985); LA. REV. STAT. ANN. § 14:73.2(A)(1) (West 1986); MD. ANN. CODE art. 27, § 45A(b)(1), (2) (1987); MICH. COMP. LAWS ANN. § 752.795 (West Supp. 1989); MINN. STAT. § 609.88(1)(a), (b) (1982); MISS. CODE ANN. § 97-45-9(1)(a) (Supp. 1988); MO. REV. STAT. § 569.095(1)(1), (2) (1986); MONT. CODE ANN. § 45-6-311(1)(b) (1987); NEB. REV. STAT. § 28-1345 (1985); NEV. REV. STAT. § 205.4765(1)(d)(f)(h) (1987); N.H. REV. STAT. ANN. § 638:17(iv)(b)(1), (2) (1986); N.J. STAT. ANN. § 2C:20-25(e) (West Supp. 1989); N.M. STAT. ANN. § 30-16A-4 (1989); N.Y. PENAL LAW § 156.25 (Mckinney 1988); N.D. CENT. CODE § 12.1-06.1-08(2) (1985 & Supp. 1989); OKLA. STAT. tit. 21, § 1953(1), (2) (Supp. 1988); OR. REV. STAT. § 164.377(3), (4) (Supp. 1988); R.I. GEN. LAWS § 11-52-3 (1981 & Supp. 1988); S.C. CODE ANN. § 16-16-20(1)(a) (Law. Co-op. 1985); S.D. CODIFIED LAWS ANN. § 43-43B-1(2), (3), (4) (1983 & Supp. 1989); UTAH CODE ANN. § 76-6-703(1), (2) (Supp. 1989); VA. CODE ANN. § 18.2-152.4(2), (3), (4), (5) (6) (1988); WIS. STAT. ANN. § 943.70(2)(a) (1), (2) (West Supp. 1989); WYO. STAT. § 6-3-502(a)(iii) (1988).

22. *See* Lederman, *supra* note 20; *see, e.g.*, ALA. CODE § 13A-8-10.4 (Supp. 1989); ARK. STAT. ANN. § 5-36-107 (Supp. 1987); CAL. PENAL CODE § 499c (West 1988); COLO. REV. STAT. § 18-4-408 (1986); CONN. GEN. STAT. ANN. § 53a-124 (West 1985); FLA. STAT. ANN. § 812.081 (West 1976 & Supp. 1989); GA. CODE ANN. § 16-8-13 (1988); MASS. ANN. LAWS ch. 266, § 30(4) (Law. Co-op 1980 & Supp. 1989); MINN. STAT. § 609.52(1), (2), (6), (8) (1982); NEB. REV. STAT. §§ 87-502 (Supp. 1988); N.Y. PENAL LAW §§ 155.00, 155.05, 155.30, 165.07 (McKinney 1988); OKLA. STAT. tit. 21, § 1732 (Supp. 1988); 18 PA. CONS. STAT. § 3930 (Supp. 1988); TENN. CODE ANN. § 39-3-1126 (1982); TEX. PENAL CODE ANN. § 31.05 (Vernon 1989); WIS. STAT. ANN. § 943.205 (West 1982 & Supp. 1989).

23. *See* Lederman, *supra* note 20.

24. 18 U.S.C. § 1831 *et seq.* (2012).

25. *Id.*

26. Section 1831 provides:

to or included in a "product that is produced for or placed in interstate or foreign commerce."[27]

(a) In general.—Whoever, intending or knowing that the offense will benefit any foreign government, foreign instrumentality, or foreign agent, knowingly—

(1) steals, or without authorization appropriates, takes, carries away, or conceals, or by fraud, artifice, or deception obtains a trade secret;

(2) without authorization copies, duplicates, sketches, draws, photographs, downloads, uploads, alters, destroys, photocopies, replicates, transmits, delivers, sends, mails, communicates, or conveys a trade secret;

(3) receives, buys, or possesses a trade secret, knowing the same to have been stolen or appropriated, obtained, or converted without authorization;

(4) attempts to commit any offense described in any of paragraphs (1) through (3); or (5) conspires with one or more other persons to commit any offense described in any of paragraphs (1) through (3), and one or more of such persons do any act to effect the object of the conspiracy, shall, except as provided in subsection (b), be fined not more than $500,000 or imprisoned not more than 15 years, or both.

(b) Organizations.—Any organization that commits any offense described in subsection (a) shall be fined not more than $10,000,000.

Id.

27. Section 1832 provides:

(a) Whoever, with intent to convert a trade secret, that is related to or included in a product that is produced for or placed in interstate or foreign commerce, to the economic benefit of anyone other than the owner thereof, and intending or knowing that the offense will, injure any owner of that trade secret, knowingly

(1) steals, or without authorization appropriates, takes, carries away, or conceals, or by fraud, artifice, or deception obtains such information;

(2) without authorization copies, duplicates, sketches, draws, photographs, downloads, uploads, alters, destroys, photocopies, replicates, transmits, delivers, sends, mails, communicates, or conveys such information;

(3) receives, buys, or possesses such information, knowing the same to have been stolen or appropriated, obtained, or converted without authorization;

(4) attempts to commit any offense described in paragraphs (1) through (3); or

(5) conspires with one or more other persons to commit any offense described in paragraphs (1) through (3), and one or more of such persons do any act to effect the object of the conspiracy, shall, except as provided in subsection (b), be fined under this title or imprisoned not more than 10 years, or both.

The EEA's definition of trade secrets is substantially similar to that of the UTSA, and includes "all forms and types of financial, business, scientific, technical, economic, or engineering information, including patterns, plans, compilations, program devices, formulas, designs, prototypes, methods, techniques, processes, procedures, programs, or codes, whether tangible or intangible, and whether or how stored, compiled, or memorialized physically, electronically, graphically, photographically, or in writing"[28] that (1) the owner has attempted to keep secret, and (2) derives value from its secrecy.[29] There is no private cause of action contained in the EEA.[30] The EEA expressly states that it does not preempt any other trade secret laws, which leaves companies open to pursue federal or state actions.[31]

1. *Legislative History of the EEA*

The EEA was enacted in 1996 to assist prosecutors in stemming the theft of intellectual property from U.S. companies.[32] By the mid-1990s, thanks to burgeoning technological innovations and globalization of trade, Congress perceived theft of U.S. trade secrets by foreign entities to be a major issue.[33] Much of this theft was undertaken in the interest of foreign entities, many of

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> (b) Any organization that commits any offense described in subsection (a) shall be fined not more than $5,000,000.

Id. § 1832.

28. UNIF. TRADE SECRETS ACT ("UTSA"), § 1(4), 14 U.L.A. 438 (1996).

29. *See* 18 U.S.C. § 1839 (2012). It states:

> (3) the term "trade secret" means all forms and types of financial, business, scientific, technical, economic, or engineering information, including patterns, plans, compilations, program devices, formulas, designs, prototypes, methods, techniques, processes, procedures, programs, or codes, whether tangible or intangible, and whether or how stored, compiled, or memorialized physically, electronically, graphically, photographically, or in writing if—(A) the owner thereof has taken reasonable measures to keep such information secret; and (B) the information derives independent economic value, actual or potential, from not being generally known to, and not being readily ascertainable through proper means by, the public.

Id. § 1839.

30. Section 1836 states that the "Attorney General may, in a civil action, obtain appropriate injunctive relief against any violation of this chapter." *Id.* § 1836.

31. *Id.* § 1838; *see also* Zetter, *supra* note 8.

32. *See* H.R. Rep. No. 104-788, at 3–8, *reprinted in* 1996 U.S.C.C.A.N. 4021, 4022–26.

33. *See id.* at 4022 ("More disturbingly, there is considerable evidence that foreign governments are using their espionage capabilities against American companies.").

which had allegedly hired former Cold War political spies whose talents played well in the world of industrial espionage.[34]

This international espionage legacy shaped the development of the early legislation, all of which dealt solely with theft by foreign entities. Section 1831 of the EEA is devoted entirely to this issue.[35] Section 1832 is nearly a carbon copy of 1831, but is devoted to domestic trade secret theft and appears to have been pasted on in haste.[36] In fact, "[c]oncerns that such a law might violate a number of international trade treaties to which the United States is a signatory caused the bill to be rewritten at the last minute to include both foreign and domestic theft of trade secrets."[37]

2. *Section 1832's Cryptic Requirement*

Possibly the most controversial nuance of § 1832 of the "old"[38] EEA was the requirement that trade secret be "related to or included in a product that is produced for or placed in interstate or foreign commerce." Absent from the original Senate bill, Congress later added the language to § 1832 but omitted it from § 1831.[39] As discussed in some detail in Part II, *infra*, courts have construed this phrase in contradictory ways. This language proved to be the key point on which the trial and appellate courts diverged in their interpretation of the EEA in the *Aleynikov* case.

3. *Void for Vagueness Doctrine*

The lack of clear and consistent construction of the "old" EEA is evident in the frequent use of the void for vagueness doctrine by defendants in cases involving § 1832.[40] The void for vagueness doctrine states that a statute "must be sufficiently explicit to inform those who are subject to it what conduct on their part will render them liable to its penalties."[41] The doctrine demands that defendants receive ample notice that they are in violation of a

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34. *See* U.S. v. Hsu (*Hsu II*), 155 F.3d 189, 194–95 (3d Cir. 1998) (citing the legislative history of the EEA).

35. *See* 18 U.S.C. § 1831. *See also* Robin L. Kuntz, Note, *How Not to Catch a Thief: Why the Economic Espionage Act Fails to Protect American Secrets*, 28 BERKELEY TECH. L.J. 901, 905–07 (2013) (offering an in-depth discussion of § 1831).

36. *See* 18 U.S.C. § 1832; James H. Pooley, Mark A. Lemley, & Peter J. Toren, *Understanding the Economic Espionage Act of 1996*, 5 TEX. INTELL. PROP. L.J. 177, 183 (1997).

37. *Id.* at 187.

38. When necessary, and for the purposes of clear delineation, this note will refer to the pre-TTSCA statute as the "old" EEA and the post-TTSCA statute as the "new" EEA.

39. *See* Pooley, James H. A.; Lemley, Mark A.; Toren, Peter J., *Understanding the Economic Espionage Act of 1996*, 5 TEX. INTELL. PROP. L.J. 177, 183 (1997).

40. *See* U.S. v. Krumrei, 258 F.3d 535 (6th Cir. 2001); U.S. v. Genovese, 409 F. Supp. 2d 253 (S.D.N.Y. 2005); U.S. v. Hsu (*Hsu I*), 40 F. Supp. 2d 623 (E.D. Pa. 1999).

41. Connally v. Gen. Constr. Co., 269 U.S. 385, 391 (1926).

given statute. Three frequently cited cases have attacked three different aspects of the "old" EEA under the void for vagueness doctrine: *U.S. v. Hsu*, *U.S. v. Krumrei*, and *U.S. v. Genovese.*

U.S. v. Hsu was one of the first cases tried under § 1832 of the EEA. In *Hsu*, defendant Kai-Lo Hsu was charged under the EEA in an alleged conspiracy to steal trade secrets from Bristol-Myers Squibb.[42] Hsu challenged the EEA as unconstitutionally vague in three important respects. First, Hsu argued that it failed to define the term "'related to or included in' a product produced for or placed in interstate or foreign commerce."[43] Second, Hsu asserted that the very definition of the term "trade secret" was vague because it did not define "reasonable measures" to maintain secrecy.[44] Third, Hsu argued, it did not define "generally known" or "readily ascertainable" to the public.[45]

The *Hsu* trial court noted that legislation creating "new" crimes is prone to attacks under the void for vagueness doctrine, acknowledging that the EEA criminalizes "conduct that heretofore was thought best left to the civil law of unfair competition and cognate jurisprudence."[46] The court then rejected the argument that the term "related to or included in a product that is produced for or placed in interstate or foreign commerce" was vague, noting that someone "well versed" in the processes of a particular industry could understand its application to that industry.[47] The court went on to reject Hsu's argument that the definition of "trade secret" was unconstitutionally vague, citing at one point the fact that the nearly identical definition used by the UTSA had withstood at least one void-for-vagueness attack.[48]

Two years later, in *U.S. v. Krumrei*, a defendant argued that the vagueness of the phrase "reasonable measures to keep such information secret" could potentially lead to arbitrary enforcement of the EEA.[49] In *Krumrei*, the defendant was accused of stealing intellectual property related to a process for applying hard coatings to laminate surfaces from Wilsonart International, Inc.[50] The Sixth Circuit, citing *Hsu*, noted that if a party knew that information was proprietary and knew that his actions were unlawful, then

42. *Hsu I*, 40 F. Supp. 2d at 623.
43. *Id.* at 626.
44. *Id.*
45. *Id.*
46. *Id.*
47. *Id.* at 627.
48. *Id.* at 628; *see also* People v. Serrata, 62 Cal. App. 3d. 9 (1976).
49. U.S. v. Krumrei, 258 F.3d 535, 538 (6th Cir. 2001).
50. *Id.*

the statute was constitutional as applied in that case.[51] Since Krumrei had admitted that he knew the intellectual property he was appropriating did not belong to him, and that he should have known—but "chose to ignore"—that his actions were illegal, the court found no basis for attacking the EEA based on vagueness.[52]

Finally, in *U.S. v. Genovese*, the court once again attacked the very definition of the term "trade secret" as vague.[53] In *Genovese*, the defendant allegedly downloaded, copied, and sold copies of Microsoft's then-unreleased Windows NT 4.0 and Windows 2000 operating systems.[54] Genovese argued that he found the code on the Internet, and could not have known either that the code was "not . . . generally known to . . . the public" or that Microsoft had taken "reasonable measures" to keep it secret.[55] The district court noted, however, that Genovese had referred to the code as "jacked," stating that others would have to "look hard" to find it elsewhere.[56] These facts, the court opined, indicated that Genovese was therefore on notice that Microsoft had not yet released the code to the public, and that its value was tied to its relative obscurity.[57] Applying the statute to the facts of the case, the court held that the EEA was not unconstitutionally vague and that Genovese knew or should have known that the code was a trade secret.[58]

Though the void for vagueness doctrine was not successfully argued in any of these cases, the fact that the doctrine has cropped up so frequently is both an indication that the "old" EEA was rarely invoked (and therefore provided little in the way of common law guidance) and that its content could be perceived as unclear or ambiguous.

II. *U.S. V. ALEYNIKOV*

In December of 2010, a jury found Sergey Aleynikov guilty of two counts of theft of trade secrets under the "old" EEA, and interstate transportation of stolen property under the National Stolen Property Act of 1934[59]

51. *Id.* at 539.
52. *Id.*
53. U.S. v. Genovese, 409 F. Supp. 2d 253 (S.D.N.Y. 2005).
54. *Id.* at 255.
55. *Id.* at 257.
56. *Id.*
57. *Id.*
58. *Id.* at 258.
59. *See* 18 U.S.C. § 2314. The National Stolen Property Act ("NSPA") of 1934 combats interstate theft of goods. A product of Depression-era anti-bootlegging efforts, the NSPA deals explicitly with "stolen goods, securities, moneys, fraudulent State tax stamps, or articles used in counterfeiting." *Id.*

("NSPA").[60] Over the course of the next year and a half, trial and appellate courts took starkly contrasting views of the application of the EEA and NSPA to Aleynikov's case.

Goldman Sachs employed Sergey Aleynikov as a programmer from May of 2007 to June of 2009, when he accepted an offer from a Chicago-based startup called Teza.[61] About two months prior to his last day at Goldman Sachs, Aleynikov began uploading proprietary data to an Apache Subversion[62] site on a German server.[63] He went out of his way to avoid detection, deleting his encryption key and attempting to clear his bash history.[64] The files he stole included, in the court's words, components "connecting to the various securities exchanges; reading the incoming price data; pricing algorithms; trading strategies; the infrastructure for routing the trading decisions back to the exchanges; and applications for monitoring the performance of all of these intricate parts of the trading system."[65]

Members of the Goldman Sachs security team noticed Aleynikov's theft of proprietary files shortly after he left the company, and immediately notified the authorities.[66] On July 3, 2009, the FBI arrested Aleynikov at Newark airport as he was returning from a meeting with Teza in Chicago.[67] He was carrying a thumb drive and laptop computer containing Goldman Sachs' proprietary source code.[68] The FBI later searched Aleynikov's home, and found that his personal desktop computer also held proprietary code.[69] While in Chicago, he had uploaded at least two files containing proprietary Goldman Sachs source code to a Teza server.[70] In an e-mail to his Teza

60. *See Aleynikov I*, 785 F. Supp. 2d 46, 55 (S.D.N.Y. 2011).

61. *Id.* at 52.

62. Despite its rather ominous moniker, a "subversion" site is merely one that uses a software versioning and revision control system for the Linux-based open-source Apache web server platform. Aleynikov, an experienced developer, likely favored a Subversion server for its flexibility in moving and copying files.

63. *Id.* at 53. The geographic location of the server, while trivial in the borderless world of the Internet, seemed to be of some importance to the trial court—perhaps because of the invocation of a statute aimed squarely at international espionage.

64. *Id.* A bash history is a history of Linux commands used by a programmer during a single session or multiple sessions. It allows Linux users to quickly type in commands, and provides a relatively superficial record of a given user's activities on a Linux-based server. The fact that Aleynikov attempted to clear his bash history is an indication that he was covering his tracks.

65. *Id.* at 54.

66. *Id.*

67. *Id.*

68. *Id.*

69. *Id.*

70. *Id.* at 57

colleagues, he implied that the source code contained in the two files he uploaded was his own, tacitly taking credit for Goldman Sachs' proprietary work.[71]

A. HIGH FREQUENCY TRADING

High frequency trading ("HFT") is a form of automated, algorithmic trading that involves the use of highly sophisticated computer programs to trade securities.[72] Firms that engage in such trading hold onto positions for seconds at a time, and generally end a trading day with no net positions.[73] Decisions are made through high-speed mathematical analysis of market data, taking advantage of trading opportunities that open up for fractions of a second.[74]

High frequency trading generates huge amounts of revenue for financial institutions, but it can also be a hazardous undertaking. HFT systems increase price volatility between the buy and ask spread of equities, and have allegedly led to more than one "flash crash" that put equity markets into abrupt tailspins.[75] There is a strong argument that HFT's effect on national and international financial markets necessitates federal intervention.[76] And while large trading institutions have the personnel and resources to develop their own trading systems, smaller start-ups might require much more time to achieve market readiness. This imbalance of opportunity could tempt smaller players to turn to theft as a more efficient option than in-house development of HFT systems—exactly the sort of shortcut that landed Aleynikov (and Agrawal) in court.

Currently, algorithmic trading accounts for an astounding 73% of all daily volume; however, only 2% of all trading firms engage in algorithmic

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71. *Id.* The court's mention of Aleynikov's ill-gotten credit for the stolen files alludes to the lack of action taken against Teza.

72. *See* Nathan D. Brown, *The Rise of High Frequency Trading: The Role Algorithms, and the Lack of Regulations, Play in Today's Stock Market*, 11 APPALACHIAN J.L. 209, 209 (2012).

73. *Id.* A "position" simply refers to the amount of a security owned. In an HFT trade, the amount of time between the purchase and sale of an investment can be measured in seconds.

74. *Id.*

75. *See* David M. Serritella, *Recent Development: High Speed Trading Begets High Speed Regulation: SEC Response to Flash Crash, Rash*, 2010 U. ILL. J.L. TECH. & POL'Y 433, 439 (2010).

76. Though the SEC does regulate trading activity and algorithmic trading, some have suggested that the federal government lacks the necessary knowledge to monitor HFT. *See* Nina Mehta, *SEC Leads from Behind as High-Frequency Trading Shows Data Gap*, BLOOMBERG NEWS (Oct. 1, 2012), *available at* http://www.bloomberg.com/news/2012-10-01/sec-leads-from-behind-as-high-frequency-trading-shows-data-gap.html.

trading.[77] And small start-ups are hardly to blame for market aberrations. In fact, recent "flash crashes" have been attributed to miscues by very large institutions.[78] Teza founder Mikhail Victorovich Malyshev asserted during the *Aleynikov* trial that his start-up trading company would not have used Goldman's code had it been offered.[79] Malyshev wanted to "build the best high frequency company in the world" and felt that copying the existing system of an industry heavyweight was counter to that goal.[80] Malyshev's attitude exemplifies the independent, innovative spirit of many start-ups.[81]

While Teza is a start-up in a broad sense, Malyshev is an experienced algorithmic trader who brings years of experience—as well as significant monetary resources—to the table. Thus, start-ups with less experience and fewer resources might not be quite so ambitious or diligent. And while larger institutions normally have ample resources to develop HFT systems of their own, they might still be tempted to engage in industrial espionage to enhance their own algorithms. In the words of Francis Bacon, "[o]pportunity makes a thief."[82]

Regardless of the source of HFT technology development, its effect on worldwide markets is inescapable. Cases like *Aleynikov* and *Agrawal* show that misappropriation of algorithmic code is a viable concern for the financial industry. And recent "flash crashes" show that HFT's rapidly growing influence on world markets can lead to unintended consequences when systems falter. Federal regulation is therefore both necessary and justified.

B. SOUTHERN DISTRICT OF NEW YORK

Aleynikov filed a motion to dismiss his conviction on the grounds that the HFT system whose code he stole was (1) not a good, ware, or merchandise as defined by the NSPA,[83] and (2) not "a product . . . produced for or placed in interstate or foreign commerce," and therefore not subject to

77. Brown, *supra* note 72, at 212.

78. *See id.* at 216.

79. *Aleynikov I*, 785 F. Supp. 2d 46, 57 (S.D.N.Y. 2011).

80. *Id.* at 53.

81. *See* Drew Hansen, *11 Lessons From Startups on Creating Hotbeds of Innovation*, FORBES.COM (Dec. 6, 2012), http://www.forbes.com/sites/drewhansen/2012/12/06/11-lessons-from-startups-on-creating-hotbeds-of-innovation/.

82. Generally attributed to a letter Bacon wrote to the Earl of Essex.

83. *See* 18 U.S.C. § 2314 (2012). The NSPA has generally been an ineffective tool in dealing with cases of intellectual property theft, particularly when something as intangible as computer code is involved. In *Aleynikov*, the court focused much of its analysis on the statute's use of the terms, "goods, wares, merchandise," which cannot easily be applied to something as abstract as intellectual property. *Aleynikov I*, 785 F. Supp. 2d. at 61.

the EEA.[84] Aleynikov argued that Goldman's HFT system was "a secret trading system that was developed for Goldman's internal use and for its' [sic] sole benefit."[85]

The Southern District of New York disagreed, denying Aleynikov's motion to dismiss and holding that the HFT code was a "good," "ware," or "merchandise" under the NSPA, based primarily on the fact that an illicit market for such code exists.[86] It further held that "the sole purpose for which Goldman purchased, developed, and modified the computer programs that comprise the Trading System was to engage in interstate and foreign commerce."[87] Since the system allowed Goldman to trade on national and international exchanges, the court reasoned, it was clearly a product produced for the purpose of interstate or foreign commerce and therefore subject to the EEA.[88]

C. COURT OF APPEALS FOR THE SECOND CIRCUIT

The Second Circuit took a more nuanced approach to construing both the NSPA and the EEA.[89] With regard to the NSPA, the court relied heavily on *Dowling v. U.S.*, a Supreme Court opinion in a "bootleg records" case from the mid-1980s.[90] There the Court noted that federal crimes are "solely creatures of statute," and that a federal indictment may be challenged if it fails to allege a crime that falls within the terms of the statute.[91] The circuit court noted that statutory construction should begin with the assumption that the ordinary meaning of the words used adequately expresses the legislative purpose.[92] Quoting *U.S. v. Bottone*, the court took the notion of a tangible good to its extreme and concluded that the NSPA "would presumably not extend to the case where a carefully guarded secret formula was memorized, carried away in the recesses of a thievish mind and placed in writing only after a boundary had been crossed."[93] In short, common sense dictates that some tangible property must be stolen in order to invoke the NSPA. Since Aleynikov conducted his illicit business virtually by posting files

84. *Aleynikov I*, 785 F. Supp. 2d. at 60.
85. *Id.*
86. *Id.* at 61.
87. *Id.* at 60–61.
88. *Id.* at 61.
89. *See Aleynikov II*, 676 F.3d 71, 75–76 (2d Cir. 2012).
90. *Id.*; *see* Dowling v. U.S., 473 U.S. 207, 207 (1985).
91. *Aleynikov II*, 676 F.3d at 75 (quoting Dowling v. U.S., 473 U.S. at 213).
92. *Id.*
93. *Id.* at 77.

via file transfer protocol (and never stole so much as a thumb drive to transport the HFT code), no tangible property had been converted.[94]

With regard to construction of the term "a product produced for or placed in interstate or foreign commerce," the court first looked to the legislative history of the EEA, noting that the key phrase was not included in § 1831.[95] The court cited *Russello*, stating, "[w]here Congress includes particular language in one section of a statute but omits it in another section of the same Act, it is generally presumed that Congress acts intentionally and purposely in the disparate inclusion or exclusion."[96] Thus, the court opined that the requirement that products be "produced for" or "placed in" commerce must be read as terms of limitation.[97] The court further noted that the term in question was not included in the original Senate bill, a fact the court held to be an indication that the words of limitation were very deliberately placed in the act.[98]

The Second Circuit then took the district court to task for its overly broad interpretation of "produced for . . . interstate or foreign commerce," arguing that such phrases should not be construed "in a vacuum."[99] Interestingly, the court noted that the EEA was enacted the year after *U.S. v. Lopez*, a case that turned on the Supreme Court's construction of the term "substantially affected interstate commerce."[100] The temporal proximity to this landmark case was a clear indication, the court reasoned, that the drafters of the EEA intentionally avoided using language that would invoke the "outer limit of Congress's regulatory authority."[101]

Using this bit of legislative history and statutory construction as a backdrop, the court held that Goldman's HFT system was neither "produced for" nor "placed in" interstate or foreign commerce.[102] Goldman had no intention to sell or license the system, and it went to great lengths to maintain its secrecy. Since the HFT system itself never entered commerce, the court reasoned, theft of its source code did not rise to the level of an offense under

94. *Id.*
95. *Id.* at 79.
96. *Id.* at 79 (quoting Russello v. U.S., 464 U.S. 16, 23 (1983)).
97. *Id.* at 79–81.
98. *Id.*
99. *Id.* at 80.
100. *Id.* at 81 (quoting U.S. v. Lopez, 514 U.S. 549, 558–59 (1995)).
101. *Id.* at 81–82.
102. *Id.* at 82.

the EEA.[103] With that, the Second Circuit reversed the district court's judgment without remand.[104]

D. ANOTHER BITE AT THE APPLE: STATE CHARGES

Aleynikov's legal woes did not end when the Second Circuit reversed his conviction. On August 9, 2012, Aleynikov was arrested and charged under two New York Penal Laws—both class E felonies punishable by jail sentences of two to five years.[105] New York Penal Law Article 156 contains multiple computer-related offenses covering a variety of causes of action including fraud, trespass, and tampering.[106] Enacted in 1986 to combat the "frightening spectre" of rising computer crime, Article 156 marked a significant modernization of New York State's criminal code.[107] Most notably, the statute defined "computer data" and "computer programs" as "property."[108] Section 156.30 criminalizes the reproduction or duplication of any computer data or computer program that results in economic damages in excess of $2,500.[109]

New York Penal Law also includes a technology-related article in section 165.07, which punishes the "unlawful use of secret scientific material."[110] Enacted in 1967, this little-used statute was only examined in detail in a single case involving the theft of a computer program—and even that case predates the Internet age.[111] Section 155.00 of the statute defines "secret scientific material" as anything that "records a scientific or technical process, invention, or formula" that is intended to be unavailable to anyone other than the rightful owner or those who have the consent of the rightful owner—in other words, a trade secret.[112] The use of the term "scientific or technical" evinces a broad interpretation, and seems to include both academic and commercial research and development.

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103. *Id.*

104. *Id.*

105. *See* Zetter, *supra* note 8; Peter Lattman, *Former Goldman Programmer is Arrested Again*, N.Y. TIMES (Aug. 9, 2012), http://dealbook.nytimes.com/2012/08/09/ex-goldman-programmer-is-arrested-again/; *see also* N.Y. PENAL LAW § 156 (Mckinney 1988).

106. N.Y. PENAL LAW § 156 (Mckinney 1988).

107. *See* People v. Versaggi, 83 N.Y. 2d 123, 128 (N.Y. 1994).

108. *Id.*

109. N.Y. PENAL LAW § 156.30 (criminalizing the "[u]nlawful duplication of computer related materials in the first degree).

110. *Id.* § 165.07.

111. *See* People v. Russo, 131 Misc. 2d 677 (N.Y. 1986).

112. N.Y. PENAL LAW § 155.

On September 12, 2012, Aleynikov pled not guilty to the New York State charges, rejecting a plea deal that specified no jail time.[113] Aleynikov's lawyer warned the judge that he would move to dismiss the case, citing double jeopardy and claiming that state prosecutors had "no sense of decency."[114] Though withstanding a second trial for essentially the same acts smacks of double jeopardy, the assertion that the Second Circuit's dismissal constitutes full adjudication of the matter of Aleynikov's trade secret thievery directly contradicts the anti-preemption language of the EEA.[115]

III. THE THEFT OF TRADE SECRETS CLARIFICATION ACT OF 2012

On November 27, 2012, with little fanfare, Senator Patrick Leahy[116] (D-VT) introduced the Theft of Trade Secrets Clarification Act of 2012 to the Senate.[117] The Act itself is quite brief, and declares simply:

> Section 1832(a) of title 18, United States Code, is amended in the matter preceding paragraph (1), by striking "or included in a product that is produced for or placed in" and inserting "a product or service used in or intended for use in".[118]

Senator Leahy's address focused on criticism of the *Aleynikov* reversal, and emphasized the need to help "American companies . . . protect the products they work so hard to develop."[119] At Senator Leahy's urging, the Senate passed this "commonsense legislation" without debate or dissent.

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113. *See* Joseph Ax, *Ex-Goldman Programmer Rejects Plea Deal with NY – Lawyer*, THOMSON REUTERS (Sept. 27, 2012), http://newsandinsight.thomsonreuters.com/Legal/News/2012/09_-_September/Ex-Goldman_programmer_rejects_plea_deal_with_NY_-_lawyer/.

114. *Id.*

115. *See infra* Section IV.B (providing a detailed discussion of preemption issues surrounding the EEA); *see also* U.S. v. Lanza 260 U.S. 377 (1922) (holding that the Fifth Amendment prohibition of double jeopardy applies only to second prosecutions for the same offense under the authority of the federal government).

116. Senator Leahy is no stranger to intellectual property reform; the Leahy-Smith America Invents Act (AIA)—the biggest overhaul of the U.S. patent system since 1952—bears his name.

117. 158 Cong. Rec. S6878-03, 2012 WL 5932548 (2012) (statement of Sen. Leahy).

118. Theft of Trade Secrets Clarification Act of 2012, Pub. L. No. 112-236, 126 Stat 1627 (2012).

119. 158 Cong. Rec. S6878-03, 2012 WL 5932548 (statement of Sen. Leahy). Interestingly, Senator Leahy's address appears to conflate the notion of interstate misappropriation with interstate commerce, noting that the Second Circuit felt that Aleynikov's theft did not satisfy the interstate commerce prong of the EEA "even though the defendant had copied the stolen code from his office in New York to a server in Germany; downloaded the code to his home computer in New Jersey; then flew to his new job in Illinois with the stolen source code in his possession . . . ." *Id.* This is an honest

In the House of Representatives, Representative Lamar Smith (R-TX)[120] introduced the Act, also focusing on the "dangerous loophole" revealed by the Second Circuit in *Aleynikov*.[121] Interestingly, rather than casting blame on the Second Circuit for its controversial decision, Representative Smith asked that the House "take action in response to the Second Circuit's call and ensure that we have appropriately adapted the scope of the EEA to the digital age."[122] Representative Jackson Lee (D-TX) echoed the sentiment, advocating protection for "proprietary software to be used internally" that is not part of a "commercial end product."[123] Though removing the confusing "product produced for or placed in" language and acknowledging services as well as products elevated the EEA beyond its past tendencies toward vagueness, two issues still remain: (1) the Second Circuit has yet to decide the fate of Samarth Agrawal, who was convicted under the "old" EEA, and (2) the persistence of an explicit lack of preemption.

A. POTENTIAL CONFUSION IN THE SECOND CIRCUIT: *U.S. V. AGRAWAL*

The case of *U.S. v. Agrawal* presents a controversial companion piece to the catch-and-release case of *Aleynikov*.[124] The fact pattern is eerily similar to that of *Aleynikov*. Like Sergey Aleynikov, Samarth Agrawal was a programmer at a large financial services corporation who allegedly stole code for an HFT system with the intent of using that code to build an electronic trading algorithm for a start-up company.[125] Arrested in his New Jersey apartment on April 19, 2010—nine months after the FBI arrested Aleynikov—he was also tried and convicted in the Southern District of New York[126] and appealed his

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misstatement, and one that is illustrative of the fact that the borderless nature of the Internet makes virtually all online activity—including commerce—an interstate affair.

120. Representative Smith, along with Senator Leahy, is the namesake of the Leahy-Smith America Invents Act ("AIA").

121. 158 Cong. Rec. H00000-52, 2012 WL 6605649 (statement of Rep. Smith).

122. *Id.* (statement of Rep. Jackson Lee).

123. *Id.* Representative Jackson Lee, like Senator Leahy, conflated interstate conversion with interstate commerce during her address. Again, this is an honest mistake that underlines the lack of geographic boundaries in the Internet age.

124. *See* Bill Singer, *No Foolish Consistency in Agrawal and Aleynikov But One Hell of a Stunning Reversal*, FORBES (Feb. 21, 2012), http://www.forbes.com/sites/billsinger/2012/02/21/no-foolish-consistency-in-agrawal-and-aleynikov-but-one-hell-of-a-stunning-reversal/.

125. Agrawal was employed by Société Générale, a large European bank with a significant U.S. presence. *Id.*

126. Agrawal's sentence of thirty-six months was lenient compared to Aleynikov's ninety-seven months. Where Aleynikov planned his theft for months in advance, Agrawal simply printed out code, placed it in his backpack, and took it home. The court reasoned that Agrawal's lack of premeditation warranted a sentence significantly lower than the Guidelines range of 97–121 months, whereas Aleynikov's behavior warranted a sentence within the Guidelines. In truth, Agrawal was a cooperative defendant who testified at trial

cased to the Second Circuit. Agrawal also argued that the code he stole was not a "good" under the NSPA, and that the HFT system was not "produced for or placed in interstate or foreign commerce" as defined by the "old" EEA.[127]

During oral arguments, the Second Circuit was quick to point out that Agrawal had printed out the stolen code, rendering it utterly tangible and therefore potentially subject to the NSPA.[128] This notion is both intuitive and comically antiquated—"tangible" code printed on a page is completely bereft of its inherent utility, whereas "intangible" code within a computer becomes dynamic and functional.[129] Interestingly, the court also expressed apprehension toward Agrawal's argument that the HFT system was not a product subject to the "old" EEA, noting that the jury instructions in the trial indicated that the source code was designed to help trade stocks.[130] This is, of course, not substantially different than the argument set forth in the *Aleynikov* trial. In *Aleynikov*, however, the Second Circuit went to great lengths to construe the EEA in such a manner as to dismiss the notion that HFT systems are "produced for or placed in interstate or foreign commerce." With the passage of the TTSCA, however, it will be difficult for Agrawal to argue that HFT code is not "a product or service used in or intended for use in" domestic commerce. This note addresses the complexities of Agrawal's situation under the revised statute in Section IV.B.

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owned up to his actions. Aleynikov never testified. *See* Government Sentencing Memorandum, *Aleynikov I*, 785 F. Supp. 2d 46 (S.D.N.Y 2011) WL 1002237.

127. *See* Supplemental Reply Brief for Defendant, U.S. v. Agrawal, No. 11-1074, 2012 WL 1899803 (2d Cir. filed Dec. 30, 2011).

128. *See Ex-SocGen Trader: Taking of Bank Code Not a Crime*, REUTERS (June 21, 2012), http://in.reuters.com/article/2012/06/21/socgen-agrawal-idINL1E8HJ5RK20120621/. Federal law applied in this case only because Agrawal transported printouts of HFT code across state lines to his New Jersey apartment.

129. *See Aleynikov I*, 737 F. Supp. 2d 173, 188–89 (S.D.N.Y. 2010). The court noted that

> [w]hile *Bottone* concerned physical copies of stolen documents containing trade secrets, rather than electronic copies, such a distinction is of no practical significance given today's economic and technological realities. Indeed, it would be absurd if an individual could skirt the statute simply by making an electronic copy of confidential business information, rather than a physical copy, and transport it across state lines using, for instance, a laptop, CD–ROM, or flash drive.

Id.

130. *Ex-SocGen Trader: Taking of Bank Code Not a Crime*, *supra* note 128.

B. A DANGEROUS LACK OF PREEMPTION

Section 1838 of the EEA states:

> This chapter shall not be construed to preempt or displace any other remedies, whether civil or criminal, provided by United States Federal, State, commonwealth, possession, or territory law for the misappropriation of a trade secret . . . .[131]

In short, there is no federal preemption where the EEA is invoked. This collides with the uncomfortable fact that most states have enacted their own criminal trade secret misappropriation laws.[132] For this reason, it is neither uncommon nor prohibited for a defendant to escape conviction under the EEA only to be charged with similar state causes of action.[133]

In the Internet age, state law is simply insufficient to handle technology whose wide-ranging nature defies traditional geographic jurisdiction. Justice Brandeis once observed, "a single courageous State may, if its citizens choose, serve as a laboratory; and try novel social and economic experiments without risk to the rest of the country."[134] However, the Internet stretches the limits of these "laboratories" with its non-linear, borderless ubiquity.[135] The notion that states can experiment with regulatory policies without adversely affecting activities outside their jurisdiction is in direct conflict with an online world whose access is unlimited by the bounds of geographic jurisdiction.[136] Most substantial Internet activities are, in fact, subject to liability and personal jurisdiction in most or all states.[137]

In spite of the ineffectiveness and inappropriateness of state laws in matters of Internet technology, and in spite of Representative Smith's stated goal of adapting "the scope of the EEA to the digital age,"[138] the TTSCA did nothing to remedy the EEA's explicit lack of preemption. The little legislative history that exists does not indicate that preemption was ever discussed during the drafting of the TTSCA. Ultimately, Congress passed up an opportunity to revise § 1838 of the EEA to address its lack of harmony with the needs of the digital age.

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131. 18 U.S.C. § 1838 (2012).
132. *See supra* Part I.
133. *See* Zetter, *supra* note 8.
134. New State Ice Co. v. Liebmann, 285 U.S. 262, 311 (1932).
135. *See generally* Peter S. Menell, *Regulating "Spyware": The Limitations of State "Laboratories" and the Case for Federal Preemption of State Unfair Competition Laws*, 20 BERKELEY TECH. L.J. 1363, 1375 (2005).
136. *See id.*
137. *See id.*
138. 158 Cong. Rec. H00000-52, 2012 WL 6605649 (2012) (statement of Rep. Smith).

IV. ANALYSIS

A. DID THE TTSCA FIX THE EEA?

One of the stated goals of the TTSCA was to "take action in response to the Second Circuit's call" in the *Aleynikov* decision.[139] Disturbed by the narrowness of the holding in *Aleynikov*, Congress sought to broaden the language in the statute to avoid ambiguity.[140] The result is a statute that is purpose-built to convict Sergey Aleynikov—and it almost certainly would have commanded and sustained Aleynikov's conviction. But will the "new" EEA result in more convictions? Is this a significant step in the right direction?

Only time will tell. The "old" EEA saw few prosecutions, and even fewer convictions. This lack of use was largely the result of its former lack of clarity. In theory, the changes brought about by the TTSCA should attract the attention of prosecutors who might have shied away from it in years past. However, the lack of publicity and fanfare surrounding the TTSCA does not inspire confidence. Lawmakers submitted the TTSCA to the Senate the Tuesday after Thanksgiving, and President Obama signed it into law the Friday after Christmas—which also happened to be the last Friday of 2012.[141] Quietly rushing the statute through the system during the holiday season is hardly a recipe for enhanced notice. Nevertheless, prosecutors at the Department of Justice were likely paying close attention, and it is their actions that will determine the ultimate success of the "new" EEA.

B. SHOULD AGRAWAL BE HELD TO A HIGHER STANDARD?

The purpose-built nature of the "new" EEA is an unfavorable development for Samarth Agrawal. The fact pattern in the *Agrawal* case is virtually identical to that in *Aleynikov*. His appeal to the Second Circuit already appeared to be on shaky ground before the TTSCA was signed.[142] And under the revised EEA, it seems almost certain that his conviction will be upheld. But is this a fair outcome? Should *Agrawal* be held to a higher standard than *Aleynikov*?

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139. *Id.* (statement of Rep. Smith).

140. *Id.* (statement of Rep. Jackson Lee).

141. *See Statement by the Press Secretary on H.J. Res. 122, H.R. 3477, H.R. 3783, H.R. 3870, H.R. 3912, H.R. 5738, H.R. 5837, H.R. 5954, H.R. 6116, H.R. 6223, S. 285, S. 1379, S. 2170, S. 2367, S. 3193, S. 3311, S. 3315, S. 3564, and S. 3642*, THE WHITE HOUSE (Dec. 28, 2012), http://www.whitehouse.gov/the-press-office/2012/12/28/statement-press-secretary-hj-res-122-hr-3477-hr-3783-hr-3870-hr-3912-hr-.

142. *See supra* Section III.A.

1. Providing Ample Notice

The Second Circuit's majority opinion in *Aleynikov* closes with a succinct summation of the lack of notice provided by the EEA:

> The conduct found by the jury is conduct that Aleynikov should have known was in breach of his confidentiality obligations to Goldman, and was dishonest in ways that would subject him to sanctions; but he could not have known that it would offend this criminal law or this particular sovereign.[143]

The message is clear: Aleynikov violated his employee agreement with Goldman and behaved dishonestly, but his conduct would not normally rise past the level of civil sanctions. Goldman, like any multi-national financial institution, has strict confidentiality policies that forbid employees from disclosing the company's proprietary secrets during the course of their employment. It further prohibits any use of such proprietary information (such as the source code stolen by Aleynikov) once employment terminates. Under typical circumstances, upon discovering Aleynikov's breach of his employment agreement, Goldman's sole legal cause of action would be to fire Aleynikov and sue him under civil law. Such a suit would likely involve an injunction and damages, and would lack any criminal element.

But the fact remains that a federal criminal statute prohibiting trade secret theft did exist at the time that Aleynikov and Agrawal committed their misdeeds. Then why has the EEA done a historically poor job of putting alleged misappropriators on notice? The answer lies primarily in the statute's ambiguity. Prosecutors, faced with a vaguely worded statute that might or might not apply to certain fact patterns, have shied away from using the "old" EEA.[144] The dearth of convictions under the EEA is evidence of this trend.[145] And with little jurisprudence to draw from—and very little public knowledge of the EEA—potential thieves like Aleynikov and Agrawal might not realize that their actions are putting them in the crosshairs of federal

143. *Aleynikov II*, 676 F.3d 71, 82 (2d Cir. 2012).

144. *See* R. Mark Halligan, *Protection of U.S. Trade Secret Assets: Critical Amendments to the Economic Espionage Act of 1996*, 7 J. MARSHALL REV. INTELL. PROP. L. 656, 667 (2008) ("Since the enactment of the EEA, there have been less than sixty prosecutions, mainly section 1832 prosecutions. Most of these prosecutions were filed in the Northern District of California . . . . Justice Department statistics confirm that approximately 80% of the eighty six federal judicial districts nationwide have had no EEA prosecutions." (internal citations omitted)).

145. *See* Susan W. Brenner & Anthony C. Crescenzi, *State Sponsored Crime: The Futility of the Economic Espionage Act*, 28 HOUS. J. INT'L L. 389, 432 (2006) (stating that as of 2006, there have been forty-seven people prosecuted in thirty-four cases under the Economic Espionage Act).

criminal law. While this does not excuse their actions, it points out the possibility that they "could not have known that it would offend this criminal law or this particular sovereign."[146]

The passage of the TTSCA does little to alleviate this lack of notice, though it does provide clearer language for future thieves to heed. There is little doubt that Aleynikov and Agrawal knew that the HFT code they were stealing was proprietary, and that it was "a product or service used in or intended for use in" commerce. Still, given the lack of fanfare surrounding the passage of the TTSCA discussed in Section IV.A, *supra*, it seems unsafe to assume that trade secret thieves are any better informed of the law now than they were under the "old" EEA.

2. *The TTSCA and the* Ex Post Facto *Clause*

Article I, Section 9 of the U.S. Constitution declares, "No Bill of Attainder or *ex post facto* Law shall be passed."[147] In 1798, the Supreme Court of the United States ruled that an ex post facto law was one that "makes an action, done before the passing of the law, and which was innocent when done, criminal; and punishes such action."[148] In *Weaver v. Graham*, the Supreme Court held that two factors must be met in order for a criminal law to be considered in violation of the Ex Post Facto Clause: (1) it must apply to events that happened before the enactment of the statute, and (2) it must disadvantage the offender.[149] The Court explained the rationale behind enforcement of the clause in *Beazell v. Ohio*:

> The constitutional prohibition and the judicial interpretation of it rest upon the notion that laws, whatever their form, which purport to make innocent acts criminal after the event, or to aggravate an offense, are harsh and oppressive, and that the criminal quality attributable to an act, either by the *legal definition of the offense* or by the nature or amount of the punishment imposed for its

146. *Aleynikov II*, 676 F.3d at 82.

147. U.S. CONST., art. I, § 9, cl. 3 (emphasis added).

148. Calder v. Bull, 3 U.S. 386, 390 (1798). Describing ex post facto laws, Chief Justice Marshall wrote,

> With very few exceptions, the advocates of such laws were stimulated by ambition, or personal resentment, and vindictive malice. To prevent such, and similar, acts of violence and injustice, I believe, the Federal and State Legislatures, were prohibited from passing any bill of attainder, or any ex post facto law.

Id. at 389. Though the enactment of the TTSCA lacks any element of "personal resentment, and vindictive malice," its application in *Agrawal* would nevertheless be retrospective and arguably unconstitutional.

149. Weaver v. Graham, 450 U.S. 24, 29 (1981).

> commission, should not be altered by legislative enactment, after the fact, to the disadvantage of the accused.[150]

In other words, it would be unfair to punish an offender for an act that was not an offense when it was committed.

When Samarth Agrawal committed his act of thievery, the "old" EEA was still in effect.[151] That version contained the controversial phrase, "product produced for or placed in interstate or foreign commerce." The *Aleynikov* court held that the HFT code was incompatible with that phrase, reversing his conviction—and inspiring the enactment of the TTSCA. In *Agrawal*, the misappropriated trade secrets in question also took the form of HFT code. In theory, the Second Circuit established a precedent in *Aleynikov* that should be followed by the court in *Agrawal*. The *Aleynikov* court ruled, in essence, that the theft of HFT code was "innocent when done"—not a criminal act under the "old" EEA at the time it occurred. However, as discussed in Section III.A, *supra*, the *Agrawal* court expressed reluctance to follow *Aleynikov* during oral arguments, and left the door open to a contrary holding. Intra-circuit splits are not uncommon, and it would not be unheard of for the Second Circuit to find a way to distinguish *Agrawal* from *Aleynikov*.

The passage of the TTSCA adds a new wrinkle to the *Agrawal* situation. The language of the TTSCA was crafted in response to *Aleynikov*. Since *Agrawal's* fact pattern is virtually identical, it is highly probable that Agrawal's conviction would be upheld under the "new" EEA. But if the Second Circuit cites the "new" EEA and upholds Agrawal's conviction, would that amount to a violation of the *Ex Post Facto* Clause? After all, the TTSCA did alter the "legal definition of the offense" as admonished in *Beazell v. Ohio*.

However, it is unlikely that the Second Circuit will need to cite the "new" EEA, as it has already expressed doubt that *Agrawal* should be reversed under the "old" EEA. It is more likely that the court will simply refuse to follow *Aleynikov* and submit a distinguishing opinion. In that event, Agrawal could appeal to the Supreme Court to grant certiorari and try to force a reversal by way of *Aleynikov's* precedent. That route seems both remote and moot, as the Court seems unlikely to get involved in the interpretation of a recently modified trade secret misappropriation criminal statute. Thus, Samarth Agrawal's hope for a reversal appears to be hamstrung by poor

150. Beazell v. Ohio, 269 U.S. 167, 170 (1925) (emphasis added).

151. President Obama signed the TTSCA into law on December 28, 2012, more than three years after Agrawal's alleged misdeeds. Though the "old" EEA was rarely invoked, cases involving trade secret misappropriation that occurred prior to December 28, 2012, might yet be brought to trial.

timing, a controversial holding in *Aleynikov*, and an efficient response from Congress.

C. IS FEDERAL PREEMPTION NECESSARY?

Perhaps the most disturbing feature of the *Aleynikov* saga is that the final chapter remains unwritten. While the Second Circuit reversed his conviction under the EEA, the State of New York awaits its opportunity to convict Aleynikov. The lack of federal preemption under the EEA is troubling in that it clouds the fate of thieves like Aleynikov. HFT is an Internet activity, and the HFT code that Aleynikov stole performs its trading tasks within a virtually ubiquitous electronic world. The facts in *Aleynikov* paint a complex picture: Russian-born programmer steals code from a computer system in New York, uploads it to a server housed in Germany, and delivers to his new employer in Chicago. While New York State law might apply to Aleynikov's theft, so might Illinois law. Depending on the complexity of a case of trade secret theft, many states and their respective laws might be involved. In those cases, the legal environment engendered by the Internet would create a situation where the laws of the most restrictive state would rule the day.[152]

The ubiquity of the Internet begs for something less provincial than state laws to regulate its activities.[153] In the context of cases like *Aleynikov*, state law is simply too varied and inconsistent. Furthermore, subjecting people like Aleynikov to the laws of dozens of states creates a confusing web of conflicting standards and punishments. Unfortunately, this web of confusion is further complicated by the fact that the EEA expressly states that it does not preempt any state laws.

Why would the EEA include such explicit rejection of its own powers of preemption? Perhaps because, as noted in Part I, *supra*, trade secret misappropriation has long been the province of state civil causes of action. But the EEA goes a step further and specifies that it preempts no *criminal* laws, either. Perhaps Congress did not wish to interfere with laws regarding intrastate trade secret misappropriation. However, the EEA explicitly relates to "*interstate* or foreign commerce," and should not preempt state causes of action that would not otherwise fall under the umbrella of the EEA. The EEA is the product of modern concerns, and should take into account the ubiquity of the Internet and its role in most contemporary acts of trade secret misappropriation. Congress would do well to consider the modern nature of the type of domestic trade secret theft the EEA purports to address.

152. *See* Menell, *supra* note 135, at 1375–76.
153. *See id.* at 1415–18.

V. CONCLUSION

The TTSCA directly addresses the request of Judge Calabresi's concurring opinion in *Aleynikov* that "Congress will return to the issue and state, in appropriate language, what I believe they meant to make criminal in the EEA."[154] However, its passage leaves the *Agrawal* court in an uncomfortable state of limbo, and the issue of preemption remains unresolved. Until the Second Circuit provides a satisfactory holding in the *Agrawal* case, Congress should keep a watchful eye on the EEA and the courts that enforce it. In the meantime, Congress should seriously consider striking the explicit lack of preemption from § 1838 of the EEA. If the TTSCA has truly cleaned up the language of the EEA in a manner that will empower prosecutors to enforce it, then Congress should not allow state laws to be used as safety nets to catch those thieves who evade punishment through "dangerous loopholes" in federal law.

154. *Aleynikov II*, 676 F.3d 71, 83 (2d Cir. 2012).

OPERATION SEIZING OUR SITES: HOW THE FEDERAL GOVERNMENT IS TAKING DOMAIN NAMES WITHOUT PRIOR NOTICE

Karen Kopel†

Imagine waking up one day to find that your website has been replaced with a banner posted by the federal government stating they have seized your domain name due to intellectual property crime violations:

Figure 1

That is exactly what happened to Andre Nasib's site, a popular hip-hop blog called Dajaz1.com. Without any prior notice or opportunity to defend the site, the Immigration and Customs Enforcement Office ("ICE") determined that Dajaz1.com was engaged in criminal copyright violations and was thus subject to forfeiture under 18 U.S.C. § 2323 due to four posted songs. As it turns out, those songs were sent to Dajaz1.com by the rights holders or their representatives in order for the influential site to promote the music, making

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it an authorized distribution. However, ICE agents relied on statements by representatives in the Recording Industry Association of America ("RIAA") in seizing the site and retaining it for over a year, waiting for the RIAA to get back to it with more evidence to proceed with forfeiture proceedings. Dajaz1 and its representatives incessantly tried to seek information from ICE and the prosecutors regarding the status of the site, but to no avail because the government had sealed the records. Despite seeking three secret *ex parte* extension orders from the court, the government never got the evidence it needed from the RIAA and eventually had to hand over Dajaz1.com back to its owner without an apology.[1]

Although this action of seizing a website may sound like a "digital Guantanamo,"[2] the process of seizing property (*in rem*) without any prior notice and without any opportunity for the party of interest to contest the original seizure (*ex parte*) has happened to thousands of domain names by the federal government under the intellectual property enforcement effort named Operation In Our Sites. Since its inception over two and a half years ago, Operation In Our Sites has seized 1,719 domain names of which over 690 have been forfeited,[3] ranging from websites selling allegedly counterfeit luxury goods, sports memorabilia, and pharmaceuticals, to websites that host copyrighted music, movies, TV shows, software, and websites that only link to this content.[4] Although this enforcement effort is grounded in noble policy reasons and backed by legitimate industry concerns,[5] the process that the National Intellectual Property Rights Coordination Center ("IPR

1. *See infra* Section II.C.1 (discussing the Dajaz1 case in detail).

2. Mike Masnick, *RIAA Tries To Downplay Its Role In The Feds' Unjustifiable Censorship of Dajaz1*, TECHDIRT (May 8, 2012, 8:14 AM), http://www.techdirt.com/articles/20120507/16073718821/riaa-tries-to-downplay-its-role-feds-unjustifiable-censorship-dajaz1.shtml (quoting Andrew Bridges, Dajaz1's attorney, in a statement following Dajaz1.com's return).

3. *See* News Release, U.S. Immigration and Customs Enforcement, Houston HIS Seizes 89 Websites Selling Counterfeit Goods (Dec. 20, 2012), *available at* https://www.ice.gov/news/releases/1212/121220houston.htm ("Under [Operation In Our Sites], 1,719 domain names have been seized since the operation began in June 2010. Since that time, the seizure banner has received more than 112 million individual views."); *see also infra* notes 30–36 and accompanying text (discussing the difference between seizure and forfeiture). Although this Note is current through December 2012, another seizure action took place in early 2013, resulting in a total of 2,061 websites seized under Operation In Our Sites. *See* News Release, U.S. Immigration and Customs Enforcement, ICE, CBP, USPIS Seize More Than $13.6 Million In Fake NFL Merchandise During 'Operation Red Zone' (Jan. 31, 2013), *available at* https://www.ice.gov/news/releases/1301/130131neworleans.htm.

4. *See* IPR Press Release, *infra* note 64; *see also infra* note 102.

5. *See infra* Section I.B (discussing the various policy reasons taken into account in the Joint Strategic Plans, which laid out the increased intellectual property enforcement efforts undertaken by the Obama Administration).

Center"), ICE, and the Department of Justice ("DOJ") employ to seize these domains has raised red flags among members of Congress and the public in general.[6] The *ex parte in rem* forfeiture proceedings allow the government to seize a domain name without any prior notice to the website operator, essentially leaving them in the dark. ICE agents and DOJ attorneys only need to show probable cause that the website in question engaged in one of the enumerated intellectual property violations in order to obtain a seizure warrant from a judge. These warrants are then served on the domestic domain name registries that are required to redirect each domain to a page that displays a banner explaining that the site has been seized pursuant to federal law.[7] To date, only two sites have successfully challenged their seizures,[8] yet their struggles in regaining control of their domain names have brought to light the lack of process and transparency that Operation In Our Sites affords those affected.

This Note will discuss Operation In Our Sites, which is part of a much broader intellectual property enforcement effort undertaken by the Obama Administration to combat all kinds of intellectual property violations. Part I discusses the background of the enforcement effort, focusing on the operation's authority granted by the Prioritizing Resources and Organization for Intellectual Property Act of 2008 ("Pro IP Act"), the policy reasons for increased intellectual property enforcement, and what Operation In Our Sites has been doing on the ground. Part II identifies the issues surrounding Operation In Our Sites, specifically addressing possible Due Process and First Amendment problems, along with other legal issues. It also provides an in-depth look at *Dajaz1* and *Rojadirecta*, the only two cases where website seizures were successfully challenged. The Note concludes with a discussion of the reality of the situation: although the process may not be perfect, it may be all we have. Rather than overhauling the entire system, the government

6. *See* Letter from Sen. Ron Wyden to John Morton, Director, U.S. Immigration and Customs Enforcement, and Eric Holder, Attorney General (Feb. 2, 2011), *available at* http://wyden.senate.gov/download/?id=103d177c-6f30-469b-aba8-8bbfdd4fd197 ("While I believe it important to combat copyright piracy, I grow concerned when the methods used may not be effective and could stifle constitutionally protected speech, job-creating innovation, and give license to foreign regimes to censor the Internet."); Letter from Rep. Zoe Lofgren to John Morton, Director, U.S. Immigration and Customs Enforcement (Apr. 7, 2011), *available at* http://lofgren.house.gov/images/stories/pdf/letter_to_morton_4-7.pdf; Letter from Rep. Zoe Lofgren, Rep. Jared Polis & Rep. Jason Chaffetz to Eric Holder, Attorney General, and Secretary Napolitano (Aug. 30, 2012), *available at* http://lofgren.house.gov/images/Letter_to_AG_Holder_083012.pdf.

7. *See supra* Figure 1; *infra* Section I.C.2 (describing the process and requirements of seizing a domain name).

8. *See infra* Section II.C (discussing the cases of Dajaz1 and Rojadirecta in depth).

should improve the enforcement of Operation In Our Sites to afford those affected transparency; specifically, enforcement agencies should be required to follow the statutory mandates or else return the domain name immediately.

I. BACKGROUND ON OPERATION IN OUR SITES DOMAIN NAME SEIZURES

To understand the legal implications of Operation In Our Sites, it is first important to have a grasp for where the authority of this operation has come from and how it has been implemented. Part I first discusses how the domain name seizure authority is governed by the Pro IP Act's civil forfeiture provisions,[9] which grant the federal government the power to first seize and then forfeit property that is used to facilitate one of the enumerated intellectual property violations.[10] The Act also created the position of the Intellectual Property Enforcement Coordinator ("IPEC") to coordinate enforcement efforts across the federal government and develop a plan to combat infringement.[11] Next, a discussion of the policy reasons behind the stronger enforcement effort and how the IPEC incorporated those reasons into her plan illuminates why such actions have been undertaken. The last Section of Part I discusses how Operation In Our Sites is working on the ground by identifying the actors involved, the process of seizing and forfeiting a domain name, and the timeline of seizure actions undertaken pursuant to the operation.

A. AUTHORITY: PRO IP ACT OF 2008

Operation In Our Sites is part of a much broader enforcement effort undertaken by the Obama Administration pursuant to the authority of the Pro IP Act.[12] Senate Judiciary Committee Chairman Patrick Leahy introduced the bill for the Pro IP Act, which President Bush signed into law on October 13, 2008.[13] The primary purpose of the Pro IP Act is to improve intellectual

9. *See* 18 U.S.C. § 2323(a) (2006).

10. *See* discussion *infra* Section I.C.2 (explaining how seizure and forfeiture are different and how the federal government must proceed in both instances).

11. *See* 15 U.S.C. § 8111 (2006).

12. Prioritizing Resources and Organization for Intellectual Property Act of 2008 ("Pro IP Act"), Pub. L. No. 110-403, 122 Stat. 4256 (codified at 18 U.S.C. § 2323 (2006)).

13. *See* Ray Dowd, *The Pro-IP Act of 2008: Copyright and Trademark Enforcement*, COPYRIGHT LITIGATION BLOG (Oct. 19, 2008), http://copyrightlitigation.blogspot.com/2008/10/pro-ip-act-of-2008-copyright-and.html.

property enforcement[14] by enhancing "civil and criminal penalties for intellectual property violations, [in order] to make commercial scale IP theft less profitable and easier to prosecute."[15] One way the Act increases intellectual property enforcement is by clearly and broadly applying seizure and forfeiture law to cases of intellectual property violations.[16] The Act also created roles for key intellectual property personnel in the executive branch to coordinate efforts across agencies and provide greater resources for those efforts.[17]

1. *Civil Forfeiture Proceedings*

The authority to conduct domain name seizures and forfeitures under Operation In Our Sites comes from the Pro IP Act's civil forfeiture provisions.[18] Inherited from English common law,[19] civil forfeiture is one of the oldest remedies and enforcement tools in the American legal system.[20]

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14. *See* U.S. INTELLECTUAL PROPERTY ENFORCEMENT COORDINATOR, 2010 JOINT STRATEGIC PLAN ON INTELLECTUAL PROPERTY ENFORCEMENT 49 (JUNE 2010), *available at* http://www.whitehouse.gov/sites/default/files/omb/assets/intellectualproperty/intellectualproperty_strategic_plan.pdf [hereinafter JOINT STRATEGIC PLAN 2010]. ("[T[he term 'intellectual property enforcement' means 'matters relating to the enforcement of laws protecting copyrights, patents, trademarks, other forms of intellectual property, and trade secrets, both in the United States and abroad, including in particular matters relating to combating counterfeit and infringing goods.").

15. H.R. REP. No. 110-617, at 23 (2008).

16. *See* 18 U.S.C. § 2323. Civil forfeiture is not new to criminal copyright, however. Previously, copies of copyrighted material and the items used in their direct manufacture were subject to seizure. *See* 17 U.S.C. § 509(a) (repealed 2008).

17. H.R. REP. No. 110-617, at 23 ("[T]his Act will . . . institutionalize key IP enforcement within the Executive Office of the President . . . .").

18. *See* 18 U.S.C. § 2323; Brief of Amici Curiae Electronic Frontier Foundation, Center for Democracy and Technology, & Public Knowledge in Support of Puerto 80's Petition for Release of Seized Property at 1, Puerto 80 Projects, S.L.U. v. United States, No. 11-3983 (S.D.N.Y June 20, 2011) [hereinafter Brief of Amici Curiae] ("[T]he provisions purportedly authorize the government to seek in rem warrants for the seizure of property used to commit infringement.").

19. *See* Robert Lieske, *Civil Forfeiture Law: Replacing the Common Law with a Common Sense Application of the Excessive Fines Clause of the Eighth Amendment*, 21 WM. MITCHELL L. REV. 265, 276 (1995).

20. *See* J. W. Goldsmith, Jr.-Grant Co. v. United States, 254 U.S. 505, 508–11 (1921) (an early U.S. Supreme Court case affirming civil forfeiture of a car used to illegally transport fifty-eight gallons of distilled spirits for which taxes had not been paid). Originating from admiralty cases involving seizure of ships and other goods, civil forfeiture has evolved to cover tax evasion, bootleg liquor, and drug cases. *See* Ann Chaitovitz, Charisma Hampton, Kevin Rosenbaum, Aisha Salem, Tom Stoll & Albert Tramposch, *Responding to Online Piracy: Mapping the Legal and Policy Boundaries*, 20 COMMLAW CONSPECTUS 1, 4 (2011).

Civil forfeiture focuses on property, requiring *in rem* jurisdiction,[21] and is based on the legal fiction that the property itself can be found guilty.[22] In order to subject property to forfeiture, the government must show probable cause that the property in question was used in connection with, or is the proceed of, an illegal activity.[23] Since jurisdiction is asserted over the property itself, early Supreme Court jurisprudence established the notion that property could be seized regardless of the culpability of its owner.[24] This notion survives in civil forfeiture law today.[25]

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21. *See* Lieske, *supra* note 19, at 271 (defining *in rem* jurisdiction required for civil forfeiture as "jurisdiction against the thing"). The critical distinction between forfeiture statutes is whether it is civil or criminal because each has its own jurisdictional requirement. Whereas civil forfeiture claims assert jurisdiction *in rem* over the property, criminal forfeiture statutes require *in personam* jurisdiction, which is jurisdiction based on the person, and thus implicate constitutional rights before the property can be seized. *Id.* at 271. The Pro IP Act also contains a criminal forfeiture provision, but that is out of the scope of this Note. *See* 18 U.S.C. § 2323(b).

22. *See* Lieske, *supra* note 19, at 266–67 (explaining that by focusing the relevant inquiry on whether the property in question is innocent or guilty, the government can circumvent an individual's constitutional rights); *see also* Mike Masnick, *DOJ: This Case Has Nothing To Do With Puerto 80; Now Here Is Why Puerto 80 Is Guilty*, TECHDIRT (Aug. 30, 2011, 9:09 AM), http://www.techdirt.com/articles/20110829/13225415732/doj-this-case-has-nothing-to-do-with-puerto-80-now-here-is-why-puerto-80-is-guilty.shtml. Masnick explained the government's argument in its reply to Puerto 80's motion to dismiss Rojadirecta's forfeiture proceedings:

> Specifically, the government is claiming that its sole reason for trying to forfeit the domain (and for seizing it in the first place) is that "those domain names themselves facilitated the commission of a recognized crime." That is, it argues that Puerto 80 is wasting its time in suggesting that *Puerto 80* did not engage in criminal copyright infringement, because the government has not charged Puerto 80 with anything. It's just claiming that the domains themselves are property used to commit a crime, and therefore can be forfeited.

Mike Masnick, *More & Bigger Mistakes Discovered In Homeland Security's Domain Seizures*, TECHDIRT (Dec. 22, 2010, 9:56 AM), http://www.techdirt.com/articles/20101222/02112912376/more-bigger-mistakes-discovered-homeland-securitys-domain-seizures.shtml

23. *See* Lieske, *supra* note 19, at 271 (arguing that probable cause is a low threshold for the government to meet).

24. *See id.* at 276–78 (discussing two early Supreme Court admiralty cases involving the seizure of ships due to the illicit conduct of individuals other than the ship's owner). "The Court reasoned that the culpability of the owner of the ship was not relevant because '[t]he thing is here primarily considered as the offender, or rather the offence is attached primarily to the thing.' " *Id.* at 277 (quoting The Palmyra, 25 U.S. (12 Wheat.) 1, 14 (1827)).

25. *See, e.g.*, *infra* Section II.B (explaining that linking sites have been seized pursuant to Section 2323's civil forfeiture authority because they link to websites that host the allegedly infringing content and thus "facilitate" the commission of a crime, despite the fact that neither the sites nor their operators are liable for criminal copyright infringement); *see also* Government's Memorandum of Law In Opposition To The Motion By Claimant Puerto 80 Projects, S.L.U. To Dismiss The Verified Complaint at 3, United States v. The Following

The Pro IP Act added 18 U.S.C. § 2323, which provides for civil forfeiture of property that is used to facilitate, or is the proceed of, certain enumerated intellectual property crimes, including criminal copyright and trademark counterfeiting.[26] Section 2323 incorporates the civil forfeiture procedures of the Civil Asset Forfeiture Reform Act of 2000,[27] which follows the Federal Rules of Criminal Procedure's rules for obtaining a search warrant.[28] Federal agents submit a sworn affidavit to a neutral federal magistrate. If the magistrate finds there is probable cause that the property is connected to the commission of criminal copyright infringement or trademark counterfeiting, the magistrate issues a seizure warrant.[29] Only then does the government initiate forfeiture proceedings against the property.

In order to understand the process afforded to domain names under Operation In Our Sites, it is important to note the difference between seizure and forfeiture—two related but distinct concepts. *Temporarily* taking custody of property related to a crime is seizure of that property.[30] The Fourth Amendment dictates that a lawful seizure of property be accompanied by a

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Domain Names: rojadirecta.org, and rojadirecta.com, No. 11-4139 (S.D.N.Y. Aug. 26, 2011). In the *Rojadirecta* case, the Government explains that the action is against the domain name Rojadirecta, not against its operator Puerto 80:

> [T]he Government has neither charged Puerto 80 with a crime, nor has it filed a civil lawsuit against that company. Instead, and as the Complaint makes absolutely clear, the Government has brought a civil action against certain property—an *in rem* proceeding against two domain names that facilitated the commission of criminal copyright infringement and are thus subject to forfeiture pursuant to Section 2323(a)(I) of Title 18, United States Code.

Id.

26. 18 U.S.C. §§ 2323(a)(1)(B)–(C) (2006):

> The following property is subject to forfeiture . . . (B) [a]ny property used, or intended to be used, in any manner or part to commit or facilitate the commission of any offense referred to in subparagraph (A); (C) [a]ny property constituting or derived from any proceeds obtained directly or indirectly as a result of the commission of an offense referred to in subparagraph (A).

Id.

27. 18 U.S.C. § 2323(a)(2) (referencing 18 U.S.C. §§ 981–987 in mandating that "[t]he provisions of chapter 46 relating to civil forfeitures shall extend to any seizure or civil forfeiture under this section").

28. *See* 18 U.S.C. § 981(b)(2) ("Seizures pursuant to this section shall be made pursuant to a warrant obtained in the same manner as provided for a search warrant under the Federal Rules of Criminal Procedure . . . .").

29. *See infra* Section I.C.2 (discussing the process ICE and the IPR Center use in seizing a domain name pursuant to the authority of §§ 2323 and 981).

30. *See* Terry Hart, *Feds Seize Domain Names*, COPYHYPE (Dec. 6, 2010), http://www.copyhype.com/2010/12/feds-seize-domain-names/.

warrant issued upon probable cause that describes with particularity the thing to be seized.[31] Seizure in the online context differs from traditional seizure in that the government requires the domain name registry to redirect a suspected domain name to display a banner explaining that the site has been seized,[32] whereas traditionally seizure involves taking physical control over a tangible item.[33] Forfeiture, on the other hand, is the *permanent* involuntary divestiture of property to the government or other party without compensation due to breach or default of a legal obligation or commission of a crime.[34] Thus, property is forfeited to the U.S. government if it was used in the commission of a crime. Under Operation In Our Sites, the domain names are first temporarily seized pursuant to a warrant in order to

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31. *See* U.S. Const. amend. IV. *But see* United States v. James Daniel Good Real Prop., 510 U.S. 43 (1993). The Court in *James Daniel* explains that the inquiry does not end at the Fourth Amendment:

> Though the Fourth Amendment places limits on the Government's power to seize property for purposes of forfeiture, it does not provide the sole measure of constitutional protection that must be afforded property owners in forfeiture proceedings. So even assuming that the Fourth Amendment were satisfied in this case, it remains for us to determine whether the seizure complied with our well-settled jurisprudence under the Due Process Clause.

Id. at 52.

32. *See supra* Figure 1.

33. *See* Brief of Amici Curiae, *supra* note 18, at 2. The Brief explains that seizure in the virtual context is a new application of the traditional seizure doctrine:

> The term 'seizure' is a misnomer in this context. One normally thinks of seizure in connection with the appropriation of real goods, such as counterfeit handbags or cars used in the commission of a crime. In these cases, however, the government has used section 2323 to require service providers to lock domain names pending transfer to the government, and to direct those domains to a web page announcing they have been seized.

Id. at 2; *see also infra* Section I.C.2 (discussing the process of seizing and forfeiting a domain name); *infra* notes 82–84 and accompanying text (summarizing the technical features of the domain name system in order to explain how seizure of a domain name works in comparison to seizure of a tangible, physical item).

34. Hart, *supra* note 30; *see* BLACK'S LAW DICTIONARY (9th ed. 2009) ("The loss of a right, privilege, or property because of a crime, breach of obligation, or neglect of duty."); *see also* Mike Masnick, *Breaking News: Feds Falsely Censor Popular Blog For Over A Year, Deny All Due Process, Hide All Details*, TECHDIRT (Dec. 8, 2011, 8:29 AM), http://www.techdirt.com/articles/20111208/08225217010/breaking-news-feds-falsely-censor-popular-blog-over-year-deny-all-due-process-hide-all-details.shtml (explaining that the difference between seizure and forfeiture is that the forfeiture process "allow[s] the government to keep the seized property and never have to give it back."); Lieske *supra* note 19, at 271 (discussing the difference between a criminal and civil forfeiture proceeding); *supra* note 21.

commence a civil forfeiture proceeding at a later date.[35] However, commentators have noted that this process of seizure in order to facilitate a forfeiture proceeding, in reality, seems like the sole purpose of the action under § 2323, rather than how the Act dictates the process.[36]

Although the Pro IP Act does not explicitly state that the civil forfeiture authority under § 2323 can be used to seize domain names involved in selling counterfeit goods and distributing pirated content, this is how the DOJ and ICE have interpreted their authority.[37] Neither the statute, the legislative history, nor any other document concerning the Act's creation discusses domain names or websites (used as the subject of the seizure and forfeiture).[38] Even commentators discussing the bill at the time of its development did not foresee the government interpreting the Act to apply to the online context. And no one anticipated that the Act would allow for the seizure of domain names.[39] However, this creative use of § 2323 is the legal basis for Operation In Our Sites.[40]

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35. Hart, *supra* note 30 ("In short: property is *seized* to commence a civil forfeiture proceeding, and it is *forfeited* if it was used in the commission of a crime."); *see* Mike Masnick, *Tell The White House to Stop Illegally Seizing & Shutting Down Websites*, TECHDIRT (June 11, 2012, 8:21 AM), http://www.techdirt.com/articles/20120609/00050419257/tell-white-house-to-stop-illegally-seizing-shutting-down-websites.shtml ("ICE has been seizing (and in some cases forfeiting—which, in this context, means keeping, as 'seizure' is supposed to be a temporary process) website URLS.").

36. *See DOJ/FBI Seize Domain Names by Warrant*, TECH LAW JOURNAL (Aug. 21, 2012), *available at* http://www.techlawjournal.com/topstories/2012/home.asp [hereinafter *DOJ/FBI Seize Domain Names*] ("Nevertheless, this action [of seizures to facilitate forfeiture] has the appearance, not of pre-trial seizure of property for the purposes of preservation of property pending likely forfeiture upon final conviction, but rather of seizure as the sole object and purpose of the action."); *see, e.g.*, *infra* Section II.C.1 (discussing Dajaz1 and how the government obtained three extensions, far surpassing the statutorily mandated timeline dictating how long the government has to initiate forfeiture proceeding if the seizure is contested).

37. *See* Brian T. Yeh, *Online Infringement and Counterfeiting: Legislation in the 112th Congress*, 1099 PLI/PAT 693, 704 (2012); *DOJ/FBI Seize Domain Names*, *supra* note 36 (discussing the "innovative way" that the DOJ and ICE have begun using civil forfeiture authority).

38. *See* Yeh, *supra* note 37; *DOJ/FBI Seize Domain Names*, *supra* note 36. "Domain names" do not exist in the discourse surrounding the Pro-IP Act's enactment:

> Section 2323 does not refer to forfeiture of domain names. Moreover, a word search of the House and Senate floor debates on passage of the PRO-IP Act discloses that the subject of domain name seizures or forfeitures did not come up. Hence, the DOJ is using a statute that the Congress did not foresee would apply to domain names to seize domain names.

DOJ/FBI Seize Domain Names, *supra* note 36.

39. *See* William Patry, *What Does It Mean To Be Pro-IP?*, THE PATRY COPYRIGHT BLOG (Dec. 10, 2007), http://williampatry.blogspot.co.uk/2007/12/what-does-it-mean-to-be-pro-

2. *Intellectual Property Enforcement Coordinator and the Joint Strategic Plan*

To carry out the increased intellectual property effort, the Pro IP Act also created the IPEC, a position in the executive branch.[41] The IPEC's role is to coordinate the efforts of multiple federal agencies charged with intellectual property enforcement.[42] Under the Act, the IPEC is responsible for chairing an intellectual property advisory committee, developing a Joint Strategic Plan against piracy and counterfeiting with the advisory committee, assisting agencies and departments in the implementation of the Joint Strategic Plan, facilitating policy guidelines to help coordination among various actors in the government with respect to enforcement, offering suggestions to the President and Congress on possible improvements in enforcement efforts, and carrying out any other function with respect to intellectual property enforcement as the President may require.[43] Nicknamed the "intellectual property czar," Victoria Espinel was appointed as the IPEC in December 2009 and is the only person to serve in that position thus far.[44] She believes that enforcing intellectual property law is key in keeping the United States a leader in the global arena for innovation and creative expression, protecting the American economy by securing jobs domestically and guaranteeing a market for exports abroad, and ensuring public safety and health by reducing the risk that counterfeit products can pose.[45]

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ip.html (arguing against adoption of the civil forfeiture bill on the grounds that the capacity of this provision is huge considering forfeiture is usually targeted at large scale criminal drug actors, but more importantly failing to foresee its application to internet domain names); *see also* Masnick, *Tell The White*, *supra* note 35 (discussing how even famed intellectual scholar William Patry did not anticipate that the civil forfeiture provision would be used to seize domain names, rather it was thought to be used to seize tangible property).

40. *See* Masnick, *Tell The White*, *supra* note 35 (explaining that ICE and DOJ pointed to section 2323 as "legal cover" for its actions of seizing domain names under Operation In Our Sites).

41. *See* 15 U.S.C. § 8111 (2006) ("The President Shall appoint, by and with the advice and consent of the Senate, an Intellectual Property Enforcement Coordinator . . . to serve within the Executive Office of the President."); *see also* JOINT STRATEFIC PLAN 2010, *supra* note 14, at 49 (explaining that the Obama Administration put the IPEC within the Executive's Office of Management and Budget). It is helpful to note that the IPEC is a position within the Executive Branch, not an agency.

42. *See* Victoria Espinel, *About the Office of the U.S. Intellectual Property Enforcement Coordinator (IPEC)*, OFFICE OF MANAGEMENT AND BUDGET, http://www.whitehouse.gov/omb/intellectualproperty/ipec/ (last visited Mar. 30, 2013).

43. *See* 15 U.S.C. § 8111(b)(1).

44. *See* JOINT STRATEGIC PLAN 2010, supra note 14, at 49 ("President Barack Obama nominated Victoria A. Espinel as the first IPEC on September 25, 2009, and the Senate confirmed Espinel on December 4, 2009.").

45. *See* Espinel, *About the Office of the IPEC*, supra note 42.

Under the Pro IP Act,[46] the IPEC is in charge of creating and implementing a Joint Strategic Plan, which is a "framework for coordinating and assessing federal efforts to combat piracy and counterfeiting."[47] The first Joint Strategic Plan was submitted to Congress in June 2010, and substantially similar plans with reiterated policy goals were released in 2011 and 2012.[48] The IPEC worked with many offices, departments, and agencies in the federal government in formulating the plans, including the Office of Management and Budget, DOJ, Federal Bureau of Investigation ("FBI"), ICE, Customs and Border Protection ("CBP"), Department of Health and Human Services, U.S. Patent and Trademark Office ("USPTO"), the U.S. Copyright Office, and many others.[49]

Espinel also solicited public input in her formulation of the first Joint Strategic Plan.[50] Specifically, she asked for comments and detailed recommendations addressing "the costs to the U.S. economy resulting from intellectual property violations, and threats to public health and safety created by infringement . . . and . . . the objectives and content of the Joint Strategic

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46. *See* 15 U.S.C. §§ 8111(b)(1)(B) and 8113(a) (2006).

47. H.R. REP. No. 110-617, at 28 (2008). The House Report describes what the Joint Strategic Plan ("JSP") will include:

> The JSP will include detailed information on the threats of piracy and counterfeiting to the United States economy and to public health and safety; outline the various roles and responsibilities that government agencies will have in tackling intellectual property enforcement efforts; provide priorities and goals that will guide IP enforcement efforts; provide an accounting of the resources that will be needed to carry out the plan; and provide performance measures to gauge the success of the JSP in curbing counterfeiting and piracy.

Id. Note, for clarification, that the House Report uses the term Intellectual Property Enforcement Representative, which was a previous iteration of the current IPEC position. *Id.*

48. *See generally* JOINT STRATEGIC PLAN 2010, *supra* note 14; U.S. INTELLECTUAL PROPERTY ENFORCEMENT COORDINATOR, 2011 JOINT STRATEGIC PLAN ON INTELLECTUAL PROPERTY ENFORCEMENT (June 2011), *available at* http://www.whitehouse.gov/sites/default/files/omb/IPEC/ipec_anniversary_report.pdf [hereinafter JOINT STRATEGIC PLAN 2011]; U.S. INTELLECTUAL PROPERTY ENFORCEMENT COORDINATOR, 2012 JOINT STRATEGIC PLAN ON INTELLECTUAL PROPERTY ENFORCEMENT (June 2012), *available at* http://www.whitehouse.gov/sites/default/files/omb/IPEC/ipec_two-year_anniversary_report.pdf [hereinafter JOINT STRATEGIC PLAN 2012]. The act requires the IPEC to submit the Joint Strategic Plan to the Committees on the Judiciary and the Committees on Appropriates of both the House and the Senate. *See* 15 U.S.C. § 8113(b).

49. JOINT STRATEGIC PLAN 2010, supra note 14, at 49.

50. See JOINT STRATEGIC PLAN 2010, *supra* note 14, at 1 ("To prepare this Joint Strategic Plan, my office worked closely across numerous Federal agencies and departments and with significant input from the public. We heard from a broad array of Americans and received more than 1,600 public comments with specific and creative suggestions.").

Plan and other specific recommendations for improving the Government's intellectual property enforcement efforts."[51] In their responses, various intellectual property public interest organizations such as Public Knowledge and the Electronic Frontier Foundation ("EFF") recommended that the IPEC, in its creation of the Joint Strategic Plan, focus only on the worst actors that cause the most public harm or act willfully, a higher standard than merely infringing.[52] These groups also emphasized that any enforcement action must be clearly weighed because bad social and economic outcomes could result if enforcement of private rights is taken too far.[53] Furthermore, the IPEC met with industry leaders on both sides of the intellectual property debate and incorporated their concerns into its plan.[54]

The result of these discussions is a Joint Strategic Plan that focuses on six categories of action items: "(1) leading by example; (2) increasing transparency; (3) ensuring efficiency and coordination; (4) enforcing our rights internationally; (5) securing our supply chain; and (6) building a data-driven Government."[55] The subsequent plans, although much shorter than the earlier plans, incorporate these concepts by explaining the significant progress the Administration has made in intellectual property enforcement by seizing numerous domain names, obtaining significant convictions, and encouraging voluntary actions by the private sector.[56] The IPEC has also

51. Coordination and Strategic Planning of the Federal Effort Against Intellectual Property Infringement: Request of the Intellectual Property Enforcement Coordinator for Public Comments Regarding the Joint Strategic Plan, 75 FED. REG. 35, 8137 (Feb. 23, 2010). However, some question whether the IPEC was as open-minded in soliciting public opinion as she appeared. *See* John Bergmayer, IPEC Asks Loaded Questions, But Public Can Respond, PUBLIC KNOWLEDGE, (Feb. 25, 2010), http://www.publicknowledge.org/node/2922 ("While I'm confident that public participation will give the office the information it needs to recommend a balanced approach to IP enforcement priorities, the leading questions and loaded words used in the Notice are a cause for concern.").

52. See Public Comment from Public Knowledge, Electronic Frontier Foundation, American Association of Law Libraries, Medical Library Association, Special Libraries Association, and U.S. PIRG, In the Matter of Coordination and Strategic Planning of the Federal Effort Against Intellectual Property Infringement: Request of the Intellectual Property Enforcement Coordinator For Public Comments Regarding the Joint Strategic Plan, at 6–8, *available at* https://www.eff.org/files/filenode/PK-EFF-et-al-JSP-comments.pdf.

53. *See id.* at 2–6.

54. *See* JOINT STRATEGIC PLAN 2010, *supra* note 14, at 49.

55. *Id.* at 7. See *id.* at 7–22 for a description of each of the six categories of enforcement strategy action items and what specifically each entails.

56. *See* JOINT STRATEGIC PLAN 2011, *supra* note 48, at 1; JOINT STRATEGIC PLAN 2012, *supra* note 48, at 1. The IPEC, Victoria Espinel, boasted:

> It has been two years since my office issued the Joint Strategic Plan on Intellectual Property Enforcement, which set forth thirty-three action

released two annual reports—in February 2011 and March 2012—detailing the progress of intellectual property enforcement that the Plan called for.[57] Specifically, the Annual Reports highlighted the steps the IPEC, along with the agency she works with, has taken to implement the plans.[58]

B. THE ESTABLISHMENT OF OPERATION IN OUR SITES

The 2010 Joint Strategic Plan developed by IPEC lays out numerous policy reasons for increasing intellectual property enforcement.[59] These policy reasons include "growth of the U.S. economy; creation of jobs for American workers and support for U.S. exports; promotion of innovation and security of America's competitive advantage in the global economy; protection of consumer trust and safety; national and economic security; and validation of rights as protected under our Constitution."[60] Most of these reasons are rooted in the concern that the United States will lose its global economic advantage if its intellectual property is not protected.[61]

> items organized under six overarching principles that contribute to protecting innovation, strengthening the economy, supporting American jobs, and promoting export in intellectual property-related sectors. I am pleased to share highlights of our success over the past two years.

JOINT STRATEGIC PLAN 2012, *supra* note 48, at 1.

57. *See* U.S. INTELLECTUAL PROPERTY ENFORCEMENT COORDINATOR, 2010 ANNUAL REPORT ON INTELLECTUAL PROPERTY ENFORCEMENT (Feb. 2011), *available at* http://www.whitehouse.gov/omb/intellectualproperty [hereinafter ANNUAL REPORT 2010]; U.S. INTELLECTUAL PROPERTY ENFORCEMENT COORDINATOR, 2011 ANNUAL REPORT ON INTELLECTUAL PROPERTY ENFORCEMENT (Mar. 2012), *available at* http://www.whitehouse.gov/omb/intellectualproperty [hereinafter ANNUAL REPORT 2011].

58. *See* ANNUAL REPORT 2010, *supra* note 57, at 1–2. Espinel explains the work the federal government has done since the implementation of the first Joint Strategic Plan:

> Since we issued the Strategy, the U.S. Government has been hard at work implementing the action items and taking concrete steps to improve enforcement. I want to highlight a few of our important steps . . . . In the Strategy, we committed to increase criminal enforcement. Among the major law enforcement actions: [ICE, DOJ, and the IPR Center] launched Operation In Our Sites and obtained court orders to seize the domain names of more than 90 infringing websites.

Id. at 1–2; *see also* ANNUAL REPORT 2011, *supra* note 57, at 1–3.

59. *See* JOINT STRATEGIC PLAN 2010, *supra* note 14, at 3–5.

60. *Id.* at 3–4.

61. *See id.* at 4–5. Explaining the United States' dominant role in the intellectual property sector:

> The U.S. is a global leader in developing new technologies in intellectual property-related industries. . . . [W]e lead the way in bringing new, life-changing pharmaceuticals and medical devices to consumers, developing environmentally-conscious technologies, creating innovative software products, building new communication networks and producing films,

In order to carry out the 2010 strategic plan for protecting intellectual property online, the Obama Administration established Operation In Our Sites. Because the Internet has facilitated the explosive growth of piracy and counterfeiting, which significantly impacts the U.S. economy, hampers consumer trust, and poses health and safety risks,[62] the Obama Administration prioritized and increased intellectual property enforcement.[63] Accordingly, in June 2010, the administration initiated Operation In Our Sites as a multi-agency program designed to investigate and combat sales of counterfeit goods and criminal copyright infringement committed over the Internet by seizing the domain names suspected of engaging in these illicit activities.[64] Operation In Our Sites is only one out of thirty-three intellectual property enforcement operations undertaken by the IPEC in the Joint Strategic Plans.[65]

C. OPERATION IN OUR SITES ON THE GROUND: WHAT HAS REALLY BEEN HAPPENING

To really understand Operation In Our Sites, it is important to understand what this operation is actually doing day-to-day. This Section discusses the actors carrying out the operation,[66] the statutorily mandated process for seizing and forfeiting a domain name, and the specific seizure actions that the government has carried out.[67]

> music and games craved by consumers throughout the World. However, our leadership in the development of creative and innovative products and services also makes us a global target for theft.

Id.

62. *Id.* at 3–4.

63. *See* Chaitovitz, *supra* note 20, at 2 ("In response to the challenges posed by online piracy and counterfeiting, the Obama Administration has made intellectual property protection and enforcement a high priority.").

64. *See* Press Release, National Intellectual Property Rights Coordination Center, Operation In Our Sites, *available at* www.iprcenter.gov/reports/fact-sheets/operation-in-our-sites/view [hereinafter IPR Press Release].

65. *See* ANNUAL REPORT 2010, supra note 57, at 33–57 (discussing the various programs that the IPEC has initiated for increased intellectual property enforcement across the entire federal government; the first Joint Strategic Plan introduced in 2010 included thirty-three specific actions intended to improve intellectual property enforcement by the federal government); *see also* Victoria Espinel, *Progress on the Intellectual Property Enforcement Strategy*, THE WHITE HOUSE BLOG (Feb. 7, 2011, 4:00 PM), http://www.whitehouse.gov/blog/2011/02/07/progress-intellectual-property-enforcement-strategy.

66. But note that this is not an exhaustive list as the inter-agency relationship the operation calls for is always expanding.

67. Although this list may seem long, it is important because it is difficult to find a comprehensive and thorough list of all the seizure actions in one place.

1. *Who Is Involved?*

In creating the IPEC, the Pro IP Act attempts to address a need to coordinate intellectual property enforcement efforts across all the federal agencies whose interests are implicated. Thus, different interagency partnerships are created to carry out over thirty action items specified in the Joint Strategic Plans.[68] For example, the IPR Center,[69] which ICE leads and manages,[70] coordinates the Operation In Our Sites effort across many federal agencies. Over the course of its existence, the IPR Center has grown to incorporate the expertise of twenty-one member agencies in an interagency partnership charged with sharing information, developing initiatives, coordinating enforcement actions, and conducting investigations related to intellectual property theft.[71] Member agencies include the FBI, CBP, the DOJ, the Food and Drug Administration, and the USPTO, along with international agencies such as INTERPOL.[72]

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68. *See supra* note 65 and accompanying text.

69. *See generally* JOINT STRATEGIC PLAN 2010, *supra* note 14, at 28. The IPR Center was established in order:

> To more effectively counter the flood of infringing products, ICE established the IPR Center. The mission of the IPR Center is to address and combat predatory and unfair trade practices that threaten our economic stability and national security, restrict the competitiveness of U.S. industry in world markets, and place the public's health and safety at risk.

Id.

70. *See generally id.* ("ICE is a lead U.S. agency for the investigation of criminal intellectual property violations involving the illegal production, smuggling, and distribution of counterfeit and pirated products . . . . [It] seizes for forfeiture goods associated with these investigations, such as those that infringe on trademarks, trade names, and copyrights.").

71. *See* News Release, U.S. Immigration and Customs Enforcement, European Law Enforcement Agencies and Europol Seize 132 Domain Names Selling Counterfeit Merchandise in 'Project Cyber Monday 3' and 'Project Transatlantic Operations' (Nov. 26, 2012), *available at* http://www.ice.gov/news/releases/1211/121126washingtondc.htm ("[T]he IPR Center uses the expertise of its 21 member agencies to share information, develop initiatives, coordinate enforcement actions, and conduct investigations related to IP theft. Through this strategic interagency partnership, the IPR Center protects the public's health and safety, the U.S. economy and the war fighters.").

72. *See About Us*, NATIONAL INTELLECTUAL PROPERTY RIGHTS COORDINATION CENTER (last visited Jan. 22, 2013), http://www.iprcenter.gov/about-us. Also included are agencies within other governments including the Royal Canadian Mounted Police, the Mexican Revenue Service, and EUROPOL. *Id. See also* JOINT STRATEGIC PLAN 2011, *supra* note 14, at 1 ("[T]he following now have representatives at the [IPR Center]: four previously unrepresented Federal agencies, a foreign government, and for the first time, an international law enforcement body.").

2. *The Process of Seizing and Forfeiting a Domain Name*

Domain name seizures generally follow a set series of steps, informed by Chapter 46 of Title 18.[73] Before initiating a seizure, federal officers investigate the websites suspected of selling counterfeit goods or illegally distributing copyrighted material in the United States.[74] For counterfeit goods, ICE and the IPR Center purchase these goods through suspected websites and have them shipped to federal agents.[75] The goods generally have to cross the U.S. border because most of the suspected websites operate abroad.[76] Once the agents have received the goods, they contact the rights holders to confirm that the goods are infringing or otherwise illegal.[77] For copyrighted material, the ICE and the IPR Center investigate possible violations by downloading or streaming the content and then checking with the rights holder to confirm that the content is protected.[78] The ICE and IPR Center present the evidence obtained from these investigations to DOJ attorneys, who work alongside ICE and the IPR Center to determine whether there is enough evidence to obtain a seizure order for each site investigated.[79] A determination is then made whether the domain names are registered in the United States, even if the website is operated overseas.[80]

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73. *See* 18 U.S.C. §§ 981(b)(2), 983 (2006) (setting out the procedure the government must follow in conducting civil forfeiture).

74. *See* Letter from John Morton, Director, U.S. Immigration and Customs Enforcement, to Rep. Zoe Lofgren (May 9, 2011), *available at* http://www.wyden.senate.gov/download/?id=598c62fd-47ad-4372-828e-7694b6821e3f ("Although ICE cannot discuss the ongoing investigations of any seized domain name or a matter in litigation, ICE conducted thorough independent investigations of each seized domain name prior to obtaining court-ordered seizure warrants.").

75. *See* Brian W. Brokate & Christina L. Winsor, *Developments In Anti-Counterfeiting Enforcement and Remedies—What's Working And What's Not?*, 1103 PLI/PAT 795, 827 (2012); *see, e.g.*, News Release, ICE, 'Operation Strike Out,' *infra* note 128 ("During the course of the operation, federal law enforcement agents made undercover purchases of sport jerseys from online retailers suspected of selling counterfeit goods.").

76. *See* Chaitovitz, *supra* note 20, at 12–13; s*ee, e.g.*, News Release, ICE, 'Operation Strike Out,' *infra* note 128 ("In most instances, the counterfeit goods were shipped directly into the United States from suppliers in other countries using international express mail.").

77. *See* Brokate & Winsor, *supra* note 75, at 827.

78. *See* Affidavit in Support of Application for Seizure Warrant at ¶¶ 8, 17, 28, United States v. The Following Domain Names: rojadirecta.org, and rojadirecta.com, No. 11-MAG-262 (S.D.N.Y. Jan. 31, 2011) [hereinafter Rojadirecta Affidavit]; Application and Affidavit for Seizure Warrant at ¶¶ 79–82, In re Seizure of The Following Domain Names: RapGodFathers.com, et al., No. 10-2822M (C.D. Cal. Nov. 17, 2010), *available at* http://s3.amazonaws.com/nytdocs/docs/543/543.pdf [hereinafter Dajaz1 Affidavit].

79. Several other factors are taken into consideration before a determination of whether the site should be seized is made, including: the popularity of the site; whether the website is commercial in nature and is profitable, such as sites that utilize advertisements and

The ICE and IPR Center present affidavits to a federal magistrate judge, who makes an independent probable cause determination.[81] If the judge concludes there is enough evidence of criminal copyright or trademark infringement, he or she grants a seizure order that is served on the domestic domain name registry,[82] not the website operator. Under the seizure order, the domain name registry must restrain and lock the domain name pending completion of the forfeiture proceeding, at which time the domain name's title, rights, and interests are transferred to the U.S. government.[83] The registry is required to redirect the domain name to a different IP address with its own web page. That web page displays a banner stating that the domain name for that website has been seized by the FBI, ICE, and IPR Center pursuant to a seizure warrant under the authority of 18 U.S.C. §§ 981 and 2323.[84] Although the banners differ slightly depending on the nature of the

sell subscriptions or merchandise; and whether the seizure of the domain name would have a substantial impact on piracy. *See* Yeh, *supra* note 37, at 704.

80. *See* 18 U.S.C. § 2323 (2006) (authority that only has jurisdiction over websites registered in the United States); Yeh, *supra* note 37, at 705 ("Only domain names registered within the United States and subject to ICE's jurisdiction may be seized."). *See generally supra* note 82 (noting that all ".com," ".net," and ".org" top-level domains ("TLDs") are managed by American registries); Chaitovitz, *supra* note 20, at 12–13 (noting that because most of these websites are operated in foreign countries and that there may not be any known assets in the United States, seizure of a domain name with U.S. registration is the only remedy available).

81. *See* Yeh, *supra* note 37, at 704 ("In order to issue the warrant, the [magistrate] judge must determine, by a standard of probable cause, that the domain name is being used in violation of federal criminal laws."). *See generally supra* text accompanying note 23.

82. *See generally* Jonathan Weinberg, *ICANN and the Problem of Legitimacy*, 50 DUKE L.J. 187, 194–98 (2000) (defining "registries" and explaining how Internet Protocol and the Domain Name System ("DNS") works). The Internet transfers data and information over numerical Internet Protocol addresses ("IP addresses") that are tied to a network of computers. *Id.* at 194–95. To access a particular website's data, an individual can type in that website's IP address; however, because IP addresses are long and complex series of numbers that are difficult to remember, the DNS was created to associate an IP address with a website's name. *Id.* at 195–96. When a user types in the name of the website, the DNS server corresponds the name to the IP address. *Id.* at 197. All domain names have a suffix, or top-level domain ("TLD"), such as ".com," ".net," and ".org" that identifies what type of website it is. *Id.* at 197–99. Registries are companies that manage a specific type of TLD. *Id.* at 202. For instance, all ".net," ".org," and ".com" TLDs are managed by registries located within the United States. *See* Chaitovitz, *supra* note 20, at 7.

83. *See* Chaitovitz, *supra* note 20, at 7; Brief of Amici Curiae, *supra* note 18, at 2–4 (discussing what seizure of a domain name really entails and how the term is odd in the context of an intangible item).

84. *See supra* Figure 1; Chaitovitz, *supra* note 20, at 7. It is important to note that the seizure of a domain name does not result in the blocking of a website, rather it leaves the IP address and the files associated with the IP address intact so visitors can still see the website by typing in the IP address instead of typing the domain name that has been seized. Chaitovitz, *supra* note 20, at 7–8.

site seized and the agencies involved, they usually contain a statement that willful copyright infringement[85] and intentionally and knowingly trafficking in counterfeit goods[86] are federal crimes that carry serious penalties.[87] Individuals who access a seized domain name will see the banner in place of the content that the website once displayed.[88]

Only then do individuals with an interest in the seized website have an opportunity to try to contest the seizure. The government is required to send written notice to the website operator within sixty days of seizing the domain name or to file a judicial forfeiture action against the property and provide notice of that action to interested parties.[89] The website owner is allowed to file a claim with the agency within the deadline set in the written notice of forfeiture.[90] Within ninety days of filing the claim, the government must file a complaint for forfeiture, include the property in a criminal indictment, or return the property pending the filing of a complaint.[91] During this hearing process to determine the validity of the affidavit supporting the seizure, the government carries the burden of proof to show that the information in the affidavit is correct.[92] If the website owner does not file a petition or claim before the set deadline, the domain name automatically becomes property of the U.S. government subject to the forfeiture provisions.[93] In April 2011, ICE launched a PSA announcement to help raise awareness of the cost of

85. *See* 17 U.S.C. § 506(a) (2006) (defining criminal copyright infringement); 18 U.S.C. §§ 2319(a)–(d) (2006) (detailing the punishments for criminal copyright infringement). Willful copyright infringement is a federal crime that carries penalties for first time offenders of up to five years in federal prison, a $250,000 fine, forfeiture, and restitution. *See* Kravets, *infra* note 221 for this language on the banner.

86. *See* 18 U.S.C. § 2320 (2006). Intentionally and knowingly trafficking in counterfeit goods is a federal crime that carries penalties for first time offenders of up to ten years in federal prison, a $2,000,000 fine, forfeiture and restitution. 18 U.S.C. § 2320(b)(1)(A).

87. Seizure banner statements are generally very vague and do not clarify if the person visiting the site would be liable for either of these types of violations or if it is the website itself that has committed the crime.

88. *See* News Release, ICE, Houston HIS Seizes, *supra* note 3 ("Under [Operation In Our Sites], 1,719 domain names have been seized since the operation began in June 2010. Since that time, the seizure banner has received more than 112 million individual views.").

89. 18 U.S.C. §§ 983(a)(1)(A)(i)–(ii) (2006).

90. *Id.* § 983(a)(2).

91. *Id.* § 983(a)(3).

92. *Id.* § 983(c)(1).

93. *See* News Release, ICE, Houston HIS Seizes, *supra* note 3 ("If no petitions or claims are filed, the domain names become the property of the U.S. government."); *see also* Masnick, *Breaking News*, *supra* note 34 (discussing the process of seizure and forfeiture and explaining the timeline between the two).

intellectual property theft, which it placed on forfeited websites in lieu of the seizure banner after the website had been forfeited.[94]

Director Morton of ICE explains there are other avenues afforded to individuals who wish to obtain due process and regain their domain name:

> Under existing federal law, the website owner may also choose to demand return of the property through the law enforcement agency itself, by writing a letter to ICE. If ICE does not return the website within 15 days, the owner can petition the U.S. District Court in which the seizure warrant was issued or executed. Further, if the website owner determines he or she does not wish to pursue either of these avenues of due process, a challenge may be filed directly with the law enforcement agency conducting [a] forfeiture action under administrative processes.[95]

However, publicized events and public commentary have brought to light the difficulty website owners face in challenging their property seizure in court or through the agencies themselves.[96] Specifically, opponents have pointed out that despite ICE's claims about how rarely people challenge the seizure of their sites (and thus justifying the large number of sites that have automatically been forfeited), many website operators have indeed contacted agents in an effort to regain their domain names.[97] However, they claim that the government uses intimidation tactics by threatening to file charges or stalling their requests in order to persuade these parties not to file the claims.[98]

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94. *See* News Release, U.S. Immigration and Customs Enforcement, New Public Service Announcement Launched to Raise Intellectual Property Theft Awareness 65 Seized Websites Now Feature PSA (Apr. 26, 2011), *available at* https://www.ice.gov/news/releases/1104/110426washingtondc.htm.

95. *See Promoting Investment and Protecting Commerce Online: Legitimate Sites v. Parasites, Part II: Hearings Before the H. Subcomm. on Intellectual Property, Competition, and the Internet*, 112th Cong. 117 (2011) (statement of John Morton, Director, ICE).

96. *See infra* Section II.C (discussing the only two examples of sites successfully challenging their seizure and forfeiture of their sites: the Dajaz1 and Rojadirecta cases).

97. *See* Masnick, *Breaking News*, *supra* note 34 ("[T]he government began stalling like mad when contacted by representatives for domain holders seeking to get their domains back. ICE even flat out lied to the public, stating that no one was challenging the seizures, when it *knew* full well that some sites were, in fact, challenging.").

98. *See id.* ("If that doesn't happen, the government can effectively just keep the property, so it tends to rely on intimidation and threats towards anyone who indicates plans to ask for their property back (usually in the form of threatening to file charges).").

3. *Timeline of the Specific Phases*

Since its inception in late June 2010, Operation In Our Sites has seized 1,719 domain names[99] allegedly involved in criminal copyright or counterfeit goods violations.[100] Many types of domain names have been targeted, including linking sites,[101] websites engaged in direct copyright infringement, and websites selling counterfeit goods, including sports items, luxury goods, and pharmaceuticals.[102] There have been ten reported phases and numerous subsequent seizure actions associated with Operation In Our Sites, which are described below.[103] An overview of the specific actions taken under this operation is helpful in understanding the scope of this enforcement action, as it is difficult to find one cohesive list detailing all the seizures.[104]

June 30, 2010, marked the first phase of Operation In Our Sites with the seizure of nine domain names and confiscation of $84,000.[105] The IPR

99. *See* News Release, ICE, Houston HIS Seizes, *supra* note 3 (stating Operation In Our Sites has seized 1,719 domain names up through December 2012, of which over 690 domains have been forfeited to the U.S. government).

100. There is some discrepancy about the exact number of sites that have been seized by Operation In Our Sites as reports from IPEC, ICE, and IPR Center sometimes have varying accounts of the total amount of sites seized per phase and whether a seizure of a domain name was pursuant to Operation In Our Sites or some other Initiative pursued by IPEC.

101. A "linking" site is a type of website that provides access, or "links," to other websites where pirated content is hosted. News Release, U.S. Immigration and Customs Enforcement, New York Investigators Seize 10 Websites That Illegally Streamed Copyrighted Sporting and Pay-per-view Events (Feb. 2, 2011), *available at* http://www.ice.gov/news/releases/1102/110202newyork.htm. These types of sites are popular because they allow visitors to easily browse content and locate streams or downloads that is usually very difficult to find with regular search engines. *Id.*

102. *See* IPR Press Release, *supra* note 64 ("Operation In Our Sites specifically targets websites and their operators that distribute counterfeit and pirated items over the Internet, including counterfeit pharmaceuticals and pirated movies, television shows, music, software, electronics, and other merchandise as well as products that threaten public health and safety.").

103. Since the beginning of 2012, ICE press releases and IPEC's IPS Spotlights has not designated an action as a "version" as previously done in 2010 and 2011, making the different phases of Operation In Our Sites more difficult to track. However, for each action in 2012, some authority from a federal agency involved with Operation In Our Sites has claimed the seizure actions were part of the domain name seizure initiative, whether on its own or in conjunction with another operation authorized by IPEC in its Joint Strategic Plans.

104. It is important to note that it is very difficult to find a complete compilation of all the seizure actions taken under Operation In Our Sites and that is why this Note focuses on such a task.

105. *See* News Release, U.S. Immigration and Customs Enforcement, "Operation In Our Sites" Targets Internet Movie Pirates, ICE, Manhattan U.S. Attorney Seize Multiple Web Sites for Criminal Copyright Violations (June 30, 2010), *available at* https://www.ice.gov/news/releases/1006/100630losangeles.htm; ANNUAL REPORT 2010,

Center, ICE, and the U.S. Attorney's Office targeted domain names allegedly involved in the illegal online distribution of first-run and other copyright-protected movies and television shows.[106] NinjaVideo.net, a popular website that provided pirated high quality online content for download, was seized during this phase.[107] Over a year later, in September and October 2011, four people tied to the NinjaVideo.net website pled guilty to their involvement in its operation.[108] The IPR Center also seized TVshack.net, a popular linking site, which is a type of website that provides access—or "links"—to other websites where the content is actually hosted.[109] Although the website did not directly offer pirated material by hosting the content, the website's operator, Richard O'Dwyer, a twenty-four-year-old college student from England, was facing possible extradition to the United States for criminal charges of copyright infringement.[110]

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supra note 57, at 42. Although ICE claimed that only nine websites were seized, IPEC claims that fifty-nine domain names were seized. ANNUAL REPORT 2010, *supra* note 57, at 42. This is because fifty of those sites were parked or unused sites related to one of the other nine seized domain names. ANNUAL REPORT 2010, *supra* note 57, at 42

106. Some of the content that these sites allegedly made available included copies of "The Karate Kid," "Prince of Persia," and "Sex and the City 2." *See* Press Release, U.S. Attorney for the Southern District of New York, Manhattan Federal Court Orders Seizures Of Seven Websites For Criminal Copyright Infringement In Connection With Distribution Of Pirated Movies Over The Internet, at 2 (June 30, 2010), *available at* http://www.justice.gov/usao/nys/pressreleases/June10/websitedomainnameseizurepr.pdf.

107. *See* News Release, ICE, Targets Internet Movie Pirates, *supra* note 105.

108. *See, e.g.*, *Leader of NinjaVideo.net Website Sentenced to 22 Months In Prison For Criminal Copyright Conspiracy*, U.S. ATTORNEY'S OFFICE FOR THE EASTERN DISTRICT OF VIRGINIA PRESS RELEASE (Jan. 6, 2012), *available at* http://www.justice.gov/usao/vae/news/2012/01/20120106ninjavideonr.html (reporting that Hana Amal Beshara was sentenced to serve twenty-two months in prison and repay $209,827 that she personally obtained from her work on NinjaVideo.net); *Co-Founder of NinjaVideo.net Website Sentenced in Virginia to 14 Months in Prison for Criminal Copyright Conspiracy*, U.S. DEPARTMENT OF JUSTICE PRESS RELEASE (Jan. 20, 2012), *available at* http://www.justice.gov/opa/pr/2012/January/12-crm-079.html (reporting that Matthew David Howard Smith was sentenced to serve fourteen months in prison and ordered to repay $172,387).

109. *See* News Release, ICE, Targets Internet Movie Pirates, *supra* note 105; *see also supra* note 101 (describing what a linking site is). "Linking websites are popular because they allow users to quickly browse content and locate illegal streams that would otherwise be more difficult to find." News Release, ICE, New York Investigators, *supra* note 101.

110. *See* Somini Sengupta, *U.S. Pursuing a Middleman in Web Piracy*, N.Y. TIMES, July 12, 2012, http://www.nytimes.com/2012/07/13/technology/us-pursues-richard-odwyer-as-intermediary-in-online-piracy.html?pagewanted=all&_r=0. O'Dwyer is awaiting his appeal of the U.K.'s Home Secretary Teresa May's official approval of the extradition request from U.S. authorities. The appeal is schedule for December 4 at the Royal Courts of Justice in London. *See TV Shack Admin Richard O'Dwyer "Almost Certain" To Be Extradited To US*, TORRENTFREAK (Oct. 25, 2012), http://torrentfreak.com/tv-shack-admin-richard-odwyer-almost-certain-to-be-extradited-to-us-121025/.

The second phase took place in November 2010 to coincide with Cyber Monday[111] and thus was nicknamed the "Cyber Monday Crackdown."[112] ICE investigated online retailers of counterfeit hard goods, like sports equipment, athletic apparel, handbags, and sunglasses, along with DVDs, music, and software—websites that sold goods that people would have otherwise bought as holiday gifts.[113] Dajaz1.com, the popular hip-hop blog whose seizure led to widespread criticism of Operation In Our Sites, was seized during this phase.[114]

On February 1, 2011, ten domain names related to sporting events were seized under the third phase, which purposefully coincided with the NFL's 2011 Super Bowl.[115] The affidavit supporting the seizure warrant describes the websites in question as popular linking sites that allegedly provide access to pirated streaming telecasts of major sporting events that were copyrighted by the NFL, NBA, NHL, WWE, and UFC.[116] The U.S. Attorney for the Southern District of New York, Preet Bharara, explained financial hardships that the sports industry endures when its content is illegally distributed online and noted that this was the policy reason for pursuing the websites.[117] ICE shut down two websites under the Rojadirecta domain name with American registries, despite the domain being declared non-infringing two years prior by a Spanish Court.[118] The struggle of Puerto80, the company that owns the

111. Cyber Monday is a marketing term for the Monday immediately following Black Friday, the Friday following Thanksgiving in the United States. The term was created to persuade people to shop online for holiday gifts.

112. *See* Chaitovitz, *supra* note 20, at 6.

113. *See* News Release, U.S. Immigration and Customs Enforcement, ICE Seizes 82 Website Domains Involved In Selling Counterfeit Goods As Part of Cyber Monday Crackdown (Nov. 29, 2010), *available at* https://www.ice.gov/news/releases/1011/101129 washington.htm; ANNUAL REPORT 2010, supra note 57, at 77.

114. *See* Dajaz1 Affidavit, *supra* note 78. The seizure warrant was solicited in November 2010 during Cyber Monday phase. Dajaz1 Affidavit, *supra* note 78.

115. *See* News Release, ICE, New York Investigators, *supra* note 101.

116. *See* Rojadirecta Affidavit, *supra* note 78, ¶¶ 13–14, 24, 41; News Release, ICE, New York Investigators, *supra* note 101 ("Users simply click on a link to begin the process of downloading or streaming to their own computer an illegal broadcast of a sporting event from the third party website that is hosting the stream.").

117. *See* News Release, ICE, New York Investigators, *supra* note 101 (" 'The illegal streaming of professional sporting events over the Internet deals a financial blow to the leagues and broadcasters who are forced to pass their losses off to the fans in the form of higher priced tickets and pay-per-view events . . . .' ").

118. *See* Brief of Amici Curiae, *supra* note 18, at 13–15 (explaining that the site was declared non-infringing by a Spanish Court two years prior to its seizure in the United States and that the U.S. government should afford more deference to a foreign government's determination under a similar copyright infringement claim).

popular sporting domain Rojadirecta, is a famous example of how difficult it is for owners of seized domain names to recapture their property.[119]

The fourth phase took place a few days later on Valentine's Day 2011.[120] Eighteen domain names allegedly selling luxury counterfeit goods were seized under the name "Operation Broken Hearted."[121] The goods allegedly violated the trademarks of brands such as Breitling, Burberry, Chanel, Coach, Dolce & Gabbana, Gucci, Louis Vuitton, Nike, Omega, Patek Philipe, Prada, Rolex, Tiffany & Co., and Timberland.[122] According to ICE, these were "deals too good to be true."[123]

The fifth phase of Operation In Our Sites took place in May 2011. Five domain names were seized, including three for involvement in the sale of counterfeit goods and two for pirated content.[124] Both ICE and IPEC's official press releases are very vague about this phase.

In July 2011, ICE seized seventeen domain names during its sixth phase, dubbed "Operation Shoe Clerk."[125] These websites were dedicated to the sales of goods allegedly infringing on the trademarks of brands such as Dolce & Gabbana, Gucci, Lacoste, PUMA, and others.[126] Ryan Breen, the operator of one of the seized sites, was arrested and convicted in the Western District of New York for selling counterfeit merchandise relating to the popular television show *Sons of Anarchy*.[127]

The seventh phase, "Operation Strike Out," coincided with the Baseball World Series in October 2011 and involved a month-long investigation of

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119. *See supra* Section II.C.2 (discussing the struggles Puerto80 went through to regain their domain names after they were seized); Opening Brief and Special Appendix for Petition-Appellant Puerto 80 Projects, S.L.U., Puerto 80 Projects, S.L.U. v. United States, 11-3390, at 7–9 (2d Cir. Sept. 16, 2011) [hereinafter Opening Brief for Puerto 80] (discussing Puerto 80's attempts to engage the government in negotiations for five months after the government had already seized its two American websites without any notice).

120. *See* News Release, U.S. Immigration and Customs Enforcement, Sweetheart, But Fake, Deals Put On ICE "Operation Broken Hearted" Protects Consumers From Counterfeit Valentine's Day Goods (Feb. 14, 2011), *available at* https://www.ice.gov/news/releases/1102/110214washingtondc.htm.

121. *See id.*

122. *See id.*

123. *Id.*

124. *See* ANNUAL REPORT 2011, supra note 57, at 24, 101.

125. *See* News Release, U.S. Immigration and Customs Enforcement, Homeland Security Investigations Brings Counterfeit Designers to Heel (July 28, 2011), *available at* http://m.ice.gov/news/releases/1107/110728washingtondc.htm?f=m.

126. *See id.* Other Brands include New Era, Nike, The North Face, Oakley, Ralph Lauren, Ray-Ban, Tory Burch, UGG, and the popular T.V. show "Sons of Anarchy." *Id.*

127. *See id.* ("The website offered counterfeit t-shirts for sale using the show's trademark brand without the permission of the Fox Broadcasting Company.").

websites engaging in the sale of allegedly counterfeit sports memorabilia, including websites suspected of violating copyrights and trademarks owned by MLB, NBA, NFL, and NHL.[128] The result of this phase was the seizure of fifty-eight domain names and 5,347 counterfeit items with a Manufacturer's Suggested Retail Price of $134,862.[129]

On November 28, 2011, the second "Cyber Monday"[130] initiative was concluded as the eighth phase of Operation In Our Sites.[131] The government seized 152 websites involved in the sale of allegedly counterfeit merchandise,[132] representing an eighty percent increase in the number of sites seized compared to the first "Cyber Monday."[133]

ICE seized twelve domain names in the ninth phase on December 4, 2011.[134] The websites were aimed at the American-Korean community and were selling allegedly pirated copies of movies, television shows, software, and workout DVDs.[135] Two website operators involved with the domains were arrested and indicted on November 30, 2011.[136]

Operation Fake Sweep, the tenth phase, ran from October 2011 until February 2012.[137] The sweep was a nationwide enforcement effort that took place over several months leading up to the NFL's Super Bowl XLVI.[138] The part of the investigation associated with Operation In Our Sites resulted in the seizure of 307 domain names, including 291 websites selling allegedly

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128. *See* News Release, U.S. Immigration and Customs Enforcement, ICE Announces Results of 'Operation Strike Out' (Oct. 31, 2011), *available at* https://www.ice.gov/news/releases/1110/111031washingtondc.htm.

129. *See id.* By the end of October, the banners that replaced the seized domain names had been viewed over seventy-five million times. *Id.*

130. *See supra* note 111 (explaining "Cyber Monday").

131. *See* News Release, U.S. Immigration and Customs Enforcement, Operation In Our Sites Protects American Online Shoppers, Cracks Down on Counterfeiters (Nov. 28, 2011), *available at* https://www.ice.gov/news/releases/1111/111128washingtondc.htm.

132. ICE's initial news release on the eighth phase states that 150 websites were seized but two more sites were seized after the publication of the news release, totaling 152 domain names seized pursuant to the second Cyber Monday. *Id.*

133. *See id.*

134. ICE did not issue an official news release for the seizure as it generally does with every phase of the operation; however, IPEC's Intellectual Property Spotlight December 2011 Edition mentions the seizure and subsequent ICE News Releases acknowledge this phase as the ninth. *See* ANNUAL REPORT 2011, *supra* note 57, at 25, 114.

135. *See* ANNUAL REPORT 2011, *supra* note 57, at 25, 114.

136. *See id.*

137. *See* News Release, U.S. Immigration and Customs Enforcement, Special Agents and Officers Seize More Than $4.8 Million in Fake NFL Merchandise and Seize 307 Websites During 'Operation Fake Sweep (Feb. 2, 2012), *available at* https://www.ice.gov/news/releases/1202/120202indianapolis.htm.

138. *See id.*

counterfeit game-related sportswear and sixteen websites offering allegedly illegal streaming of sporting telecasts.[139]

The DOJ announced the seizure of more than $1.5 million in proceeds from the online sale of counterfeit sports apparel made in China on May 11, 2012.[140] The seizure stemmed from an IPR Center investigation of commercial websites involved in the sale of allegedly counterfeit goods.[141] It is important to note that this operation marked the beginning of ICE and the IPEC stopping the designation of specific seizure actions as separate phases, despite continuing to credit subsequent actions as part of the Operation In Our Sites initiative.

"Project Copy Cat" marked the two-year anniversary of Operation In Our Sites in July 2012, and resulted in the seizure of seventy domain names.[142] The targeted domain names were websites that were designed to copy original websites, so even the most discerning shopper would have a very difficult time differentiating between a counterfeit site and the original site it copied.[143]

August 2012 was the first time that Operation In Our Sites seized domain names related to cell phone applications ("apps").[144] The three domain names seized were allegedly engaged in the illegal distribution of copies of copyrighted Android cell phone apps through alternative online markets.[145] The IPR Center, ICE, DOJ, and FBI coordinated their efforts with international law enforcement, such as the Dutch and French governments, because the servers storing these apps were hosted in other countries.[146] ICE, in justifying its new direction, explained that "software

139. *See id.*

140. *See* Press Release, U.S. Department of Justice, Department of Justice Seizes More Than $1.5 Million in Proceeds from the Online Sale of Counterfeit Sports Apparel Manufactured in China (May 11, 2012), *available at* http://www.justice.gov/opa/pr/2012/May/12-crm-610.html.

141. *See id.*

142. *See* News Release, U.S. Immigration and Customs Enforcement, ICE-Led IPR Center Seizes 70 Websites Duping Consumers Into Buying Counterfeit Merchandise (July 12, 2012), *available at* https://www.ice.gov/news/releases/1207/120712washington.htm.

143. *See id.* ("The 70 websites . . . closely mimicked legitimate websites selling authentic merchandise and duped consumers into unknowingly buying counterfeit goods. Many of the websites so closely resembled the legitimate websites that it would be difficult for even the most discerning consumer to tell the difference.").

144. The sites seized were: applant.net, appbucket.net, and snappzmarket.com. *See* Press Release, U.S. Department of Justice, Federal Courts Order Seizure of Three Website Domains Involved in Distributing Pirated Android Cell Phone Apps (Aug. 21, 2012), *available at* http://www.justice.gov/opa/pr/2012/August/12-crm-1033.html.

145. The sites seized were: applant.net, appbucket.net, and snappzmarket.com. *See id.*

146. *See DOJ/FBI Seize Domain Names*, *supra* note 36.

apps have become an increasingly essential part of our nation's economy and creative culture."[147]

In early October 2012, ICE announced "Project Bitter Pill," an investigation that resulted in the seizure of 686 websites involved in the selling of allegedly illegal counterfeit pharmaceuticals.[148] The two-month-long investigation involved many international actors, such as INTERPOL,[149] and was the largest single seizure action to date under Operation In Our Sites.[150]

ICE continued its trend of cracking down on Cyber Monday by seizing 101 domain names involved in the sale of allegedly counterfeit merchandise online in late November 2012[151] and another eighty-nine websites in December 2012.[152] However, "recognizing the global nature of Internet crime, this year the IPR Center partnered with Europol, who, through its member countries, executed coordinated seizures of foreign-based top-level domains such as .eu, .be, .dk, .fr, .ro and .uk."[153] The result was another thirty-one domain names seizures abroad.[154] ICE Director Morton emphasized that these allegedly infringing sites are part of an international problem that should be addressed through international partnerships.[155]

Although this list of the various seizure actions taken by ICE, IPR Center, and DOJ is long, it is important to emphasize the vast amount of domain names affected across many different types of intellectual property industries. By conceptualizing in one place the various publicized seizure actions, it not only draws upon the breadth of work that Operation In Our

147. Press Release, DOJ, Federal Courts Order Seizure, *supra* note 144.

148. *See* News Release, U.S. Immigration and Customs Enforcement, HIS Seizes 686 Websites Selling Counterfeit Medicine to Unsuspecting Consumers (Oct. 4, 2012), *available at* https://www.ice.gov/news/releases/1210/121004washingtondc.htm.

149. *See id.*

150. The IPR Center and ICE have always claimed authority to seize domain names involved in the sale of counterfeit pharmaceuticals due to the threat to national health and safety. *See* IPR Press Release, *supra* note 64; *see also supra* note 102 and accompanying text. However, this effort was the first time Operation In Our Sites has seized pharmaceutical sites on such a large scale.

151. *See* News Release, ICE, European Law Enforcement Agencies, *supra* note 71 ("These websites were set up to dupe consumers into unknowingly buying counterfeit goods as part of the holiday shopping season.").

152. *See* News Release, ICE, Houston HIS Seizes, *supra* note 3 ("89 domain names were seized. . . . This brings the total number of domain names seized for Cyber Monday to 190. This is the third year that the IPR Center has targeted websites selling counterfeit products online in conjunction with Cyber Monday.").

153. News Release, ICE, European Law Enforcement Agencies, *supra* note 71.

154. *See id.*

155. *See id.* ("Our partnerships enable us to go after criminals who are duping unsuspecting shoppers all over the world. This is not an American problem, it is a global one and it is a fight we must win.").

Sites is responsible for in a mere two and a half years, but also emphasizes how many people may have had their rights implicated.

II. WHAT'S ALL THE FUSS ABOUT? ISSUES SURROUNDING OPERATION IN OUR SITES

Our system of intellectual property rights only functions if there is proper enforcement; however, how to strike a proper balance between enforcement efforts to protect the rights holders and the individual rights of the website operators and their visitors is a hotly contested issue. Although the IPEC created the Joint Strategic Plans to strengthen intellectual property enforcement across federal agencies, Operation In Our Sites's process of seizing domain names without prior notice to website owners has arguably violated constitutional rights. Analyzing the potential (and realized) risks of this process is important in determining whether this enforcement effort is one that is working and that should be continued.

A. CONSTITUTIONAL ISSUES

1. *(Lack of) Due Process*

The process of seizing domain names under Operation In Our Sites is an *in rem ex parte* forfeiture, which does not afford the website owners any prior notice.[156] However, the opportunity to defend oneself against allegations of wrongdoing prior to the imposition of remedial measures is highly valued in the U.S. Constitution.[157] Due process limits *ex parte* orders to extraordinary circumstances, so only in extreme cases may the government deprive a

156. *See supra* note 21 (defining *in rem*). *Ex parte* is defined as "Done or made at the instance and for the benefit of one party only, and without notice to, or argument by, any person adversely interested; of or relating to court action taken by one party without notice to the other." BLACK'S LAW DICTIONARY (9th ed. 2009).

157. *See* U.S. CONST. amend. V ("No person shall . . . be deprived of life, liberty, or property, without due process of law."); United States v. James Daniel Good Real Prop., 510 U.S. 43, 53 (1993) ("The right to prior notice and a hearing is central to the Constitution's command of due process."); *see also* David Makarewicz, *5 Reasons Why the US Domain Name Seizures Are Unconstitutional*, TORRENTFREAK (Mar. 12, 2011), http://torrentfreak.com/5-reasons-why-the-us-domain-seizures-are-unconstitutional-110312/. Makarewicz explains the importance of due process:

> In many ways, the whole point of due process is to protect citizens from wrongful Government action. The Supreme Court has explained that the right to notice and a hearing prior to a government seizure is for the purpose of enabling an individual "to protect his use and possession of property from arbitrary encroachment-to minimize substantively unfair or mistaken deprivations of property."

Id.

person of his or her property without advance notice and a hearing.[158] When the government seizes a domain name, the constitutionality of the seizure turns on whether the notice and hearing required by the Constitution must occur before or after the seizure takes place.[159]

Supporters of the *in rem ex parte* seizure process emphasize that domain names are a type of property that constitutes an extraordinary situation, such that no prior notice is required.[160] First, the public has an interest in preventing the continued use of websites that are allegedly engaged in criminal copyright violations or distributing counterfeit goods.[161] Second, there is a special need to keep the website owners in the dark about the pending seizure because the nature of domain names makes them transient; website owners can move them out of the jurisdictional reach of ICE under the Pro IP Act or can destroy the domain names before the government commences civil forfeiture proceedings.[162] Third, government officials in the DOJ, ICE, and the IPR Center—not self-interested parties—are initiating the seizures.[163] Supporters within the federal government seem content with

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158. *See* Fuentes v. Shevin, 407 U.S. 67, 90–91 (1972). The *Fuentes* Court explained why *ex parte* orders are generally reserved for extraordinary situations:

> There are 'extraordinary situations' that justify postponing notice and opportunity for a hearing. These situations, however, must be truly unusual. Only in a few limited situations has this Court allowed outright seizure without opportunity for a prior hearing. First, in each case, the seizure has been directly necessary to secure an important governmental or general public interest. Second, there has been a special need for very prompt action. Third, the State has kept strict control over its monopoly of legitimate force: the person initiating the seizure has been a government official responsible for determining, under the standards of a narrowly drawn statute, that it was necessary and justified in the particular instance.

Id. (citations omitted).

159. *See* Hart, *supra* note 30.

160. *See Fuentes*, 407 U.S. at 90–91 (discussing the three unusual circumstances that qualify for seizure without prior notice and hearing).

161. *See* Hart, *supra* note 30. Hart explains why domain names fall under *Fuentes'* three-factors:

> The seizure permits the US "to assert *in rem* jurisdiction over the property in order to conduct forfeiture proceedings, thereby fostering the public interest in preventing continued illicit use of the property and in enforcing criminal sanctions", domain names "could be removed to another jurisdiction, destroyed, or concealed, if advance warning of confiscation were given", and "seizure is not initiated by self-interested private parties", but by federal officials.

Id.

162. *See id.*

163. *See id.*

the fact that, due to these factors, a neutral magistrate's determination that there is probable cause to seize the domain name is the only due process required.[164] Lastly, supporters of the process claim that seizing domain names poses less risk than seizing other types of real property. Since the domain name seizure leaves the IP address of the website intact, the website owner and his visitors can still access the website's content after seizure has occurred.[165]

On the other hand, in an open letter to ICE, Senator Ronald Wyden expressed his concerns with the way Operation In Our Sites has functioned on the ground. He emphasized that the operation does not afford those whose domain names have been seized a proper means to defend themselves and the content on their websites.[166] Senator Wyden "worr[ied] that domain name seizures could function as a means for end-running the normal legal process in order to target websites that may prevail in full court."[167] This is especially true given that it is unclear if website operators can be liable when the website's users post the infringing content, or when another site—to which the operator merely links—hosts the infringing content.[168]

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164. *See* Makarewicz, *supra* note 157 (discussing the exchange between IPEC Victoria Espinel and Congresswoman Zoe Lofgren at a House Judiciary Subcommittee on Intellectual Property, Competition, and the Internet). "Espinel attempted to argue that a judge's sign off amounted to due process. Lofgren tersely countered by saying 'With all due respect, judges sign a lot of things.' " *Id.*

165. *See* Hart, *supra* note 30. Some would argue that seizures of domain name do not pose any extra risk:

> The "risk of error" involved in seizing domain names is no higher than those involved in the seizure of personal property: the content and servers are still available to the owner, the site can still be accessed through the IP address, and it is relatively easy for the owner to acquire a new domain name—something many of those affected did within hours of having their domains seized.

Id.; *see also supra* note 84 (explaining that when the government seizes a domain name it requires the domain name registry to redirect the domain name to an IP address that displays the government banner; however, the website can still be accessed by typing in the original IP address).

166. *See* Letter from Sen. Ron Wyden to John Morton, *supra* note 6.

167. *Id.*

168. *See* Flava Works, Inc. v. myVidster.com, 689 F.3d 754 (7th Cir. 2012) (explaining the plaintiff video producer was not likely to succeed against a social bookmarking website because in its contributory copyright infringement claim, where the defendant did not induce or significantly increase the amount of infringement); *see also* Mike Masnick, *Rojadirecta Points Court to FlavaWorks Ruling Concerning Infringement On Linking Sites*, TECHDIRT (Aug. 14, 2012, 8:24 PM), http://www.techdirt.com/articles/20120814/00493120013/rojadirecta-points-court-to-flavaworks-ruling-concerning-infringement-linking-sites.shtml ("Even if they don't quite agree with Posner's ruling [in *Flava Works v. myVidster*], just the fact that there are significant questions over whether or not linking/embedding are legal, should raise

Other opponents have also noted that the lack of prior notice and full adversarial hearing increases the likelihood of an improper seizure.[169] David Sohn, Senior Counsel for CDT explains that "[w]hen law enforcement makes its case unopposed and a domain name owner has no opportunity to defend itself, mitigating factors and overbreadth issues may not come to light before the name is seized of blocked. In a one-sided process, the risk of mistakes or overaggressive action is high."[170] Although not officially part of Operation In Our Sites, ICE's actions in seizing 84,000 websites that it falsely believed to be engaged in child pornography under "Operation Save Our Children" is a telling tale of the high risk and overbreadth of the *ex parte* forfeiture process.[171] In February 2011, ICE seized the domain name mooo.com that allows users to register free subdomains in the form of "username.mooo.com," which hosts many personal and small business websites."[172] Because of ICE's failure to realize that the subdomains were entirely distinct from each other, its actions in seizing the parent domain of mooo.com in an attempt to seize one subdomain name suspected of child pornography resulted in the blocking of thousands of innocent websites whose visitors were wrongfully told that the website they were visiting hosted the obscene content.[173] This is merely one example of many instances in which the lack of due process adversely affects website owners and visitors.

2. *Free Speech and Prior Restraint*

Some of the targeted websites not only served copyrighted content and counterfeit goods, but also contained legitimate, lawful speech, including

significant questions about the "willfulness" needed to show criminal copyright infringement.").

169. *See Promoting Investment and Protecting Commerce Online: Legitimate Sites v. Parasites. Part 1: Hearing Before the H. Comm. on the Judiciary, Subcomm. on Intellectual Property, Competition, and the Internet*, 112th Cong. 37 (2011) [hereinafter *Online Commerce Hearing I*] (statement of David Sohn, Senior Policy Counsel, Center for Democracy & Technology), *available at* http://judiciary.house.gov/hearings/hear_03142011.html.

170. *Id.*

171. *See* Ernesto, *U.S. Government Shuts Down 84,000 Websites, 'By Mistake,'* TORRENTFREAK (Feb. 16, 2011), http://torrentfreak.com/u-s-government-shuts-down-84000-websites-by-mistake-110216/ ("The above failure again shows that the seizure process is a flawed one, as has been shown several times before in earlier copyright infringement sweeps. If the Government would only allow for due process to take place, this and other mistakes wouldn't have been made.").

172. *See* Brief of Amici Curiae, *supra* note 18, at 4–5.

173. *See id.* Website visitors were informed through the use of a similar banner system as Operation In Our Sites, however these banners indicated that child pornography was the reason for the seizure. *See* WIKIPEDIA OPERATION PROTECT OUR CHILDREN BANNER, https://en.wikipedia.org/wiki/File:Operation_Protect_Our_Children_banner.jpg (last visited Jan. 22, 2012).

conversations from chat rooms and posts in discussion forums and blogs. Although the First Amendment does not protect infringing content,[174] legitimate, uninfringing speech should be afforded the full protection granted by the Constitution. The First Amendment has in place substantive and procedural safeguards to help protect speech that is legitimate while enjoining content that is infringing.[175] The issue then becomes whether the civil forfeiture provision of the Pro IP Act and its process of seizing domain names without any prior notice and only based on a mere showing of probable cause violates the First Amendment protection of free speech.[176]

Opponents of Operation In Our Sites's method of seizing domain names prior to any adversarial hearing have claimed that this process can amount to a type of censorship because these are websites that contain some lawful content, rather than just criminal items, warranting more due process protection in order to comply with the First Amendment.[177] This is

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174. *See* Eldred v. Ashcroft, 537 U.S. 186, 221 (2003) (holding that copyright's safeguards are adequate to cover First Amendment concerns); Harper & Row, Publishers, Inc. v. Nation Enters., 471 U.S. 539, 555–60 (1985) (same); Mark A. Lemley & Eugene Volokh, *Freedom of Speech and Injunctions in Intellectual Property Cases*, 48 DUKE L.J. 147, 150 (1998) ("[T]he Supreme Court has held that copyright law is a constitutionally permissible speech restriction; though copyright law restricts what we can write or record or perform, the First Amendment doesn't protect copyright-infringing speech against such a restraint.").

175. *See* Henry P. Monaghan, *First Amendment "Due Process,"* 83 HARV. L. REV. 518, 518 (1970) ("[C]ourts have begun to construct a body of procedural law which defines the manner in which they and other bodies must evaluate and resolve first amendment claims—a first amendment "due process," if you will."). "It is in the obscenity area that the courts have been most concerned with procedural matters. There the Supreme Court has fashioned a series of specific rules designed to prevent insensitive procedural devices from strangling first amendment interests." *Id.* at 518. Monaghan identifies the First Amendment procedural test as whether the procedure shows "the necessary sensitivity to freedom of expression." *Id.* at 519.

176. *See generally id.* at 532–39 (discussing first amendment "due process" as applied to *ex parte* seizures).

177. *See* Statement of Rep. Zoe Lofgren, Lofgren, Wyden Question Response to Seizure Inquiries, *available at* http://lofgren.house.gov/index.php?option=com_content&view=article&id=637&Itemid=130. Representative Lofgren is one of the most vocal advocates against Operation In Our Sites in Congress. She explains:

> ICE's response fails to address legitimate concerns about "Operation In Our Sites." Domain seizures without due process are a form of censorship. In this instance, our government has seized domains with nothing more than the rubber stamp of a magistrate, without any prior notice or adversarial process, leaving the authors of these sites with the burden of proving their innocence. While this might be enough for the seizure of stolen cars or knock-off handbags, it is not enough for web sites and speech on the Internet. It is disturbing that this administration is treating them the same.

Id.

particularly the case with the seizure of linking sites, websites that do not host the allegedly infringing content but rather contain speech that encourages its visitors to click on links that will lead them to third-party sites that host the infringing content.[178] Since the seizures take down entire websites rather than target specific unlawful content, ICE's domain name seizure methods can amount to a violation of an innocent party's First Amendment right to free speech in cases where different individuals author different parts of the website.[179]

The First Amendment not only protects the right to distribute legal speech, but also "necessarily protects the right to receive it."[180] The websites targeted under Operation In Our Sites all had visitors from the United States, thus implicating those visitors' rights when a site with lawful content was seized.

More importantly, seizure of protected speech without a prior determination that the content is infringing can amount to a prior restraint under the Constitution.[181] Prior restraints are extremely "serious and the least tolerable infringement on First Amendment rights" and are highly disfavored by our jurisprudence.[182] When an item to be seized involves speech, rather than just a tangible instrumentality of the illegal action, more due process is required to make sure that the First Amendment safeguards are not violated. The Court has held "that mere probable cause to believe a legal violation has transpired is not adequate to remove books or films from circulation."[183] Thus, by analogy to the online context, the mere showing of probable cause required under the civil forfeiture provisions of the Pro IP Act is not enough to guard against First Amendment concerns that are unique to domain

178. *See supra* note 101 (describing what a linking site is).

179. *See Online Commerce Hearing I*, *supra* note 169, at 9 (statement of David Sohn, Senior Policy Counsel, Center for Democracy & Technology). Seizures can affect both "lawful and unlawful content, including non-Web content like email or instant messaging connections." *Id.*

180. Martin v. City of Struthers, 319 U.S. 141, 143 (1943). This First Amendment right to receive free speech applies to content delivered over the Internet as well. *See* Reno v. ACLU, 521 U.S. 844, 874 (1997).

181. *See* Hart *supra* note 30. Infringing content is not protected by the First Amendment. *Id.* "The term 'prior restraint' is used to describe administrative and judicial orders *forbidding* certain communications when issued in advance of the time that such communications are to occur." Alexander v. United States, 509 U.S. 544, 550 (1993).

182. Neb. Press Ass'n v. Stuart, 427 U.S. 539, 559 (1976). *See also* Bantam Books, Inc. v. Sullivan 372 U.S. 58, 70 (1963) ("Any system of prior restraints of expression comes to this Court bearing a heavy presumption against its constitutional validity. . . . We have tolerated such a system only where it operated under judicial superintendence and assured an almost immediate judicial determination of the validity of the restraint." (citations omitted)).

183. Fort Wayne Books, Inc. v. Indiana, 489 U.S. 46, 66 (1989).

names. In order to comply with the First Amendment, a judicial determination as to whether the domain names contained infringing material needed to be made, not just a magistrate's determination that there exists probable cause that such material exists on the site.[184] The Court has explained that in order for a prior restraint by an administrative agency to be constitutional, the process of seizing the speech "must include: (a) an adversarial hearing, (b) with the burden on the censor, and (c) with clear opportunity for prompt judicial review and appeal."[185]

Proponents of Operation In Our Sites compare the seizure of websites engaged in allegedly illegal conduct to the confiscation of obscene materials and argue that these seizures are thus consistent with the strictures of the First Amendment.[186] Since the First Amendment does not protect obscene materials,[187] these materials would be akin to infringing speech and courts should follow the same analysis in determining if the seizure violates First Amendment protections.

In making sure that the seizure of obscene content does not amount to a seizure of lawful speech as well, courts must ensure that the government has met two requirements.[188] First, the seizure of the obscene material must comply with the Fourth Amendment, which requires that the government "describe the targeted material with specificity" in the instrument granting seizure.[189] Supporters argue that Operation In Our Sites obviously meets this requirement because the government seizes the domain names pursuant to "valid, specific warrants" based on probable cause issued by a neutral magistrate, who makes an independent determination from information contained in a sworn affidavit.[190]

The Supreme Court has also indicated that it treats seizures done for preservation of evidence differently from forfeiture, regarding the former as

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184. *See* Brief of Amici Curiae, *supra* note 18, at 12.

185. *Id.* at 11.

186. *See* Chaitovitz *supra* note 20, at 11–12.

187. *But see* Miller v. California, 413 U.S. 15, 23–24 (1973) (expressing concern about categorically stating that no obscene content is protected and trying to limit state-obscenity laws).

188. *See* Chaitovitz *supra* note 20, at 11–12.

189. *See id.* at 11; *see also* Stanford v. Texas, 379 U.S. 476, 485 (1965) ("[T]he constitutional requirement that warrants must particularly describe the 'things to be seized' is to be accorded the most scrupulous exactitude when the 'things' are books, and the basis for their seizure is the ideas which they contain.").

190. Hart, *supra* note 30 ("There is no question that the government has met this requirement; the seizures were made pursuant to valid, specific warrants issued by a neutral, impartial judge.").

more permissible.[191] Given that a website's content is still accessible after the domain name seizure by typing in the site's IP address, this type of *in rem* seizure falls into the more permissible category. Further, ICE has claimed that the seizure takes place in order to preserve the domain name for the civil forfeiture proceeding, guarding against the possibility that the website owner may take the site down or transfer it beyond the jurisdictional reach of § 2323 if he were afforded prior notice.[192]

The second procedural requirement mandates a judicial determination of whether to impose a final restraint of speech,[193] but supporters claim this determination does not need to occur before the seizure.[194] Since the seizure occurs to preserve the property for the forfeiture proceeding, which must take place within a statutorily mandated period of time,[195] and the website owner can challenge the seizure, proponents argue that Operation In Our Sites meets this second procedural requirement.[196] Proponents also point out that the domain name seizure does not amount to censorship and thus cannot be a final restraint because the website's content can still be accessed by using the site's IP address and the website owner can set up a new domain.[197] However, this argument is somewhat odd because, on one hand, it assumes that a seizure is required in order to preserve the domain name for

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191. *See* Heller v. New York, 413 U.S. 483, 492 (1973)

> [S]eizing films to destroy them or to block their distribution or exhibition is a very different matter from seizing a single copy of a film for the bona fide purpose of preserving it as evidence in a criminal proceeding, particularly where, as here, there is no showing or pretrial claim that the seizure of the copy prevented continuing exhibition of the film.

Id.

192. *But see* Makarewicz, *supra* note 157 (arguing that domain names should be regarded more like real estate that cannot be moved because "A domain . . . cannot be moved or concealed from the Government without defeating the purpose of having a domain in the first place.").

193. *See* Chaitovitz, *supra* note 20, at 12.

194. *See Heller*, 413 U.S. at 489. In prior civil forfeiture cases, in which the government aimed to ultimately suppress the targeted material, the Court "did not require that the adversary proceeding must take place prior to *initial* seizure. Rather, it was held that a judicial determination must occur 'promptly so that administrative delay does not in itself become a form of censorship." *Id.*

195. *See* 18 U.S.C. § 983(a)(1) (2006) (mandating that the government must send written notice of the seizure or file a civil judicial forfeiture action within 60 days of the date of seizure).

196. Hart, *supra* note 30 ("This does not mean that a judicial determination must occur *before* seizure. The Court in *Heller v. New York* said . . . 'a judicial determination need only occur "promptly so that administrative delay does not in itself become a form of censorship." ' ").

197. *See id.* (comparing the seizure of domains to the lawful seizure of the film in *Heller*, stating that domain name seizures are "even less like a form of final restraint").

the forfeiture proceeding while, on the other hand, it assumes that the website owner still has full control over his or her website's content through its IP address. It seems that proponents of Operation In Our Sites are trying to claim two different stances whenever it is convenient for their argument.

B. OTHER CONCERN: LINKING SITES CANNOT BE LIABLE FOR CRIMINAL COPYRIGHT INFRINGEMENT UNDER 17 U.S.C. § 506

Websites that only induce or facilitate copyright infringement—such as linking sites, which only post links to other websites that host the illegal content—are not direct infringers and thus fall outside the scope of criminal copyright law.[198] Although websites for such activities can be held civilly liable for contributory infringement, there is no recognized principle of secondary liability in criminal copyright law. Websites like Dajaz1 and Rojadirecta, along with many other sites accused of criminal copyright infringement, are merely linking sites, and thus very shaky authority exists for these seizures under § 2323 power.

Under § 2323(a)(1)(B), property that was used in facilitating or committing criminal copyright infringement is subject to forfeiture.[199] The purpose of this statute is to hold the property until the owner's conviction and then forfeit the property if the owner is convicted. Therefore, one's property should not be seized pursuant to a forfeiture statute when he or she cannot be convicted of committing the relevant crime under that statute. Although the practical realities of domain name seizures is that a lot of these websites are operated from abroad[200] and thus out of the jurisdictional reach of § 2323 (which is why the statute allows for service on the American domain name registry), it should still follow that the domain names that are subject to forfeiture should only be those that if the operators were within the United States, they would be subject to *criminal* intellectual property violations.

198. *See* 17 U.S.C. § 506(a)(1)(C) (2006). The argument that these linking sites fall under § 506(a)(1)(C), criminal copyright infringement, is very shaky. The "making available" theory of criminal copyright infringement would be wrong because the third-party websites that actually host the infringing content are the sites that "made available" the content in question. *Id.* Rather, it is a better argument that these sites were used to "facilitate the commission of" a § 506 violation by using language and hyperlinks to indicate where the site's visitor could find the infringing content online. *See* 18 U.S.C. § 2323(a)(1)(B) (2006).

199. *See* 18 U.S.C. § 2323(a)(1)(B).

200. *See* Chaitovitz, *supra* note 20, at 12–13 (noting many of the domain names are operated abroad).

C. SPECIFIC EXAMPLES

The domain name seizures of Dajaz1 and Rojadirecta are worth noting. Both sites were seized in the early stages of Operation In Our Sites, and both owners diligently and consistently fought ICE agents, DOJ attorneys, and the IPR Center while attempting to get anyone from the government to speak to them about the status of their seizure and to regain their domains. After prolonged struggles of over a year for each domain, both sites ultimately prevailed in recapturing their websites, despite reduced website traffic that has nearly crippled them. However, their struggles were not in vain because they have shed much-needed light on the unconstitutionality of the process that currently plagues domain names seized pursuant to Operation In Our Sites. Public support for seized domains has centered around the struggles these domains faced, and their advocates have pressed Espinel, Director of ICE Morton, Attorney General Holder, and other key individuals to make domain name seizures follow constitutional and legal norms by incorporating greater transparency in the take-down process.

1. Dajaz1

Dajaz1 is a popular hip-hop blog, which was seized in November 2011 for providing links to four copyrighted songs.[201] However, Dajaz1 was not only a linking site, as described in the affidavit supporting the seizure warrant, but it also served as a blog and place for visitors to post commentary on their favorite artists and rappers.[202] The seizure of the site not only prevented access to the allegedly infringing songs—which were later found to be posted legally with the consent of the rights holders[203]—but also

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201. *See* Masnick, *Breaking News*, *supra* note 34; Masnick, *More & Bigger Mistakes*, *supra* note 22. The four songs include: (1) *Deuces*, by Chris Brown; (2) *Long Gone*, by Nelly; (3) *Fall For Your Type*, by Jamie Fox; (4) *Mechanics*, by Reek Da Villian. Masnick, *More & Bigger Mistakes*, *supra*.

202. *See* Masnick, *Breaking News*, *supra* note 34. On his blog, Masnick follows the Dajaz1 case diligently and notes:

> Those seizures struck us as particularly interesting, because among the sites seized were a bunch of hip hop blogs, including a few that were highly ranked on Vibe's list of the top hip hop blogs. These weren't the kinds of things anyone would expect, when supporters of these domain seizures and laws like SOPA and PROTECT IP talk of 'rogue sites.' Blogs would have lots of protected speech, and in the hip hop community these blogs, in particular, were like the new radio.

Id.

203. *See* Masnick, *Breaking News*, *supra* note 34. The nature of the music industry in the Internet age is now:

> Artists routinely leaked their works directly to these sites in order to promote their albums . . . . The Dajaz1 case become particularly

to the many legitimate and protected blogs hosted on the domain. Access to the commentary on hip-hop was disabled as part of the seizure due to ICE's policy of taking down the entire domain rather than targeting the suspected content.

ICE Agent Andrew Reynolds, a recent college graduate, based his claims of criminal copyright infringement on information he learned from Carlos Linares, VP of Anti-Piracy Legal Affairs for the RIAA.[204] In the affidavit, Reynolds claimed that the songs were in "pre-release" and not authorized for third party distribution over the Internet.[205] To support his claim, Reynolds relied on information he learned from RIAA representatives.[206] What Reynolds failed to realize was that each of the four songs were sent to Dajaz1.com by each perspective rights holder for the purpose of promoting the song.[207] One of the songs listed as infringing was not even represented by the RIAA record label, meaning that Reynolds was not justified in relying on Linares's statement regarding that specific song.[208] Despite this, a magistrate judge granted a seizure order that was served on the domain name registry, requiring it to redirect the domain name to a government IP address displaying the banner that the site engaged in criminal copyright infringement and was seized pursuant to 18 U.S.C. § 2323.

In general, the take-down process for Operation In Our Sites requires that the government notify the website's owner of the seizure within sixty days, which then triggers the owner's right to file a claim in order to contest the seizure.[209] The government then has ninety days to commence a forfeiture proceeding.[210] Although this process is prescribed in the Pro-IP Act, this is not what Dajaz1's lawyer, Andrew Bridges, encountered.[211]

> interesting to us, after we saw evidence showing that the songs that ICE used in its affidavit as 'evidence' of criminal copyright infringement were songs sent by representatives of the copyright holder with the request that the site publicize the works—in one case, even coming from a VP at a major music label.

Id.; *see also* Masnick, *More & Bigger Mistakes*, *supra* note 201.

204. *See* Masnick, *More & Bigger Mistakes*, *supra* note 201.

205. *See* Dajaz1 Affidavit, *supra* note 78, at 56.

206. *See id.*

207. *See* Masnick, *More & Bigger Mistakes*, *supra* note 201.

208. *See* Masnick, *Breaking News*, *supra* note 34 ("In fact, one of the songs involved an artist not even represented by an RIAA label, and Linares clearly had absolutely no right to speak on behalf of that artist.").

209. *See supra* notes 89–91 and accompanying text.

210. *See* 18 U.S.C. § 983(a) (2006) (establishing the steps and durational requirements of seizing and forfeiting under 18 U.S.C. § 2323); Section I.C.2 (describing the process of seizing a domain name).

211. *See* Masnick, *Breaking News*, *supra* note 34.

Rather, the government stalled when contacted by Dajaz1's representatives.[212] However, Dajaz1 was able to file its administrative claim on February 15, 2011, requiring that the government file its forfeiture claim no later than May 16, 2011.[213] After filing this claim, Bridges was informed that the government would begin forfeiture proceedings, but the deadline came and went without notice to anyone at Dajaz1.[214] The government had been seeking secret extensions from the court in order to continue its investigation.[215] It claimed that the order must be kept under seal and that Dajaz1 needed to be kept in the dark because the "filing of a complaint would require the government to reveal . . . information concerning the on-going criminal investigation. The disclosure of that information would likely have an adverse effect on the investigation, if for no other reason than it would indicate that direction and scope of the investigation."[216] Despite incessantly trying to find out any information about the status of Dajaz1, Bridges was left in the dark. He was told that he would just need to trust the government's word; he could not get a redacted version of the order or any information proving that the government actually got three extensions until mid-November 2011.[217]

In the end, despite extending the forfeiture deadline nearly six months, the government decided not to commence the forfeiture process.[218] After Bridges continually asked what the status of the domain name was, the government eventually handed back Dajaz1.com to its owner on December 8, 2011, a month after the last extension expired and over a year after the

212. *See id.* ("After continuing to stall and refusing to respond to Dajaz1's filing requesting the domain be returned, the government told Dajaz1's lawyer, Andrew P. Bridges, that it would begin forfeiture procedures. . . . Then, the deadline for the government to file for forfeiture came and went and nothing apparently happened.").

213. *See* Ex Parte Application For Order Extending For Sixty Days the Deadline For Filing Complaint For Forfeiture at 5, In the Matter of the Seizure of The Internet Domain Name "Dajaz1.com," No. 11-00110 (C.D. Cal. Sept. 8, 2011) [hereinafter Ex Parte Application].

214. *See* Masnick, *Breaking News*, *supra* note 34.

215. *See id.*

216. Ex Parte Application, *supra* note 213, at 5; *see* Masnick, *Breaking News*, *supra* note 34 ("The initial (supposed) secret extension was until July. Then it got another one that went until September. And then *another one* until November . . . or so the government said. When Bridges asked the government for *some proof* that is had actually obtained the extension in question, the government attorney told Bridges that he would just have to 'trust' him.").

217. *See* Ex Parte Application, *supra* note 213.

218. *See* Masnick, *Breaking News*, *supra* note 34.

original seizure of the site.[219] With that came no explanation or apology; rather, the EFF, Wired, and the California First Amendment Coalition worked to get the court documents unsealed, which finally happened in May 2012.[220] The documents reveal that the delay in initiating forfeiture proceedings against Dajaz1 was due to ICE agent Reynolds waiting to hear back from representatives at the RIAA for evidence that the posting of the songs on Dajaz1.com constituted infringement.[221] Opponents of Operation In Our Site's process criticize ICE for seizing Dajaz1 "based on the say-so of the record company guys, and getting secret extensions as they wait for their masters, the record companies, for evidence to prosecute."[222]

As it turned out, the probable cause that Agent Reynolds obtained was a few unsupported statements from a record label executive, which was enough to shut down a popular website for over a year, effectively denying the owners their due process and the site's visitors their First Amendment rights. Dajaz1's attorney, Bridges, criticized the government's actions as "unjustified."[223] Among many points, Bridges compares the seizure of Dajaz1 "to seizing a printing press of the New York Times because the newspaper, in its concert calendar, refers readers to four concerts where the promoters of those concerts have failed to pay ASCAP for the performance licenses."[224] Although the government has never conceded that their actions violated any

219. *See id.* ("[T]he government decided that it would not file a forfeiture complaint . . . and it let the last (supposed) extension expire. Only after Bridges asked *again* for the status of the domain did the government indicate that it would return the domain to its owner.").

220. *See* Mike Masnick, *Judge Lets Feds Censor Blog For Over A Year So The RIAA Could Take Its Sweet Time*, TECHDIRT (May 3, 2012, 4:08 PM), http://www.techdirt.com/articles/20120502/16575418746/judge-lets-feds-censor-blog-over-year-so-riaa-could-take-its-sweet-time.shtml.

221. *See* David Kravets, *Feds Seized Hip-Hop Site for a Year, Waiting for Proof of Infringement*, WIRED (May 3, 2012, 5:00 PM), http://www.wired.com/threatlevel/2012/05/weak-evidence-seizure/.

222. *Id.* (quoting EFF's legal director, Cindy Cohn). Cohn goes on to comment that "[t]his is the RIAA controlling a government investigation and holding it up for a year." *Id.* The RIAA, on the other hand, tried to downplay its involvement in the investigation by stating, "ICE conducted its own independent investigation of the site and ICE along with the Justice Department concluded that there was a basis for seizing the domain name. Rights holders and the RIAA were requested to assist law enforcement and made every attempt to do so in a complete and prompt manner." Masnick, *RIAA Tries To Downplay Its Role*, *supra* note 2.

223. *See* Masnick, *RIAA Tries To Downplay Its Role*, *supra* note 2 (quoting Andrew Bridges).

224. *Id.*

legal or constitutional norms,[225] the Dajaz1 case makes it clear that the federal agents running Operation In Our Sites have not been transparent about whether the website operators are seeking and obtaining the proper process that § 2323 is supposed to afford.

2. Rojadirecta

There are other examples of websites that successfully, yet laboriously, regained their domain name after ICE and the IPR Center seized it. Rojadirecta, for example, is a Spanish sports website owned by Puerto 80, registered with the American company GoDaddy.com, Inc.[226] Pursuant to the third phase of Operation In Our Sites, Rojadirecta was seized on February 1, 2011, under the authority of a warrant issued the by a magistrate judge in the Southern District of New York.[227] According to the affidavit filed in support of seizure, Rojadirecta was targeted because it was a linking site that offered access to third-party websites that contained infringing broadcasts.[228] The warrants were based on ICE's determination that there was enough evidence to amount to probable cause that Rojadiecta had "been used to commit and facilitate criminal copyright infringement."[229] The difference between Dajaz1's case and Rojadirecta's is that after repeated negotiations between Rojadirecta's representatives and the government failed,[230] Rojadirecta decided to sue the government to return their domains, in which the government retaliated by immediately filing to forfeit the

225. *See* Kravets, *supra* note 221 ("The Los Angeles federal prosecutor [in the Dajaz1 case] . . . agreed to unseal the documents, but . . . did so without conceding there was any First Amendment or common law necessity to do so.").

226. *See* Memorandum of Points and Auth. in Support of Puerto 80's Petition for Release of Seized Prop. and in Support of Request for Expedited Briefing and Hearing of Same at 2, Puerto 80 Projects, S.L.U. v. United States, No. 11-3983 (S.D.N.Y. 2011), *appeal granted*, No. 11-3390 (2d Cir. Aug. 19, 2011). Both Rojadirecta.com and Rojadirecta.org were seized but are discussed in the singular "Rojadirecta" because both sites are associated with the same IP address and are virtually the same. *See* Rojadirecta Affidavit, *supra* note 78, ¶ 40(a).

227. *See supra* Section I.C.3 (discussing phase three of Operation In Our Sites); News Release, ICE, New York Investigators, *supra* note 101.

228. *See* Rojadirecta Affidavit, *supra* note 78, ¶¶ 40–44. The affidavit goes on to say that Rojadirecta "provides links to daily live sporting events and Pay-Per-View events, as well as downloadable sporting events or Pay-Per-View event that were previously aired." *Id.* ¶ 40(a).

229. *Id.* ¶ 46.

230. See Opening Brief for Puerto 80, *supra* note 119, at 7–9 (offering a detailed account of every attempt of Rojadirecta's attorneys to engage the government agencies involved in discussions and asking the court for a speedy process to regain control of its domains because the government's actions in stalling had caused significant harms to its business).

domains.[231] After two simultaneous legal cases and much arguing back and forth between Rojadirecta's representatives and DOJ attorneys, the government filed a voluntary dismissal notice on August 29, 2012, nearly eighteen months after the original seizures.[232]

Rojadirecta's counsel, intellectual property scholars Mark Lemley and Ragesh Tangri, set out many arguments in both legal proceedings. First, they argued that due to the nature of Rojadirecta's site, which is not just a linking site but also contains lawful speech, seizing the site without a prior determination of its validity constitutes a prior restraint under the First Amendment's Free Speech Clause.[233] Furthermore, they point out that since Rojadirecta is a linking site, it does not host any of the allegedly infringing content on its domain. Under established case law, mere linking to a site does not qualify as criminal copyright infringement because there is a higher pleading requirement of willfulness that cannot be met by indirect copyright infringement.[234] Also, they point out that Rojadirecta was declared non-infringing by two Spanish courts and that this court should not disregard that in order to uphold generally accepted international norms.[235]

III. CONCLUSION AND THE FUTURE

Protecting intellectual property is essential for promoting the United States's economy, health, and safety, as well continuing the country's position as a powerful leader in the world community. Espinel had it right when she explained that intellectual property is one of the largest and most powerful sectors of our economy. And there is no doubt that the Internet is

231. Mike Masnick, *Feds Tie Themselves In Legal Knots Arguing For Domain Forfeiture In Rojadirecta Case*, TECHDIRT (May 16, 2012, 10:22 AM), https://www.techdirt.com/articles/20120516/05031118941/feds-tie-themselves-legal-knots-arguing-domain-forfeiture-rojadirecta-case.shtml.

232. Mike Masnick, *Oops: After Seizing & Censoring Rojadirecta For 18 Months, Feds Give Up & Drop Case*, TECHDIRT (Aug. 29, 2012, 12:45 PM), https://www.techdirt.com/articles/20120829/12370820209/oops-after-seizing-censoring-rojadirecta-18-months-feds-give-up-drop-case.shtml.

233. Opening Brief for Puerto 80, *supra* note 119, at 15–17; *see* Mike Masnick, *Rojadirecta Sues US Government, Homeland Security & ICE Over Domain Seizure*, TECHDIRT (June 13, 2011, 12:22 PM), https://www.techdirt.com/articles/20110613/12021514673/rojadirecta-sues-us-government-homeland-security-ice-over-domain-seizure.shtml (quoting Rojadirecta's brief in its suit filed against the government).

234. Masnick, *Oops*, *supra* note 232 ("Furthermore, the filing points out that the government totally failed to meet the requirements to show criminal copyright infringement, and notes that the government cannot show that Rojadirecta meets those requirements.").

235. Opening Brief for Puerto 80, *supra* note 119, at 14; *see also* Brief of Amici Curiae, *supra* note 18, at 13–14.

responsible for the great growth in online piracy and counterfeiting that plagues our current day and age. Finding a way to deal with this issue is crucial, yet complex.

Operation In Our Sites was the Obama Administration's partial solution to this growing problem. Although the process may not be perfect as the above discussion of possible constitutional concerns and other issues illustrates, it is a valid concern that most of these website operators are abroad or untraceable or can take their site and move it to another jurisdiction and need to be taken into account. By providing for an *in rem ex parte* forfeiture proceeding that begins with no-prior notice seizure, the IPR Center, ICE, and DOJ are trying to do their best to combat online infringement. Although this system may not be perfect, if the DOJ, ICE, and IPR Center follow the Act's mandates of a specific process of steps with durational limitations, constitutional concerns will be mitigated. Technically, *in rem ex parte* forfeiture has been in U.S. common law for centuries and using it in the online context is a new application of it.

An additional solution would be to offer those affected more transparency. By requiring these agencies to answer questions about that status of the seized domains while adhering to statutory timelines and requirements, constitutional violations would be less likely to arise. In order to ensure these agencies are complying with the need for greater transparency, a penalty that the domain would be automatically returned and no forfeiture proceeding could be filed could be imposed if any violations occur. However, because the current process is replete with constitutional violations—both for website owners and visitors—the Obama Administration should require that the agencies executing the operation establish measures that increase transparency and allow website owners to contest allegations in a manner that complies with due process.

HOW NOT TO CATCH A THIEF: WHY THE ECONOMIC ESPIONAGE ACT FAILS TO PROTECT AMERICAN TRADE SECRETS

Robin L. Kuntz†

"The Cold War is not over, it has merely moved into a new arena: the global marketplace."[1]

Sixteen years ago, with America still recovering from its Cold War-era fear of Soviet spies, members of Congress realized that the nature of foreign espionage had transformed. Foreign enemies (and allies) had traded in their military spies for ones who spied on the trade secrets of American businesses, and this growing threat of economic loss concerned the U.S. government. In an effort to curb the increasing danger that foreign governmental actors posed to the trade secrets of American companies and the U.S. economy at large, Congress enacted the Economic Espionage Act of 1996 ("EEA"), which criminalizes the theft of trade secrets with the intent to benefit a foreign government.[2] The EEA has largely failed in its purpose, and today, economic threats from abroad have grown even stronger. Between 2011 and 2012, economic espionage losses to the U.S. economy exceeded $13 billion.[3] Although the U.S. Department of Justice ("DOJ") and the Federal Bureau of Investigations ("FBI") have prioritized investigations under 18 U.S.C. § 1831—the EEA provision that criminalizes economic espionage—courts have heard only nine such cases since 1996, and only six convictions have resulted.[4] This Note argues that the failure to curb economic espionage results from two problems, one external and one internal to the EEA. First, courts have interpreted § 1831 of the EEA too

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1. *Economic Espionage*, THE FEDERAL BUREAU OF INVESTIGATION, http://www.fbi.gov/about-us/investigate/counterintelligence/economic-espionage (last visited Sept. 20, 2012).

2. 18 U.S.C. §§ 1831–1839 (2006); *see* 142 CONG. REC. S12,207–12,216 (daily ed. Oct. 2, 1996).

3. *Economic Espionage: A Foreign Intelligence Threat to American Jobs and Homeland Security: Hearing Before the H. Comm. on Homeland Sec.*, 112th Cong. 1 (2012) (statement of Frank Figliuzzi, Assistant Dir., Counterintelligence Div., Fed. Bureau of Investigation), *available at* http://www.fbi.gov/news/testimony/economic-espionage-a-foreign-intelligence-threat-to-americans-jobs-and-homeland-security?utm_campaign=email-Daily&utm_medium=email&utm_source=congressional-testimony&utm_content=109928.

4. *See infra* Section II.B.

narrowly. Second, Congress constructed § 1831 too narrowly. If courts broaden their reading of § 1831 of the EEA, and if Congress adopts solutions offered in recent legislation, the EEA may become a more effective tool in curbing the threat of economic espionage.

This Note evaluates the stated policies underlying the EEA, and argues that judicial treatment of cases involving economic espionage under § 1831 of the EEA conflicts with the goals of Congress and frustrates the prosecutorial objectives of the DOJ. This Note posits that Congress can help correct this misalignment by amending the EEA to reflect the policy goals outlined in recent legislation. Part I provides the background and policies behind the enactment of the EEA and lays out the EEA's statutory framework. Part II discusses the responses to the EEA by the DOJ, FBI, and Congress. It also describes the narrow approach that courts have taken in their interpretations of § 1831 of the EEA. Part III explains that judicial narrowing of § 1831 conflicts with the goals of Congress and the DOJ—to convict and punish those who commit economic espionage. Part III then argues that recent legislation amending the EEA indicates Congress's desire to broaden the elements of § 1831. Finally, the Note concludes by advocating an expansion of the recent amendments to the EEA in order to fulfill Congress's goal of reducing international theft of American trade secrets.

I. THE ECONOMIC ESPIONAGE ACT OF 1996: A BACKGROUND

A. THE POLICY RATIONALES BEHIND THE ENACTMENT OF THE EEA

By 1996, developments in computer technology, coupled with the growing value of intangible assets, made it both easier and more lucrative for individuals and companies to steal proprietary information from others.[5] Congress was especially concerned that foreign countries were engaging in

5. H.R. REP. NO. 104-788, at 4–5 (1996). By the end of the Cold War, rapid development of information and communications technology "made it more difficult to rely on the national border to keep adversaries at bay." Aaron J. Burnstein, *Trade Secrecy as an Instrument of National Security? Rethinking the Foundations of Economic Espionage*, 41 ARIZ. L. J. 933, 943–44 (2009). These technological developments have also "made it much cheaper to collect economic and technological information on a scale that allows large-scale, rapid industrial development without investing in fully independent research and development," presenting the possibility that other countries might "leapfrog" the United States in terms of technological development. *Id.* at 944.

"economic espionage"—stealing trade secrets from American companies and detracting from the economic power of the United States.[6]

While domestic trade secret theft was a major concern,[7] the legislative history behind the EEA reveals that Congress was especially worried about foreign threats to American economic prosperity.[8] Prior to the passage of the bill, FBI Director Louis Freeh testified to a judiciary subcommittee that the FBI was investigating "allegations of economic espionage conducted against the United States by individuals or organizations from [twenty-three] different countries,"[9] including many countries that took advantage of their friendly relations with the United States to steal proprietary information from American companies.[10] Additionally, the Senate Intelligence Committee reported that since the end of the Cold War, foreign governments were increasing their use of espionage resources to obtain trade secrets from American companies, causing more than $100 billion in losses to these businesses.[11] Congress viewed these cases of economic espionage as threats

6. *See* 142 CONG. REC. H10,461 (daily ed. Sept. 17, 1996) ("[L]argely overlooked as a threat to our national security is the attack being waged against our Nation's economic interests . . . . [O]ur economic interests should be seen as an integral part of its national security interests, because America's standing in the world depends on its economic strength and productivity."). Nathaniel Minott offers a definition of "economic espionage": "illegal, clandestine, coercive or deceptive activity engaged in or facilitated by a foreign government designed to gain unauthorized access to economic intelligence, such as proprietary information or technology, for economic advantage." Nathaniel Minott, *The Economic Espionage Act: Is the Law All Bark and No Bite?*, 20 INFO. & COMM. TECH. L. 201, 205 (2011) (offering the definition of the Canadian Security Intelligence Service). As discussed in Section III.A.2, *infra*, the EEA defines economic espionage as encompassing activities intended to confer benefits beyond just economic advantages on a foreign government. The EEA thus defines "economic espionage" in slightly broader terms than does the definition provided by Minott.

7. In 1996, the American Society for Industrial Security estimated that thefts of trade secrets costs American businesses about $24 billion per year in losses, much of which was caused by "Americans or U.S. nationals who leave their employment and steal proprietary information which they deliver to their new employers." *See* 142 CONG. REC. H10,461 (daily ed. Sept. 17, 1996) (statement of Rep. Buyer).

8. *See* 142 CONG. REC. H10,461 (daily ed. Sept. 17, 1996) (statement of Rep. Hyde) ("But largely overlooked as a threat to our national security is the attack being waged against our nation's economic interests.").

9. *Id.* (statement of Rep. Hyde).

10. *Id.* (statement of Rep. Hyde). Representative Hyde does not identify these countries, but states, "[m]ost disturbing is the fact that a number of these countries maintain friendly relations with the United States, yet take advantage of their access to U.S. information and their ability to steal the innovations of American businesses." *Id.*

11. 142 CONG. REC. H12,208 (daily ed. Oct. 2, 1996) (statement of Sen. Specter).

to U.S. national security, and sought a way to hold foreign agents accountable for their criminal actions.[12]

Prior to the enactment of the EEA, no federal criminal statute existed that directly addressed domestic trade secret theft, let alone foreign economic espionage.[13] Instead, prosecutors relied on a combination of various federal statutes—such as the Depression-era Interstate Transportation of Stolen Property Act,[14] the Mail Fraud statute,[15] and the Wire Fraud statute[16]—to combat crimes that involved trade secret theft.[17] These statutes, however, were limited in their application and were inadequate in prosecuting instances of economic espionage:[18] the mail fraud statute only applied to economic espionage that involved the use of mail; the wire fraud statute required "an intent to defraud as well as use of wire, radio or television"; and the Transportation of Stolen Property Act did not apply to economic espionage at all.[19]

Thus, in proposing the EEA, Congress had two main concerns. First, "[f]oreign powers, through a variety of means, [were] actively involved in stealing critical technologies, data and information from U.S. companies or the U.S. Government for the economic benefit of their own industrial sectors."[20] Second, "[l]aws then on the books . . . were of virtually no use in prosecuting acts of economic espionage."[21] Congress decided that the only way to "maintain [the United States'] industrial and economic edge and thus safeguard [its] national security" was to enact a federal law that protected the

12. 142 CONG. REC. H10,461; *see also Economic Espionage*, THE FEDERAL BUREAU OF INVESTIGATION, http://www.fbi.gov/about-us/investigate/counterintelligence/economic-espionage (last visited Sept. 20, 2012) ("The Cold War is not over, it has merely moved into a new arena: the global marketplace.").

13. 142 CONG. REC. H10,461 (statement of Rep. Schumer).

14. 18 U.S.C. §§ 2314, 2315 (2006).

15. *Id.* § 1341.

16. *Id.* § 1343.

17. *See* United States v. Hsu, 155 F.3d 189, 194 (3d Cir. 1998) (noting that "the absence of any comprehensive federal remedy targeting the theft of trade secrets" forced prosecutors to "shoehorn economic espionage crimes into statutes directed at other offenses"). While one previously existing federal statute, 18 U.S.C. § 1905, prohibited the misappropriation of trade secrets, it only provided for misdemeanor sanctions and thus was rarely used in criminal prosecutions. *See* James H. A. Pooley et al., *Understanding the Economic Espionage Act of 1996*, 5 TEX. INTELL. PROP. L. J. 177, 179 (1997).

18. *See* Gerald J. Mossinghoff et al., *The Economic Espionage Act: A New Federal Regime of Trade Secret Protection*, 79 J. PAT. & TRADEMARK OFF. SOC'Y 191, 194 (1997); *see also* Pooley et al., *supra* note 17, at 179–80.

19. *See* Mossinghoff et al., *supra* note 18, at 194.

20. *Id.* at 193.

21. *Id.*

proprietary economic information of the United States at a national level.[22] The EEA—and specifically § 1831—was Congress's response to these concerns. The statute provided the federal government with a much-needed vehicle for prosecuting trade secret theft.

B. THE EEA: 18 U.S.C. §§ 1831, 1832

In 1996, Congress enacted the EEA, which criminalizes two categories of trade secret theft. Section 1832 prohibits general trade secret theft.[23] Section 1831—the focus of this Note—criminalizes foreign economic espionage by punishing "those who knowingly misappropriate, or attempt to conspire to misappropriate, trade secrets with the intent or knowledge that their offense will benefit a foreign government, foreign instrumentality, or foreign agent."[24] Section 1831 thus only concerns trade secret theft by foreign

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22. S. REP. NO. 104-359, at 11–12 (1996).

23. 18 U.S.C. § 1832 (2006):

> (a) Whoever, with intent to convert a trade secret, that is related to or included in a product that is produced for or placed in interstate or foreign commerce, to the economic benefit of anyone other than the owner thereof, and intending or knowing that the offense will, injure any owner of that trade secret, knowingly—
>
> (1) steals, or without authorization appropriates, takes, carries away, or conceals, or by fraud, artifice, or deception obtains such information;
>
> (2) without authorization copies, duplicates, sketches, draws, photographs, downloads, uploads, alters, destroys, photocopies, replicates, transmits, delivers, sends, mails, communicates, or conveys such information;
>
> (3) receives, buys, or possesses such information, knowing the same to have been stolen or appropriated, obtained, or converted without authorization;
>
> (4) attempts to commit any offense described in paragraphs (1) through (3); or
>
> (5) conspires with one or more other persons to commit any offense described in paragraphs (1) through (3), and one or more of such persons do any act to effect the object of the conspiracy,
>
> shall, except as provided in subsection (b), be fined under this title or imprisoned not more than 10 years, or both.
>
> (b) Any organization that commits any offense described in subsection (a) shall be fined not more than $5,000,000.

24. United States v. Hsu, 155 F.3d 189, 195 (3d Cir. 1998); *see* 18 U.S.C. § 1831 (2006):

> (a) IN GENERAL.—Whoever, intending or knowing that the offense will benefit any foreign government, foreign instrumentality, or foreign agent, knowingly—
>
> (1) steals, or without authorization appropriates, takes, carries away, or conceals, or by fraud, artifice, or deception obtains a trade secret;

governmental actors—which this Note defines as "economic espionage"—while § 1832 concerns trade secret theft by domestic actors. Neither of these provisions preempts other civil or criminal laws prohibiting the misappropriation of trade secrets, meaning that a person indicted under the EEA may still be prosecuted under any other trade secret misappropriation statute for the same set of facts.[25]

Congress emphasized the importance of the foreign economic espionage problem by imposing harsh penalties on those who violate § 1831 of the EEA.[26] In the original EEA statute, an individual who violated § 1831 faced a maximum prison sentence of fifteen years, a maximum fine of $500,000, or

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> (2) without authorization copies, duplicates, sketches, draws, photographs, downloads, uploads, alters, destroys, photocopies, replicates, transmits, delivers, sends, mails, communicates, or conveys a trade secret;
>
> (3) receives, buys, or possesses a trade secret, knowing the same to have been stolen or appropriated, obtained, or converted without authorization;
>
> (4) attempts to commit any offense described in any of paragraphs (1) through (3); or
>
> (5) conspires with one or more other persons to commit any offense described in any of paragraphs (1) through (3), and one or more of such persons do any act to effect the object of the conspiracy,
>
> shall, except as provided in subsection (b), be fined not more than $500,000 or imprisoned not more than 15 years, or both.
>
> (b) ORGANIZATIONS.—Any organization that commits any offense described in subsection (a) shall be fined not more than $10,000,000.

As discussed *infra* Section III.B, Congress amended the penalty provisions of § 1831 in January 2013. *See* H.R. Rep. No. 112-610, at 2 (2012).

25. 18 U.S.C. § 1838 ("This chapter shall not be construed to preempt or displace any other remedies, whether civil or criminal, provided by United States Federal, State, commonwealth, possession, or territory law for the misappropriation of a trade secret . . . ."). *See* United States v. Aleynikov, 785 F. Supp. 2d 46 (S.D.N.Y. 2011), *rev'd*, 676 F.3d 71 (2d Cir. 2012) (reversing Aleynikov's conviction for trade secret theft under § 1832 of the EEA). After the Second Circuit reversed Aleynikov's conviction under federal laws, he was charged under New York Penal Laws. *See* Robert Damion Jurrens, *U.S. v. Aleynikov and the Economic Espionage Act*, 28 BERKELEY TECH. L. J. 833, 838 (2013) (forthcoming) (noting that the EEA "expressly states that it does not preempt any other trade secret laws, which leaves companies open to pursue federal or state actions").

26. *See* Mark D. Seltzer & Angela A. Burns, *Criminal Consequences of Trade Secret Misappropriation: Does the Economic Espionage Act Insulate Trade Secrets from Theft and Render Civil Remedies Obsolete?*, B.C. INTELL. PROP. & TECH. F. 1, 14 (1999), http://bciptf.org/wp-content/uploads/2011/07/46-Burns_IPTF11.pdf ("The EEA prescribes stiff maximum criminal sanctions.").

both.[27] The $500,000 maximum fine for individuals under § 1831 was double the normal maximum fine for felonies.[28] Moreover, any organization that violated § 1831 faced a maximum fine of $10 million.[29]

II. DEVELOPMENTS IN THE WAKE OF THE EEA

A. THE DOJ AND THE FBI: A SLOW START, BUT RAMPING UP

When Congress passed the EEA in 1996, the House of Representatives estimated that in the six years following its enactment, "the government would most likely investigate and prosecute a total of about [fifty] cases covered by this legislation."[30] While the government has surpassed this fifty-case goal, almost all EEA cases during this six-year period were prosecuted under § 1832 of the EEA, which criminalizes general trade secret theft.[31] Between 1996 and 2009, well over a hundred trade secret prosecutions were initiated in the United States, but only six of them were under § 1831 of the EEA.[32] By 2012, the DOJ had only prosecuted nine cases under § 1831 of

27. 18 U.S.C. § 1831. An individual who violates § 1832, on the other hand, faces a maximum prison sentence of ten years, a fine, or both. As discussed *infra* Section III.B, the § 1831 penalty provisions were amended in January 2013. *See* H.R. Rep. No. 112-610.

28. *See* Pooley et al., *supra* note 17, at 201–02. It is also interesting to note that the original bills Congress introduced contained even more severe penalty provisions than does the enacted EEA. On September 17, 1996, Representative Buyer introduced H.R. 3723 (entitled the "Economic Espionage Act of 1996"), which provided for a maximum prison sentence of twenty-five years for those who commit economic espionage with the intent to benefit a foreign government. *See* 142 CONG. REC. H10,460 (daily ed. Sept. 17, 1996). On September 18, 1996, Senator Stevens proposed an amendment to H.R. 3723, which also imposed a maximum prison sentence of twenty-five years for an individual convicted of economic espionage. *See* 142 CONG. REC. S10,862-63 (daily ed. Sept. 18, 1996) (Amendment No. 5384).

29. 18 U.S.C. § 1831. Any organization that violates § 1832 faces a maximum fine of $5 million. *Id.* § 1832. *See* Pooley et al., *supra* note 17, at 202 ("Evidently, the general approach of the statute is to punish foreign espionage more severely than domestic trade secret theft.").

30. H.R. REP. NO. 104-788, at 9 (1996).

31. Michael L. Rustad, *The Negligent Enablement of Trade Secret Misappropriation*, 22 SANTA CLARA COMPUTER & HIGH TECH. L.J. 455, 458 (2006) ("An empirical study of all EEA prosecutions from the federal criminal statute's enactment in 1996 to August 1, 2005 uncovered fewer than fifty economic or espionage prosecutions filed in federal courts; nearly every prosecution was for domestic rather than foreign economic espionage.").

32. Mark L. Krotoski, *Common Issues and Challenges in Prosecuting Trade Secret and Economic Espionage Act Cases*, 57 U.S. ATTY'S BULL. 2, 7 (2009). These six cases include: (1) Indictment, United States v. Okamoto et al., No. 1:01-CR-00210 (N.D. Ohio filed May 8, 2001); (2) Judgment in a Criminal Case as to Fei Ye, United States v. Ye, No. 5:02-CR-20145 (N.D. Cal. Nov. 25, 2008); (3) Judgment in a Criminal Case as to Xiaodong Sheldon Meng, Judgment in a Criminal Case as to Ming Zhong, United States v. Meng, No. 5:04-CR-20216 (N.D. Cal. June 24, 2008); (4) Order Granting in Part and Denying in Part Defendants'

the EEA.[33] In five of these cases, the defendants pled guilty.[34] One of these cases is still pending.[35] The remaining three—*United States v. Chung*,[36] *United States v. Lee*,[37] and *United States v. Jin*[38]—are the only prosecutions that went to trial, and *Chung* resulted in the only trial conviction to date under § 1831 of the EEA.[39]

Despite the relatively small number of prosecutions brought under § 1831 of the EEA, it is notable that the DOJ initiated four of these nine prosecutions within the past three years.[40] Before 2009, charges of foreign

Motion for Judgment of Acquittal as to Lan Lee, Yuefei Ge, United States v. Lee et al., No. 5:06-CR-00424 (N.D. Cal. May 21, 2010); (5) United States v. Chung (*Chung I*), 633 F. Supp. 2d 1134 (C.D. Cal. 2009), *aff'd*, (*Chung II*) 659 F.3d 815 (9th Cir. 2011); (6) United States v. Jin, 833 F. Supp. 2d 977 (N.D. Ill. 2012) (convicting the defendant under § 1832, but acquitting the defendant under § 1831).

33. *See* William J. Edelman, Note, *The "Benefit" of Spying: Defining the Boundaries of Economic Espionage Under the Economic Espionage Act of 1996*, 63 STAN. L. REV. 447, 453–54 (2011); Roy Strom, *U.S. Tries Cracking Down on Economic Espionage*, CHI. DAILY L. BULL. 1, 1 (2012).

34. *See* Judgment as to Kexue Huang, United States v. Huang, No. 1:10-CR-00102 (S.D. Ind. Jan. 5, 2012) (sentencing defendant to eighty-seven months imprisonment and three years supervised release); Judgment as to Elliot W. Doxer, United States v. Doxer, No. 1:11-CR-10268 (D. Mass. Dec. 21, 2011) (sentencing defendant to six months imprisonment and two years supervised release); Judgment as to Hong Meng, United States v. Meng, No. 1:10-CR-00056 (D. Del. Oct. 26, 2010) (sentencing defendant to fourteen months imprisonment); Judgment as to Fei Ye, United States v. Ye, No. 5:02-CR-20145 (N.D. Cal. Nov. 25, 2008); Plea Agreement as to Tze Chao, United States v. Liew, No. 3:11-CR-00573 (N.D. Cal. Mar. 2, 2012). Not all of the defendants in the *Liew* case have pled guilty. The district court quashed service of the indictment on one of the defendants, the Pangang Group Co., Ltd. *See* United States v. Pangang Group Co., Ltd., 2012 WL 3010958, at *1 (N.D. Cal. July 23, 2012). Notably, this is the first case in which the DOJ directly charged a foreign entity (the Pangang Group is a Chinese company) rather than just an individual who intended to benefit a foreign government. See *infra* note 167 for further discussion.

35. *See* Indictment, United States v. Okamoto et al., No. 1:01-CR-00210 (N.D. Ohio filed May 8, 2001). Before the FBI could arrest the defendant, he fled to Japan. Japan subsequently denied the United States' extradition request, finding no probable cause to suspect that he committed economic espionage under § 1831. *See* Tetsuya Morimoto, *A First Japanese Denial of U.S. Extradition Request: Economic Espionage Case*, 20 No. 7 INT'L ENFORCEMENT L. REP. 288, 288–89 (2004).

36. *Chung I*, 633 F. Supp. 2d 1134 (C.D. Cal. 2009), *aff'd*, 659 F.3d 815 (9th Cir. 2011).

37. United States v. Lee, No. CR 06-0424 JW, 2010 WL 8696087, at *1 (N.D. Cal. May 21, 2010).

38. United States v. Jin, 833 F. Supp. 2d 977 (N.D. Ill. 2012).

39. *See* Edelman, *supra* note 33, at 453–54, tbl.1. Notably, all but one of the nine § 1831 cases involve trade secrets allegedly stolen with the intent to benefit the Chinese government. *See id.*

40. These four cases include: United States v. Huang, No. 12-1053 (7th Cir. dismissed Mar. 26, 2012); Complaint, United States v. Doxer, No. 1:11-CR-10268 (D. Mass. filed Oct. 5, 2010); Complaint, United States v. Meng, No. 1:10-CR-00056 (D. Del. filed Oct. 1, 2009);

economic espionage were rare—so rare that one attorney compared § 1831 prosecutions to "unicorn sightings."[41] By the end of 2010, however, the DOJ was making a marked effort to prioritize economic espionage prosecutions. The 2010 "Annual Report on Intellectual Property Enforcement"—a report by the U.S. Intellectual Property Enforcement Coordinator ("IPEC")[42] detailing that year's enforcement efforts as well as future objectives—announced the DOJ's increased focus on prosecuting economic espionage crimes.[43] The 2010 Report promised that this focus would continue,[44] as did the 2011 report,[45] which stated: "Protecting trade secrets is vital to our nation's economic success, and we will continue vigorously to enforce our trade secret and economic espionage statutes."[46]

This call for vigorous enforcement of the EEA applies not only to DOJ prosecutions, but also to FBI investigations. As a result, between 2009 and 2010, the FBI commenced forty investigations involving economic espionage under § 1831.[47] The current FBI Director, Robert Mueller, "has designated counterintelligence as the FBI's number two priority, second only to counterterrorism," and the FBI recently formed an "Economic Espionage Unit" that specifically works to combat the economic espionage threat

and Complaint, United States v. Liew et al., No. 3:11-CR-00573 (N.D. Cal. filed July 27, 2011).

41. Quinn Emanuel Urquhart & Sullivan, LLP, *Spotlight on the Economic Espionage Act*, JD SUPRA (Mar. 22, 2012), http://www.jdsupra.com/legalnews/spotlight-on-the-economic-espionage-act-20115/ (citing Sharon Weinberger, *US Charges Scientist with Economic Espionage*, 466 NATURE 542, 543 (2010)).

42. The Intellectual Property Enforcement Coordinator ("IPEC"), Victoria Espinel, was appointed by President Obama in 2008 to coordinate the enforcement efforts of government agencies working to combat intellectual property crimes, including trade secret theft. *See About the Office of the U.S. Intellectual Property Enforcement Coordinator (IPEC), Office of Management and Budget*, THE WHITE HOUSE, http://www.whitehouse.gov/omb/intellectual property/ipec/ (last visited Mar. 3, 2013).

43. Executive Office of the President of the United States, *2010 U.S. Intellectual Property Enforcement Coordinator Annual Report on Intellectual Property Enforcement*, 4 (2011), http://www.whitehouse.gov/sites/default/files/omb/IPEC/ipec_annual_report_feb 2011.pdf.

44. *Id.*

45. Executive Office of the President of the United States, *2011 U.S. Intellectual Property Enforcement Coordinator Annual Report on Intellectual Property Enforcemen*, at 9–10, 30–31 (2012), http://www.whitehouse.gov/sites/default/files/omb/IPEC/ipec_annual_report_mar 2012.pdf.

46. *Id.* at 113.

47. Press Release, Office of Public Affairs, Department of Justice, Department of Justice Joins in Launch of Administration's Strategic Plan on Intellectual Property Enforcement as Part of Ongoing IP Initiative (June 22, 2010), *available at* http://www.justice.gov/opa/pr/2010/June/10-ag-722.html.

through community outreach and other programs.[48] While the efforts of the DOJ and FBI represent an attempt to counter the huge amounts of economic loss that economic espionage has caused in recent years, these efforts have yet to reduce losses to the U.S. economy. Frank Figliuzzi, the Assistant Director of the FBI's Counterintelligence Division, testified that between 2011 and 2012, "economic espionage losses to the American economy total[ed] more than $13 billion."[49]

The increased focus on economic espionage within the DOJ and FBI in recent years likely stems from initiatives within the Executive Department that aim to protect the intellectual property rights of U.S. citizens. For instance, in October 2008, President George W. Bush signed into law the Prioritizing Resources and Organization for Intellectual Property Act ("PRO-IP Act"),[50] which was enacted to "enhance remedies for violations of intellectual property laws and to allow rights holders to enforce their intellectual property rights more aggressively."[51] The PRO-IP Act created the

48. *Economic Espionage*, THE FEDERAL BUREAU OF INVESTIGATION, http://www.fbi.gov/about-us/investigate/counterintelligence/economic-espionage (last visited September 20, 2012). The FBI's Counterintelligence Division works to "identify, disrupt, and defeat the efforts of foreign intelligence services operating inside the United States." *Economic Espionage: A Foreign Intelligence Threat to American Jobs and Homeland Security: Hearing Before the H. Comm. on Homeland Sec.*, 112th Cong. 1 (2012) (statement of Frank Figliuzzi, Assistant Dir., Counterintelligence Div., Fed. Bureau of Investigation), *available at* http://www.fbi.gov/news/testimony/economic-espionage-a-foreign-intelligence-threat-to-americans-jobs-and-homeland-security?utm_campaign=email-Daily&utm_medium=email&utm_source=congressional-testimony&utm_content=109928. In May 2012, for example, the FBI unveiled billboards in nine major U.S. cities, which contained the words: "13 Billion Lost: Protect America's Trade Secrets" and directed viewers to the FBI website. Evan Perez, *FBI's New Campaign Targets Corporate Espionage*, WALL ST. J. (May 11, 2011 9:21 AM), http://professional.wsj.com/article/SB10001424052702304543904577396520137905092.html?mg=reno64-wsj#articleTabs_video%3D%26articleTabs%3Darticle.

49. *Economic Espionage: A Foreign Intelligence Threat to American Jobs and Homeland Security: Hearing Before the H. Comm. on Homeland Sec.*, 112th Cong. 1 (2012) (testimony of Frank Figliuzzi, Assistant Dir., Counterintelligence Div., Fed. Bureau of Investigation), *available at* http://www.fbi.gov/news/testimony/economic-espionage-a-foreign-intelligence-threat-to-americans-jobs-and-homeland-security?utm_campaign=email-Daily&utm_medium=email&utm_source=congressional-testimony&utm_content=109928.

50. Prioritizing Resources and Organization for Intellectual Property Act ("PRO-IP Act"), Pub. L. No. 110-403, 122 Stat. 4256 (2008).

51. Tonya D. Butler, *"The IP Czar Chronicles": Coming to a White House Near You*, 56 FED. LAW. 14 (2009) (internal quotation marks omitted). The PRO-IP Act was intented to

> bolster the Federal effort to protect this most valuable and vulnerable property, to give law enforcement the resources and the tools its needs to combat [intellectual property crimes], and to make sure that the many agencies that deal with intellectual property enforcement have the opportunity to talk with each other, to coordinate their efforts, and to achieve the maximum effects for their efforts.

Intellectual Property Enforcement Coordinator ("IPEC"), an official within the President's Executive Office who serves as the President's principal advisor on matters "regarding domestic and international intellectual property enforcement programs."[52] The IPEC must also, when appropriate, make recommendations to Congress "for improvements in Federal intellectual property laws and enforcement efforts."[53] The PRO-IP Act also provides funding and investigative resources to the DOJ and FBI for the enforcement of laws relating to intellectual property crimes.[54] These resources, and the IPEC's enforcement efforts, have likely contributed to the sudden increase in economic espionage enforcement by the DOJ and FBI in the past few years.

B. THE COURTS: THE THREE ECONOMIC ESPIONAGE CASES THAT MADE IT TO TRIAL

Because the DOJ has prosecuted only nine cases under § 1831, the federal courts have had very few opportunities to interpret the provisions of the EEA. *United States v. Chung*,[55] *United States v. Lee*,[56] and *United States v. Jin*[57] are the only prosecutions under § 1831 of the EEA that resulted in published judicial opinions discussing the statute.[58] While these cases lay out a basic analytical framework for interpreting the elements of a § 1831 claim, the case law regarding § 1831 remains relatively undeveloped.

The only trial conviction under § 1831 occurred in 2009, when Judge Carney of the Central District of California found Dongfan "Greg" Chung—a former Boeing engineer—guilty of stealing secret technological information from Boeing and giving it to the Chinese government.[59] Federal agents found over 300,000 pages of Boeing technical documents in Chung's home, including six documents Judge Carney determined were trade secrets: four relating to an antenna that Boeing developed for the Columbia space shuttle, and two describing technology that Boeing developed for the Delta IV

154 CONG. REC. S7281 (daily ed. July 24, 2008) (statement of Sen. Leahy).

52. PRO-IP Act § 301(b)(E).

53. *Id.* § 301(b)(F).

54. *See* Butler, *supra* note 51; PRO-IP Act §§ 401–403.

55. *Chung I*, 633 F. Supp. 2d 1134 (C.D. Cal. 2009), *aff'd*, 659 F.3d 815 (9th Cir. 2011).

56. United States v. Lee et al., No. CR 06-0424 JW, 2010 WL 8696087, at *1 (N.D. Cal. May 21, 2010).

57. United States v. Jin, 833 F. Supp. 2d 977 (N.D. Ill. 2012).

58. *See* Edelman, *supra* note 33, at 453–54, tbl.1. Notably, all but one of these cases involved trade secrets allegedly stolen with the intent to benefit the Chinese government. *See id.*

59. *Chung I*, 633 F. Supp. 2d at 1148. The defendant waived his right to a jury trial, and the court conducted a ten-day bench trial. *Id.* at 1137.

Rocket.[60] The Ninth Circuit affirmed Chung's conviction in 2011, holding that "there was sufficient evidence to support the district court's finding that Defendant possessed the relevant trade secret documents . . . with the intent to benefit China."[61] The Ninth Circuit pointed to "ample evidence" that during the 1980s and in 2001, Chung "intended to benefit China by providing technical information responsive to requests from Chinese officials and by delivering presentations to Chinese officials."[62] The court explained that, given Chung's pattern of conduct and his recent possession of trade secret documents similar to those he possessed in the 1980s and 2001, there was sufficient evidence of Chung's intent to benefit China.[63] Because there was ample evidence that Chung intended to benefit China, neither the district court nor the Ninth Circuit devoted much of their opinions to nuanced interpretations of the EEA provisions. Chung had acted as an agent of the Chinese government, he possessed an obvious intent to benefit China in the past, and he stole trade secrets very similar to those he had previously used in his conversations with Chinese officials.[64] On its face, § 1831 of the EEA fit the facts of *Chung* almost perfectly—Chung had committed trade secret theft with the intent to benefit a foreign government.

In both *Lee* and *Jin*, on the other hand, weaker evidence of the defendants' relationships with foreign governments required the courts to delve into deeper statutory interpretation of the EEA.[65] In *Lee*, the defendants Lee and Ge were charged under both § 1831 and § 1832 for stealing trade secrets from their employer and using them to set up their own company to develop a competing product in China.[66] To fund their company, the defendants intended to apply for a cash grant from a program set up by the Chinese government.[67] After a jury trial, Chief Judge Ware of the Northern District of California sustained the jury's conviction of the defendants for trade secret theft under § 1832, but granted the defendants'

60. *Chung II*, 659 F.3d at 819, 824.

61. *Id.* at 828.

62. *Id.*

63. *Id.* ("Given Defendant's history of passing technical documents to China . . . a rational trier of fact reasonably could infer from Defendant's more recent possession of similar documents that his intent to benefit China persisted well into the limitations period and extended to his possession of the trade secrets.").

64. *See id.*

65. *See* United States v. Lee et al., No. CR 06-0424 JW, 2010 WL 8696087, at *1 (N.D. Cal. May 21, 2010); United States v. Jin, 833 F. Supp. 2d 977 (N.D. Ill. 2012).

66. *Lee*, 2010 WL 8696087, at *1.

67. *Id.* at *4.

motion for acquittal as to the economic espionage charges under § 1831.[68] The court concluded that, while the government sufficiently established that the defendants committed trade secret theft, it failed to produce evidence showing that the defendants intended or knew that the theft would benefit a foreign government.[69]

After reviewing the EEA's legislative history, the court in *Lee* concluded that "the 'benefit any foreign government' element must be interpreted to refer to the benefits ordinarily associated with 'espionage,' " which traditionally is associated with "activity sponsored or solicited by a foreign government."[70] The court added that such activity does not include "benefits on the economy of a country that might be realized from operating a company in a foreign country,"[71] even if the defendants used trade secrets in creating their new company and the foreign government provided funding for that company through a cash grant.[72]

The government funding at issue in *Lee* involved China's "863 Program," an initiative adopted in 1986 to "accelerate the acquisition and development of science and technology in the [People's Republic of China ("PRC")]"[73] in order to gain equal footing with the scientific and technological capabilities of the United States.[74] Officials in the Chinese government deny that the program supports the theft of trade secrets from American companies.[75] However, in return for cash grants from the Chinese government, all recipients of 863 funding sign a contract promising to allocate to the government the rights for all intellectual property work done in connection with the funding, including trade secrets.[76] Therefore, in exchange for these cash grants, all recipients of 863 funding must confer a benefit—in the form of intellectual property rights—on the Chinese government.

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68. *Id.* at *3, *8. The jury did not return a verdict against either defendant on three of the charged counts: (1) Conspiracy to Commit Economic Espionage; (2) Economic Espionage or Attempted Economic Espionage as to their employer, NetLogic; and (3) Theft of Trade Secrets as to Net Logic. The defendants then moved for acquittal on these three counts. *Id.* at *1.

69. *Id.* at *2, *7–8.

70. *Id.* at *6.

71. *Id.*

72. *Id.* at *8.

73. *Hearing on H.R. 105-851 Before the H. Select Comm. on U.S. Nat'l Sec. and Military/Commercial Concerns with the People's Republic of China*, 105th Cong. 10 (1999).

74. *See* Aaron J. Burstein, *Trade Secrecy as an Instrument of National Security? Rethinking the Foundations of Economic Espionage*, 41 ARIZ. ST. L.J. 933, 976 (2009) (citing U.S.-CHINA ECON. & SEC. REVIEW COMM'N, 2007 REPORT TO CONGRESS 127 (2007)).

75. *Id.* at 977.

76. *Id.* at 976.

Despite the nature of the 863 Program, the *Lee* court held that the defendants lacked the intent to confer a benefit on the Chinese government, and thus acquitted the defendants of the § 1831 charges.[77] The court differentiated the *Lee* case from *Chung*, in which the defendant had been "an agent of the [PRC] for over thirty years,"[78] holding that "[e]vidence that Defendants solely intended to benefit themselves in the PRC, or benefit a private corporation in the PRC is insufficient for the charge of Economic Espionage."[79]

Similarly, in *Jin*—the most recent trial involving § 1831 of the EEA—Judge Castillo of the Northern District of Illinois acquitted the defendant of economic espionage.[80] The indictment alleged that Jin stole proprietary technical documents from Motorola, her former employer, and was in possession of these documents as she boarded a flight to China.[81] It also alleged that during a previous leave of absence from Motorola, Jin accepted employment at Sun Kaisens, a Chinese company that develops telecommunications technology for the Chinese military.[82] Although the court found Jin guilty of stealing trade secrets from Motorola under § 1832—the general trade secret provision of the EEA—it concluded "the evidence failed to establish beyond a reasonable doubt that Jin intended or knew that her conduct would benefit [China]."[83] The court therefore acquitted Jin of economic espionage under § 1831.[84]

III. DISCUSSION

The facts and holdings of *Lee* and *Jin* demonstrate that the courts narrowly interpreted several elements of § 1831. These narrow interpretations, which led both courts to acquit the defendants of economic espionage charges, directly conflict with Congress's goal of curbing economic espionage and the DOJ's efforts to prosecute foreign theft of trade secrets.

77. *Lee*, 2010 WL 8696087, at *8.

78. *Id.* at *6 (citing *Chung I*, 633 F. Supp. 2d 1134, 1148 (C.D. Cal. 2009)).

79. *Id.* at *7.

80. *See* United States v. Jin, 833 F. Supp. 2d 977, 1020 (N.D. Ill. 2012). The defendant waived her right to a jury trial and proceeded to a bench trial. *Id.* at 980.

81. *Id.*

82. *Id.*

83. *Id.* at 1020.

84. *Id.*

A. JUDICIAL NARROWING OF § 1831 OF THE EEA CONFLICTS WITH THE GOALS OF CONGRESS AND THE DOJ

In formulating their narrow interpretations of § 1831, the *Lee* and *Jin* courts focused on the requirements of § 1831 that differentiate it from § 1832: that the defendant acted "intending or knowing that the [trade secret theft] will benefit any foreign government, foreign instrumentality, or foreign agent."[85] The courts' analyses in both cases can be divided into three elements. First, the courts explain what constitutes a "foreign government, foreign instrumentality, or foreign agent." Second, they offer interpretations of what it means to "benefit" one of these entities. Finally, the courts analyze the mens rea element of the statute—that the defendant must *intend or know* that the trade secret theft will benefit a foreign government.

1. *Defining the Beneficiary: A Foreign Government, Foreign Instrumentality, or Foreign Agent*

The *Lee* court stated that "benefitting a 'foreign government, instrumentalit[y] or agent [is not] synonymous with benefitting a 'foreign country' or benefitting a 'foreign corporation.' "[86] The court interpreted the EEA's legislative history as distinguishing § 1831 (foreign economic espionage) from § 1832 (general trade secret theft) on the basis that "the former penalizes conferring a benefit on a foreign *government* and the latter covers offenses conferring a benefit on a foreign *corporation*."[87] The *Lee* court concluded that § 1831's use of the term "foreign government" instead of "foreign country" requires the prosecution to "prove that the offense was to aid the government of a foreign country."[88]

The court's conclusion that § 1831 only targets those who confer a benefit on a foreign government, rather than a foreign corporation, does not necessarily follow from the legislative history that the court cited in the *Lee* opinion. The legislative history underlying the EEA explains that "[e]nforcement agencies should administer [§ 1831] with its principle [sic] purpose in mind and therefore should not apply [§] 1831 to foreign corporations when there is no evidence of foreign government sponsored or coordinated intelligence activity."[89] Nothing in this statement, however,

85. 18 U.S.C. § 1831(a) (2006).

86. United States v. Lee et al., No. CR-06-0424 JW, 2010 WL 8696087, at *6 (N.D. Cal. May 21, 2010).

87. *See id.* at *6. The court added that "there are numerous statutes and regulations penalizing the sole act of exporting goods or technological information to a foreign country with no requirement of benefit to the government of those countries." *Id.* at *7.

88. *Id.*

89. 142 CONG. REC. S12,212 (daily ed. Oct. 2, 1996); *see Lee*, 2010 WL 8696087, at *7.

categorically excludes foreign corporations from the ambit of § 1831. The EEA defines "foreign instrumentality" as "any agency, bureau, ministry, component, institution, association, or any legal, commercial, or business organization, *corporation*, firm, or entity that is substantially owned, controlled, sponsored, commanded, managed, or dominated by a foreign government."[90] As long as there is evidence that a foreign government "substantially" sponsors a foreign corporation, that corporation falls squarely within the scope of § 1831 of the EEA.[91]

In cases involving foreign corporations, a court's task is therefore to determine whether a certain entity is substantially sponsored or controlled by a foreign government. While the EEA does not define "substantially," the statute's legislative history explains that "the prosecution need not prove complete ownership, control, sponsorship, command, management, or domination" over a foreign entity.[92] In *Jin*, the court did not explicitly comment on whether China "substantially sponsored" Sun Kaisens, the Chinese telecommunications company for which Jin temporarily worked during her leave of absence from Motorola.[93] The court did, however, note that Sun Kaisens "develops telecommunications technology and products for the Chinese military."[94] The court also explained that one of the documents found in Jin's possession listed Sun Kaisens as "a member of the General Assembly," which was the highest decision-making body of a Chinese military project called the Comprehensive Mobile Communications Project.[95]

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90. 18 U.S.C. § 1839(1) (emphasis added).

91. *See id.*

92. *See* MICHAEL BATTLE ET AL., U.S. DEP'T OF JUSTICE, PROSECUTING INTELLECTUAL PROPERTY CRIMES § IV.B.4, at 158 (3d ed. 2006), *available at* http://www.lb5.uscourts.gov/ArchivedURLs/Files/09-20074(1).pdf. The legislative history of the EEA provides some explanation of how to define "substantial":

> Substantial in this context, means material or significant, not technical or tenuous. We do not mean for the test of substantial control to be mechanistic or mathematical. The simple fact that the majority of the stock of a company is owned by a foreign government will not suffice under this definition, nor for that matter will the fact that a foreign government owns 10 percent of a company exempt it from scrutiny. Rather the pertinent inquiry is whether the activities of a company are, from a practical and substantive standpoint, foreign government directed.

142 CONG. REC. S12,212.

93. *See* United States v. Jin, 833 F. Supp. 2d 977 (N.D. Ill. 2012).

94. *Id.* at 980.

95. *Id.* at 1004. The Comprehensive Mobile Communications Project was part of the Comprehensive Military Communications System 2nd General Meeting, which was organized by the 61st Institute. *Id.* The 61st Research Institute focuses on the research and development of equipment for the People's Liberation Army of China. *Id.* at 1002.

Given the strong relationship between the Chinese government and Sun Kaisens, as well as the lack of precedent for judicial interpretation regarding the extent of control or domination necessary for a company to constitute a "foreign instrumentality," the *Jin* court could have concluded that the Chinese government substantially sponsored Sun Kaisens.

2. The Benefit

Closely tied to the interpretation of the "beneficiary" element is the determination of what constitutes a "benefit" to a foreign government under § 1831. The EEA's legislative history indicates that courts should interpret the word "benefit" in § 1831 broadly:

> The defendant did not have to intend to confer an economic benefit to the foreign government, instrumentality, or agent . . . . Rather, the government need only prove that the actor intended that his actions in copying or otherwise controlling the trade secret would benefit the foreign government, instrumentality, or agent in *any way*. Therefore, in this circumstance, benefit means not only an economic benefit but also reputational, strategic, or tactical benefit.[96]

The *Lee* court, however, interpreted the benefit element more narrowly than these comments suggest. The court's conclusion that "there was no evidence that Defendants intended to or were required as a condition of the grant to transfer any technology to the PRC"[97] does not comport with the realities of the 863 Program in which the defendants intended to participate.[98] The cash grant that the defendants would have received under the 863 Program was not given unconditionally, but rather as part of a give-and-take that involved a subsequent conferral of benefits on the Chinese government.[99] If the *Lee* court had viewed the program in this way, it likely

96. H.R. REP. NO. 104-788, at 11 (1996).

97. *See* United States v. Lee et al., No. CR 06-0424 JW, 2010 WL 8696087, at *8 (N.D. Cal. May 21, 2010).

98. *See supra* Section II.B.

99. *See* Edelman, *supra* note 33, at 465 (noting a possible argument that the defendants in *Lee* "must have known that there is no such thing as free money, and if China was willing to fund the venture, the defendants had to understand that the government was getting some benefit in return"). In some respects, this 863 funding relationship looks and functions much like a venture capital relationship, in which the *Lee* court noted that a benefit would be "inherent" because "[v]enture capital means money invested in the ownership element of a new enterprise." *See Lee*, 2010 WL 8696087, at *8.

would have found that the 863 funding requirements transformed the defendants' use into a "benefit" for the purposes of § 1831.[100]

The narrow interpretation by the court conflicts with the policy goals that Congress hoped to accomplish through the EEA. If courts continue down the *Lee* court's path and interpret "benefit" narrowly, prosecutors may believe that they can only obtain an economic espionage conviction by showing benefits that are obviously solicited by a foreign government—as in the *Chung* case—and they may lose the incentive to prosecute cases where the benefit is more indirect.[101] This deterrence thus creates a vicious cycle: if prosecutors lack the incentive to pursue on-the-margin economic espionage cases due to the ambiguity of the statute, courts will lose the opportunity to develop case law on § 1831, which will perpetuate the ambiguity of the statute and thus continue to deter prosecutions.[102]

Jin represents an on-the-margin case where the benefit to the foreign government was more indirect. The court acknowledged that the legislative history of the EEA suggests a broad interpretation of the term "benefit," but it concluded that proof of Jin's intention to confer a benefit on the Chinese government was too speculative.[103] The court focused not on whether Jin thought or knew the stolen trade secret information would confer a benefit on a foreign government, but whether the stolen trade secret information *actually* would have conferred a benefit on the Chinese government.[104] The court reasoned that, because the technology contained in the Motorola trade secrets was less advanced than that available to the Chinese military, and was therefore undesirable, the link between the Chinese military and the trade secrets failed to "give the PRC any tactical, reputational, or other benefit."[105] The court also suggested that, because Jin had documents indicating the Chinese military was seeking more advanced telecommunications technology than that contained in the Motorola trade secrets, Jin likely knew the stolen trade secrets would not benefit the Chinese government.[106]

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100. *See Lee*, 2010 WL 8696087, at *6. This broader reading of Program 863's purposes and activities also relates to the "beneficiary" element of § 1831, discussed *supra* Section III.A.1.

101. *See Criminal Law—Economic Espionage—Ninth Circuit Upholds First Trial Conviction Under § 1831 of the Economic Espionage Act of 1996*, 125 HARV. L. REV. 2177, 2182 (2012) ("EEA ambiguity disincentivizes prosecution of cases at the margin.").

102. *See id.*

103. United States v. Jin, 833 F. Supp. 2d 977, 1019–20 (N.D. Ill. 2012).

104. *See id.* (emphasis added).

105. *Id.*

106. *Id.* at 1019.

This focus on the actual benefit to the Chinese military distorts the proper analysis of § 1831. The court incorrectly focused on what benefit the Chinese government was seeking from the defendant, rather than what benefit the defendant was seeking to confer on the Chinese government. Regardless of whether the Motorola technology was less advanced than that desired by the Chinese military, access to these documents may have provided the Chinese government a glimpse into Motorola's design process or may have provided some other type of information about the company's strategies. More importantly, the court's focus on the actual benefit disregarded the third element of § 1831: whether Jin *intended* these documents to benefit the Chinese government.[107]

3. *The Defendant's Mens Rea: Intent or Knowledge*

To convict a defendant under § 1831, the government need not prove that a foreign government actually benefitted from the defendant's offense.[108] Rather, the government must prove that the defendant had the requisite mens rea—he or she must have intended or known of a benefit to a foreign government at the time he or she stole the trade secrets.[109] Because both the *Lee* and *Jin* courts focused more of their analyses on the benefit requirement than on the mens rea element, the case law regarding how courts should interpret the mens rea element in § 1831 remains relatively undeveloped.[110]

In its brief analysis of Jin's mens rea, the court provided two arguments for why Jin neither intended nor knew of a benefit to a foreign government.

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107. *See* 18 U.S.C. § 1831(a) (2006) (focusing on the language "whoever, *intending or knowing* that the offense will benefit any foreign government . . . ." (emphasis added)). In acquitting Jin of economic espionage charges, the court concluded: "There is certainly plenty of speculative proof that the PRC *may have benefitted* from Jin's conduct, but such speculation does not equate to proof beyond a reasonable doubt." *Jin*, 833 F. Supp. 2d at 1020 (emphasis added). As discussed *infra* Section III.A.3, it was improper for the court to consider whether or not an actual benefit would have accrued to the PRC in determining Jin's guilt under § 1831.

108. *See* Edelman, *supra* note 33, at 473; *see also* 18 U.S.C. § 1831(a).

109. Edelman, *supra* note 33, at 473; *see also* 18 U.S.C. § 1831(a).

110. In *Lee*, the court focused on whether a grant from the 863 Program equated to a benefit to the PRC. United States v. Lee et al., No. CR 06-0424 JW, 2010 WL 8696087, at *7–8 (N.D. Cal. May 21, 2010); *see also supra Section* III.A.2. While the court acknowledged that the defendants intended to benefit themselves and intended to apply for an 863 grant, it did not explicitly analyze § 1831's mens rea requirement. *Lee*, 2010 WL 8696078, at *7–8; *see also* Edelman, *supra* note 33, at 452–53 (noting the prosecutors' and judge's focus on the benefit element during the *Lee* trial). In *Jin*, the court concluded that Jin did not intend to benefit the Chinese government because "the evidence did not establish that Jin planned to give the trade secrets to Sun Kaisens" and because the government would not have actually benefitted from the Motorola trade secrets. *Jin*, 833 F. Supp. 2d at 1019–20; *see also supra* Section III.A.2.

First, it explained that the government provided no evidence that Sun Kaisens "asked or directed" Jin to steal trade secrets from Motorola.[111] However, this explanation overstates the government's burden. The government must prove only that the defendant "intend[ed] or [knew] that the [trade secret theft] offense [would] benefit any foreign government,"[112] not that the foreign government solicited the transfer or beneficial use of the trade secrets.[113]

Second, even if the Motorola documents would not have *actually* benefitted the Chinese government, Jin may still have believed or intended that the Chinese government would receive a benefit. The *Jin* court stated that "[t]he Chinese military documents found in Jin's possession clearly establish that Sun Kaisens develops telecommunications technology for the Chinese military, and that Jin had worked on such projects in the past."[114] Given this connection between Jin and the Chinese military, the court could have adopted the *Chung* court's analysis: "Given Defendant's history of passing technical [non-trade secret] documents to China . . . a rational trier of fact reasonably could infer from Defendant's more recent possession of similar documents that his intent to benefit China . . . extended to his possession of the trade secrets."[115]

While the evidence of Jin's connection to the Chinese military was not as strong as the evidence of Chung's connection to the Chinese government, the *Jin* court should have used a similar inferential chain in analyzing Jin's conduct.[116] Jin had a history of working for Sun Kaisens on telecommunications projects that benefitted the Chinese military.[117] Given this past and Jin's recent possession of Chinese military documents relating to telecommunications,[118] it is reasonable to infer that her past intent to

111. *Jin*, 833 F. Supp. 2d at 1019.

112. 18 U.S.C. § 1831(a).

113. *See Lee*, 2010 WL 8696087, at *7 ("[T]he government would have met its burden if it presented evidence showing that Defendants were 'intending' to transfer [their employer's] trade secrets to the PRC or one of its instrumentalities or agents, or use it for the PRC's benefit even if the transfer or beneficial use was not solicited by the PRC.").

114. *Jin*, 833 F. Supp. 2d at 1003.

115. *Chung II*, 659 F.3d 815, 828 (9th Cir. 2011).

116. In *Jin*, the Government argued that "Jin knew her conduct would benefit the PRC because Sun Kaisens develops telecommunications technology for the Chinese military, Jin knew that Sun Kaisens developed telecommunication projects for the Chinese military, and the trade secrets pertained to telecommunications technology." *Jin*, 833 F. Supp. 2d at 1019. The court held that this "inferential chain from the facts to the Government's conclusion fails to establish the required proof beyond a reasonable doubt." *Id.*

117. *Id.* at 1003.

118. *See infra* note 124.

benefit the Chinese military—or at least to benefit Sun Kaisens, which is arguably a Chinese instrumentality[119]—extended to Jin's possession of the Motorola trade secrets.[120] By refusing to accept this inferential chain as circumstantial proof of Jin's intent or knowledge, the court narrowly interpreted § 1831's mens rea element.

Furthermore, the court stated that "the evidence did not establish that Jin planned to give the trade secrets to Sun Kaisens, let alone the PRC."[121] That Jin did not intend to give the trade secrets to Sun Kaisens or the PRC, however, does not foreclose the possibility that she intended to "use [the trade secrets] for the PRC's benefit."[122] The *Jin* court acknowledged that Jin "believed at the time she took the documents that they would, at a minimum, help prepare her for her new job with Sun Kaisens and meet the expectations of her new employer," and thus confer an indirect benefit on Sun Kaisens.[123] Jin intended to use the trade secrets to enrich herself and improve her skills, and her enrichment would, in turn, benefit Sun Kaisens. This intention, combined with Jin's knowledge that Sun Kaisens developed telecommunications technology for the Chinese military, as well as her knowledge of her own role in that process, suggest that Jin knew or intended that a benefit, even if indirect, would result from her trade secret theft.[124] This conclusion would carry even more weight if the court had given a broad

119. *See supra* Section III.A.1.

120. Jin knew that Sun Kaisens worked closely with the Chinese military, so she therefore knew that work she did in connection with telecommunications projects would likely be passed on to the Chinese military. *See* Posters 'N' Things, Ltd. v. United States, 511 U.S. 513, 523–24 (1994) (concluding that, in a criminal statute with a mens rea requirement of knowledge, this requirement is satisfied by evidence of "action undertaken with knowledge of its probable consequences" (quoting United States v. United States Gypsum Co., 438 U.S. 422, 444 (1978))).

121. *Jin*, 833 F. Supp. 2d at 1019.

122. *See* United States v. Lee et al., No. CR 06-0424 JW, 2010 WL 869087, at *7 (N.D. Cal. May 21, 2010).

123. *Jin*, 833 F. Supp. 2d at 1017. The court discussed this planned use in its determination of Jin's guilt of general trade secret theft under § 1832. *Id.*

124. The facts stated in the *Jin* opinion reveal a strong relationship among Jin, Sun Kaisens, and the Chinese military. In 2006, a Sun Kaisens manager asked Jin to review Chinese documents and "ascertain how much assistance she could provide on the projects." *Id.* at 983. Later in 2006, the same manager emailed Jin asking her to familiarize herself with a document that would be discussed with "Institute 61," which is "under the oversight of the Chinese military and develops equipment for the People's Liberation Army (PLA)." *Id.* A few weeks later, Jin saved documents relating to Chinese military communications systems to her hard drive. *Id.* In 2007, Jin saved additional Chinese military and Sun Kaisens documents. *Id.* When agents stopped Jin at the airport on her way out of the United States, they found a classified document relating to Chinese military telecommunications systems. *Id.* at 988.

reading to the "beneficiary" element and determined that Sun Kaisens was an instrumentality of the Chinese government.[125] Jin's intention to indirectly benefit Sun Kaisens by using the trade secrets for her professional development would thus equate to an intention to benefit a foreign instrumentality. In constricting the statute's interpretation, the court set precedent that makes it more difficult to convict a defendant of economic espionage.

The courts' narrowing of the elements of § 1831 does not fully explain the lack of economic espionage convictions. In *Jin*, the court found that the defendant lacked the mens rea required for a conviction under § 1831, and convicted her only on charges of general trade secret theft.[126] Yet, at sentencing, Judge Castillo enhanced Jin's prison term because he found the evidence that she intended to benefit the Chinese government in stealing the Motorola trade secrets to be "compelling."[127] Judge Castillo's recognition of this evidence suggests that § 1831 of the EEA does not function as Congress intended in securing economic espionage convictions. Even where a judge finds compelling evidence of guilt, the narrowly defined elements of § 1831 prevent that judge from convicting the defendant under the economic espionage prong of the EEA.

B. CONGRESS'S RECENT LEGISLATION AMENDING THE EEA INDICATES A DESIRE TO BROADEN THE ELEMENTS OF § 1831

1. *The Penalty Enhancement Act of 2012*

Congress has most recently articulated its policy goals regarding economic espionage by passing EEA-related legislation. On January 14, 2013, President Obama signed into law the Foreign and Economic Espionage Penalty Enhancement Act of 2012 ("Penalty Enhancement Act")[128] which amends the EEA by significantly increasing the maximum fines for stealing trade secrets with an intent to benefit a foreign government.[129] The Penalty Enhancement Act was the product of two

125. *See supra* Section III.A.1.

126. *Jin*, 833 F. Supp. 2d at 1020.

127. Ameet Sachdev, *Four Years for Stealing Secrets in Punishing Ex-Motorola Worker, Judge Warns Economic Espionage Is a Threat to U.S. Companies*, CHICAGO TRIBUNE, Aug. 30, 2012.

128. *Statement by the Press Secretary, Office of the Press Secretary*, THE WHITE HOUSE, http://www.whitehouse.gov/the-press-office/2013/01/14/statement-press-secretary (last visited Mar. 3, 2013).

129. *Foreign and Economic Espionage Penalty Enhancement Act of 2012 ("Penalty Enhancement Act")*, H.R. 6029, 112th Cong. (2012); 158 CONG. REC. H7,559 (daily ed. Jan. 1, 2013). For offenses committed by individuals, this bill increased the maximum fine from $500,000 to $5,000,000, and for offenses committed by organizations, the bill increased the fine from

companion bills—H.R. 6029 in the House of Representatives and S. 678 in the Senate—which contained nearly identical language in their original formats.[130] H.R. 6029 passed in the Senate on December 19, 2012,[131] and in the House on January 1, 2013.[132]

The Penalty Enhancement Act contains measures that the IPEC, in conjunction with the Departments of Commerce, Homeland Security, Justice and State, and the U.S. Trade Representative, recommended to Congress.[133] The bill was intended to be "a starting point for a larger discussion about the implementation of the [EEA], and whether additional updates and improvements are needed in light of the global economy and advances in technology."[134] In his introduction of S. 678 to the Senate, Senator Herb Kohl described how the technological landscape has changed in the fifteen years since the enactment of the EEA. Now, companies maintain as much as eighty percent of their assets as intangible trade secrets, and recent technologies make it very easy for outsiders to obtain this information.[135] Senator Kohl provided several examples of recent economic espionage cases, including *Chung* and *Lee*, and concluded: "We must definitively punish anyone who steals information from American companies."[136]

By significantly increasing the maximum fines for a conviction under § 1831 of the EEA, the Penalty Enhancement Act reflects the policy goals

"not more than $10,000,000" to "not more than $10,000,000 or 3 times the value of the stolen trade secret to the organization, including expenses for research and design and other costs of reproducing the trade secret that the organization has thereby avoided." H.R. 6029 § 2(a)–(b).

130. *See* H.R. 6029; S. 678, 112th Cong. (2011). S. 678 was introduced on March 30, 2011, by Senator Kohl of Wisconsin, and was co-sponsored by Senator Sheldon Whitehouse of Rhode Island and Senator Chris Coons of Delaware. 157 CONG. REC. S1985 (daily ed. Mar. 30, 2011). H.R. 6029 was introduced on June 27, 2012, by Representative Lamar Smith of Texas. 158 CONG. REC. H4155–56 (daily ed. June 27, 2012). Both bills originally proposed increasing the maximum imprisonment for a § 1831 violation from fifteen to twenty years, and H.R. 6029 also proposed increasing the maximum fine for a § 1831 violation. *See* S. 678; H.R. 6029. The only other notable difference between the House and Senate bills is that the House bill does not contain a directive for the Sentencing Committee to "consider establishing a minimum offense level under the Federal sentencing guidelines and policy statements for offenses relating to the transmission or attempted transmission of a stolen trade secret outside of the United States." *See* S. 678 § 3(b)(3); H.R. 6029 § 3(b).

131. 158 CONG. REC. S8229–30 (daily ed. Dec. 19, 2012).

132. 158 CONG. REC. H7559 (daily ed. Jan. 1, 2013).

133. 157 CONG. REC. S1985 (daily ed. Mar. 30, 2011) (statement of Sen. Kohl).

134. *Id.* (statement of Sen. Kohl).

135. *Id. See also* Strom, *supra* note 33, at 1 ("Given the relative ease of transferring sensitive trade secrets via cellphones, e-mail and thumb drives, . . . a recent surge in trade secret theft cases makes sense.").

136. CONG. REC. S1985 (statement of Sen. Kohl).

that Senator Kohl enunciated in his initial introduction of the bill. These substantive amendments, however, are not the only reflections of these goals. The Penalty Enhancement Act also directs the U.S. Sentencing Commission to review the U.S. Sentencing Guidelines in light of the amendments to the EEA's penalty provisions.[137] The Act asks the Sentencing Commission to "consider whether additional enhancements in the Federal sentencing guidelines" are appropriate to account for two types of special offense characteristics:[138] (1) "the transmission or attempted transmission of a stolen trade secret outside of the United States"[139] and (2) "the transmission or attempted transmission of a stolen trade secret outside of the United States that is committed or attempted to be committed for the benefit of a foreign government, foreign instrumentality, or foreign agent."[140] These recommended sentencing enhancements are not substantive amendments to the EEA. Rather, if adopted by the Sentencing Commission, the enhancements would increase the offense level—and thus, the possible sentence—of a defendant who has already been convicted of trade secret theft[141] under either § 1831 or § 1832 of the EEA.[142]

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137. *See* H.R. 6029, 112th Cong. § 3 (2012).

138. *Id.* § 2(b)(2). "Special offense characteristics" are "those characteristics specific to the defendant's conduct or harm that Congress has determined to be aggravating or mitigating factors of a crime." Carolyn Barth, *Aggravated Assaults with Chairs versus Guns: Impermissible Applied Double Counting Under the Sentencing Guidelines*, 99 MICH. L. REV. 183, 185 n.14 (2000). Sentencing judges use special offense characteristics to add enhancements to a defendant's base offense level when determining the proper sentencing range under the Guidelines. *See infra* note 141.

139. H.R. 6029 § 2(b)(2)(A).

140. *Id.* § 2(b)(2)(B). The bill issues the following general directive to the United States Sentencing Commission:

> (a) IN GENERAL.—Pursuant to its authority under section 994(p) of title 28, United States Code, the United States Sentencing Commission shall review and, if appropriate, amend the Federal sentencing guidelines and policy statements applicable to persons convicted of offenses relating to the transmission or attempted transmission of a stolen trade secret outside of the United States or economic espionage, in order to reflect the intent of Congress that penalties for such offenses under the Federal sentencing guidelines and policy statements appropriately, [sic] reflect the seriousness of these offenses, account for the potential and actual harm caused by these offenses, and provide adequate deterrence against such offenses.

Id. § 3(a).

141. While the U.S. Sentencing Guidelines are no longer mandatory, the Sentencing Reform Act, 18 U.S.C. § 3553, requires sentencing courts to consider the sentencing range generated by the Sentencing Guidelines in its assessment of an appropriate sentence. Alan Ellis and James H. Feldman, Jr., *Federal Sentencing Under the Advisory Guidelines: A Primer for the Occasional Federal Practitioner—Part I*, THE CHAMPION 42, 43 (July 2008); *see* United States v. Booker, 543 U.S. 220 (2005) (holding that mandatory Sentencing Guidelines are

The second recommended enhancement would increase the recommended penalty of a defendant who has stolen a trade secret and transmitted—or attempted to transmit—it outside of the United States for the benefit of a foreign government.[143] Such an enhancement would therefore apply only to a defendant who has been convicted of economic espionage as codified in § 1831 of the EEA.

The first recommended enhancement, on the other hand—for "the transmission or attempted transmission of a stolen trade secret outside of the United States"[144]—does not parallel any provision in the EEA. Rather, this enhancement essentially cuts out the beneficiary, benefit, and mens rea requirements contained in § 1831. If adopted by the Sentencing Commission, such a provision would enhance the Guideline sentence of anyone convicted of stealing trade secrets who also attempts to—or does—take the trade secrets out of the country, regardless of whether the defendant intended to

unconstitutional). As an example of how penalty enhancements factor into the calculation of a Guidelines range, consider a defendant who has been convicted of economic espionage under 18 U.S.C. § 1831 (2006). First, the judge must determine the offense guideline applicable to the offense of conviction. U.S.S.G. § 1B1.1(a)(1). For 18 U.S.C. § 1831, the applicable offense guideline is § 2B1.1, which covers offenses involving stolen property, fraud, deceit, and other property offenses. *See* U.S.S.G. § 2B1.1. Second, the judge must determine the "base offense level," which is "six" for defendants convicted under § 1831. *See* U.S.S.G. §§ 1B1.1(a)(2); 2B1.1(a). Third, the judge must determine if a "specific offense characteristic" ("SOC") applies. U.S.S.G. § 1B1.1(a)(2). In this calculation, the judge increases the base offense level according to the penalty enhancements provided in the Guidelines. For example, if the loss exceeded $1 million, the judge must add sixteen levels to the base level. U.S.S.G. § 2B1.1(b)(1). At present, the only enhancement in the Guidelines specifically relating to trade secret theft is § 2B1.1(b)(5), which provides for a two-level enhancement if "the offense involved misappropriation of a trade secret and the defendant knew or intended that the offense would benefit a foreign government, foreign instrumentality, or foreign agent." U.S.S.G. § 2B1.1(b)(5). A defendant convicted under § 1831, therefore, would receive this two-level enhancement to his offense level. After considering a number of other factors, the judge produces a final offense level and uses this, as well as the defendant's criminal history category, to calculate the appropriate sentencing range under the Guidelines. *See* U.S.S.G. § 1B1.1(a)(3)–(8).

142. Because the first of the two recommended enhancements does not include a requirement that the defendant has stolen trade secrets with an intent to benefit a foreign government, this enhancement could apply to a defendant who has only committed domestic trade secret theft under § 1832. This differs from the enhancement that currently exists in the Sentencing Guidelines, which would only increase the base offense level of a defendant convicted of economic espionage under § 1831 of the EEA. *See supra* note 141. The Penalty Enhancement Act gives the Sentencing Commission 180 days to complete its consideration of these additional enhancements. H.R. 6029 § 3(d).

143. *See* H.R. 6029 § 2(b)(2)(B).

144. *Id.* § 2(b)(2)(A).

benefit, or knew he was benefitting, a foreign government, foreign instrumentality, or foreign agent.[145]

While these directives for sentencing enhancements do not contain proposals to amend the provisions of the EEA itself, they serve as indications of Congress' current policy objectives. Senator Kohl, when he introduced S. 678 to the Senate, framed it as "a first step in our efforts to do more to stem the flow of valuable business information out of our country."[146] He provided several examples of recent economic espionage cases, including *Chung* and *Lee*, and advocated "punish[ing] anyone who steals information from American companies."[147] These sentiments reflect Congress's goals in originally enacting the EEA, but they especially emphasize the importance of keeping trade secrets of American companies within the United States. The directives in the Penalty Enhancement Act reflect a congressional belief that it is not only necessary to punish an individual who steals trade secrets with a specific intent to benefit a foreign government, but also to punish an individual who steals trade secrets and simply takes them to a foreign country.

2. *The Penalty Enhancement Act May Increase Penalties, but Not Convictions, in on-the-Margin Cases*

If the Sentencing Commission adopts these recommendations for additional penalty enhancements, defendants like Lee and Jin—who stole trade secrets and attempted to transmit them outside the United States—could face harsher punishments. Under the narrow interpretation of the § 1831 elements used by courts thus far, these types of defendants will escape economic espionage conviction because of insufficient proof that they intended to benefit a foreign government.[148] However, because these types of defendants would be convicted under § 1832 of the EEA, which punishes general trade secret theft, they would still face harsher punishments under the proposed Sentencing Guidelines enhancements for attempts to take stolen trade secrets out of the United States. This result echoes the approach already taken by Judge Castillo in Jin's sentencing—he enhanced Jin's punishment because of compelling evidence that she intended to benefit

145. Because this enhancement would only apply to those convicted of stealing trade secrets, and because the EEA is the only federal statute that criminalizes trade secret theft, this enhancement would likely only apply to those convicted under § 1831 or § 1832. *See supra* Section I.A,

146. 157 CONG. REC. S1985 (daily ed. Mar. 30, 2011) (statement of Sen. Kohl).

147. *Id.*

148. *See supra* Part III.

a foreign government.[149] The additional enhancements for attempted transmission of trade secrets out of the United States would subject defendants who barely escape economic espionage conviction to harsher punishments.

Nevertheless, harsher punishments will not necessarily align the judicial outcomes of § 1831 cases with the policy goals of Congress and the prosecutorial ambitions of the DOJ. While those convicted of economic espionage or found to have attempted the transmission of trade secrets outside the country may face increased prison sentences under these potential enhancements, the narrow elements of § 1831 will still restrict the ability of courts to find defendants guilty of economic espionage. Furthermore, the narrow interpretation that courts have given to the already narrow elements in the statute will discourage prosecutors from prosecuting on-the-margin cases like *Jin* and *Lee* because of the slim chances of conviction under § 1831.[150] These penalty enhancements, while indicative of Congress's attempt to combat economic espionage, do not strike at the heart of the problem. The language of § 1831— which both constricts and is constricted by the courts—has impeded the efforts of Congress and the DOJ to convict defendants of economic espionage. Thus, to align its goals and judicial outcomes, Congress must reform the language of the EEA itself.

C. A PROPOSAL FOR IMPROVED ENFORCEMENT OF THE EEA

One theme emerges from analysis of the policy goals and proposals outlined in the Penalty Enhancement Act: the dangers of economic espionage originate not only from those who steal trade secrets with a specific intent to benefit a foreign government, but also from those who steal trade secrets and merely transmit—or attempt to transmit—them to a foreign corporation or entity. This, in turn, suggests a specific way to reform the EEA itself to increase convictions under the EEA: Congress should add a provision to the EEA that addresses the same concerns that underlie the Penalty Enhancement Act.

The Penalty Enhancement Act's directives to the Sentencing Commission recommended enhancements in the Sentencing Guidelines for two offenses: (1) economic espionage and (2) "the transmission or attempted

149. *See* Sachdev, *supra* note 127.

150. *See Criminal Law—Economic Espionage—Ninth Circuit Upholds First Trial Conviction Under § 1831 of the Economic Espionage Act of 1996*, *supra* note 101, at 2182 ("EEA ambiguity disincentivizes prosecution of cases at the margin."); *supra* Section III.A.2.

transmission of a stolen trade secret outside of the United States."[151] The EEA codifies the first of these offenses in § 1831, but it does not codify the second.[152] As discussed in Section III.B above, *supra*, the Penalty Enhancement Act's focus on this second offense suggests Congress's interest in preventing the transmission of a stolen trade secret outside of the United States, even if it was not stolen for the benefit of a foreign government. Congress could emphasize this importance by writing a prohibition on such activity into the EEA itself. Such a provision could appear as a separate section within the EEA, and would use the same preamble as § 1831 and the same language as § 1831 and § 1832 in its description of the general trade secret offense. This additional provision could read as follows:

> (a) Whoever, with intent to convert a trade secret, that is related to or included in a product that is produced for or placed in interstate or foreign commerce, to the economic benefit of anyone other than the owner thereof, and intending or knowing that the offense will, injure any owner of that trade secret, knowingly—
>
> [the five types of trade secret theft from § 1831 and § 1832[153]]
>
> *and knowingly transmits or attempts to transmit such information outside the United States*, shall, except as provided in subsection (b), be fined under this title or imprisoned not more than __ years, or both.[154]

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151. S. 678, 112th Cong. § 3(b)(2) (2012); H.R. 6029, 112th Cong. § 3(b)(2) (2012); *see supra* Section III.B.

152. *See* 18 U.S.C. § 1831–1832 (2006); *supra* Section I.B.

153. These five types of trade secret theft are:

> (1) steals, or without authorization appropriates, takes, carries away, or conceals, or by fraud, artifice, or deception obtains a trade secret;
>
> (2) without authorization copies, duplicates, sketches, draws, photographs, downloads, uploads, alters, destroys, photocopies, replicates, transmits, delivers, sends, mails, communicates, or conveys a trade secret;
>
> (3) receives, buys, or possesses a trade secret, knowing the same to have been stolen or appropriated, obtained, or converted without authorization;
>
> (4) attempts to commit any offense described in any of paragraphs (1) through (3); or
>
> (5) conspires with one or more other persons to commit any offense described in any of paragraphs (1) through (3), and one or more of such persons do any act to effect the object of the conspiracy . . . .

18 U.S.C. § 1831(a)(1)–(5).

154. This proposed provision is identical to 18 U.S.C. § 1832 except for the italicized language. By including the "produced for or placed in interstate or foreign commerce" language from § 1832 in this suggested addition, Congress would establish federal jurisdiction over the provision. *See* Susan W. Brenner & Anthony C. Crescenzi, *State-*

To reflect the severity of this offense, Congress could set the maximum prison sentence at a number of years just below the fifteen-year maximum prison sentence for economic espionage under § 1831.[155] Adding such a provision to the EEA would decrease the impediments to conviction found in § 1831, while at the same time reserving the harshest punishments for those defendants who clearly commit economic espionage under § 1831 as currently codified and interpreted. Adding a provision to the EEA that prohibits the transmission or attempted transmission of a stolen trade secret outside of the United States would remove the three biggest barriers to conviction under § 1831: the beneficiary, benefit, and mens rea elements. Regardless of the defendant's intent or knowledge to benefit a foreign government, he or she would violate this provision if he or she steals an American trade secret and knowingly transmits it to a foreign country.

This addition to the EEA would give prosecutors more breathing room to prosecute foreign thieves of trade secrets without stretching the terms of § 1831. The proposal would encompass situations like those in *Jin* and *Lee*, where the defendants had stolen trade secrets and attempted to transmit them to a foreign country, but did not meet § 1831's narrowly interpreted benefit and mens rea requirements. The harsher punishment provided under § 1831 would be reserved for situations like that in *Chung*,[156] where the facts suggest the defendant's obvious intent to benefit a foreign government.

The addition of this type of economic espionage crime to the EEA would both increase economic espionage convictions—thus aligning the goals of Congress with judicial outcomes—and preserve fairness to defendants. Because this addition would not change the terms of § 1831, defendants would not be subject to the harshest economic espionage punishments unless a court finds that they satisfied the narrow beneficiary,

Sponsored Crime: The Futility of the Economic Espionage Act, 28 HOUS. J. INT'L L. 389, 428 (2006). It would also serve to bridge the gap between domestic trade secret theft in § 1832 and foreign economic espionage in § 1831—by using § 1832's language to criminalize foreign-related trade secret theft, it would help to fix the current disconnect between the two sections. The EEA's express statement that it does not preempt any other trade secret laws would also apply to this provision. *See* 18 U.S.C. § 1838 (2006); *supra* note 25.

155. The maximum prison sentence for the suggested offense should be at least twelve years, to differentiate it from the maximum sentence of ten years for general trade secret theft under § 1832. *See* 18 U.S.C. § 1832(a). Congress could set the maximum fine for this offense at the same level as the originally enacted § 1831—$500,000 for individuals and $10 million for organizations. *See* 18 U.S.C. § 1831 (2006).

156. *Chung I*, 633 F. Supp. 2d 1134 (C.D. Cal. 2009), *aff'd*, 659 F.3d 815 (9th Cir. 2011). *See supra* Section II.B.

benefit, and mens rea elements of the existing § 1831. Those who transmit or attempt to transmit a stolen trade secret outside of the United States would receive a lesser punishment—under the suggested EEA addition—and those who only steal a trade secret, without transmitting it, would receive an even lesser punishment—under § 1832. Most importantly, this suggested amendment would still require that a defendant committed trade secret theft—that is, that the defendant had the requisite intent as described in § 1832. To convict a defendant under this suggested addition, prosecutors would still need to prove beyond a reasonable doubt that the defendant knowingly committed trade secret theft (i.e., that he violated § 1832), and that he knowingly transmitted or attempted to transmit those stolen trade secrets outside of the United States.[157] The government, however, would *not* need to prove that the defendant intended or had knowledge of a resulting benefit to a foreign government in the commission of this trade secret theft or in its transmission to another country.

D. BEYOND THE EEA

One potential complication with this proposed amendment—and with the EEA in general—may arise in the context of multinational corporations. While Congress has directed EEA enforcement efforts against foreign governments and foreign entities, it is unclear how the EEA would apply to companies that have a significant presence in multiple foreign nations. The suggested amendment to the EEA may further complicate this problem, as it shifts the focus from those who intend to benefit a foreign government with their stolen trade secrets to those who merely take them to another country. What if the defendant stole a trade secret from an American company, and then transmitted it to a company in China that was forty-nine percent American-owned and fifty-one percent Chinese-owned? What if it is impossible to determine what percentage of a multinational corporation is owned or controlled by a certain country? These are legitimate questions that Congress should consider if it decides to reevaluate its policy regarding economic espionage enforcement.

Even putting these open issues aside, a basic problem with the EEA itself will prevent Congress from accomplishing all of its goals. Congress

157. Reflecting this logic, Nathaniel Minott suggests that the additional mens rea requirement in § 1831 (having the intent or knowledge that the offense benefit a foreign government) is "needlessly onerous, and, in many respects, is unusual compared with other criminal statutes." Minott, *supra* note 6, at 206. Minott points out that "[o]ften, criminal law does not require the prosecutor to demonstrate the specific, separate dual intents when the law has two branches. Usually, it is sufficient only to demonstrate that the defendant had the requisite intent to set the cause in motion." *Id.* at 207.

intended that the EEA function as a "strong and meaningful deterrent to criminals considering engaging in economic espionage."[158] But the policies behind the EEA also suggest that these "criminals" are the foreign governments themselves, which initiate the efforts to steal American trade secrets.[159] The EEA, however, as a domestic law, does not—and cannot—target foreign governments for punishment.[160] Congress, therefore, "enacted a law that was supposed to target a certain class of violator, but left the 'head' of the beast unscathed."[161] Consequently, the EEA does not punish or deter the roots of the problem: foreign governments that solicit and benefit from economic espionage.[162]

The individuals whom the EEA does punish—those who actually steal the trade secrets from American companies—are the "lowest actors on the international espionage ladder."[163] They are simply the pawns of the foreign government that wants to benefit from American trade secrets. Enhancing the punishment of these actors under the Penalty Enhancement Act thus seems misguided. It is unlikely that an increase in the maximum fine under § 1831 will deter foreign governments from committing economic espionage when those foreign governments feel few repercussions from the penalty. Furthermore, because of these policies, it may seem especially problematic to punish individuals for simply taking trade secrets out of the country without the intent to benefit a foreign government, as proposed in Section III.C, *supra*.

There are several possible solutions to these problems. One solution could involve a combination of changes to the EEA and external agreements with foreign governments. Because the EEA only covers individual offenders, the ultimate solution to the larger inter-governmental economic espionage conflict may require international treaties. The United States could accomplish this either through bilateral treaties[164] or a multi-country

158. 142 CONG. REC. S12,214 (daily ed. Oct. 2, 1996).

159. *See id.* at 12,208 ("For years now, there has been mounting evidence that many foreign nations and their corporations have been seeking to gain competitive advantage by stealing trade secrets . . . ."); *see also* 142 CONG. REC. H10,461 (daily ed. Sept. 17, 1996) ("[The EEA] will also send a clear message to foreign governments, including many of our traditional allies, that are currently spying on America's private companies.").

160. Minott, *supra* note 6, at 209.

161. *Id.*

162. *See id.*

163. *Id.* at 210.

164. *See id.* at 222 (arguing that treaties could provide an "effective enforcement mechanism" for the economic espionage problem).

convention prohibiting economic espionage,[165] which could both encourage fair competition among nations and provide a mechanism for punishing those that steal or solicit the theft of trade secrets from other nations.[166] Another solution to the holes in the EEA could involve direct prosecution of the foreign instrumentalities of trade secret theft. While this would probably not be feasible if the beneficiary of the trade secret theft traced directly to a foreign government, it may be feasible if the beneficiary is an instrumentality of—i.e., a corporation in—a foreign government.[167]

Both of these solutions—combining changes in the EEA with treaties, and prosecuting foreign instrumentalities directly—could help Congress achieve its policy goals. First, by targeting the foreign governments who solicit trade secret theft, these solutions would tackle the real economic espionage problem. Second, both of these solutions would preserve the EEA's current function of prosecuting and punishing those individuals who actually commit trade secret theft for the benefit of a foreign government. While foreign governments may be the main problem behind economic espionage, the individuals who steal trade secrets from American companies play a significant part in the crime and should be punished for it.

IV. CONCLUSION

The EEA's failures to prevent foreign economic espionage stem from problems of narrowness in § 1831. Despite Congress's calls for broad

165. *See* Mark E.A. Danielson, *Economic Espionage: A Framework for a Workable Solution*, 10 MINN. J.L. SCI. & TECH. 503, 527–30 (2009) (proposing a convention framework for prohibiting economic espionage, and thereby "obliging parties to comply as a matter of international law").

166. *See id.* at 530.

167. In the most recent case involving economic espionage, *United States v. Pangang Group Co.*, prosecutors attempted to do just that. United States v. Pangang Group Co., Ltd., No. CR 11-00573 JSW, 2012 WL 3010958, at *1 (N.D. Cal. July 23, 2012). In *Pangang*, the Government charged Pangang Group, an allegedly state-owned Chinese company involved in the manufacturing and marketing of steel, titanium, and vanadium products, with economic espionage. *See id.* at *1. After a grand jury indicted the Pangang Group, the district court granted the defendants' motion to quash service of the summons, holding that the Government failed to comply with the service requirements in the Federal Rules of Civil Procedure when it served the summons on a manager of a United States-based, Pangang-owned company. *Pangang Group*, 2012 WL 3010958, at *1, *14. The *Pangang* opinion will likely make it "more difficult for the U.S. government to serve foreign corporations" in economic espionage cases. Quinn Emanuel Urquhart & Sullivan, LLP, *Court Quashes Summons of Indictment in Economic Espionage Act Prosecution Against Quinn Emanuel Chinese Client*, JD SUPRA (Oct. 5, 2012), http://www.jdsupra.com/legalnews/court-quashes-summons-of-indictment-in-e-49457/. However, this case suggests that the DOJ is making—and can make—an effort to target foreign instrumentalities directly.

interpretation of the provision, courts have read the beneficiary, benefit, and mens rea elements of the statute quite narrowly. This narrow judicial interpretation makes it more difficult for prosecutors to secure convictions, and thus deters them from pursuing economic espionage prosecutions. On the other hand, it appears that the narrow elements of § 1831 itself may constrain courts in their desire to convict defendants of economic espionage, as evidenced by Judge Castillo's enhancement of Jin's sentence for compelling evidence that she intended to benefit China.[168] The recently enacted Penalty Enhancement Act—with its suggestion that the EEA punish those who transmit stolen trade secrets to another country regardless of their intent to benefit a foreign government—indicates Congress's desire to broaden the terms and reach of the EEA. If Congress changes the EEA to reflect these desires, if courts interpret these provisions broadly, and if the DOJ continues to directly prosecute foreign instrumentalities or the Executive branch reaches outside the EEA through treaties or conventions, the United States may be able to accomplish its stated goal of curbing economic espionage.

168. *See* Sachdev, *supra* note 127.

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THE FOURTH AMENDMENT AND GOVERNMENT INTERCEPTION OF UNSECURED WIRELESS COMMUNICATIONS

Shaina Hyder†

From its inception, Google Street View fascinated users with detailed, "360-degree street-level imagery"[1] of locations ranging from famous landmarks to small town neighborhoods.[2] To capture these images, Google sent a fleet of cars equipped with cameras and GPS receivers around the world.[3] In addition to taking photographs, Google utilized car-mounted antennas to take snapshots of the surrounding Wireless Fidelity ("Wi-Fi") landscape, scanning the airwaves for traces of Wi-Fi beacons to identify Wi-Fi networks by their name, numeric hardware ID, and other details.[4] Google then uploaded lists of Wi-Fi network identities and signal strengths in order to create a Wi-Fi network location database to broaden Google's geolocation-based services.[5] This database allowed Google to track a mobile

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1. *Street View*, GOOGLE MAPS, http://maps.google.com/intl/en/help/maps/streetview/#utm_campaign=en&utm_medium=van&utm_source=en-van-na-us-gns-svn (last visited Nov. 21, 2012).

2. *See* Mani Potnuru, Note, *Limits of the Federal Wiretap Acts Ability to Protect Against Wi-Fi Sniffing*, 111 MICH. L. REV. 89 (2012).

3. Glenn Fleishman, *Sniffing Problems*, THE ECONOMIST'S BABBAGE SCI. AND TECH. BLOG (May 3, 2012, 3:37 PM), http://www.economist.com/blogs/babbage/2012/05/googles-wi-fi-scanning-travails.

4. In re Google Inc. St. View Elec. Comms. Litig., 794 F. Supp. 2d 1067, 1071 (N.D. Cal. 2011); *see* Fleishman, *supra* note 3; *see also WiFi data collection: an update*, OFFICIAL GOOGLE BLOG, http://googleblog.blogspot.com/2010/05/wifi-data-collection-update.html (last visited Feb. 19, 2013). On the Official Google Blog, Google stated:

> When we announced three weeks ago that we had mistakenly included code in our software that collected samples of payload data from WiFi networks, we said we would ask a third party to review the software at issue, how it worked, and what data it gathered. That report, by the security consulting firm Stroz Friedberg, is now complete and was sent to the interested data protection authorities today. In short, it confirms that Google did indeed collect and store payload data from unencrypted WiFi networks, but not from networks that were encrypted.

5. Ian Paul, *Google Street View's Wi-Fi Snooping Engineer is Outed*, PC WORLD (May 1, 2012, 08:24 AM), http://www.pcworld.com/article/254774/google_street_views_wi_fi_

device's—and thus a user's—approximate position based on Wi-Fi network signals and the degree to which those signals overlap with the signal of the mobile device.[6]

Today, most homeowners encrypt their home Wi-Fi networks. However, when Google first began deploying its Street View vehicles, far fewer households encrypted their Wi-Fi networks.[7] Google's Street View cars intercepted the data packets coming from and leaving homes with unencrypted Wi-Fi networks by employing a device called a packet sniffer.[8] Though Google claimed it was interested only in the public names of the wireless networks, Google used the packet sniffer to collect and analyze all types of data broadcasted through unprotected Wi-Fi connections,[9] including sensitive private information such as e-mails and passwords.[10]

The ease with which Google conducted large-scale interception of wireless communication for a period spanning multiple years gives rise to the possibility that governments might use similar technology to conduct large-scale surveillance of the wireless communications of individual citizens, without any perceptible legal checks in place. The Fourth Amendment guarantees "[t]he right of the people to be secure in their persons, houses, papers, and effects, against unreasonable searches and seizures, shall not be violated,"[11] but the extent to which the Fourth Amendment will provide individuals a right to privacy for the contents of their wireless communications remains an open question. This question falls at the intersection of the Federal Wiretap Act and the Fourth Amendment. The Federal Wiretap Act prohibits the intentional interception of "any wire, oral, or electronic communication" unless one or more statutory exceptions applies.[12] Importantly, § 2511(2) of the Wiretap Act provides a statutory exception where the "electronic communications system [is] configured so that such electronic communication is readily accessible to the general

snooping_engineer_is_outed.html; In re Google Inc. St. View Elec. Comms. Litig., 794 F. Supp. 2d at 1071.

6. *See* Fleishman, *supra* note 3.

7. *Id.*

8. *See* Adrian Hannah, *Packet Sniffing Basics*, LINUX JOURNAL (Nov. 14, 2011), http://www.linuxjournal.com/content/packet-sniffing-basics. Packet sniffing, or packet analysis, is the process of intercepting and logging data passing over a digital network or part of a network. It is amongst the most common tools used for intercepting wireless communications.

9. *Id.*

10. *See* Fleishman, *supra* note 3.

11. U.S. CONST. amend. IV.

12. 18 U.S.C. § 2511 (2006).

public."[13] Under this exception, companies like Google have virtually free rein to intercept Wi-Fi communications if the Fourth Amendment does not protect those communications. If Congress or Courts do not limit this exception, the exception could set a dangerous precedent permitting law enforcement officials to freely intercept information exchanged through unsecured wireless networks.[14]

This Note examines the budding tension between the Fourth Amendment and the Federal Wiretap Act, concluding that although current cases read the Wiretap Act as permitting certain private instances of Wi-Fi sniffing, the Fourth Amendment should prohibit the government from intercepting unsecured Wi-Fi signals.

Part I of this Note provides an overview of Wi-Fi technology. It explains the distinction between encrypted ("secured") and unencrypted ("unsecured") communications and explains how readily available technology allows third parties to intercept both. Part II provides an overview of the Fourth Amendment with a discussion of four Supreme Court cases assessing the constitutionality of law enforcement searches that utilized information-gathering technology. Part III discusses *In re Innovatio IP Ventures, LLC Patent Litigation* and a related case addressing the legality of such interceptions by private actors under the Wiretap Act.[15] Finally, Part IV applies the rationale of these cases concerning private actors to government interception of information exchanged through unsecured wireless networks, concluding that such interception—absent the grant of a wiretap order—is an unlawful search and is thus prohibited by the Fourth Amendment.

I. WI-FI TECHNOLOGY

A. BASICS

A basic Wi-Fi network consists of a Wireless Access Point ("WAP"), commonly known as a "wireless router," which connects to an Internet Service Provider's ("ISP") Network through a wired connection that communicates over radio frequencies with any device that is equipped with a Wi-Fi adapter. The Federal Communications Commission ("FCC") regulates

13. 18 U.S.C. § 2511(2)(g)(i).

14. United States v. Young, 153 F.3d 1079, 1080 (9th Cir. 1998) ("The Fourth Amendment limits searches conducted by the government, not by a private party, unless the private party acts as an "instrument or agent" of the government.").

15. In re Innovatio IP Ventures, LLC Patent Litig., 886 F. Supp. 2d 888 (N.D. Ill. Aug. 22, 2012).

most radio communications in the United States,[16] though most Wi-Fi networks operate in unregulated frequency ranges known as Industrial, Scientific, and Medical ("ISM") radio bands.[17] These bands can be used by anyone, even those that do not have a license from the FCC.[18] Other devices such as cordless telephones, wireless microphones, and amateur radios also operate on ISM radio bands.[19] Radio frequency ranges of the ISM bands are further divided into channels, and each individual wireless network operates on one of these channels.[20]

B. NETWORK ENCRYPTION

Wi-Fi technology allows users to restrict access to networks through the use of a password. The information transmitted over the network is encrypted when a wireless network is password protected.[21] Wired Equivalent Privacy ("WEP") is a security protocol for wireless networks that encrypts transmitted data.[22] Wi-Fi Protected Access ("WPA") and Wi-Fi Protected Access II ("WPA2") are two additional forms of Wi-Fi encryption developed by the Wi-Fi Alliance to secure wireless computer networks. WPA and WPA2 have largely replaced WEP encryption.[23] When the password

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16. *Case History: A Brief History of Wi-Fi*, THE ECONOMIST, http://www.economist.com/node/2724397 (Jun. 10, 2004). ("Wi-Fi would certainly not exist without a decision taken in 1985 by the Federal Communications Commission (FCC), America's telecoms regulator, to open several bands of wireless spectrum, allowing them to be used without the need for a government licence.").

17. John Herman, *Giz Explains: Why Everything Wireless is 2.4GHz*, GIZMODO (Sept. 7, 2010, 1:00 PM), http://gizmodo.com/5629814/giz-explains-why-everything-wireless0is-24ghz.

18. *See* Definition of: ISM Band, PCMag.com Encyclopedia, http://pcmag.com/encyclopedia_term/0,2542, t=unlicensed+band&i=45467,00.asp (last visited Jan. 31, 2013). The FCC regulates and allocates use of radio frequency ranges:

> In 1985, the FCC Rules (Part 15.247) opened up the ISM bands for wireless LANs and mobile communications. In 1997, it added additional bands in the 5 GHz range under Part 15.407, known as the Unlicensed National Information Infrastructure (U-NII). Europe's HIPERLAN wireless LANs use the same 5 GHz bands, which are titled the "Broadband Radio Access Network." Numerous applications use the ISM/U-NII bands, including cordless phones, wireless garage door openers, wireless microphones, vehicle tracking and amateur radio.

Id.

19. *Id.*

20. *See* 802.11B WiFi Frequency Channels, MOONBLINK, http://www.moonblinkwifi.com/2point4freq.cfm, (last visited Jan. 31, 2013).

21. *See* Potnuru, *supra* note 2.

22. Becky Waring, *How to Secure Your Wireless Network*, PC WORLD (Apr. 9, 2012, 1:00 AM), http://www.pcworld.com/article/130330/article.html.

23. *Id.*

protection to a wireless network is set to "off," the information transmits unencrypted and unprotected through the Wi-Fi network.[24] The information exchanged under a secured setting is encrypted, and must be decoded if intercepted.[25] There are other security technologies such as the data encryption standard and virtual private networks that can provide additional security for wireless network users.[26]

Encryption predates the Internet and Wi-Fi communications, stretching all the way back to the founding fathers of the United States.[27] Encryption of wireless communications uses "complex algorithms to mix characters of a message with other characters or values in a seemingly nonsensical way."[28] The end product is an electronic file with code that is undecipherable to anyone who does not have the encryption key or password. The document only becomes readable when the document's encryption key is applied to the plaintext.[29] Similar to the way physical property may be protected by a lock and key, the use of encryption on electronic files similarly protects the contents of the file by creating a lock and key system through which only the encryption key can open the document at hand.[30] Without the encryption key, "it would be impossible to decode a document without having a supercomputer work on it for hundreds, or sometimes thousands, of years."[31]

C. PACKET SNIFFING

The packet analyzer ("sniffer") is a computer program or a piece of computer hardware that can intercept and log traffic passing over a digital

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24. *See Wi-Fi (802.11) Security*, GETNETWISE, http://security.getnetwise.org/tips/wifi (last visited June 22, 2011).

25. *Id.*

26. Margaret Rouse, *Data Encryption Standard*, SEARCH SECURITY (July 2006), http://searchsecurity.techtarget.com/definition/Data-Encryption-Standard ("Data Encryption Standard (DES) is a widely used method of data encryption . . . . There are 72,000,000,000,000,000 (72 quadrillion) or more possible encryption keys that can be used."). *See also* Jack Schofield, *Using a VPN to Protect Your Web Use*, THE GUARDIAN'S ASK JACK BLOG (May 17, 2012, 8:56 AM), http://www.guardian.co.uk/technology/askjack/2012/may/17/vpn-internet-privacy-security ("A VPN, or virtual private network, creates a virtual "tunnel" of encrypted data running over the public Internet.").

27. *Id.*

28. Sean J. Edgett, *Double-Clicking on Fourth Amendment Protection: Encryption Creates A Reasonable Expectation of Privacy*, 30 PEPP. L. REV. 339, 342–43 (2003); *see* Alex Salkever, *Uncle Sam Should Learn to Hack*, BUS. WK. ONLINE (Oct. 15, 2001), http://www.businessweek.com/stories/2001-10-01/uncle-sam-should-learn-to-hack.

29. Edgett, *supra* note 28.

30. *Id.*

31. *Id.*

network or part of a network.[32] It is among the most common tools used for intercepting wireless communications.[33] As data streams flow across a given network, the sniffer captures each data packet.[34] A data packet is made up of a small amount of computer data sent over a network.[35] Each data packet contains both "payload" information, consisting of the personal information sent over the wireless connection, and also data that identifies the source and destination of the payload data.[36] This Note focuses primarily on wireless users' privacy interests in payload data. Whether or not Wi-Fi networks are encrypted, wireless communications are susceptible to interception by packet sniffers.[37] However, encrypted interceptions require decoding whereas unencrypted interceptions do not.[38]

II. THE FOURTH AMENDMENT: THEN AND NOW

The Fourth Amendment guarantees that "[t]he right of the people to be secure in their persons, houses, papers, and effects, against unreasonable searches and seizures, shall not be violated."[39] The Fourth Amendment was drafted almost directly in response to the British government's issuance of writs of assistance.[40] Writs of assistance were invasive, unpopular[41] general warrants granting law enforcement officials broad authority to search for evidence to be used in subsequent trials;[42] in terms of breadth, they permitted

32. *See* Hannah, *supra* note 8.

33. *Id.*

34. Jared Howe, *A Hacker's Toolkit*, PRIVATE WIFI (Apr. 14, 2011), https://www.privatewifi.com/a-hacker's-toolkit/.

35. *Packet*, TECHTERMS.COM, http://www.techterms.com/definition/packet (last visited Feb. 21, 2013).

36. *Payload*, TECHTERMS.COM, http://www.techterms.com/definition/payload (last visited Feb. 21, 2013). Construed in terms of postal mail, payload data can be analogized to the letter contained in the envelope to be mailed. The additional data identifying the source and destination of the payload data can be analogized to the to and from addresses written on the outside of an envelope sent through postal mail.

37. *Id.*

38. *Id.*

39. U.S. CONST. amend. IV.

40. *See* Olmstead v. United States, 277 U.S. 438, 463 (1928) (noting that the "well known historical purpose of the Fourth Amendment" was "directed against general warrants and writs of assistance").

41. Brower v. County of Inyo, 489 U.S. 593 (1989); *see also* THOMAS M. COOLEY, A TREATISE ON THE CONSTITUTIONAL LIMITATIONS WHICH ROSE UPON THE LEGISLATIVE POWER OF THE STATES OF THE AMERICAN UNION 301–02 (1868).

42. *Brower*, 489 U.S. 593; *see also* THOMAS M. COOLEY, A TREATISE ON THE CONSTITUTIONAL LIMITATIONS WHICH ROSE UPON THE LEGISLATIVE POWER OF THE STATES OF THE AMERICAN UNION 301–02 (1868).

officials to search virtually any home, at any time, and for any reason.[43] In one notable case, *The Case of John Wilkes*, Lord Halifax, the British Secretary of State, sought to find the author of a libelous pamphlet and issued a search warrant that did not name any individual by name. Lord Halifax instead directed officials "to make strict and diligent search for the authors, printers and publishers of a seditious and treasonable paper" and "to apprehend and seize [them], together with their papers." The officials carrying out the warrant arrested a total of fifty men, including Wilkes, by forcibly entering and searching their homes.[44] As a result, Entick, an associate of Wilkes, brought a civil action against Nathan Carrington and three other messengers to the King in *Entick v. Carrington*.[45] The messengers forcibly entered Entick's home and spent four hours searching the premises; they broke open locked boxes, chests, and drawers; they read Entick's private papers and carried away printed charts and pamphlets.[46] Lord Camden held the aggressive search to be destructive "of all the comforts of society" and the warrant that was issued to be insufficient to merit a search.[47] The Court's holding helped establish civil liberties and limit governmental power.

In the Colonies, English authorities continued to use writs of assistance.[48] Such oppressive and frequent invasions of privacy prompted the proposal and ratification of the Fourth Amendment.[49] Subsequent case law also strongly suggests that the framers intended for the Fourth Amendment to protect privacy interests against abuses of governmental power; stemming from an interest in privacy, the exclusionary rule fashioned in *Weeks v. United States*[50] and *Mapp v. Ohio*[51] excludes evidence seized in violation of a

43. John Burkoff, *"A Flame of File": The Fourth Amendment in Perilous Times*, 74 MISS. L.J. 631 (2004); *see* William Cuddihy, The Fourth Amendment: Origins and Original Meaning, 602-1791, 763 (1990) (unpublished Ph.D. dissertation, Claremont Graduate School) (on file with UMI Dissertation Services).

44. The Case of John Wilkes, 19 Howell's State Trials 1029, 95 Eng. 807 (1765). *See* Raymond Shih Ray Ku, *The Founders' Privacy: The Fourth Amendment and the Power of Technological Surveillance*, 86 MINN. L. REV. 1325, 1333 (2002).

45. 19 Howell's State Trials 1029, 95 Eng. 807 (1765).

46. *Id.*

47. *Id.* at 817–18.

48. *See* Burkoff, *supra* note 42.

49. *Id.*; *see also* United States v. Verdugo-Urquidez, 494 U.S. 259, 266 (1990). Chief Justice Rehnquist stated, "The driving force behind the adoption of the [Fourth] Amendment . . . was widespread hostility among the former colonists to the issuance of writs of assistance empowering revenue officers to search suspected places for smuggled goods, and general search warrants permitting the search of private houses, often to uncover papers that might be used to convict persons of libel."

50. Weeks v. United States, 232 U.S. 383, 393 (1914) ("The efforts of the courts and their officials to bring the guilty to punishment, praiseworthy as they are, are not to be aided

defendant's Fourth Amendment rights from use in trial.[52] Like that of the Amendment itself, the primary rationale for the exclusionary rule was, and still remains, to protect the privacy interests of citizens.[53]

As early as 1961, the U.S. Supreme Court held that Fourth Amendment protections are not "measurable in terms of ancient niceties of tort or real property law."[54] In *Silverman v. United States*, the government investigated an illegal gambling ring with headquarters in a row house.[55] The government obtained permission from the owner of the neighboring row house to use the neighboring house as an observation post.[56] Government agents found a crack in the wall between the two houses, and used a simple device called a "spike mike," consisting of a foot-long spike attached to a microphone, together with an amplifier, a power pack, and earphones—positioned against the heating duct of the adjoining house—to listen in to conversations.[57] The *Silverman* Court ruled that this constituted a search because it was "accomplished by means of an unauthorized physical penetration into the premises occupied by the petitioners."[58] Contrasting the Court's own prior opinions,[59] the *Silverman* Court noted that "officers overheard the [defendant's] conversations only by usurping the heating system," an "integral" part of the defendant's row house.[60] Law enforcement effected the usurpation of the defendant's heating system without the defendant's knowledge or consent.[61] The Court reasoned that in such circumstances, a court need not consider whether or not there was a technical trespass under the local property law related to the party walls, because even resting the spike mike against the defendant's heating vent constituted an unauthorized physical penetration that violated the defendant's Fourth Amendment

by the sacrifice of those great principles established be years of endeavor and suffering which have resulted in their embodiment in the fundamental law of the land.").

51. Mapp v. Ohio, 367 U.S. 643, 655 (1961).

52. *Id.*; *see also Weeks*, 232 U.S. 383.

53. Ryan A. Ray, *The Warrantless Interception of E-Mail: Fourth Amendment Search or Free Rein for the Police?*, 36 RUTGERS COMPUTER & TECH. L.J. 178, 184–87 (2010).

54. Silverman v. United States, 365 U.S. 505, 511 (1961).

55. *Id.* at 506.

56. *Id.* at 506.

57. *Id.* at 506–07.

58. *Id.* at 509. *Silverman* distinguished decisions in *Goldman v. United States*, 316 U.S. 129 (1942), and *Lee v. United States*, 343 U.S. 747 (1952), in which the Court ruled that the eavesdropping had not been accomplished by means of an unauthorized physical encroachment within a constitutionally protected area, and was therefore a permissible invasion of privacy. *Id.* at 507.

59. *See* Mapp v. Ohio, 367 U.S. 643, 655 (1961).

60. Silverman v. United States, 365 U.S. 505, 511 (1961).

61. *Id.* at 511.

rights.[62] That singular, small trespass violated the defendant's privacy not necessarily because of the private nature of the heating vent, but because the heating vent was part of the home as a whole and through it, the officers were able to access the defendant's intimate conversations.

In *United States v. Katz*—one of the most famous Fourth Amendment cases—the Supreme Court held that the Fourth Amendment is intended to protect people, not places.[63] Under the *Katz* rule, an expectation of privacy may exist even in public places and is protected by the Fourth Amendment.[64] In *Katz*, the Court held that the government's use of an electronic surveillance device placed outside of a public telephone booth to listen to and record the defendant as he conducted illegal gambling violated the privacy upon which he relied while using the telephone booth.[65] The majority, led by Justice Stewart, focused on the idea of Katz's intention in using the phone booth, and noted that "what [Katz] sought to exclude when he entered the [phone] booth was not the intruding eye—it was the uninvited ear. He did not shed his right to do so simply because he made his calls from a place where he might be seen."[66]

In a separate concurrence, Justice Harlan parsed out a two-part reasonable-expectation-of-privacy test for determining whether government activity constitutes a search.[67] The test requires (1) that a person exhibit an actual, subjective expectation of privacy and (2) that the expectation be one that society is prepared to recognize as "reasonable."[68] Under this test, whether the incident occurred in a public or a private space may be one factor courts consider in evaluating the reasonable expectation of privacy. But location does not necessarily make an expectation of privacy unreasonable or unworthy of protection under the Fourth Amendment. The *Katz* test—even now—is used to delimit the scope of the Fourth Amendment in the context of law enforcement investigations and has become the nearly exclusive test for the Fourth Amendment.[69]

Almost half a century after *Katz*, the Supreme Court applied Justice Harlan's test to the Department of the Interior's use of more sophisticated

62. *Id.* at 512.
63. Katz v. United States, 389 U.S. 347, 353 (1967).
64. *Id.*
65. *Id.*
66. *Id.* at 352.
67. *Id.* at 360.
68. *Id.* at 361.
69. Orin S. Kerr, *The Fourth Amendment in Cyberspace: Can Encryption Create a Reasonable Expectation of Privacy?*, 33 CONN. L. REV. 503 (2001) (emphasis added); *see also* Rakas v. Illinois, 439 US 128, 143 (1978); Smith v. Maryland, 442 US 735, 739 (1979).

government surveillance technology.[70] In *United States v. Kyllo*, the Court held that the use of a thermal imaging device to monitor the radiation of heat from a person's home constituted a search within the meaning of the Fourth Amendment and thus required a warrant.[71] The court held this to be a search, despite the fact that the government remained outside of the house and monitored the heat emanating through the walls of the home from a public vantage point.[72] The Court found the government's search presumptively unreasonable because the surveillance technology was not commonly available to the public. In his opinion, Justice Scalia—writing for the majority—sought to protect privacy interests against evolving surveillance equipment.[73] Justice Scalia held that both off-the-wall surveillance and through-the-wall surveillance intrude upon the privacy of the home and refused to draw a distinction between the two methods of surveillance. The Court held that in the home, "*all* details are intimate details because the entire area is held safe from prying government eyes."[74]

In dissent, Justice Stevens adhered to the distinction between off-the-wall and through-the-wall surveillance. Justice Stevens wrote that excessive heat emanating from Kyllo's walls could have been perceived by the passerby as just as it could have been perceived by the thermal imaging device.[75] Justice Stevens further elaborated that "[h]eat waves, like aromas that are generated in a kitchen, or in a laboratory or opium den, enter the public domain if and when they leave a building."[76] The dissent argued that the officer's conduct did not amount to a search because the officers were doing no more than drawing off-the-wall inferences that a passerby could have drawn by walking past the home, rather than conducting any through-the-wall surveillance that would constitute a more invasive search and reveal more intimate details.[77]

70. United States v. Kyllo, 533 U.S. 27 (2001).

71. *Id.* at 40.

72. *Id.*

73. *Id.* at 35–36. ("[A mechanical interpretation of the Fourth Amendment] would leave the homeowner at the mercy of advancing technology—including imaging technology that could discern all human activity in the home. While the technology used in the present case was relatively crude, the rule we adopt must take account of more sophisticated systems that are already in use or in development.").

74. *Kyllo*, 533 U.S. at 37 (emphasis added).

75. *Id.* at 43.

76. *Id.* at 43–44.

77. *Id.* at 41.

III. SNIFFING UNDER THE WIRETAP ACT

The Federal Wiretap Act is broadly written and provides that, with certain exceptions, "any person who . . . intentionally intercepts . . . any wire, oral, or electronic communication" shall be subject to liability.[78] Under the Wiretap Act, an "electronic communication" includes "any transfer of signals, writing, images, sounds, data or intelligence of any nature transmitted in whole or in part by a wire, radio, electromagnetic, photoelectronic or photooptical system that affects interstate or foreign commerce."[79]

A. CORDLESS PHONES AND RADIO BASED COMMUNICATIONS: THE WIRETAP ACT BEFORE WI-FI

McKamey v. Roach is an early case involving cordless telephones, where the Sixth Circuit held that the Wiretap Act did not protect cordless telephone communications from third-party interception.[80] Plaintiffs McKamey and Jett alleged that Jett's neighbors, the Roachs, intercepted and recorded twelve to thirty telephone conversations between McKamey and Jett in violation of the Wiretap Act.[81] Neither plaintiff knew that the Roachs were intercepting and recording their private conversations. One of the plaintiffs, Jett, used a cordless telephone.[82] The cordless portions of the conversations travelled between the cordless telephone base unit and the handset through AM or FM radio signals, and the Roachs intercepted the conversations with a radio scanner.[83] At the time the McKamey-Jett conversations took place, the Wiretap Act permitted the interception of cordless telephone communications without exception.[84] Because the Roachs' scanner only intercepted the radio portion of the conversation between the plaintiffs, the court held that the Wiretap Act did not protect the plaintiffs' cordless telephone communications from the defendants' interception.[85] The court also noted that the owner's manual to Jett's cordless telephone stated that it used "radio transmission[s]" and cautioned owners that "[i]t is not possible to ensure privacy of communication when using this telephone."[86] Finally, the court noted that there might be interference problems between cordless

78. 18 U.S.C. § 2511(1)(a) (2006); *see also* 18 U.S.C. § 2520(a).
79. 18 U.S.C. § 2510 (12).
80. McKamey v. Roach, 55 F.3d 1236 (6th Cir. 1995).
81. *Id.* at 1237.
82. *Id.*
83. *Id.*
84. *Id.*
85. *Id.*
86. *Id.* at 1240.

telephones if a neighbor also has a cordless telephone that operates on the same channel.[87]

B. UNAUTHORIZED WI-FI INTERCEPTIONS: *UNITED STATES V. AHRNDT*

A district court considered the issue of Wi-Fi interception in a 2010 case, *United States v. Ahrndt*.[88] The court analogized the expectation of privacy in wireless networks to the expectation of privacy in cordless telephones because both devices transmit data over radio waves and both are easily intercepted.[89] Ahrndt was charged with the transportation and possession of child pornography.[90] He argued that his neighbor violated the Electronic Communications Privacy Act ("ECPA") when she accessed his iTunes library—a system for playing, storing, and sharing audio, video, and image files[91]—through his unsecured Wi-Fi network while a police officer observed.[92] The court noted that under ECPA, it is not unlawful for any person "to intercept or access an electronic communication made through an electronic communication system that is configured so that such electronic

87. *Id.* at 1237.

88. United States v. Ahrndt, CRIM. 08-468-KI, 2010 WL 373994 (D. Or. Jan. 28, 2010), *rev'd and remanded*, 475 F. App'x 656 (9th Cir. 2012) (reversing the district court's denial of Ahrndt's motion to suppress, because a computer expert found that Ahrndt's iTunes was capable of detecting other files shared by other programs on his computer, making it unclear whether he affirmatively shared those files, and remanding for further proceedings and fact finding). The court also posed the following questions for further fact finding:

> 1. As a technical matter, is sharing files over a wireless network accurately characterized as a "broadcast" of the contents of those files, such that JH's computer simply intercepted Ahrndt's images outside Ahrndt's home? Or, alternatively, did the act of connecting to Ahrndt's network, accessing his library and opening the image involve sending wireless signals into Ahrndt's home to communicate with his router and computer?
>
> 2. Did Ahrndt intentionally enable sharing of his files over his wireless network? If not, did he know or should he have known that others could access his files by connecting to his wireless network?
>
> Was the image in "Dad's LimeWire Tunes" library that JH and McCullough opened accessible over the Internet by Limewire users at the time JH and McCullough accessed the files, or at any time prior?

Id. at 658.

89. *Id.* at *3 ("The expectation of privacy in cordless phones is analogous to the expectation of privacy in wireless networks, because wireless networks are so easily intercepted.").

90. *Id.* at *1.

91. *Id.*

92. *Id.* at *1–2.

communication is readily accessible to the general public."[93] Because Ahrndt's router broadcast his wireless network in a 400-foot radius around his house, and because Ahrndt had configured his iTunes program to automatically share files with any computer that joined that network, the court held that the wireless network was "readily accessible to the general public."[94] The court also denied Ahrndt's claim that officers who viewed his iTunes library violated his Fourth Amendment right against unreasonable search.[95] The court held that Ahrndt "failed to demonstrate either a reasonable objective or subjective expectation of privacy" in his use of the shared iTunes library on an unsecured wireless network and therefore could not invoke the protections of the Fourth Amendment.[96]

The court held that Ahrndt had no reasonable expectation of privacy in his iTunes files.[97] Importantly, the court concluded that society recognizes a lower expectation of privacy in information broadcast through an unsecured wireless network as opposed to information transmitted through a hardwired network or password-protected network.[98] According to the court, Ahrndt had no socially recognizable right to privacy because the default setting of iTunes is *not* to share music or images with others, and his iTunes library was set to share.[99] To enable sharing—as Ahrndt did—a user must take six affirmative steps, thus knowingly and purposefully sharing their iTunes.[100]

Upon an appeal and a subsequent motion to suppress evidence, the same district court *granted* Ahrndt's motion to suppress evidence.[101] In his opinion and order on motion to suppress, Judge King concluded, "Ahrndt's reasonable expectation of privacy in the contents of his computer was *not* eliminated when he attached it to his unsecured wireless network router . . . . Accordingly, although Ahrndt's failure to secure his network suggests a lesser subjective expectation of privacy, I could not say he lost all expectation of privacy in the contents of files on his personal computer."[102] Further, the court found that since the evidence suggested that the default setting of LimeWire, a peer-to-peer file sharing software, was set to share content,

93. *Id.* at *6–8. *See* 18 U.S.C. § 2511(2)(g)(i) (2006).
94. *Id.* at *18–19.
95. *Id.* at *9.
96. *Id.*
97. *Id.* at *5.
98. *Id.*
99. *Id.* at *7.
100. *Id.*
101. United States v. Ahrndt, 3:08-CR-00468-KI, 2013 WL 179326 (D. Or. Jan. 17, 2013).
102. *Id.* at *6 (emphasis added).

there was "no evidence Ahrndt intentionally enabled the sharing of his files over his wireless network."[103]

C. A SPLIT IN INTERPRETATION?

Against the backdrop of an ongoing debate, the district court for the Northern District of Illinois, in *In re Innovatio IP Ventures*, ruled that the Wiretap Act does not cover interception of unencrypted Wi-Fi communications.[104] The court reasoned that Wi-Fi sniffing falls under the statutory exception to the Wiretap Act that permits a person "to intercept or access an electronic communication made through an electronic communication system that is configured so that such electronic communication is readily accessible to the general public."[105] The court distinguished contrary precedent by highlighting the public availability of packet analyzers.[106]

As discussed in *Innovatio*, while public availability of a given technology may be relevant to a court's determination as to whether § 2511(g)(i) of the Wiretap Act applies to a given interception of electronic communication, the consideration is not determinative for the constitutionality of law enforcement searches under the Fourth Amendment.[107]

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103. *Id.* at *7.

104. In re Innovatio IP Ventures, LLC Patent Litig., 886 F. Supp. 2d 888, 894 (N.D. Ill. 2012), (citing 18 U.S.C. §2511(g)(i)).

105. *Id.* (citing 18 U.S.C. § 2511(g)(i)).

106. *Id.* at 893 (distinguishing In re Google Inc. St. View Elec. Communications Litig. 794 F. Supp. 2d 1067, 1070 (N.D. Cal. 2011)). The court also stated that, "upon examination, the proposition that Wi–Fi communications are accessible only with sophisticated technology breaks down. As mentioned . . . Innovatio is intercepting Wi–Fi communications with a Riverbed AirPcap Nx packet capture adapter, which is available to the public for purchase for $698.00." *Id.*

107. Orin Kerr, *District Court Rules that the Wiretap Act Does Not Prohibit Interception Unencrypted Wireless Communications*, THE VOLOKH CONSPIRACY (Sept. 6, 2012, 7:08 PM), http://www.volokh.com/2012/09/06/district-court-rules-that-the-wiretap-act-does-not-prohibit-intercepting-unencrypted-wireless-communications/. In a recent article on wireless networks and the Fourth Amendment, Orin Kerr suggested that the court's analysis of § 2511(g)(i) in *Innovatio* is flawed. Kerr advances the argument that the term "configured" in § 2511(g)(1) refers to the intent of the designer. He states that the exemption "focuses on the person who does the *configuring* of the network *so* that it works a particular way—to design the network so that the general public was *supposed* to be able to access them," rather than on whether the end user sets up the Wi-Fi network as an encrypted or unencrypted network. To Kerr, it seems obvious that while one might not know the actual intent of the packet sniffer's designer with 100% certainty, here, as with many technologies, the standards for an "expected use" and an "unexpected use" should be clear to users. Kerr writes that "[n]o one suggests that unsecured wireless networks are set up with the goal that everyone on the network would be free to read the private communications of others." Just because

In *In Re Google Streetview*, currently on appeal before the Ninth Circuit, the district court held that § 2511(g)(i) of the Wiretap Act does not apply to private sniffing because information exchanged through unsecured wireless networks is not readily accessible to the public and the technology used to access such information ("packet sniffers") is "sophisticated."[108] While collecting data, Google—like Innovatio—sniffed private information exchanged through unsecured wireless networks, collected payload data, and in some instances also captured emails, URLs, and passwords.[109] On motion for summary judgment, Google argued that it could not be held liable under the Wiretap Act because (1) the collected data was "readily accessible to the general public," and (2) the Wiretap Act's statutory definition of "readily accessible" applies solely to "radio communications" and is inapplicable to "electronic communications."[110]

The court rejected the latter argument by narrowly construing "radio communications" in light of the Wiretap Act's legislative history.[111] The court likened Wi-Fi communications to cellular communications, which the Ninth Circuit had previously deemed to be "wire communications."[112] For the Act to make sense, these "wire communications" could not also have been "radio communications," and thus the "radio communications" exception did not apply.[113] The court also rejected Google's argument that the collected data was "readily accessible to the general public"—an argument that prevailed in *Innovatio*—on procedural grounds.[114] In rejecting this argument, the court accepted at face value the plaintiff's pleadings that although the sniffed

unsecured Wi-Fi may be easily intercepted, does not mean that users of unsecured Wi-Fi networks intend for everyone else with access to the network to read their communications.

108. In re Google Inc. St. View Elec. Communications Litig., 794 F. Supp. 2d 1067, 1082 (N.D. Cal. 2011).

109. Alan Eustace, *Creating Stronger Privacy Controls Inside Google*, OFFICIAL GOOGLE BLOG (OCT. 22, 2010), http://googleblog.blogspot.com/2010/10/creating-stronger-privacy-controls.html.

110. In re Google Inc. St. View Elec. Communications Litig., 794 F. Supp. 2d at 1073.

111. *Id.* at 1081.

112. *Id.* at 1078. The court noted:

> An interpretation of "radio communication" that presumptively included all technologies that transmit over radio waves, such as cellular phones, under the purview of electronic communications and held that technology bound by Section 2510(16)'s definition of "readily accessible to the general public," would contravene Ninth Circuit precedent holding that cellular phone communications are wire communications for purposes of the Wiretap Act.

Id. See also In the Matter of the Application of the United States for an Order Authorizing the Roving Interception of Oral Communications, 349 F.3d 1132 (9th Cir. 2003).

113. *Id.*

114. *Id.* at 1081.

networks were unsecure, the networks were configured to prevent the general public from gaining access, and interception required "sophisticated packet sniffer technology" to which the general public did not have access when the Street View project began.[115] The court reasoned that

> Wi–Fi technology shares a common design with cellular phone technology, in that they both use radio waves to transmit communications, however they are both designed to send communications privately, as in solely to select recipients, and both types of technology are architected in order to make intentional monitoring by third parties difficult.[116]

Depending on the outcome of the *Google* appeal, *Google* and *Innovatio* may be at odds with one another. For now, their tension as to the permissibility of private sniffing raises two issues. First, it suggests that the Wiretap Act's current categorization of communication mediums may be too outdated and simplistic to account for new media that—like unencrypted Wi-Fi—are private by convention but public by design. Second, if a federal enforcement agency such as the Federal Bureau of Investigation ("FBI") put together a street team of like Google's, drove across the country sniffing private information from unencrypted networks, and cited *Innovatio* as authority, the government could argue that it is entitled to intercept unsecured, and possibly even secured, Wi-Fi communications.

IV. THE FOURTH AMENDMENT SHOULD BE CONSTRUED AS PROTECTING THE USERS OF UNSECURED WIRELESS NETWORKS FROM GOVERNMENT WI-FI INTERCEPTION.

Because courts have traditionally used the Wiretap Act to protect wireless networks, there have been relatively few references to the Fourth Amendment in the case law surrounding wireless networks."[117] That said, the Wiretap Act is a poor substitute for the Fourth Amendment with respect to protecting the privacy of Wi-Fi signals. The Wiretap Act, with the exception of a few statutory exemptions, fails to account for the public's reasonable expectation of privacy in a rapidly changing technological climate.

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115. *Id.* at 1082.

116. *Id.* at 1082–83.

117. *See* Orin Kerr, *Do Users of Wi-Fi Networks Have Fourth Amendment Rights Against Government Interception*, THE VOLOKH CONSPIRACY (Sept. 24, 2012, 6:17 PM), http://www.volokh.com/2012/09/24/fourth-amendment-rights-for-users-of-wi-fi-networks-both-encrypted-and-unencrypted/.

A. UNDER FOURTH AMENDMENT CASE LAW, WI-FI NETWORKS SHOULD BE ENTITLED TO PROTECTION

The extent to which the Fourth Amendment will provide individuals a right to privacy for the contents of their electronic communications remains an open question in light of new and emerging technologies and methods of communication.[118] *Innovatio* held that the general availability of a device used to intercept Wi-Fi network information might be determinative as to whether one's expectation of privacy is reasonable under § 2511(g)(i) of the Wiretap Act.[119] Regardless of whether this is true as a matter of statutory interpretation, it is inconsistent with Fourth Amendment jurisprudence. Public access to the tools that colonial British law enforcement officials used to execute writs of assistance was not the mischief that the Fourth Amendment was drafted to cure. The mischief the Fourth Amendment was drafted to cure was an unwarranted invasion of privacy, exemplifying this nation's "express and profound constitutional commitment to individual freedom from unjustified and unreasonable government searches and seizures."[120]

In *Silverman*, the Supreme Court did not hold the search unconstitutional because the police used cutting-edge technology to gain access to information in a way that ordinary individuals would not have expected. The microphone was in use for nearly a century prior to the Supreme Court's decision in *Silverman*: it was invented by Thomas Edison in 1877 and was surely available to the general public in 1961.[121] Nor did the Court hold the search unconstitutional because the government had unlawfully trespassed (in the traditional sense) on *Silverman's* home. Instead, the *Silverman* opinion may be read as suggesting that citizens have a protected privacy interest in the sound waves that they create in confined spaces. In *Silverman*, the Justices noted that the Court:

> has never held that a federal officer may without warrant and without consent physically entrench into a man's office or home, there secretly observe or listen, and relate at the man's subsequent criminal trial what was seen or heard. . . . It may be that it is the obnoxious thing in its mildest and least repulsive form; but illegitimate and unconstitutional practices get their first footing in

118. Quon v. Arch Wireless Operating Co., Inc., 529 F.3d 892, 904 (9th Cir. 2008).

119. In re Innovatio IP Ventures, LLC Patent Litig., 886 F. Supp. 2d 888, 893 (N.D. Ill. 2012).

120. *See* Burkoff, *supra* note 42.

121. IEEE Computer Society, *Microphone*, GLOBAL HISTORY NETWORK, http://www.ieeeghn.org/wiki/index.php/Microphone, (last visited Jan. 21, 2012).

> that way, namely, by silent approaches and slight deviations from legal modes of procedure.[122]

The Court did not find a physical trespass to be the offensive factor,[123] nor did it find the government's use of sophisticated tools to be the egregious conduct.[124] The government's unwarranted invasion of privacy—by listening to the conversations that the citizen wished to keep private—was the mischief that the *Silverman* Court would not tolerate.[125]

Katz may be read as extending the logic of *Silverman*.[126] As with *Silverman*, the surveillance tool used in *Katz* was not treated or referred to as particularly sophisticated.[127] In defining the standard that still governs the reasonable expectation of privacy, the *Katz* Court focused on Katz's intention in using the phone booth and noted that he used the booth in order to exclude the "*uninvited ear*."[128] The Court explained:

> One who occupies [a phone booth], shuts the door behind him, and pays the toll that permits him to place a call is surely entitled to assume that the words he utters into the mouthpiece will not be broadcast to the world. To read the Constitution more narrowly is to ignore the vital role that the public telephone has come to play in private communication.[129]

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122. Silverman v. United States, 365 U.S. 505, 511–12 (1961).

123. Departing from earlier, tangible property based notions of trespass, the Court has since held that the "Fourth Amendment governs not only the seizure of tangible items, but extends as well to the recording of oral statements overheard without any 'technical trespass under local property law.' " Katz v. United States, 389 U.S. 347, 353 (1967) (citing *Silverman*, 365 U.S. at 511–12).

124. In *Silverman*, the surveillance device used was a "spike mike," a simply constructed, and comparatively inexpensive, instrument consisting of a foot-long spike attached to a microphone. *Silverman*, 365 U.S. at 506.

125. *Id.*

126. *Katz*, 389 U.S. at 353 ("Once this much is acknowledged, and once it is recognized that the Fourth Amendment protects people-and not simply 'areas'-against unreasonable searches and seizures it becomes clear that the reach of that Amendment cannot turn upon the presence or absence of a physical intrusion into any given enclosure.").

127. In *Katz*, the surveillance tool used as electronic listening and recording device. *Id.* at 347. In *Silverman*, the surveillance device used was a "spike mike." *Silverman*, 365 U.S. at 506. Neither Court regarded the surveillance devices used in *Katz* or *Silverman* to be sophisticated, or outside of use by ordinary individuals.

128. *Katz*, 389 U.S. at 352 (emphasis added).

129. *Id.*

The *Katz* Court noted the vital role that public telephones played in society at the time.[130] As was true then, when one thinks of speech in common parlance, one does not think of mechanical oscillations of pressure that travel from one's vocal chords and mouth to another's eardrum, and one does not think of speech in terms of travelling waves.

The Supreme Court's holding in *Kyllo* aligns with the interpretation of the Fourth Amendment put forth in *Katz*. In *Kyllo*, the Court reasoned that because the device was not commonly available to the public, the government's search was presumptively unreasonable. The Court based its decision on the sophistication of the heat detecting technology that the government used to gather its information but cited the *Katz* Court's rationale, which rejected a purely mechanical interpretation of the Fourth Amendment.[131] The Court stated, "[r]eversing [*Katz*] would leave the homeowner at the mercy of advancing technology—including imaging technology that could discern all human activity in the home."[132]

Supreme Court jurisprudence makes clear that heat waves coming from the home, sound waves coming from the home, and sound waves coming from confined spaces—such as public telephone booths—all warrant Fourth Amendment protection.[133] Expecting such waves to be kept private is reasonable, especially since many modern communications require the use of radio waves. Analogizing Wi-Fi waves to sound waves and heat waves establishes a sound basis for the assertion that a reasonable expectation of privacy applies to radio waves and thus Wi-Fi networks transmitted via radio waves.[134] In addition, a person should have a reasonable expectation of privacy in their Wi-Fi communications. Wireless communications, by

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130. Justice Stewart's opinion for the Court stated that "[t]o read the Constitution more narrowly is to ignore the vital role that the public telephone has come to play in private communication." *Id.* at 352.

131. Kyllo v. United States, 533 U.S. 27, 34 (2001). The court stated:

> We think that obtaining by sense-enhancing technology any information regarding the interior of the home that could not otherwise have been obtained without physical "intrusion into a constitutionally protected area," Silverman, 365 U.S. at 512, 81 S. Ct. 679, constitutes a search—at least where (as here) the technology in question is not in general public use. This assures preservation of that degree of privacy against government that existed when the Fourth Amendment was adopted. On the basis of this criterion, the information obtained by the thermal imager in this case was the product of a search.

Id.

132. *Id.* at 28.

133. Referencing *Silverman*, *Katz*, and *Kyllo*.

134. *See Kyllo*, 533 U.S. at 36.

definition, are transmitted through radio frequencies. The medium through which information is transmitted is not, by itself, determinative of whether such expectation exists under the Fourth Amendment; wireless communications, even on unsecured networks, should not be exempt from protection simply because the medium that they travel in is susceptible to interception.

B. WHAT DETERMINES A REASONABLE EXPECTATION OF PRIVACY IN WI-FI COMMUNICATIONS?

The Wiretap cases take an approach to delimiting the reasonable expectation of privacy in the Wi-Fi context that often overemphasizes the technological nuances and user understanding of Wi-Fi technology. Courts, such as the one in *Innovatio*, use reasoning that is based primarily on the statutory interpretation of the Wiretap Act.[135] The reasoning of the court in *Innovatio* largely echoes the reasoning in another Fourth Amendment case, *United States v. Granderson*, in which Court held that the defendant did not have a reasonable expectation of privacy in his dwelling because of the sizeable slot in a boarded window through which the defendant conducted his illicit drug business.[136] The *Granderson* Court stated that "[a]lthough society generally respects a person's expectations of privacy in a dwelling, what a person chooses voluntarily to expose to public view thereby loses its Fourth Amendment protection."[137]

In *Granderson*, the Court noted that the defendant could have shielded his activities with "simple and obvious" steps, and was not entitled to a reasonable expectation of privacy.[138] The court in *Innovatio* seems to have applied a similar standard for an individual's expectation of privacy—finding

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135. In re Innovatio IP Ventures, LLC Patent Litig., 886 F. Supp. 2d 888, 894 (N.D. Ill. 2012) (citing 18 U.S.C. §2511(g)(i) (2006)). The court stated:

> The public's lack of awareness of the ease with which unencrypted Wi–Fi communications can be intercepted by a third party is, however, irrelevant to a determination of whether those communications are "readily accessible to the general public." 18 U.S.C. § 2511(2)(g)(i). The language of the exception does not, after all, refer to "communications that the general public knows are readily accessible to the general public." Therefore, the public's expectation of privacy in a particular communication is irrelevant to the application of the Wiretap Act as currently written. Because data packets sent over unencrypted Wi–Fi networks are readily accessible using the basic equipment described above, the Wiretap Act does not apply here.

Id.

136. United States v. Granderson, 182 F. Supp. 2d 315, 321–22 (W.D.N.Y. 2001).

137. *Id.* at 321.

138. *Id.*

that the Wiretap Act does not apply to Wi-Fi interceptions of unencrypted Wi-Fi networks because data packets sent over unencrypted Wi–Fi networks are readily accessible.[139]

However, the "simple and obvious" stream of reasoning is far too simplistic in the context of wireless technologies, especially considering that wireless users are of various technical backgrounds, ranging from the extremely inexperienced to the highly sophisticated. What may be simple and obvious for one Wi-Fi user may be not be simple and obvious for another Wi-Fi user.

Even reasoning distinguishing between encrypted and unencrypted Wi-Fi networks may not be appropriate. Under the *Innovatio* and *Google* approaches, the expectation of privacy may depend on the level of encryption. For many scholars however, the distinction between encrypted communications and unencrypted communications is a distinction without a difference with regard to delimiting the reasonable expectation of privacy. Consider the following:

> When the government obtains encoded text that can only be decrypted with an individual's private key, that individual enjoys an excellent chance that the government will be unable to discover the key and decrypt the communication. However, the Fourth Amendment does not protect the individual if the government decides to devote its resources to decrypting the communication and manages to succeed. From a rights-based perspective, the individual has no enforceable legal means of blocking the government from attempting to *translate* the encoded text into plaintext. She has no right to stop government agents from examining the encoded text and trying to *think of patterns* that might provide the key to translating the encoded text into plaintext . . . . Thus, the government is free to try to crack the code if it wishes: the fact that it will probably fail does not create Fourth Amendment protection.[140]

Treating encryption as a distinction without a difference corresponds with Fourth Amendment jurisprudence. Heat waves cannot be encoded, but sound waves can. Through language or speaking in code, *Katz* and *Silverman* may have encoded the messages that law enforcement officials intercepted. Such measures would have made it more difficult for law enforcement to use the information intercepted, but the interception—and not the decoding—was deemed to be the unconstitutional intrusion.

139. *In re Innovatio IP Ventures*, 886 F. Supp. 2d at 894.
140. Kerr, *supra* note 113 (emphasis added).

A misplaced focus on the nuance of Wi-Fi technology, rather than on the fact that Wi-Fi communications often emanate from spaces where one may have a reasonable expectation of privacy—could lead to the formation of confusing or conflicting theories in case law. By 1994, Congress specifically expanded privacy and security protection for cordless telephone communications by striking out the express exclusion of cordless telephone conversations from the definition of wire communication.[141] Congress reasoned that the widespread, private use of cordless telephones justified the exclusion.[142]

As with sound waves in *Katz* and *Silverman* and heat waves in *Kyllo*, Congress understood that radio waves emanating from cordless telephones were entitled to protection from warrantless surveillance. Courts have had little trouble finding that heat waves, sound waves, and radio waves (in the context of cordless phones) emanating from the home are broadcast widely, but are not broadcast for all to detect and perceive.[143] The same logic should apply to Wi-Fi communications that emanate from private spaces, whether or not the Wi-Fi communications are secured or unsecured. Utilizing an unencrypted Wi-Fi network does not amount to a user openly broadcasting the network to the public. Failure to acknowledge this distinction would be out of line with the Fourth Amendment's purpose[144] and would undermine the vital role that the Internet has—in the Supreme Court's words—"come to play" in private communication.[145]

In *Johnson v. United States*, Justice Jackson summarized the downfalls of the allowing liberal police surveillance in regards to Fourth Amendment privacy rights and the importance of courts to regulate such government surveillance:

> The point of the Fourth Amendment that often is not grasped by zealous officers is not that it denies law enforcement the support of

141. Adam P. Mastroleo, *Does the Fourth Amendment Protect Cordless Telephone Communications, and If So, When?*, 56 SYRACUSE L. REV. 459, 466–67 (2006).

142. *Id.*

143. *See* United States v. Kyllo, 533 U.S. 27, 36 (2001); *see also* Dow Chemical Co. v. United States, 476 U.S. 227, 247 (1986) (Powell, J., concurring in part and dissenting in part) ("The reasonable expectation of privacy standard was designed to ensure that the Fourth Amendment continues to protect privacy in an era when official surveillance can be accomplished without any physical penetration of or proximity to the area under inspection.").

144. *Id.*; *see* Katz v. United States, 389 U.S. 347, 352 (1967) ("[W]hat [Katz] sought to exclude when he entered the [phone] booth was not the intruding eye—it was the uninvited ear. He did not shed his right to do so simply because he made his calls from a place where he might be seen.").

145. *Id.* (emphasis added).

> the usual inferences that reasonable men draw from evidence. Its protection consists in requiring that those inferences be drawn by a neutral and detached magistrate, instead of being judged by the officers working on the ground, enterprise of ferreting out crime . . . . The right of officers to thrust themselves into a home is also a grave concern, not only to the individual, but also to a society that chooses to dwell in reasonable security and freedom from surveillance. When the right of privacy must reasonably yield to the right of search is, as a rule, to be decided by a judicial officer, not by a policeman or government enforcement agent.[146]

Given the prevalence of Wi-Fi technology and the judicial precedent concerning analogous technologies, courts should understand that not all broadcasted communication is intended to be public. Under the protection of the Fourth Amendment, communications intended to be private should not be subject to government surveillance without a warrant.

Wireless signals emanating from places other than a person's home are likely not subject to a reasonable expectation of privacy. The majority of Fourth Amendment cases have revolved around the home and public spaces that are understood to be private—such as Katz's phone booth.[147] A public Wi-Fi network is very different because a public Wi-Fi network would be subject to both physical and non-physical monitoring. For example, an individual using a public Wi-Fi network in a coffee shop could reasonably expect other patrons to peek over at the computer screen. In the instance of a workplace, an individual might even be subject to non-physical monitoring or restrictions of use. As such, Fourth Amendment protections would be weaker in the instance of a public Wi-Fi network, given the public nature of the use.

However, in the gray area between public and private Wi-Fi networks, there are a number of scenarios where individuals not using their own, private wireless home connection might have Fourth Amendment protections similar to that of the home. Individuals sharing a large wireless network for personal dwelling or private space, such as students living in a campus dormitory, might hold a reasonable expectation of privacy in their Wi-Fi communications. Even though the network is not private, the origin of

146. Johnson v. United States, 333 U.S. 10, 13 (1948).

147. *Id.* at 351 ("But what [an individual] seeks to preserve as private, even in an area accessible to the public, may be constitutionally protected."). Though Katz's phone booth was in a public location, it is reasonably understood to be private. One would not enter a phone booth if one saw the booth to be already occupied. The sheer size of the phone booth implies that it should only be used to accommodate one, and the closed off nature of the phone booth lends credence to the idea that the booth is a private place, which serves to confine the contents of the phone conversation even if the individual is in view.

the individual's use and the origin of the waves lie in the individual's private space.

V. GOVERNMENTAL PROTECTIONS AGAINST FOURTH AMENDMENT PRIVACY RIGHTS

Although Fourth Amendment precedent suggests that sniffing of private Wi-Fi networks should be protected against unreasonable search and seizure, counterarguments exist. The government might rely upon individual, non-governmental actors to take the initial step towards wireless network surveillance to use as a shield against the Fourth Amendment.[148] In cases such as *Ahrndt*, in which the initial interception was by a third party, the defendant's neighbor, who accessed the defendant's iTunes library through his unsecured Wi-Fi network while a police officer observed the shield becomes especially compelling.[149] Cases such as *United States v. Jacobsen*[150] show that private action does not necessarily render the government's action unreasonable. In *Jacobsen*, the Supreme Court held that police seizure of cocaine found by FedEx employees was not unreasonable because a non-governmental actor conducted the initial search.[151] Although the government agent went beyond the initial private search, the Court held that the Fourth Amendment did not apply.[152]

The government could also easily make an open fields argument—that privacy is not afforded to the open fields and spaces surrounding one's home—against a Fourth Amendment right to privacy,[153] arguing that since the wireless signal went beyond the boundaries and curtilage of the home, an interception was proper. In *United States v. Dunn*,[154] the Court posed a

148. Walter v. United States, 447 U.S. 649, 662 (1980). ("[T]he Fourth Amendment proscribes only governmental action, and does not apply to a search or seizure, even an unreasonable one, effected by a private individual not acting as an agent of the Government or with the participation or knowledge of any governmental official.").

149. United States v. Ahrndt, CRIM. 08-468-KI, 2010 WL 373994, at *1–2. (D. Or. Jan. 28, 2010).

150. United States v. Jacobsen, 466 U.S. 109 (1984).

151. *Id.* at 118.

152. *Id.*

153. *See* Dow Chemical Co. v. United States, 476 U.S. 227, 238 (1986) (holding that the government's enhanced aerial photography of the Dow Chemical factory's industrial complex was not protected by the Fourth Amendment, because the Fourth Amendment did not protect "open fields" that surrounded the complex).

154. United States v. Dunn, 480 U.S. 294, 294–95 (1987) (holding that extent-of-curtilage questions should be resolved with particular reference to four factors, which are used to gauge whether the area claimed to be curtilage is so intimately tied to the home itself that it should be placed under the home's "umbrella" of protection).

significant question in terms of Fourth Amendment protection surrounding the home itself: is the area to be searched so intimately tied to the home itself that it should be placed under the home's "umbrella" of Fourth Amendment protection?[155] The government might argue that communications that are broadcast via radio waves outside of the home—even if intercepted within the radius of the Wi-Fi signal—are not under Fourth Amendment protection because they extend outside of the home's curtilage. Especially in cases of students living on a college campus or a professional staying in a hotel overnight, the government might argue that there is so much sharing and cross-using of wireless networks that it extends beyond the curtilage of the home, and that no reasonable expectation of privacy should apply, even in a private place.

Lastly, the government might also argue that Wi-Fi sniffers actually are in common use, and therefore users of unencrypted Wi-Fi networks should reasonably be aware that their wireless communications hold a likelihood of interception. The government might cite the relatively inexpensive nature of the packet sniffer, and the use of the packet sniffer by corporations such as Google and Innovatio, to make the claim that packet sniffers should not be considered sophisticated technology in the current technological climate. The government might reason that unsecured wireless communications falls under the statutory exception to the Wiretap Act that permits a person "to intercept or access an electronic communication made through an electronic communication system that is configured so that such electronic communication is readily accessible to the general public."[156] The implication is that users should not have a reasonable expectation of privacy in the use of unsecured networks and should readily expect that their wireless communications are not private.

VI. CONCLUSION

Recently decided and pending cases such as *Innovatio* and *Google* may establish that the Wiretap Act does not protect the users of unencrypted Wi-Fi networks from interception. Precedent from cases litigated under the Wiretap Act suggests that this determination may depend on technological nuances such as (1) the presence or absence of data encryption and (2) the mechanics of Wi-Fi communication.

155. *Id.*

156. In re Innovatio IP Ventures, LLC Patent Litig., 886 F. Supp. 2d 888, 892 (N.D. Ill. 2012) (citing 18 U.S.C. §2511(g)(i) (2006)).

If the Wiretap Act does not prevent the government from intercepting unencrypted Wi-Fi networks, it will be imperative for the Supreme Court or Congress to determine whether the Fourth Amendment provides protection. Supreme Court jurisprudence makes clear that other forms of waves—heat waves coming from the home, sound waves coming from the home, and sound waves coming from private spaces—all warrant Fourth Amendment protection.[157] Fourth Amendment jurisprudence, unlike cases interpreting the Wiretap Act, favors individuals' privacy rights in their wireless communications. This right should not rest on technological details and usage but rather on an individual's reasonable expectation of privacy in their wireless communications.

157. Referencing *Silverman*, *Katz*, and *Kyllo*.

FRALEY V. FACEBOOK: THE RIGHT OF PUBLICITY IN ONLINE SOCIAL NETWORKS

Jesse Koehler†

> "Nothing influences people more than a recommendation from a trusted friend. A trusted referral influences people more than the best broadcast message. A trusted referral is the Holy Grail of advertising."

–Facebook Chief Executive Officer Mark Zuckerberg[1]

As Mark Zuckerberg's statement indicates, consumers often base their purchases and brand affinities on recommendations and endorsements by other consumers, especially by friends and family. But what happens when an advertiser sends to a consumer a message dressed up as an endorsement from a trusted friend?

First, the recipient of the message might distrust future referrals by that trusted friend. Second, if the recipient continues to receive similar messages from the same friend, the referrals may prove less and less meaningful to the recipient. Thus, the recipient's "trusted friend" might lose some credibility with the recipient and subsequently lose some ability to influence the recipient. The now-less-trusted friend might be embarrassed by the unintended referral and might also suffer some harm to his reputation in the eyes of the recipient. Moreover, if the advertiser—or some intermediary—profits from the deceptive referral, the advertiser has been unjustly enriched by misappropriating the friend's referral because the friend could have charged the advertiser directly to give such an endorsement.

This brief hypothetical demonstrates the dangers that result from a single abuse of an individual's unique right to influence a friend or family member through an endorsement or referral. If an advertiser or intermediary abuses this right on a grander scale—such as in the context of an online social network—the harms become more substantial and more dangerous.

In January 2011, Facebook, Inc.—provider of the worldwide online social networking site based in Menlo Park, California—launched a new

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1. Claire Hoffman, *The Battle For Facebook*, ROLLING STONE, Sept. 15, 2010, http://www.rollingstone.com/culture/news/the-battle-for-facebook-20100915.

advertising service labeled "Sponsored Stories" that did just that.[2] "Sponsored Stories" exploited a user's stated preferences for certain products and services ("Likes") in conjunction with the user's name and profile photo to convince that user's "Friends" to similarly "Like" a product or service.[3] Facebook enabled this service for all of its 600 million users as a default setting.[4] Because Facebook users join the site for free, Facebook sustains itself through revenue generated by selling targeted advertising, such as "Sponsored Stories."[5] Advertisers paid Facebook for these "Sponsored Stories" advertisements in search of the value of these trusted referrals.[6]

Facebook users brought a class action lawsuit in the North District of California, *Fraley v. Facebook*, alleging that Facebook misappropriated their names, profile photos, and likenesses in paid advertisements without their consent.[7] Specifically, plaintiffs alleged that Facebook violated their statutory right of publicity under California Civil Code section 3344 by unwillingly drafting Facebook users as "unpaid and unknowing spokespersons for various products."[8]

In response to plaintiffs' claims, Facebook alleged a defense under section 3344(d)'s exemption for newsworthiness.[9] The court, in assessing this argument, found the plaintiffs to be "celebrities within their own Facebook social networks . . . [and thus] subjects of public interest among the same audience."[10] However, the court later concluded that even the newsworthy actions of such "celebrities" fall outside of section 3344(d)'s exemption where the speech in question is published for commercial purposes.[11]

As a result, the court found the plaintiffs' misappropriation allegations to properly establish monetary injury and denied Facebook's motion to dismiss for failure to state a claim.[12] The parties have since reached a settlement with Facebook paying $20 million for its massive-scale right of publicity violations.[13]

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2. Fraley v. Facebook, Inc., 830 F. Supp. 2d 785, 791 (N.D. Cal. 2011).
3. *Id.*
4. *Id.* at 790.
5. *Id.*
6. *Id.* at 792.
7. *Id.* at 790.
8. *Id.* at 792.
9. *Id.* at 804.
10. *Id.* at 805.
11. *Id.* (citing Downing v. Abercrombie & Fitch, 265 F.3d 994, 1002 (9th Cir. 2001)).
12. *Id.* at 812.
13. Nate Raymond, *Facebook pitches new $20 million "Sponsored Stories" settlement*, REUTERS, Oct. 8, 2012, http://www.reuters.com/article/2012/10/08/us-facebook-settlement-idUSBRE89712220121008. This settlement followed U.S. District Court Judge

This Note delves into the tension between privacy and newsworthiness as exemplified by the way the right of publicity straddles the line between these conflicting concepts. Additionally, this Note examines the weaknesses in the current right of publicity law's limited focus on economic harm as applied in *Fraley* and considers alternative approaches that incorporate non-economic harm, along with the implications and applicability of such alternatives. Moreover, this Note places a special emphasis on how the tension between privacy and newsworthiness takes on a new form in light of changing technology—specifically online social networks—and on resolving this tension in the context of the new types of fora that the Internet provides.

Part I frames the latter discussion by examining the legal history leading to the development of the right of publicity at common law through privacy tort and introduces the California statutory protection for the right of publicity.

Part II delves into the right of publicity's internal tension between privacy rights and newsworthiness. It outlines the historical relevance of newsworthiness as a defense to a right of publicity claim, provides an example of how the standard has developed in defamation law in the face of privacy constraints, and takes a brief look at California's statutory exemption for newsworthiness and the relevant case law.

Part III focuses on the difficulty that non-celebrity plaintiffs face in pleading and proving harm in right of publicity cases. It explores the development of word-of-mouth advertising and its expanded capabilities online, especially for social marketing in online social networks. The discussion emphasizes the economic and non-economic harms that result from abuse of a non-celebrity's right of publicity via unauthorized word-of-mouth messages. Additionally, Part III examines the court's rulings in Facebook's previous legal problems with infringement of its users' right of publicity to emphasize the availability of non-economic harm under California right of publicity law.

Part IV analyzes the holding of *Fraley* in light of the previous right of publicity case against Facebook and the policy behind California's right of publicity statute. This Part criticizes the weaknesses of the current approach to the right of publicity in California and addresses the issues left unanswered by the *Fraley* decision. In particular, Part IV proposes a holistic economic and

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Richard Seeborg's rejection of a previous settlement proposal by the parties. Dan Levine, *UPDATE 2–Judge rejects Facebook settlement over ad feature*, REUTERS, Aug. 17, 2012, http://www.reuters.com/article/2012/08/18/facebook-settlement-idUSL2E8JI00420120818.

non-economic approach to the right of publicity and considers both the benefits and possible criticisms of such an approach. Additionally, it explores the broader challenges of resolving the privacy-newsworthiness tension in a way that deems newsworthy all actions by online social network users and indicates the potentially dangerous implications of such an overbroad resolution. Finally, Part IV presents key considerations for online social networking companies that are looking to avoid right of publicity liability.

I. RIGHT OF PUBLICITY LAW

To understand the strengths and weaknesses of current right of publicity laws, this Note first explores how right of publicity laws developed. It briefly traces the underlying rationales and tensions of the current right of publicity from the birth of the privacy torts through the growth of the right of publicity as a separate tort and finally to the right's codification in state law. Tracing this development illuminates the root of the privacy-newsworthiness tension as well as the rationales supporting recovery for both economic and non-economic harm for right of publicity misappropriations.

A. THE BIRTH OF PRIVACY TORTS

The concept of the right of publicity arose out of the development of privacy tort law in the early 1960s.[14] In 1960, William Prosser famously recognized four distinct categories of privacy torts[15] from the general premise of privacy protection espoused by Louis Brandeis and Samuel Warren in their 1891 essay, *The Right to Privacy*.[16] In particular, Prosser's fourth privacy tort—"[a]ppropriation, for the defendant's advantage, of the plaintiff's name

14. *See* Melissa Desormeaux, *When Your Rights Depend on Your Paycheck: The Scary Way Courts Are Deciding Right of Publicity Cases*, 12 TUL J. TECH. & INTELL. PROP. 277, 278–79 (2009) (tracing the right of publicity through the privacy torts to its culmination in 1960 and recognition state-by-state thereafter).

15. Prosser recognized the following four privacy torts: "[i]ntrusion upon the plaintiff's seclusion or solitude, or into his private affairs;" "[p]ublic disclosure of embarrassing private facts about the plaintiff;" "[p]ublicity which places the plaintiff in a false light in the public eye;" and "[a]ppropriation, for the defendant's advantage, of the plaintiff's name or likeness." William L. Prosser, *Privacy*, 48 CALIF. L. REV. 383, 389 (1960). As reporter for The American Law Institute, Prosser later included these same four torts in the Restatement (Second) of Torts. RESTATEMENT (SECOND) OF TORTS §§ 652A–652E (1977).

16. Louis D. Brandeis & Samuel D. Warren, *The Right to Privacy*, 4 HARV. L. REV. 193 (1891) (starting a judicial trend toward recognizing a person's legal right to be left alone as well as his legal right to control what personal information others can reveal about him to the public).

or likeness"[17]—initiated the progressive trend toward a recognized right of publicity.

The policy justifications behind Prosser's recognition of the privacy torts reveal exactly what the right of publicity aims to protect. Prosser conceptualized his fourth privacy tort of misappropriation—the tort from which the right of publicity directly derives—as one that protects a person's proprietary interest in the use of his name or likeness.[18] That is not to say that the misappropriation privacy tort represents solely a property tort. Rather, this protection contains a reputational interest in a person being able to decide which products and services they want to be associated with and how the public, or at least a relevant public, perceives him.[19] Finally, the misappropriation tort aims to protect the mental integrity of a person by preventing unnecessary mental distress or "hurt feelings" from public misperception.[20]

Based on the various interests that the misappropriation tort labors to protect, the application of the tort—and thus the perception of the legal right—differs when applied to a celebrity rather than a non-celebrity private person.[21] Specifically, Prosser conceptualized a lower expectation of privacy for public figures.[22] This lower expectation of privacy derives from the fact "that [public figures] have sought publicity and consented to it, and so cannot complain of it; that their personalities and their affairs already have become public, and can no longer be regarded as their own private business; and that the press has a privilege . . . to inform the public about those who have become legitimate matters of public interest."[23]

On the other hand, these same rationales support a stronger proprietary interest in a public figure's name and likeness. This stronger proprietary interest increases the amount recoverable and the likelihood of recovery by a public figure under the misappropriation privacy tort. Because privacy tort law generally involves a recovery for "hurt feelings," courts and some legal

17. Prosser, *supra* note 15, at 389.

18. *Id.* at 406.

19. Desormeaux, *supra* note 14, at 290–91.

20. *See* Mark P. McKenna, *The Right of Publicity and Autonomous Self-Definition*, 67 U. PITT. L. REV. 225, 228 (2005) (noting that most people—as private persons—would not suffer identifiable economic damage but still deserved recovery as a result of emotional harm).

21. For further discussion of what makes someone a public figure and the importance of this classification regarding newsworthiness considerations, see *infra* Section II.A.

22. *See* Prosser, *supra* note 15, at 411.

23. *Id.*

scholars[24] struggle to recognize the applicability of the misappropriation tort to private persons by arguing that a private person cannot prove injury as a result of a public misconception about him.[25] Specifically, this line of thinking focuses the misappropriation tort solely on the monetary harm caused by the breach of one's proprietary right and completely overlooks any "hurt feelings" or mental distress that might result from such misappropriation and its reputational harm.[26] Instead, this view finds that private persons cannot quantify the monetary harm resulting from the use of their name or likenesses that a public figure—who can profit from endorsements—could.[27] This public figure/private person dichotomy figures prominently in discussions of the right of publicity because the right of publicity shares the privacy torts' policy justifications and First Amendment considerations.[28]

Some early cases involving a pseudo-right of publicity[29] demonstrate the interconnectivity of the economic and non-economic approaches to the misappropriation tort that later influenced the codification of the right of publicity in California and elsewhere. In 1905, the Georgia Supreme Court in *Pavesich v. New England Life Insurance Co.* looked to privacy tort law to recognize the importance of a right to prevent misappropriation of one's name or likeness in commercial advertising.[30] The advertiser in that case, an insurance company, used Pavesich's image in the company's advertisement, suggesting that the company insured Pavesich.[31] Although the *Pavesich* court focused heavily on the advertisement's violation of Pavesich's right to

24. *See* Paul Czarnota, *The Right of Publicity in New York and California: A Critical Analysis*, 19 VILL. SPORTS & ENT. L.J. 481, 482 (2012) (stating that "[i]n practice, . . . only celebrities possess sufficient commercial value in their identity to justify litigation").

25. *See* McKenna, *supra* note 20, at 229.

26. *See id.* at 228.

27. *See id.*

28. *See* Fraley v. Facebook, Inc., 830 F. Supp. 2d 785, 804–05 (N.D. Cal. 2011). For further analysis and discussion, see *infra* Section III.B.

29. This Note uses the phrase "pseudo-right of publicity" cases to refer to cases brought as privacy tort actions prior to a common law or statutory recognition of the right of publicity as a stand-alone right that share policy considerations and rationales with current right of publicity law. *See, e.g.*, Pavesich v. New England Life Ins. Co., 50 S.E. 68, 79 (Ga. 1905) (holding that defendants had "no more authority to display [plaintiff's image] in public for the purpose of advertising . . . than they would have had to compel the plaintiff to place himself upon exhibition for this purpose"); O'Brien v. Pabst Sales Co., 124 F.2d 167, 170 (5th Cir. 1941) (holding that plaintiff as a public figure could not recover for injury resulting from a false reputational impression).

30. *Pavesich*, 50 S.E. at 79–80.

31. *Id.* at 79.

seclusion against intrusion,[32] the court recognized that "[n]othing appears from which it is to be inferred that [Pavesich] has waived his right to determine for himself where his picture should be displayed in favor of the advertising right of defendants."[33] The court thus acknowledged that the unauthorized commercial use of a person's name or likeness overlaps with and is distinct from the privacy torts.[34]

However, prior to the development of the right of publicity, not all courts were willing to award recovery for commercial misappropriation of an individual's name or likeness under the existing privacy conceptions.[35] In 1941, the Fifth Circuit in *O'Brien v. Pabst Sales Co.* denied recovery to the college football player Davey O'Brien on his privacy claim because the court did not believe a public figure could recover for a false reputational impression resulting from use of his name or likeness.[36] Specifically, the court rejected the concept that a public figure's reputation or feelings might be hurt by a particular, albeit commercial, use of his identity as opposed to the general publicity surrounding the public figure.[37] Under a modern right of publicity regime, this case would most certainly have been found to represent a misappropriation of O'Brien's image.[38]

Similarly, in 1902 the New York Court of Appeals in *Roberson v. Rochester Folding Box Co.* refused to recognize a right of privacy when it rejected a woman's claim that a flour manufacturer harmed her by misappropriating her likeness on advertisements for its flour.[39] The court held that the

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32. The right to seclusion against intrusion is another of Prosser's privacy torts. Prosser, *supra* note 15, at 389 (recognizing the existence of a privacy tort for "[i]ntrusion upon the plaintiff's seclusion or solitude, or into his private affairs").

33. *Pavesich*, 50 S.E. at 70 ("One who desires to live a life of partial seclusion has a right to choose the times, places, and manner in which and at which he will submit himself to the public gaze.").

34. McKenna, *supra* note 20, at 242.

35. O'Brien v. Pabst Sales Co., 124 F.2d 167, 170 (5th Cir. 1941).

36. *Id.*

37. *Id.* Note that the case "was not for the value of [O'Brien's] name in advertising a product but for damages by way of injury to him in using his name in advertising beer." *Id.*

38. *See, e.g.*, Abdul-Jabbar v. Gen. Motors Corp., 85 F.3d 407, 416 (9th Cir. 1996) (presenting a similar fact pattern and permitting recovery for misappropriation for primarily advertising purposes based on both economic and emotional injury to plaintiff's reputation); Carson v. Here's Johnny Portable Toilets, 698 F.2d 831, 836 (6th Cir. 1983) (allowing recovery for commercial use of the phrase "Here's Johnny" because defendant's use of the phrase in connection with its product and corporate name appropriated plaintiff's identity). Note, however, that the defendant in *O'Brien* might have been able to allege a defense of newsworthiness. *See* discussion *infra* Part II (explaining how newsworthiness provides a defense to misappropriation under a right of publicity allegation).

39. Roberson v. Rochester Folding Box Co., 64 N.E. 442, 447 (N.Y. 1902).

manufacturer's use was not libelous.[40] Roberson alleged that her friends' recognition of her image humiliated her and damaged her good name to the point that it caused her "great distress and suffering, both in body and mind . . . compel[ling her] to employ a physician."[41] Notably, however, Judge Gray in his dissent challenged the majority by recognizing Roberson's need to recover—at least through injunctive relief—for the reputational harm and emotional distress caused by the flour manufacturer's use of her image.[42]

This judicial disagreement regarding the availability of recovery for misappropriation of a person's name or likeness demonstrates the early conflict about the relationship between newsworthiness, harm, and privacy. Although Prosser's conception of four separate privacy torts helped unify much of the judicial landscape regarding misappropriation of a person's name or likeness, the misappropriation tort developed apart from its privacy tort brethren due to its dual economic and non-economic roots.

B. GROWTH OF RIGHT OF PUBLICITY AS A SEPARATE TORT

Following the publication of an influential article by Melville B. Nimmer[43] and a critical decision by the United States Court of Appeals for the Second Circuit,[44] Prosser's proposed misappropriation tort gained more widespread recognition and gave rise to a separate legal right known as the right of publicity.[45] Since the early misappropriation tort permitted recovery for economic harm, some legal scholars characterized the right of publicity solely as a protection against economic injury.[46]

These critics favor division between the right of publicity as focused on recovery of economic harm and a separate misappropriation tort focused on

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40. *Id.*

41. *Id.* at 442.

42. *Id.* at 449–50 (Gray, J., dissenting). Judge Gray argued in his dissent:

> The proposition is . . . an inconceivable one that these defendants may, unauthorizedly, use the likeness of this young woman upon their advertisement, [sic] as a method of attracting widespread public attention to their wares, and that she must submit to the mortifying notoriety, without right to invoke the exercise of the preventive power of a court of equity.

Id. at 450.

43. Melville B. Nimmer, *The Right of Publicity*, 19 LAW & CONTEMP. PROBS. 203 (1954).

44. Haelan Labs v. Topps Chewing Gum, Inc., 202 F.2d 866, 868 (2d Cir. 1953) (stating "in addition to and independent of [the] right of privacy . . . a man has a right in the publicity value of his photograph. . . . This right might be called a 'right of publicity' ").

45. *See* 1 J. THOMAS MCCARTHY, RIGHTS OF PUBLICITY AND PRIVACY § 5:63 (2d ed. 2003).

46. *See* McKenna, *supra* note 20, at 228.

recovery for injuries to a person's emotional well-being.[47] Under such a division, primarily public figures assert the economic right of publicity and non-celebrity private persons generally assert the non-economic misappropriation tort.[48]

Professor Robert C. Post, for instance, argues for such a division between economic and non-economic harm:

> Because appropriation and the right of publicity flow from such very different moral commitments, it may not be sufficient simply to make either tort available at the election of a plaintiff. . . . There is a sharp internal contradiction in the position of a plaintiff who alienates and objectifies her image and simultaneously claims that it is integral to her very identity in the manner presupposed by the tort of appropriation.[49]

Professor Post's view conforms to statutory and judicial language limiting specific states' right of publicity.[50] However, not all states have such limiting judicial or legislative language in their cases and statutes; these states instead recognize a singular right of publicity rather than both the right of publicity and a separate misappropriation tort.[51]

Under such a singular construction, a solely economic approach to the right of publicity suggests a limiting of the right to celebrities and thus raises a barrier to prevent private persons from recovering from mental distress and reputational harm caused by an appropriation—absent a separate, possibly unavailable, misappropriation tort claim.[52]

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47. *See* MCCARTHY, *supra* note 45, § 5:63; Robert C. Post, *Rereading Warren and Brandeis: Privacy, Property, and Appropriation*, 41 CASE W. RES. L. REV. 647, 674–79 (1991).

48. However, a strict division between the applicability of either the economic right of publicity and the non-economic misappropriation tort to either public figures or private persons would "falter as an overgeneralization." MCCARTHY, *supra* note 45, § 5:63.

49. Post, *supra* note 47, at 677.

50. *See, e.g.*, Cardtoons, L.C. v. Major League Baseball Players Ass'n, 95 F.3d 959, 976 (10th Cir. 1996) ("Publicity rights, however, are meant to protect against the loss of financial gain, not mental anguish."); Carson v. Here's Johnny Portable Toilets, Inc., 698 F.2d 831, 835 (6th Cir. 1983) ("The right of publicity has developed to protect the commercial interest of celebrities in their identities.").

51. RESTATEMENT (THIRD) OF UNFAIR COMPETITION § 46 cmt. b (1995) ("[I]n some jurisdictions separate causes of action now redress the commercial and personal injuries resulting from an unauthorized commercial exploitation of a person's identity. . . . In other jurisdictions, relief for both personal and commercial harm is available through a single common law or statutory cause of action."). In particular, California's statutory and judicial language allows for a combined economic and non-economic approach to the right of publicity. See *infra* Section I.C for discussion of this duality.

52. *See supra* note 50; *see also* discussion *supra* notes 24–28 and accompanying text.

Nimmer directly opposed such a construction of the right of publicity: "[i]t is impractical to attempt to draw a line as to which persons have achieved the status of celebrity and which have not; it should rather be held that every person has the property right of publicity."[53] Moreover, such an economic approach relies heavily on the alienability—or transferability—of an individual's right of publicity such that the individual can grant use of his identity to a company or advertiser.[54] This focus on alienability emphasizes the value of the appropriation of an individual's name or likeness to a potential advertiser rather than recognizing the devaluation of the individual's right of publicity that results from misappropriation.[55] In particular, this focus ignores the most compelling justifications for the right of publicity: "autonomy and personal dignity," "natural rights (largely a labor-reward analysis)," and the reputational and emotional harms associated with their violation.[56] These justifications do not necessarily require alienability and still allow for recovery when unjustly infringed upon.[57]

A more holistic approach to a singular right of publicity instead recognizes the non-economic harm caused to a person in the form of embarrassment and discomfort that arises from having his name or likeness associated with products and services incongruent with his values.[58] Recognition of such non-economic harms characterizes the right of publicity in part as what Mark P. McKenna labels an individual's legitimate interest in "autonomous self-definition."[59] This approach to the right of publicity focuses on the ability of an individual—either a public figure or a private person—to control his identity and define for himself how the public perceives him.[60] Under this approach, misappropriation of a person's name or likeness directly harms the individual by forcibly refusing him the right to define his identity. The approach looks not at whether the perceived

53. Nimmer, *supra* note 43, at 217.

54. *See* Jennifer E. Rothman, *The Inalienable Right of Publicity*, 101 GEO. L.J. 185, 234 (2012) (acknowledging the dangers and inconsistencies resulting from the construction of the right of publicity as an alienable right as well as the difficulty of changing such an embedded conception decades after the engraining of the right in common law).

55. See *infra* Sections III.B, IV.A.1 for further discussion of the importance of this distinction.

56. Rothman, *supra* note 54, at 229.

57. *Id.* at 229–30.

58. *See* McKenna, *supra* note 20, at 290–91 (supporting a finding of non-economic harm that can be paired with an economic approach to the right of publicity for a holistic approach).

59. *Id.* at 279 ("[B]ecause an individual bears uniquely any costs attendant to the meaning of her identity, she has an important interest in controlling uses of her identity that affect her ability to author that meaning.").

60. *Id.* at 279–80.

misappropriation would be objectionable to the public generally but whether the particular misappropriation conflicts with and thus "destabilizes" the individual's self-definition.[61]

Much like the rationalization for Prosser's misappropriation tort, a holistic right of publicity also concerns protections for an individual's reputational interests. For example, if a company utilizes a private individual's name in an advertisement for life insurance, the private individual might not be able to claim much in economic damages for the use of his name. However, the individual will certainly bear the unique costs of having been associated publicly with a product that may be incongruent with the individual's self-defined public identity.[62]

C. CALIFORNIA'S RIGHT OF PUBLICITY STATUTE

Although many states currently recognize a common law right of publicity, some states—such as California[63] and New York[64]—have gone as far as to codify the right of publicity. California's statutory right of publicity mandates that "[a]ny person who knowingly uses another's name, voice, signature, photograph, or likeness, in any manner . . . for purposes of advertising or selling, or soliciting purchases . . . without such person's prior consent . . . shall be liable for any damages sustained by the person or person injured as a result thereof."[65] Although California's statutory right of publicity arose as a response to the state's need to protect the entertainment industry and its celebrities,[66] California courts have interpreted the statute's legislative record to support the conclusion that the right needed to extend beyond

61. *Id.* at 288.

62. *See* Pavesich v. New England Life Ins. Co., 50 S.E. 68, 69 (Ga. 1905) ("The publication is malicious, and tends to bring plaintiff into ridicule before the world, and especially with his friends and acquaintances, who know that he has no policy in the defendant company.").

63. CAL. CIV. CODE § 3344 (West 2012).

64. N.Y. CIV. RIGHTS LAW § 51 (McKinney 2012). New York's statutory right of publicity limits recovery to "[a]ny person whose name, portrait, picture or voice is used within this state for advertising purposes or for the purposes of trade without the written consent" of the individual. *Id.* Additionally, the New York statute's lack of a statutory minimum for damages constrains the applicability of the statute to non-celebrities, thus focusing the statute on protecting plaintiffs' economic interests but not the reputational or autonomous self-definition interests that the California statute potentially protects.

65. CAL. CIV. CODE § 3344(a).

66. *See* CAL. CIV. CODE § 3344.1 (appeasing celebrities in the entertainment industry by extending their right of publicity recovery capabilities to their successors after the celebrity's death).

mere celebrities and public figures.[67] To that end, the statute specifically provides recovery for injured persons for either the actual damages suffered from the unauthorized use plus any profits attributable to the use or, in the alternative, $750.[68] By providing this minimum claim for damages, the statute more easily extends to private persons who may otherwise struggle to quantify and demonstrate commercial value in their name, image, or likeness.[69]

Moreover, unlike Professor Post's separate economic right of publicity tort and non-economic misappropriation tort, the California right of publicity statute implies inclusion of both the economic harm and the non-economic dignitary and reputational harm. This duality of the California right of publicity statute arises from the statutory minimum for damages,[70] the availability of the right to private persons,[71] and the courts' acknowledgement of "hurt feelings" as a possibility for meeting the harm requirement.[72]

II. TENSION BETWEEN PRIVACY AND NEWSWORTHINESS

Because California's right of publicity statute prevents a commercial speaker from inappropriately using an individual's name or likeness and thus

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67. Miller v. Collectors Universe, Inc., 72 Cal. Rptr. 3d 194, 204 (Ct. App. 2008) ("[S]ection 3344(a) as originally enacted in 1971 'established a concrete remedy for the little man with a minimum of $300 [now $750] payment,' 'a simple, civil remedy for the injured individual.' " (quoting Assemblymember Vasconcellos, Letter to Gov. Reagan, Nov. 10, 1971 re Assem. Bill No. 826 (1971 Reg. Sess.) 1–2)).

68. CAL. CIV. CODE § 3344(a). Notably, the California Court of Appeal has interpreted this statutory minimum damages to apply for "each cause of action arising from each prohibited use" rather than per instance of misappropriation. *Miller*, 72 Cal. Rptr. 3d at 206. Thus, if a plaintiff pursues statutory damages, only $750 can be awarded even for multiple instances of misappropriation *unless* the plaintiff can allege separate causes of action. For further discussion of this distinction and its legislative grounding, see *id.* at 202–09.

69. Andrew M. Jung, *Twittering Away the Right of Publicity: Personality Rights and Celebrity Impersonation on Social Networking Websites*, 86 CHI.-KENT L. REV. 381, 393 (2001). For further discussion of the importance of this availability of right of publicity claims to private persons, see *infra* Section III.C.

70. CAL. CIV. CODE § 3344(a). For further discussion of how statutory minimum damages gives rise to a right of publicity focused on both economic and non-economic harm, see *infra* Section III.C.

71. *See Miller*, 72 Cal. Rptr. 3d at 204 (citing Assemblymember Vasconcellos, Letter to Gov. Reagan, Nov. 10, 1971 re Assem. Bill No. 826 (1971 Reg. Sess.) 1).

72. *See, e.g.*, Cohen v. Facebook, Inc. (*Cohen I*), 798 F. Supp. 2d 1090, 1097 (N.D. Cal. 2011) (recognizing mental harm could substantiate harm in a right of publicity claim); *Miller*, 72 Cal. Rptr. 3d at 205 ("[B]y enacting section 3344(a), the Legislature provided a practical remedy for a non-celebrity plaintiff whose damages are difficult to prove and who suffers primarily mental harm from the commercial misappropriation of his or her name.").

places a strain on what a speaker can say, the right of publicity can conflict with the First Amendment's free speech and freedom of the press clauses. American society and its legal system have long recognized the fundamental importance of the public's right to be informed and kept up-to-date on important matters, as well as the need for a free press to inform the public.[73] Thus, the right of publicity and the concept of newsworthiness require a balancing test that weighs the newsworthiness of the speech in question against the right of publicity of the person implicated as the subject matter of the speech.[74] As a result of varying expectations of privacy, this balancing test applies differently for public figures as opposed to private persons.[75]

The U.S. Supreme Court addressed this conflict and need for balancing in the landmark 1977 right of publicity case, *Zacchini v. Scripps-Howard Broadcasting Co.*[76] In *Zacchini*, the Court looked at whether a news reporter's broadcast of Hugo Zacchini's "human cannonball" act—"in which [Zacchini was] shot from a cannon into a net some 200 feet away"—violated Zacchini's right of publicity.[77] The Court took an economic approach to the right of publicity and held that the "State's interest in permitting a 'right of publicity' is in protecting the proprietary interest of the individual in his act in part to encourage such entertainment."[78] Notably, the Court found that the line-drawing between the First Amendment and Zacchini's right of publicity clearly favored Zacchini.[79] In doing so, the Court rejected the argument that the newsworthiness of the event should immunize the media from liability for profiting from the broadcast of Zacchini's entire act—which ruined the

73. *See, e.g.*, U.S. CONST. amends. I, XIV; Zacchini v. Scripps-Howard Broad. Co., 433 U.S. 562, 567 (1977) ("[T]he press has a privilege to report matters of legitimate public interest even though such reports might intrude on matters otherwise private.").

74. On an international note, the importance of a newsworthiness-balancing test similarly appears in the laws of other countries but often balances privacy and publicity concerns differently based on the formation of national privacy law. Paul M. Schwartz and Karl-Nikolaus Peifer offer a unique comparative analysis of the U.S. approach to privacy and publicity as outlined in Prosser's four torts and the German single unitary concept of the right of personality. Paul M. Schwartz & Karl-Nikolaus Peifer, *Prosser's Privacy and the German Right of Personality: Are Four Privacy Torts Better than One Unitary Concept?*, 98 CALIF. L. REV. 1925 (2010). Regarding newsworthiness, German courts prove more willing than U.S. courts to "find that a reported matter is not newsworthy, but merely 'entertainment' (Unterhaltung) or otherwise lesser-valued speech." *Id.* at 1979.

75. For further discussion of the different newsworthiness balancing for public figures and private persons, see discussion *infra* Section II.A.

76. *Zacchini*, 433 U.S. at 562.

77. *Id.* at 562.

78. *Id.* at 573.

79. *Id.* at 574–75.

novelty and thus the profitability of Zacchini broadcasting the act himself—without paying him or receiving his consent.[80]

Certainly *Zacchini* represents a clear-cut case where the right of publicity trumps newsworthiness,[81] but the newsworthiness issue generally involves more balancing and discussion.

A. DIFFERENT NEWSWORTHINESS STANDARD FOR PRIVATE PERSONS VERSUS PUBLIC FIGURES

Prosser recognized in his path-breaking article *Privacy* that private persons have a higher expectation of privacy than public figures.[82] As a result of this lower level of expectations of privacy for public figures, courts generally require a higher standard of invasiveness for public figures to be able to prove invasion of privacy.[83] A discussion of key defamation cases reveals how these different standards interact with exceptions for newsworthiness in the application of the law.

In the seminal defamation case *New York Times v. Sullivan*, the Supreme Court explicitly addressed how the public figure/private person dichotomy affected the law.[84] The case pitted the *New York Times* and its right to free speech and freedom of the press against Sullivan—an elected Alabama city commissioner—alleging libel by the newspaper.[85] Based on Sullivan's position as a public government official, the Court recognized that the press, and speakers generally, need a buffer of protection to criticize a public official's actions without being threatened with a defamation suit or chilled into self-censorship by the threat of a lawsuit.[86] To create such a buffer, the Court established a higher standard of proof that public figures would have to meet to be able to recover for defamation.[87] This "actual malice" standard requires a public figure to prove that the defamatory speaker acted with knowledge of falsity or reckless disregard for the truth when speaking about the public figure.[88] The standard safeguards speakers criticizing or

80. *Id.*

81. *Id.* at 576 ("Ohio has recognized what may be the strongest case for a 'right of publicity' involving, not the appropriation of an entertainer's reputation to enhance the attractiveness of a commercial product, but the appropriation of the very activity by which the entertainer acquired his reputation in the first place.").

82. *See* discussion *supra* Section I.A.

83. *See, e.g.*, New York Times Co. v. Sullivan, 376 U.S. 254 (1964); Gertz v. Robert Welch, Inc., 418 U.S. 323 (1974).

84. *New York Times Co.*, 376 U.S. at 279–80.

85. *Id.* at 256–57.

86. *Id.* at 279.

87. *Id.*

88. *Id.* at 280.

commenting on the newsworthy actions of a public figure, so long as the speaker does not act with "actual malice" in the course of publishing the defamation.

In *Gertz v. Robert Welch, Inc.*, on the other hand, the Court clearly refused to extend the same "actual malice" standard to private persons alleging defamation.[89] The Court focused on a public figure's greater ability to access channels of communication to counteract false statements as well as a public figure's voluntary assumption of the risk of potentially defamatory falsehoods resulting from willfully entering the public sphere.[90] Specifically, the Court held that a private person "has relinquished no part of his interest in the protection of his own good name, and consequently he has a more compelling call on the courts for redress of injury inflicted by defamatory falsehood."[91]

Private persons have thus secured greater protection by the law for recovery in defamation cases by avoiding voluntary immersion into the public sphere and by keeping their actions private and beyond what any court would consider newsworthy.

B. CODIFICATION OF NEWSWORTHINESS EXEMPTION IN SECTION 3344(D) AND EXPANSION THROUGH CASE LAW

To reinforce the importance of freedom of speech and newsworthiness when applying the California statutory right of publicity, the California legislature codified the common law newsworthiness defense in California Civil Code section 3344(d).[92] Section 3344(d) exempts from statutory liability the "use of a name, voice, signature, photograph, or likeness in connection with any news, public affairs, or sports broadcast or account, or any political campaign."[93] Even though the exemptions in this section appear to be quite straightforward and limited, California courts have expanded the scope of the

89. Gertz v. Robert Welch, Inc., 418 U.S. 323, 348 (1974). While the Court clearly held that the "actual malice" standard does not apply to private persons, the Court filled out the contours of where the line between public figures and private person should be in a string of cases following *Gertz*. *See, e.g.*, Milkovich v. Lorain Journal Co., 497 U.S. 1 (1990); Wolston v. Reader's Digest Ass'n, Inc., 443 U.S. 157 (1979); Hutchinson v. Proxmire, 443 U.S. 111 (1979); Time, Inc. v. Firestone, 424 U.S. 448 (1976).

90. *Gertz*, 418 U.S. at 345 (noting the rarity of a truly involuntary public figure and leaving that issue for a later date).

91. *Id.*

92. CAL. CIV. CODE § 3344(d) (West 2012).

93. *Id.*

use exemption to cover even commercially-driven uses, so long as the appropriation was not primarily for advertising purposes.[94]

For instance, in *Dora v. Frontline Video Inc.* the California Court of Appeal held that the use of an image of a famous surfer in the context of a surfing documentary constituted an exempted use under section 3344(d).[95] Frontline produced a video documentary chronicling the events and public figures, including Dora, critical to the creation of the surfing lifestyle—a lifestyle that the court held to have influenced popular culture.[96] Because Frontline used the newsworthiness of the name and likeness of Dora and other surfers in the related context of a documentary about surfing, the court found Frontline's use protected and exempted from liability under section 3344(d).[97]

Conversely, the Ninth Circuit in *Abdul-Jabbar v. General Motors Corp.* held that section 3344(d)'s newsworthiness exemption did not extend to appropriative uses primarily for advertising purposes.[98] In *Abdul-Jabbar*, General Motors Corporation ("GMC") used basketball player Kareem Abdul-Jabbar's former name, Lew Alcindor, in a television commercial that aired during a NCAA men's basketball tournament.[99] The *Abdul-Jabbar* court found that GMC's use of Abdul-Jabbar's former name attracted television viewer's attention, thus creating a commercial advantage for GMC since "the first step toward selling a product or service is to attract the consumers' attention."[100] By attempting to use the newsworthiness of Abdul-Jabbar's name apart from the context of his newsworthiness, GMC had gone beyond the safeguards made for free speech and harmed Abdul-Jabbar's proprietary and reputational interest in the use of his name as protected by his right of publicity.[101]

As these cases indicate, the newsworthiness of a public person's actions and the freedom of the press to comment thereon often come into conflict with that individual's right of publicity. When the speech appropriates an

94. *See, e.g.*, Abdul-Jabbar v. Gen. Motors Corp., 85 F.3d 407, 416 (9th Cir. 1996) (finding defendant's use of plaintiff's name for primarily for advertising purposes to be outside of the newsworthiness exemption); Dora v. Frontline Video, Inc., 18 Cal. Rptr. 2d 790, 795 (Ct. App. 1993) (finding defendant's use of plaintiffs' names and likenesses to be newsworthy).

95. *Dora*, 18 Cal. Rptr. 2d at 795.

96. *Id.* at 794.

97. *Id.* at 795.

98. *Abdul-Jabbar*, 85 F.3d at 415–16.

99. *Id.*

100. *Id.* at 416 (citing Eastwood v. Superior Court, 198 Cal. Rptr. 342, 349 (Ct. App. 1983)).

101. *Id.*

individual's name or likeness in the context of that individual's newsworthy actions, *Dora* indicates that the public's interest in the newsworthiness of the individual's name or likeness trumps the individual's interest in controlling the use of his name or likeness.[102] On the other hand, the Ninth Circuit's holding in *Abdul-Jabbar* distinguished appropriations of a person's name or likeness primarily for advertising purposes from recognized exempted uses.[103] Such advertising-centric uses infringe too much upon a person's proprietary and reputational interest in his right of publicity and extend beyond the scope of any discussion of the person's newsworthiness exempted by section 3344(d).[104]

III. ESTABLISHING HARM: ECONOMIC AND NON-ECONOMIC HARMS

This Part explores the right of publicity's dual economic and non-economic aspects as they apply to private persons, especially in the context of online social networks.

Under traditional celebrity-centric conceptions, the right of publicity gives a person the right to control the products and services that he endorses and to which he ties his identity. Adherents to this endorsement-based concept of the right of publicity reject non-celebrity private persons' claims of misappropriation because those persons lack the ability to establish significant monetary harm related to endorsements without consent.[105] However, such an interpretation of the right of publicity overlooks the value of word-of-mouth advertising, especially in online social marketing.

A. PRE-INTERNET WORD OF MOUTH

Word-of-mouth advertising "describes peer-to-peer interactions in which an individual passes on opinions about a product to others."[106] Traditionally, this type of advertising occurs without prompting by an advertiser; a user or purchaser of a service or product shares, of his own will, his opinions about the product or service with other consumers—likely the individual's close friends and family.[107] Advertisers and brand owners have long sought after

102. *See Dora*, 18 Cal. Rptr. 2d at 795.

103. *See Abdul-Jabbar*, 85 F.3d at 416.

104. *See id.*

105. *See, e.g.*, Czarnota, *supra* note 24, at 482 (stating that "only celebrities possess sufficient commercial value in their identity to justify litigation").

106. William McGeveran, *Disclosure, Endorsement, and Identity in Social Marketing*, 2009 U. ILL. L. REV. 1105, 1109 (2009).

107. *Id.*

word-of-mouth endorsements because of the high level of influence that consumers have over the opinions and purchasing decisions of their friends and family.[108] Advertising researchers have documented the widespread acknowledgment in the marketing community of the importance of word-of-mouth advertising.[109]

Due to the recognized value of word-of-mouth advertising, a private individual's endorsement has value, and as such, that individual should have the right to control his endorsements within his social sphere. However, advertisers historically struggled to fully leverage a single individual's endorsement within his social sphere, given the difficulties in trying to personalize and deliver a message and to identify persons within that individual's sphere of influence.[110] Additionally, advertisers faced the danger that consumers' family and friends might view the advertisement as less than genuine since it did not come directly from the mouth of the individual.[111]

B. SOCIAL MARKETING

The dawn of online social networks and the Internet significantly reduced the impediments advertisers previously faced in personalizing advertisements.[112] In particular, public access to other consumers' opinions increased in number and visibility with the rise of the Internet and the creation of new fora for the collection, publication, and dissemination of

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108. Kineta H. Hung & Stella Yiyan Li, *The Influence of eWOM on Virtual Consumer Communities: Social Capital, Consumer Learning, and Behavioral Outcomes*, 47 J. ADVERTISING RES. 485, 485 (2007) ("[Word of mouth] is the most important source of influence in the purchase of household goods, and advice from other consumers about a service exerts a greater influence than all marketer-generated information combined.").

109. McGeveran, *supra* note 106, at 1110. McGeveran states that "one advertising researcher estimates that Americans participate in 3.5 billion word-of-mouth conversations daily and that 49 percent of those who hear word of mouth are 'highly likely' to pass that information on to others." *Id.* (citing to Justin Kirby, *How to Manage and Measure the Word of Mouth Revolution*, MARKETINGPROFS, Feb. 28, 2006, http://www.marketingprofs.com/6/kirby1.asp). In fact, Facebook's own Chief Executive Officer Mark Zuckerberg stated that "nothing influences people more than a recommendation from a trusted friend and that a trusted referral is the Holy Grail of advertising." Hoffman, *supra* note 1.

110. *See* ANDY SERNOVITZ, WORD OF MOUTH MARKETING: HOW SMART COMPANIES GET PEOPLE TALKING 4–5 (2006).

111. *See* Louise Kelly, Gayle Kerr & Judy Drennan, *Avoidance of Advertising in Social Networking Sites: The Teenage Perspective*, 10 J. INTERACTIVE ADVERTISING 16, 16 (2010).

112. McGeveran, *supra* note 106, at 1112. McGeveran notes various alternative ways in which advertisers and public relations practitioners encouraged word-of-mouth advertising such as Tupperware parties, discounts for friend referrals, and the use of stunts like midnight release parties for books and films. *Id.* at 1110–11.

consumer opinions and reviews.[113] Professor Eric Goldman offers an assessment of the Internet's amplification of word-of-mouth advertising that proves especially poignant in the context of online social networks due to users' established online connections with family and friends.[114] Specifically, Goldman argues that the Internet amplifies word-of-mouth advertising by (1) "reduc[ing] consumers' costs to share their views," (2) disseminating a consumer's opinion beyond that consumer's own social network through the ease of online "forwarding" of messages, and (3) giving rise to online intermediaries that "systematically capture and republish consumer opinions."[115]

In the context of online social networks, advertisers and companies refer to these word-of-mouth advertising messages as "social marketing."[116] Social marketing utilizes all the benefits of online word-of-mouth advertising that Eric Goldman outlines and combines them into a single location. Consumers provide both the audience and message by connecting with their family and friends while also freely espousing their interests—in the case of Facebook, clicking "Like" on the page of a product, service, or brand they support.[117] Through advertising structures implemented by the online social network provider, advertisers have both the messages and content at their fingertips

113. *Id.* at 1112. Furthermore, consumer opinions on the Internet are often displayed directly on the webpage selling the product or service under review, which marks a significant departure from pre-Internet practices and increases the influence of the consumer opinions by providing them to potential purchasers at the critical point-of-purchase. *See, e.g.*, YELP, http://www.yelp.com (last visited Feb. 13, 2013); AMAZON.COM, http://www.amazon.com (last visited Feb. 13, 2013).

114. Eric Goldman, *Online Word of Mouth and Its Implications for Trademark Law*, *in* TRADEMARK LAW AND THEORY: A HANDBOOK OF CONTEMPORARY RESEARCH 404, 411 (Graeme B. Dinwoodle & Mark D. Janis eds., 2008).

115. *Id.* Although the growing visibility, veracity, and value of online word-of-mouth advertising proves fruitful for companies and advertisers, the ubiquity of such online word-of-mouth messages generated concern from the Federal Trade Commission ("FTC") about the threat of blurring the line between consumer-generated word-of-mouth messages and corporate-sponsored word-of-mouth messages. Pradnya Joshi, *Approval by a Blogger May Please a Sponsor*, N.Y. TIMES, July 12, 2009, http://www.nytimes.com/2009/07/13/technology/internet/13blog.html?_r=0. In December 2009, the FTC implemented a new guideline, extending from its truth in advertising guidelines, that requires online endorsers such as bloggers, or even Twitter users, to fully disclose the existence of a connection "between the endorser and the seller of the advertised product that might materially affect the weight or credibility of the endorsement." 16 C.F.R. § 255.5 (2009).

116. McGeveran, *supra* note 106, at 1116 (defining social marketing as "any technique that sends information about an ordinary individual's interaction with a product to that person's friends and acquaintances in order to stimulate demand for that product").

117. *See* Fraley v. Facebook, Inc., 830 F. Supp. 2d 785, 790 (N.D. Cal. 2011).

and merely need to pay the "gatekeeper" to be able to send their social marketing messages.

For instance, an advertiser utilizing Facebook's "Sponsored Stories" would simply pay Facebook to run an advertisement featuring any users who had clicked "Like" on the advertiser's page.[118] This advertisement would appear on the homepages of the "friends" of those users, indicating that the users like the advertiser's brand or product.[119] Such an advertisement aims to convince the users' "friends" to similarly "Like" the advertiser's page or go a step further and purchase the advertiser's brand or product.[120]

As a result of the ease of online social marketing, advertisers can capitalize on word-of-mouth advertising on a much grander scale than ever before. With over one billion active monthly users,[121] Facebook offers a huge audience for social marketers through its targeted advertising and Sponsored Stories.[122]

But, as Professor William McGeveran conceptualized in his analysis of social marketing, such amplified use of social marketing harms a person's privacy and right of publicity both qualitatively and quantitatively.[123] On a qualitative level, abuse of social marketing—by appropriating a person's name or likeness without consent—harms a person's right to publicity by decreasing the credibility or reliability of endorsements by that person and thus mitigating the strength of the person's future endorsements.[124] Regarding quantitative harm, repeated appropriation of a person's right of publicity in social marketing devalues the person's right because the sheer volume of marketing messages floods the market and makes each recommendation or endorsement less important as the messages add to and compete with the noise of other social marketing.[125]

On a related note, advertisers and companies utilizing social marketing often overlook the potential privacy harms of their advertisements by incorrectly assuming that individuals expect less privacy online; however,

118. *See id.* at 791–92.

119. *See id.*

120. *See id.*

121. Geoffrey A. Fowler, *Facebook: One Billion and Counting*, WALL ST. J., Oct. 4, 2012, http://online.wsj.com/article/SB10000872396390443635404578036164027386112.html.

122. *See How advertising and Sponsored Stories work*, FACEBOOK, http://www.facebook.com/about/privacy/advertising (last visited Feb. 1, 2013).

123. McGeveran, *supra* note 106, at 1129.

124. *Id.* at 1129–30.

125. *Id.* at 1130.

such a view represents a popular misconception.[126] Thus, when an advertiser utilizes a user's expressed interest in its brand, it might cause additional reputational harms and "hurt feelings" by revealing to that user's friends a possibly controversial or embarrassing interest to which the user did not realize he had openly attached his online social network profile.[127]

Moreover, opting out of social networking to avoid invasions of one's privacy is no longer a realistic alternative; rather, by opting out of social networking, an individual would abdicate control over his own reputation, leaving his friends, family, and acquaintances to shape the individual's reputation by tagging the abstainer in photos or discussing the abstainer.[128]

C. *COHEN V. FACEBOOK*: OPENING THE DOOR TO NON-ECONOMIC HARM FOR NON-CELEBRITIES IN RIGHT OF PUBLICITY CASES

Having established the unique value social marketing offers to advertisers as well as the potential economic and non-economic harms social marketing misuse can cause to users, social network users facially appear to be in a clear position to prove injury and damages in right of publicity cases where a company has misappropriated their names or likenesses in social marketing messages without consent.[129] However, prior to *Fraley*, the California courts

126. In fact, a recent survey about targeted advertising online indicated that when informed about how marketers target advertisements online, between 73% and 86% of individuals "say they would not want such advertising." Joseph Turow et al., *Americans Reject Tailored Advertising and Three Activities that Enable It*, SSRN ELIBRARY, *1 (2009), http://ssrn.com/paper=1478214. Moreover, opposite to popular belief, "large percentages of young adults are in harmony with older Americans when it comes to sensitivity about online privacy and policy suggestions." Chris Jay Hoofnagle et al., *How Different are Young Adults from Older Adults When it Comes to Information Privacy Attitudes and Policies?*, SSRN ELIBRARY, *3 (2010), http://ssrn.com/paper=1589864. Additionally, people actually expect a "higher—not a lower—degree of privacy in communications with friends and family members" who encompass much, if not all, of a person's social network. McGeveran, *supra* note 106, at 1125.

127. For example, a user might have mistakenly thought he had obscured his stated interests and preferences from the view his friends. Furthermore, even if a user was concerned with revealing his brand loyalties, that user may have unknowingly clicked "Like" on a page "to access a special offer code for a new product, to access photographs of an event, or to become eligible for a promotional prize." *See* Fraley v. Facebook, Inc., 830 F. Supp. 2d 785, 792 (N.D. Cal. 2011). Or, the user simply might not have realized how the social network functioned because of unclear or vague descriptions of how the social network provider would share such stated interests and preferences.

128. McGeveran, *supra* note 106, at 1127.

129. *See* CAL. CIV. CODE § 3344(a) (West 2012). As mentioned briefly in Section I.B, *supra*, California courts permit recovery for private persons under the California right of publicity statute.

did not award damages to such private person plaintiffs in right of publicity cases.[130]

For instance, Facebook previously faced a similar right of publicity class action in *Cohen I* (and subsequently *Cohen II*).[131] The court granted Facebook's motions to dismiss in both instances.[132] Although the *Cohen I* court dismissed the case, the court demonstrated an apparent willingness to substantiate a right of publicity claim on non-economic harm alone[133]—a willingness absent in *Fraley*.

In 2011, Facebook found itself in court—in *Cohen I*—on allegations that its "Friend Finder" service violated users' right of publicity.[134] This service allowed Facebook subscribers to use their email accounts and contacts from those email accounts to locate other subscribers on Facebook that the subscriber already knew but who were not yet among the subscriber's "friends."[135] Facebook then promoted this service by placing notifications on homepages of the subscriber's "friends" informing them that the subscriber tried the service.[136] These messages displayed the subscriber's photo and name as endorsements encouraging the subscriber's "friends" to use the service as well.[137] The *Cohen I* court dismissed the plaintiffs' section 3344 claim with leave to amend.[138] The court held that plaintiffs failed to plead that they suffered any harm from the infringement of their right of publicity.[139] Interestingly, the court recognized section 3344(a)'s protection for non-celebrity plaintiffs through statutory minimum damages and stated that recovery could be available for mental anguish apart from economic harm.[140] However, the court held that the plaintiffs still needed to plead

130. *See, e.g.*, Cohen v. Facebook, Inc. (*Cohen I*), 798 F. Supp. 2d 1090, 1097 (N.D. Cal. 2011). The court dismissed the plaintiffs' complaint with leave to amend and the plaintiffs subsequently amended their complaint, but the court dismissed the amended complaint without leave to amend. Cohen v. Facebook, Inc. (*Cohen II*), C 10-5282 RS, 2011 WL 5117164, at *3 (N.D. Cal. Oct. 27, 2011).

131. *Cohen I*, 798 F. Supp. 2d at 1097; *Cohen II*, 2011 WL 5117164, at *3.

132. *Cohen I*, 798 F. Supp. 2d at 1097; *Cohen II*, 2011 WL 5117164, at *3.

133. *Cohen I*, 798 F. Supp. 2d at 1097.

134. *Id.* at 1092.

135. *Id.*

136. *Id.*

137. *Id.*

138. *Id.* at 1097.

139. *Id.*

140. *Id.*; *see also* Abdul-Jabbar v. Gen. Motors Corp., 85 F.3d 407, 416 (9th Cir. 1996) ("Injury to a plaintiff's right of publicity is not limited to present or future economic loss, but 'may induce humiliation, embarrassment, and mental distress.' " (citing Waits v. Frito-Lay, Inc., 978 F.2d 1093, 1103 (9th Cir. 1992))). *But see* Post, *supra* note 47, at 674–79

harm—if solely mental anguish—as even the statutory damage award required a showing of harm.[141]

On review of the plaintiffs' amended complaint in *Cohen II*, the court dismissed without leave the plaintiffs' amended section 3344 claim and held that the Facebook subscribers failed to demonstrate harm by infringement of their right of publicity.[142] The court drew attention to the fact that Facebook had not used subscribers' names and likeness outside of any context in which they already appeared, stating that subscribers' "friends" had access to the subscribers' names and likenesses in the course of the friends' normal use of Facebook.[143] The court reiterated its previous holding: "[t]he fact that the California Legislature has provided for statutory damages in the amount of $750 for a [sic] individual who is unable to *quantify* the amount of damages suffered does not eliminate the requirement of a cognizable injury in the first instance."[144] Thus, although the California legislature directly provided for recovery for non-economic injury through statutory minimum damages, this allowance does not eliminate a plaintiff's burden of showing such harm.

IV. *FRALEY V. FACEBOOK*: CRITICISMS AND IMPLICATIONS

When Facebook again faced class allegations of infringing its users' right of publicity, the *Fraley* court found what the plaintiffs in the *Cohen* cases failed to properly allege—harm.[145] The Facebook subscribers alleged that they did not know that their choice to click the "Like" button would be "interpreted and publicized by Facebook as an endorsement of those advertisers, products, services, or brands."[146] Although Facebook included the ability to appropriate its users' likenesses for other commercial purposes in its Terms of Use, Facebook did not allow users to opt out of being featured in "Sponsored Stories" when the new advertising service launched.[147]

(arguing for a division between a right of publicity focused on economic recovery and a separate misappropriation tort focused on non-economic reputational and emotional harm).

141. *Cohen I*, 798 F. Supp. 2d at 1097.

142. Cohen v. Facebook, Inc. (*Cohen II*), C 10-5282 RS, 2011 WL 5117164, at *3 (N.D. Cal. Oct. 27, 2011).

143. *Id.*

144. *Id.*

145. Fraley v. Facebook, Inc., 830 F. Supp. 2d 785, 810 (N.D. Cal. 2011).

146. *Id.* at 792.

147. *Id.* Note that this lack of opt-out proves especially problematic for minors using Facebook because they cannot consent to commercial use of their names or likenesses without parental consent. *See id.* at 803–04 (quoting CAL. CIV. CODE § 3344(a) (West 2012)) ("Any person who knowingly uses another's name, voice, signature, photograph, or likeness . . . without such person's prior consent, or, in the case of a minor, the prior consent

Notably, the plaintiffs in *Fraley* only alleged economic injury as a result of Facebook's infringement of their right of publicity and did not allege non-economic harm such as mental anguish or hurt feelings.[148] Unlike the *Cohen* cases, the plaintiffs here could demonstrate actual calculable economic loss from the abuse of their right of publicity because the "Sponsored Stories" resulted in a profit for Facebook attributable to the plaintiffs.[149] In making this finding, the court denied Facebook's argument requiring plaintiffs to prove preexisting value in their right of publicity before permitting recovery.[150] Such an approach to the right of publicity would run counter to the California legislature's intent for the statute to extend to non-celebrity private persons as indicated by the statutory minimum damages.[151]

Under the precedent set forth by the Ninth Circuit in *Abdul-Jabbar*, the district court in *Fraley* properly entered a preliminary finding in favor of the plaintiffs regarding the motion to dismiss.[152] The court recognized that although the plaintiffs' actions on Facebook could be deemed newsworthy in the context of their online social network, comprising their friends and family, "Facebook's *commercial use* of those actions in Sponsored Stories remove[d] them from the scope of [section] 3344(d)'s newsworthy privilege."[153] However, to reach this conclusion, the court first rejected plaintiffs' claims that their actions on the online social network did not constitute newsworthy actions and that they could not be considered anything other than private persons.[154] The court instead found plaintiffs to be local celebrities in the context of their personal social network, thus identifying them as "subjects of public interest among the same audience."[155] This struggle over plaintiffs' celebrity status arose because plaintiffs did not want to be classified as celebrities since doing so could strength Facebook's possible newsworthiness defense, but at the same time, the plaintiffs wanted to establish some form of localized fame to argue the value of their endorsements and resulting injury.[156]

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of his parent or legal guardian, shall be liable for any damages sustained by the person . . . injured as a result."). The *Fraley* settlement directly addresses this issue by requiring Facebook to implement a process for confirmed parents to be able to opt their children out of "Sponsored Stories." Raymond, *supra* note 13.

148. *Fraley*, 830 F. Supp. 2d at 807.
149. *Id.* at 809.
150. *Id.* at 806–07.
151. *Id.* at 807.
152. *Id.* at 805, 810.
153. *Id.* at 805.
154. *Id.* at 804.
155. *Id.* at 805.
156. *See id.* at 804.

Whether intentional or not, the court's analysis of the privacy-newsworthiness tension in the context of online social networks suggests far-reaching and perhaps problematic implications for the right of publicity as well as other areas of law, including defamation and the privacy torts.[157] Moreover, the plaintiffs' failure to allege non-economic harm in addition to economic harm compelled the *Fraley* court to depart from *Cohen I* and *Cohen II*'s non-economic view of the right of publicity in such a way that undermines the strength of the right of publicity in an online context.[158] *Fraley*'s analysis also falls in line with criticisms of an encompassing economic and non-economic approach.[159] However, such an approach is incongruent with section 3344's statutory language and previous case law.[160]

A. WEAKNESSES OF CURRENT RIGHT OF PUBLICITY FRAMING

In *Cohen I* and *Cohen II*, the court denied the plaintiffs' section 3344 claim because the plaintiffs failed to allege either economic harm or harm as a result of mental distress.[161] The *Fraley* plaintiffs, however, had a stronger argument for proving harm since Facebook's profits from its "Sponsored Stories" social marketing were directly attributed to the use of the plaintiffs' names and likenesses.[162] The plaintiffs may have also avoided pleading other economic and non-economic harms due to perceived difficulty in demonstrating these less quantifiable harms.

Limited to the economic harm aspect of the allegation as a result of plaintiffs' ambiguous pleading and opposition to the motion to dismiss, the *Fraley* court could not address the potential non-economic aspects of the right of publicity and also focused only on the *value of the misappropriation to the*

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157. *See supra* Section II.A.

158. *See* Memorandum of Law in Opposition to Motion to Dismiss at 9–11, Fraley v. Facebook, Inc., 830 F. Supp. 2d 785 (N.D. Cal. 2011) (No. CV 11-01726), 2011 WL 7663488. Plaintiffs argued:

> While section 3344 certainly *allows* a plaintiff to plead and recover under a theory of mental anguish, there is nothing to suggest that the Legislature did not *also* intend to allow the non-celebrity to also recover that penalty where there is a misappropriation of his or her name or likeness for the economic advantage of a defendant.

Id. at 10.

159. *See* Post, *supra* note 47, at 674–79.

160. *See supra* notes 70–73 and accompanying text.

161. Cohen v. Facebook, Inc. (*Cohen I*), 798 F. Supp. 2d 1090, 1097 (N.D. Cal. 2011); Cohen v. Facebook, Inc. (*Cohen II*), C 10-5282 RS, 2011 WL 5117164, at *3 (N.D. Cal. Oct. 27, 2011).

162. *See* Fraley v. Facebook, Inc., 830 F. Supp. 2d 785, 809 (N.D. Cal. 2011).

violator rather than the *devaluation of the individual's right of publicity*.[163] The plaintiffs' plea of harm based on the profits alone and their resulting failure to plead with enough specificity regarding other theories of injuries outside of lost profits forced the court to adopt this limited approach.[164] Still, the *Fraley* court, as a result of the plaintiffs' pleading, left unaddressed a full discussion of harm and the right of publicity.

1. *Applying a Holistic Economic and Non-Economic Approach*

Although some states and legal scholars recognize the right of publicity as a solely economic harm—leaving mental anguish and dignitary recovery to a separate misappropriation tort—California case law and statutory language reject a bifurcated approach, thus permitting consideration of both economic and non-economic harms.[165] Specifically, California case law and model civil jury instructions[166] permit the fact-finder to award damages for mental anguish and dignitary harm by showing proof of "anxiety, embarrassment, humiliation, shame, depression, feelings of powerlessness, [and] anguish"[167] that "concerns one's own peace of mind"[168] as well as "impairment of reputation and standing in the community."[169]

The plaintiffs in *Fraley* should have pled both economic and non-economic harm. Such pleading would have allowed the court to follow the *Cohen* court's commitment to legislative intent and judicial precedent[170] that implicated the need for a holistic economic and non-economic approach to the right of publicity.[171] Had the pleading allowed the *Fraley* court to adopt such an approach, the court likely would have found additional harm apart from the economic harm.

The facts of the case allege that Facebook users routinely clicked "Like" on the pages of companies and brands for reasons other than to express their

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163. *Id.* at 806 ("Here, Plaintiffs allege not that they suffered mental anguish as a result of Defendant's actions, but rather that they suffered economic injury because they were not compensated for Facebook's commercial use of their names and likenesses in targeted advertisements to their Facebook Friends.").

164. *See id.*

165. *See supra* notes 70–73 and accompanying text.

166. Judicial Council of California Civil Jury Instruction 1820 (CACI 1820) (2012).

167. Miller v. Nat'l Broad. Co., 232 Cal. Rptr. 668, 680 (Ct. App. 1986).

168. Selleck v. Globe Int'l, Inc., 212 Cal. Rptr. 838, 846 (Ct. App. 1985).

169. Diaz v. Oakland Tribune, Inc., 188 Cal. Rptr. 762, 774 (Ct. App. 1983) (citing Gertz v. Robert Welch, Inc., 418 U.S. 323, 350 (1974)).

170. *See* Miller v. Collectors Universe, Inc., 72 Cal. Rptr. 3d 194, 204 (Ct. App. 2008) (citing Assemblymember Vasconcellos, Letter to Gov. Reagan, Nov. 10, 1971 re Assem. Bill No. 826 (1971 Reg. Sess.) 1).

171. *See* Cohen v. Facebook, Inc. (*Cohen I*), 798 F. Supp. 2d 1090, 1097 (N.D. Cal. 2011).

support for the company or brand.[172] For example, users may have clicked "Like" on a page because doing so allowed them "to access a special offer code for a new product, to access photographs of an event, or to become eligible for a promotional prize."[173] Thus, when Facebook incorporated the users' names and likenesses into its "Sponsored Stories," the company broadcasted to the users' "friends" potentially misleading word-of-mouth messages that could have conflicted with the way the users intended to present themselves online. Such messages could have caused users non-economic harm in the form of humiliation and impairment of reputation by presenting them to their "friends" as proponents of brands and companies that they did not in fact endorse.[174] Moreover, if users had restricted the visibility of the "Likes" section of their profile to only certain "friends" or to no one but themselves, the broadcasting of these "Likes" through "Sponsored Stories" would certainly have caused them embarrassment and feelings of powerlessness as their selected privacy settings led to a greater expectation of privacy. The unavailability of an option to opt-out of social marketing paired with the lack of transparency about what happens when a user clicks the "Like" button strengthens the support for a finding of non-economic harm.[175]

The absence of this entire analysis in the *Fraley* opinion and the court's focus solely on economic harm overemphasized the categorization of the plaintiffs as public figures,[176] and suggested the enforcement of a solely economic-harm-focused approach to the right of publicity. This type of interpretation of section 3344 focuses incorrectly on what *profit the misappropriating party received* from the violation of a person's right of publicity rather than the *harm actually incurred upon the violated party*. The economic focus devalues the violated party's interest in their right of publicity by limiting its value only to what value others can derive from it. In actuality, misappropriation of an individual's right of publicity causes more harm than the profits gained by the infringer.[177] As discussed in Section III.B, *supra*, misappropriation harms an individual's right of publicity both qualitatively and quantitatively.[178] Limiting the scope of recovery only to the infringer's

172. Fraley v. Facebook, Inc., 830 F. Supp. 2d 785, 792 (N.D. Cal. 2011).

173. *Id.*

174. *See* Pavesich v. New England Life Ins. Co., 50 S.E. 68, 79–80 (Ga. 1905); Roberson v. Rochester Folding Box Co., 64 N.E. 442, 449–50 (N.Y. 1902) (Gray, J., dissenting).

175. *See Fraley*, 830 F. Supp. 2d at 792.

176. See *infra* Section IV.B for further discussion of the implications of this overemphasis.

177. *See* McGeveran, *supra* note 106, at 1129.

178. *Id.*

profits ignores the devaluation of the individual's right of publicity. Such devaluation results from oversaturation of the market for the individual's word-of-mouth messages as well as the discrediting of the usefulness of suggestions or endorsements from that individual.[179]

This evaluation demonstrates the value of a holistic approach to right of publicity harm that blends economic harm, dignitary harm from loss of control over self-image, and mental anguish in the form of humiliation and embarrassment. Inclusion in section 3344 of a statutory minimum for incalculable harm suggests that the statute should dually focus on economic harm as well as harm caused by restricting an individual's self-control of his image, which is often less calculable and tied to mental distress.[180] Since the *Fraley* court found economic harm supporting recovery, a future court's deference to *Fraley* could lead to defective pleadings by future plaintiffs and subsequent dismissals of cases like *Cohen* where plaintiffs cannot easily quantify economic harm.[181] Such an approach more closely resembles an early pseudo-right of publicity holding rather than the recent California case law.[182]

2. *Criticisms and Dangers of Holistic Approach*

Approaching the right of publicity with a stronger focus on autonomous control of self-image does give rise to some possible criticisms. First, some critics might view a right of publicity focused more on control of self-image as providing an intellectual-property-like protection for a person's public identity—similar to inventions protected by patent law and creative works protected by copyright law.[183] Since Congress and state legislatures generally give such intellectual property ("IP") protection to foster creative and scientific growth and improvement, a critic might argue that a person does not need legal encouragement through IP protection to create their identity,

179. *See id.*

180. *See* CAL. CIV. CODE § 3344(a) (West 2012).

181. *See* Cohen v. Facebook, Inc. (*Cohen I*), 798 F. Supp. 2d 1090, 1097 (N.D. Cal. 2011); Cohen v. Facebook, Inc. (*Cohen II*), C 10-5282 RS, 2011 WL 5117164, at *3 (N.D. Cal. Oct. 27, 2011).

182. *Compare* Roberson v. Rochester Folding Box Co., 64 N.E. 442, 447 (N.Y. 1902) (rejecting a misappropriation claim by finding the use of plaintiff's image to be non-libelous and thus lacking harm) *with* Miller v. Collectors Universe, Inc., 72 Cal. Rptr. 3d 194, 205 (Ct. App. 2008) (stating that "by enacting section 3344(a), the Legislature provided a practical remedy for a non-celebrity plaintiff whose damages are difficult to prove and who suffers primarily mental harm from the commercial misappropriation of his or her name").

183. *See* Post, *supra* note 47, at 676 ("[W]e must inquire whether we wish the law to create a social structure in which our very names and images have become alienable commodities.").

as they will do it naturally.[184] This is not necessarily true, however, in an age where individuals often create online personas completely separate from their real life persona.[185] Moreover, protection of autonomous control of self-image does not aim to encourage development of a person's identity for purposes of increasing the value of the person's right of publicity; rather, the interest focuses on compensating individuals for infringements upon their personal right to control their identity along the lines of a "Natural Rights Perspective."[186] This perspective recognizes that a person's identity is inherent to that person such that employing that person's identity without consent infringes on that person's natural right to own—and therefore control—his identity and how he portrays himself to others.[187]

Second, some commentators might voice concerns that strengthening the right of publicity by allowing for more recovery—resulting from mental distress and loss of control of self-image—will in turn endanger the public's right to be informed and the press's right to inform the public by potentially chilling speech.[188] This argument fails because strengthening individuals' ability to substantiate their injury in no way affects a court's analysis of whether or not a defendant's use qualifies for a newsworthiness exemption; the balancing test occurs separately from any considerations of harm and damages.[189]

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184. *See, e.g.*, David Tan, *Beyond Trademark Law: What the Right of Publicity Can Learn From Cultural Studies*, 25 CARDOZO ARTS & ENT. L.J. 913, 934–35 (2008) (arguing that such incentives prove especially unnecessary in the Internet era of meritless celebrity); Michael Madow, *Private Ownership of Public Image: Popular Culture and Publicity Rights*, 81 CALIF. L. REV. 127, 184 (1993) (arguing that such a rationale is based "on a fundamental misconception of the processes by which fame is generated and public images are formed in contemporary society").

185. *See* Daniel Nemet-Nejat, *Hey, That's My Persona?: Exploring the Right of Publicity for Blogs and Online Social Networks*, 33 COLUM. J.L. & ARTS 113, 119 (2009) ("[T]hese are not merely digital renderings of one's physical world identity; they are 'alter egos,' derived, but distinct, from their creators.").

186. *See* Jeffrey J. Brown, *Defending the Right of Publicity: A Natural Rights Perspective*, 10 INTELL. PROP. L. BULL. 131, 139 (2006).

187. *See id.* ("If one can own anything in this world, one owns his own *Person* and nobody has any right to it but himself.") (internal quotation marks omitted).

188. *See* Russell Hickey, *Refashioning Actual Malice: Protecting Free Speech in the Right of Publicity Era*, 41 TORT TRIAL & INS. PRAC. L.J. 1101, 1102 (2006).

189. For example, the *Fraley* court addresses separately newsworthiness and injury. Fraley v. Facebook, Inc., 830 F. Supp. 2d 785, 805–07 (N.D. Cal. 2011). Moreover, the *Cohen* court did not even mention newsworthiness in its discussion of injury. Cohen v. Facebook, Inc. (*Cohen I*), 798 F. Supp. 2d 1090, 1097 (N.D. Cal. 2011).

B. IMPLICATIONS FOR PRIVACY-NEWSWORTHINESS TENSION

In addition to the *Fraley* court's less-than-ideal approach to evaluating harm and damages, the court's language concerning newsworthiness and celebrity in the context of social networks is also potentially problematic for claims regarding the right of publicity, privacy, and defamation. Even though the court found that Facebook's "Sponsored Stories" fell outside of section 3344(d)'s newsworthiness exemption due to Facebook's commercial use of plaintiffs' names and likenesses,[190] the court still provided a thorough interpretation of how newsworthiness should be understood in the context of an online social network.[191] In particular the court found the plaintiffs to be "local 'celebrities' within their own Facebook social networks . . . [which] ma[de] them subjects of public interest among the same audience."[192] Moreover, the court suggested an increasing arbitrariness regarding the distinction between public figures and private persons in light of the domination of online social networking websites, including YouTube and Twitter.[193]

Before delving into the implications of such a conception of newsworthiness in the context of online social networks, it should be noted that the *Fraley* court's primary fixation on the status of plaintiffs as either public figures or private persons arose from the plaintiffs' contradictory pleading that they could be celebrities for the purposes of showing injury, but not celebrities in the context of the newsworthiness discussion.[194] But, as the analysis in Section IV.A.1, *supra*, indicates, plaintiffs did not need to demonstrate their "celebrity status" to their Facebook "friends" to be able to recover economically.[195] In fact, plaintiff's "celebrity" status added nothing to the discussion of injury because the value of endorsements in advertising depends on the endorser's ability to influence potential buyers into purchasing a good or service. Word-of-mouth advertising does not rely on the fame or notoriety of the endorser but rather on an individual's ability to affect the purchasing decisions of members of his social network.[196] Had the plaintiffs or the court framed the injury to the plaintiffs as the devaluation of

190. *Fraley*, 830 F. Supp. 2d at 805 (following the Ninth Circuit's holding in Abdul-Jabbar v. Gen. Motors Corp., 85 F.3d 407 (9th Cir. 1996)).

191. *Id.*

192. *Id.*

193. *Id.*

194. *Id.* at 804.

195. *See supra* notes 178–179 and accompanying text (noting the availability of substantiating harm through non-economic means or through qualitative and quantitative harm to the plaintiffs' right of publicity for social marketing purposes).

196. *Fraley*, 830 F. Supp. 2d at 792.

the plaintiffs' right of publicity through overuse and misuse along with harm resulting from Facebook's infringement of the plaintiffs' control over their self-identities, the court could have avoided this celebrity/non-celebrity "contradiction" and may have had less of an issue recognizing the plaintiffs as private persons rather than public figures for newsworthiness purposes.

1. Newsworthiness Implications for Right of Publicity

Under the *Fraley* court's interpretation of newsworthiness, misappropriation of an individual's right of publicity in the social networking context will almost inherently be newsworthy because a user's actions in the social network will nearly always be to a limited audience that has opted to "friend" the user. Thus, from the court's viewpoint, the user's "friends" find all of the user's actions of interest to them, or else the "friend" would not have opted to join that person's social network. As a primary matter, this view of newsworthiness overstates the relationship between a Facebook user and his "friends" or, more broadly, between any online social network user and the people with whom he connects. A user might have many reasons for connecting with another person—including that it would be awkward or uncomfortable for the user to reject a request to connect with another person—such that the user's "supposed 'friends' are also populated by relatives, professional colleagues, neighbors, former classmates or co-workers, and many casual acquaintances."[197] Some of these "friends" will be uninterested in the actions of the user, or perhaps more commonly, the user will be uninterested in the online actions of his "friends." As a result of this disinterest, at least a portion of the user's "friends" likely consider his actions in the context of the online social network as less newsworthy on the whole than the *Fraley* court anticipated.

Labeling as newsworthy all of a user's "public" actions[198] within the online social network places appropriation of a user's right of publicity regarding those actions wholly within the section 3344(d) exemption; therefore, such an overbroad classification places the onus on a plaintiff to prove that a defendant's use falls outside of the exemption. Even though this presumption of newsworthiness seems less than problematic in the case of

197. *See* McGeveran, *supra* note 106, at 1126 n.104.

198. Note that because of users' customized privacy settings some actions, including a user's "Likes," are less visible and thus less "public" than other actions. Here, the court considers the plaintiffs' "Likes" to be "public" as implied by the court's finding the actions can be deemed newsworthy. *Fraley*, 830 F. Supp. 2d at 804–05. *See also supra* note 175 and accompanying text (explaining that plaintiffs' may have obscured their "Likes" from visibility by any of their "friends" such that the "Likes" could not possibly be considered "public" or newsworthy actions).

Fraley—where misappropriation occurred in the context of social marketing and thus primarily for advertising purposes—the presumption will likely prove harmful when the use by a defendant lacks a facially discernible advertising focus.[199] This potential harm results from the forced presumption of public interest in the plaintiff's actions in the context of his online social network, which would further decrease the plaintiff's chances by allowing the defendant to claim an exemption under section 3344(d); the burden of the exemption discussion then falls on the question of whether or not the defendant appropriated the users' names or likenesses primarily for advertising purposes.[200]

2. *Newsworthiness Implications for Privacy Torts and Defamation*

Applying the newsworthiness standard espoused by the *Fraley* court as a blanket rule is detrimental to a user's expectation of privacy because it places a higher pleading burden on the user.[201] Under the *Fraley* interpretation, all social networking users would be considered public figures in the context of their network of "friends" because of the users' willingness to connect with others and to place some facts about themselves into the quasi-public sphere of their social network.[202] For a public figure, a court would apply a higher requirement of intent and a lower expectation of privacy for the torts of intrusion upon seclusion, public disclosure of embarrassing facts, false light invasion of privacy, and defamation.[203]

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199. Consider the fine line between what garners exemption under section 3344(d) in two cases evaluating surfing as newsworthy and consider the purported role of advertising in the appropriating of the plaintiffs' names and likenesses. *Compare* Dora v. Frontline Video, Inc., 18 Cal. Rptr. 2d 790, 795 (Ct. App. 1993) (finding defendant's use of plaintiffs' names and likenesses to be newsworthy in the context of a documentary about surfing) *with* Downing v. Abercrombie & Fitch, 265 F.3d 994, 1002 (9th Cir. 2001) (refusing to find defendant exempt from liability because defendant's use of plaintiffs' likenesses drew too tenuous a connection to the theme of the clothing catalog in which defendant used the likenesses).

200. *See* Abdul-Jabbar v. Gen. Motors Corp., 85 F.3d 407, 416 (9th Cir. 1996) (focusing heavily on the purpose of the appropriated use since the plaintiff's name and basketball statistics were presumed to be newsworthy).

201. *See supra* note 23 and accompanying text.

202. *See* Fraley v. Facebook, Inc., 830 F. Supp. 2d 785, 805 (N.D. Cal. 2011). See *supra* Section IV.B.1 for discussion of issues with this overbroad characterization.

203. *See* Prosser, *supra* note 15, at 411. The torts of public disclosure of embarrassing facts and false light invasion of privacy represent the last two of Prosser's privacy torts. *Id.* at 389 (acknowledging torts for "[p]ublic disclosure of embarrassing private facts about the plaintiff" and "[p]ublicity which places the plaintiff in a false light in the public eye").

Consider, for instance, a case where a user's "friend" posts a libelous comment on the user's Facebook wall for all of the user's "friends" to see.[204] Such a post might cause the user considerable reputational harm and mental distress.[205] However, under the *Fraley* newsworthiness conception, a court would view the user as a public figure and would require the user to establish that the "friend" who posted the libelous comment acted with actual malice before permitting recovery.[206] This view would limit the user's ability to recover regardless of the harm sustained or the inapplicability of the public figure status.

On the other hand, the imposition of the higher pleading standard might prevent social networking users from becoming overly litigious in the quasi-public sphere of online social networking where users generally speak more freely—arising from the common ability of an online speaker to speak from behind a curtain of anonymity.[207] But this litigation deterrence provides only a narrow potential benefit since libelous speech and invasions of privacy, in the context of online social networks, are perhaps more potent than other instances of the torts. In particular, the relevant audience likely represents an amalgamation of the people to whom the targeted user would be most sensitive about revealing personal or libelous information.[208] Moreover, the capabilities of users to share and redistribute a libelous message or one that invades a particular user's privacy dispel any notion that speech in the online social networking context should deserve any less scrutiny than other online speech or print speech.[209]

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204. For an actual online social network defamation case similar to the example provided, see *Chaker v. Mateo*, 147 Cal. Rptr. 3d 496, 501–02 (Ct. App. 2012) (demonstrating the California courts' willingness to hold users of online social networking sites to be public figures based on election to join a site where other users would have a legitimate interest in knowing about a user's character). *See also* L.V. Anderson, *Can You Libel Someone on Twitter?*, SLATE, Nov. 26, 2012, http://www.slate.com/articles/technology/explainer/2012/11/libel_on_twitter_you_can_be_sued_for_libel_for_what_you_write_on_facebook.html.

205. *See* McKenna, *supra* note 20, at 290–91.

206. *See Fraley*, 830 F. Supp. 2d at 805.

207. *See* Katherine D. Gotelaere, *Defamation or Discourse?: Rethinking the Public Figure Doctrine on the Internet*, 2 CASE W. RES. J.L. TECH. & INTERNET 1, 1 (2011) ("While online anonymity is valuable as it encourages the speaker to distribute his ideas freely, it is also dangerous as it widens the potential for cognizable legal harm to individuals in the form of online defamation.").

208. *See* McGeveran, *supra* note 106, at 1125.

209. *See* Goldman, *supra* note 114, at 411. Note, however, that a user could still be deemed a limited purpose public figure depending on the topic of the potentially libelous or privacy-invasive speech and the users' voluntary participation. *See* Reader's Digest Ass'n v. Superior Court, 690 P.2d 610, 615 (Cal. 1984) ("Unlike the 'all purpose' public figure, the 'limited purpose' public figure loses certain protection for his reputation only to the extent

C. FUTURE OPPORTUNITY FOR USERS TO RECOVER FOR VIOLATIONS OF THE NOW LEGALLY-COGNIZABLE RIGHT OF PUBLICITY

Finally, the *Fraley* court's finding favoring the plaintiffs on their right of publicity claim paves the way for similar cases of abuses of social marketing. As explained in Section IV.A.2, *supra*, if future courts or plaintiffs follow the economic-harm-focused approach of the *Fraley* court, potentially damaging infringement of users' right of publicity will go unpunished for failure to plead harm apart from a calculable economic profit by the social network provider. For example, the plaintiffs in *Fraley* likely would have struggled to plead injury under their profits-focused pleading if Facebook had not charged advertisers for the "Sponsored Stories." However, the plaintiffs still would have suffered economic injury and non-economic injury as discussed in Section IV.A.1, *supra*, even in the absence of Facebook's own direct profiting from the messages.

If future plaintiffs and courts instead adopt the holistic approach focusing on the *harm incurred on plaintiffs* rather than the *profits of the infringer*, plaintiffs will be more likely to recover.[210] For instance, the plaintiffs in *Cohen I* and *Cohen II* might have been able to avoid dismissal of their section 3344 claims had they adopted this approach.[211] They would have been able to allege injury through the qualitative and quantitative devaluation of their right of publicity resulting from repeated use by Facebook to promote its "Friend Finder" service, even though they could not have proved a calculable monetary harm. Such a finding of harm, although immeasurable, exemplifies

that the allegedly defamatory communication relates to his role in a public controversy."). Still, a presumption of being a public figure significantly overshadows any concerns of a user's public figure status arising on an individual case-by-case basis and causes more far-reaching harm due to its blanket application. *See supra* notes 203–208 and accompanying text.

210. Such findings of non-economic harm find support in both right of publicity and pseudo-right of publicity cases in California. For instance, in *Fairfield v. American Photocopy Equipment Co.*, the California Court of Appeal reversed a lower court's decision regarding a false endorsement because the lower court precluded the plaintiff from presenting evidence relating to his mental anguish and hurt feelings the plaintiff suffered as a result of the misappropriation of his name in the inaccurate endorsement. 291 P.2d 194, 200 (Cal Ct. App. 1955). Moreover, regarding the California's statutory right of publicity, the California Court of Appeal in *Miller v. Collectors Universe, Inc.* substantiated a non-celebrity's injury based on his hurt feelings apart from economic harm. 72 Cal. Rptr. 3d 194, 209 (Ct. App. 2008).

211. Plaintiffs in *Cohen I* and *Cohen II* twice failed to plead injury through mental distress or devaluation of the users' right of publicity regardless of the court's specific suggestion that pleading injury caused by mental distress might have been sufficient to allow for recovery under the section 3344(d) statutory minimum. *See* Cohen v. Facebook, Inc. (*Cohen I*), 798 F. Supp. 2d 1090, 1097 (N.D. Cal. 2011); Cohen v. Facebook, Inc. (*Cohen II*), C 10-5282 RS, 2011 WL 5117164, at *3 (N.D. Cal. Oct. 27, 2011).

the California legislature's rationale for inclusion of a statutory minimum damages in section 3344.

Because of the potential for future successful cases by online social network users regarding right of publicity infringement, online social networking providers would be wise to take active steps outlined in Section IV.D, *infra*, to protect themselves from having to pay enormous damage awards—at least $750 per plaintiff—or large settlements similar to the $20 million Facebook paid to settle the *Fraley* case.[212] Additionally, online social networking providers enabling social marketing should recognize that abuse of social marketing not only proves harmful for social network users, but abuse also harms the use of social marketing generally.[213]

D. KEY IMPLICATIONS FOR ONLINE SOCIAL NETWORKING COMPANIES

To prevent right of publicity lawsuits, social networking companies need to take action to insure that their Terms of Service ("TOS") properly outline the data that the social network provider collects, how the provider currently uses the data, who the provider permits to use the data, and how the provider plans to use the data in the future—if the provider has plans to offer new products or services. For example, both the *Fraley* court and the

212. *See* CAL. CIV. CODE § 3344(a) (West 2012); Levine, *supra* note 13.

213. Because word-of-mouth advertising and social marketing rely heavily on the trust an individual has amassed among his close friends and family members over time, false endorsements by social networking providers appropriating the individuals' names or likenesses lead receivers of those endorsements to distrust social marketing messages more generally. *See* McGeveran, *supra* note 106, at 1165. Not only does social marketing abuse cause users to distrust word-of-mouth messages they receive but it also minimizes users' willingness to tie themselves to messages as they recognize the tendency for abuse of such messages. *See* Angela Hausman, *Marketing is Dead??????*, HAUSMAN MARKETING LETTER (Aug. 12, 2012), http://www.hausmanmarketingletter.com/marketing-is-dead ("As more [marketing] firms take shortcuts by compensating consumers for favorable endorsements, social media users are becoming jaded and beginning to distrust their friends' opinions. A recent research study by Robert Kozinets found both anger and distrust generated when bloggers were compensated for their product reviews by as little as free products."). A 2012 online survey revealed that 98% of Americans distrust information found on the Internet with 59% citing too many ads as a main reason for distrust and 53% citing distrust resulting from viewing information as self-promotional. *Mancx Survey: 98% of Americans Distrust Information on the Internet*, HARRIS INTERACTIVE (July 17, 2012), http://www.harrisinteractive.com/vault/2012_Mancx%20Distrust%20Internet%20Info.PDF. This distrust is not limited to the specific social marketing abuser, but rather poisons users' perceptions of the word-of-mouth messages generally. *See* McGeveran, *supra* note 106, at 1165. As William McGeveran warns, there is a "danger that irresponsible social marketing practices by a few individual firms could damage the entire recommendation ecology." *Id.* Furthermore, overuse of social marketing by multiple parties can lead to the "spamification" of word-of-mouth messages whereby the messages lose meaning and effectiveness in an oversaturated market. *Id.*

Cohen I court held that consent remained a disputed question of fact precluding dismissal on that ground alone because Facebook's TOS did not directly disclose that users' names and likenesses would be used for social marketing purposes.[214] Had Facebook instead ensured that its TOS required consent to be given for appropriation of users' names and likenesses in its "Sponsored Stories," the TOS would have likely provided Facebook a strong defense to even its advertising-purposed appropriation of users' right of publicity.[215]

Second, online social networking companies should write their TOS consent terms as clearly as possible. Additionally, they should recognize that extra steps would need to be taken to gain consent from minors, as they cannot consent to appropriation of their names and likenesses without parental authorization.[216] If the company's existing TOS does not provide for right of publicity appropriation, the company will need to send a notice of modification to its users when it adds such consent requirements to its TOS.[217] This notice of modification actively informs users of the changing TOS and its implications.

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214. Fraley v. Facebook, Inc., 830 F. Supp. 2d 785, 805 (N.D. Cal. 2011) (holding the issue of consent to be a disputed question of fact not ripe for dismissal); *Cohen I*, 798 F. Supp. 2d at 1095 ("Nothing in the provisions of the Terms documents to which Facebook has pointed constitutes a clear consent by members to have their name or profile picture shared in a manner that discloses what services on Facebook they have utilized, or to endorse those services.").

215. Of course, a court might invalidate the TOS consent if the court does not believe the browse-wrap consent—consent purportedly given by the mere action of using an online or downloadable product or service—to be enough to protect the company. The court might also invalidate the consent if it deems the TOS terms to be unconscionable or lacking willfulness on the part of the users in their agreeing to the terms. Thus, consent provides a full defense in an ideal situation but likely includes potential weaknesses.

216. Note that as a result of the *Fraley* settlement, Facebook has implemented an opt-out consent for minors as long as requested by a confirmed parental guardian. *See supra* note 147.

217. Generally, online social networking companies implement the broadest language possible regarding how the company can and will use the information users provide. For example, prior to *Fraley*, Facebook's TOS stated, "You can use your privacy settings to limit how your name and profile picture may be associated with commercial, sponsored, or related content (such as a brand you like) served or enhanced by us. You give us permission to use your name and [Facebook] profile picture in connection with that content, subject to the limits you place." *Fraley*, 830 F. Supp. 2d at 805. Such broad language relies on a questionable understanding that if the company changes how it would like to use users' information in the future, these new uses will still be covered by the existing TOS such that the company can implement the new uses of the information without requiring users to reaffirm consent to the TOS. However, as *Cohen I* and *Fraley* demonstrate, the California courts have proven unwilling to recognize consent under a broadly worded TOS, at least regarding utilization for endorsement purposes that implicate users' right of publicity. *Fraley*, 830 F. Supp. 2d at 805

Finally, should a company want to take additional steps to protect its users' interest in their right of publicity and avoid possible litigation altogether, the company should consider offering either an opt-in or opt-out availability for appropriation of users' names and likenesses in the company's social marketing service.

Implementing an opt-out or opt-in consent for social marketing purposes provides the highest level of protection for users, but it represents a considerable sacrifice on behalf of the social networking provider. Namely, offering the ability to opt-out—or going so far as to make the social marketing service opt-in—limits the online social network provider's profits by limiting the number of participants available for appropriation purposes.[218]

However, a provider might also benefit from the added legal protection. Allowing users to opt out permits those who would be offended by the use of their names or likenesses to opt out, thus eliminating many of the would-be plaintiffs. From the users' perspective, the ability to opt out provides the necessary ability to control and shape their personal identities. Finally, opt-out ensures that the messages that appear through social marketing actually provide meaningful endorsements by users who are aware that advertisers will use the users' right of publicity to promote the brands and companies for which the users indicate support.

For specific aspects of an online social network provider's social marketing service, a provider might also consider implementing a more user-friendly opt-in requirement before allowing word-of-mouth messages to issue regarding a user's particular actions. Opt-in would require users to assent to the promotion of their specific online actions in social marketing messages targeting their "friends."[219] Applying such an opt-in requirement to

(holding the issue of consent to be a disputed question of fact not ripe for dismissal); *Cohen I*, 798 F. Supp. 2d at 1095 ("Nothing in the provisions of the Terms documents to which Facebook has pointed constitutes a clear consent by members to have their name or profile picture shared in a manner that discloses what services on Facebook they have utilized, or to endorse those services.").

218. For example, Facebook continues to face enormous financial pressures to increase profitability through advertising—especially after its stock's sharp decline in value immediately after its IPO—while simultaneously facing pressure not to affect users' experience in a way drives away users. *See* Michel Liedtke, *After IPO, Facebook will face new profit pressures*, YAHOO! FINANCE, Feb. 2, 2012, http://finance.yahoo.com/news/ipo-facebook-face-profit-pressures-224809565.html. Of course, advertising is not the only way Facebook and other online social networking companies can make money will maintaining free services. *Id.* ("[Facebook also] charges a commission for some of the sales of games and other services on its website."). Although, last year 85% of Facebook's revenue came from advertising. *Id.*

219. Facebook currently provides such an opt-in requirement for promotion through its Beacon program whereby Facebook and its advertisers encourage users not only to opt-in to

all social marketing messages ensures that a social network provider will face reduced likelihood of a lawsuit for infringement of users' right of publicity, but such broad implementation could result in detrimental consequences regarding the profitability of the social marketing service.[220] However, contracting properly for consent can limit the need for such an opt-out or opt-in provision, unless the company is interested in taking that additional protective step.

V. CONCLUSION

The *Fraley* court's decision in favor of the plaintiffs on their section 3344 claims represents a step toward defining how the right of publicity will play out in the online social networking context. Even though the court arrived at the proper result in favor of the users, the court's exclusively economic approach to the right of publicity exemplifies the weaknesses of the current right of publicity law, especially in light of social marketing practices and autonomous control concerns. A holistic approach focusing on the *injury caused to plaintiffs*—qualitatively, quantitatively, and incorporating non-economic harm—rather than solely on the profits earned by the misappropriating party would more accurately conceptualize the injury resulting from right of publicity infringement. Moreover, such an approach would properly increase the capabilities of online social network users to recover when a provider violates their right of publicity, regardless of whether the misappropriating party directly profited from the use.

On the other hand, the court introduced a problematic framing of newsworthiness whereby future courts could deem the actions of similarly situated plaintiffs inherently newsworthy in the context of the plaintiffs' "friends" due to the plaintiffs' pseudo-public figure status among his "friends." A subscriber trying to allege invasion of privacy or defamation in

promote their actions but also to create the message to accompany the endorsement or recommendation. *See* McGeveran, *supra* note 106, at 1120–21.

220. Advertisers would only be able to promote their brand at the moment users interact with the brand by asking them to opt-in and promote the brand. This severely minimizes the usefulness of social marketing both for the advertisers and for the social network provider because it places both parties' ability to profit from social marketing wholly at the unpredictable whim of users. Even the inclusion of an opt-out provision might seem too injurious to the profitability of social marketing, but a social network provider looking to differentiate itself in the market might promote its opt-out provision as making it a more user-friendly and user-focused social network. Such reduced profitability could additionally lead a social network provider to consider transforming its free service into a subscription service—a change users would likely view negatively. See *supra* note 218 for further discussion of the centrality of advertising to Facebook and to similar online social networking companies.

the online social network context could potentially be held to a higher pleading standard and thus a loss of protection because of his *Fraley*-anointed public figure status. Moreover, a plaintiff alleging infringement of his right of publicity may no longer be able to assert that his actions online do not constitute a subject of public interest such that the plaintiff can no longer rely on his private person status as a counterargument to a defendant's claim of exemption under section 3344(d).

JONESING FOR A TEST: FOURTH AMENDMENT PRIVACY IN THE WAKE OF *UNITED STATES V. JONES*

Lauren Elena Smith†

> "And as we grieve the loss of the Fourth Amendment, we'll be forced to look deep in our hearts—and at the little pieces of plastic dangling from our keychains—and ask ourselves if it was all worth it."[1]

–Judge Alex Kozinski

> "You have zero privacy anyway . . . [g]et over it."[2]

–Scott McNealy, CEO of Sun Microsystems

The evolution of surveillance technologies over the last few decades has led some observers to wonder if the Fourth Amendment will become irrelevant in the digital age.[3] Privacy protections are eroding, as law enforcement is able to access more information that is voluntarily shared by technology-utilizing citizens. The extent of privacy protection for location-tracking information is particularly important given the pervasiveness of GPS tracking technology today, as law enforcement can now obtain location information without relying on government-issued GPS trackers. A recent study found that 85% of the U.S. population owns a cell phone (at minimum, locatable with cell tower triangulation technology), and 45% own a smartphone (precisely locatable with installed GPS technology),[4] with countless more driving cars containing built-in precise tracking devices. Documents provided in response to Congressional and nonprofit group inquiries in 2012 revealed that law enforcement aggressively relies on cell

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1. Alex Kozinski & Stephanie Grace, *Pulling Plug on Privacy: How Technology Helped Make the 4th Amendment Obsolete*, THE DAILY, (June 22, 2011), http://www.thedaily.com/page/2011/06/22/062211-opinions-oped-privacy-kozinski-grace-1-2/.

2. Polly Sprenger, *Sun on Privacy: 'Get over It,'* WIRED.COM, (Jan. 26, 1999), http://www.wired.com/politics/law/news/1999/01/17538.

3. *See* Kozinski & Grace, *supra* note 1.

4. Joanna Brenner, *Pew Internet: Mobile*, PEW INTERNET & AMERICAN LIFE PROJECT (Dec. 4, 2012), http://pewinternet.org/Commentary/2012/February/Pew-Internet-Mobile.aspx.

phone location and usage data and frequently accesses such information without warrants through phone companies.[5] In 2011, cellphone companies responded to 1.3 million demands from law enforcement agencies for text messages and other information about subscribers.[6] Some police departments even acquired their own cell tracking equipment to avoid reliance on phone companies.[7]

Given the prevalence of location-tracking information today and lack of judicial guidance on the matter, many looked to the recent Supreme Court case *United States v. Jones*[8] as a case that would breathe fresh life into the relevance of the constitutional standards for reasonable search and possibly stop the erosion of Fourth Amendment protections.[9] The various opinions in *Jones*, however, answered few questions about how the Fourth Amendment should be applied in the face of new technology—such as remote GPS tracking—that can transmit information without a trespass. Yet, while the *Jones* majority did little to stop the erosion of Fourth Amendment protections because it focused exclusively on the government's trespass on the defendant's vehicle, the two concurrences suggest future judicial evaluation of changing expectations of privacy in the digital age.

This Note reviews prior standards for Fourth Amendment search, and explores the effects of the *Jones* opinions on the development of Fourth Amendment law. It analyzes the opinions in *Jones*, as well as the lower D.C. Circuit decision, in order to shed light on the implications of the case for pressing Fourth Amendment questions in the Information Age.

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5. *See* Eric Lichtblau, *More Demands on Cell Carriers in Surveillance*, N.Y. TIMES, July 9, 2012, at A1, *available at* http://www.nytimes.com/2012/07/09/us/cell-carriers-see-uptick-in-requests-to-aid-surveillance.html; Eric Lichtblau, *Police Are Using Phone Tracking as Routine Tool*, N.Y. TIMES, Apr. 1, 2012, at A1, *available at* http://www.nytimes.com/2012/04/01/us/police-tracking-of-cellphones-raises-privacy-fears.html.

6. *Id.* While such location data is often useful for the purposes of locating a victim in an emergency, the practice was not limited to emergency incidents. *Id.*

7. *See* Lichtblau, *More Demands on Cell Carriers in Surveillance*, *supra* note 5; Lichtblau, *Police Are Using Phone Tracking as Routine Tool*, *supra* note 5.

8. United States v. Jones, 132 S. Ct. 945 (2012).

9. *See, e.g.*, Erica Goldberg, *How* United States v. Jones *Can Restore Our Faith in the Fourth Amendment*, 110 MICH. L. REV. 62 (2011); Julia Angwin & Scott Thurm, *Judges Weigh Phone Tracking*, WALL ST. J., Nov. 9, 2011, http://online.wsj.com/article/SB10001424052970203733504577024092345458210.html; Adam Liptak, *Court Case Asks if 'Big Brother' Is Spelled GPS*, N.Y. TIMES, Sept. 11, 2011, at A1, *available at* http://www.nytimes.com/2011/09/11/us/11gps.html?_r=0; Lyle Denniston, *Argument preview: High-tech policing*, SCOTUSBLOG (Nov. 5, 2011, 12:03 AM), http://www.scotusblog.com/?p=131095; Marcia Hofmann, *Supreme Court Agrees to Hear Key Warrantless GPS Tracking Case*, ELECTRONIC FRONTIER FOUNDATION, (June 27, 2011), https://www.eff.org/deeplinks/2011/06/supreme-court-agrees-hear-key-warrantless-gps.

Part I frames the later discussion by examining the legal history of reasonable search, focusing on the shift from a trespass-based standard to one that turns on a person's reasonable expectation of privacy. In particular, Section I.C highlights the role of technology in increasing the relevance of the reasonable-expectation-of-privacy test given the frequency with which citizens "voluntarily" share their data and actions in the Information Age.

Part II lays out the facts and judicial history of *Jones* and examines the majority and concurring opinions.

Part III explores the practical implications of *Jones*, reviewing the effects that the case has already had on judicial decisions and legislation. It examines the effects both of the binding aspects from the majority *Jones* decision related to trespass, as well as the dicta and potential second holding from the concurrences related to reasonable expectations of privacy in the Information Age.

Part IV explores the unresolved questions raised by the *Jones* concurrences as to whether, and how, judicial understandings of reasonable expectations of privacy should adapt to the Information Age. It analyzes opinions from the cases examined in Part I and from *Jones* to focus on third party doctrine and mosaic theory in reexamining the volition at the heart of "voluntary" communication of information today.

Finally, Part V notes the shortcomings of *Jones* in addressing pressing Fourth Amendment questions in the Information Age. It concludes that courts may need to reexamine what constitutes voluntary communication of information in order for the Fourth Amendment to remain relevant in the Information Age.

I. GETTING TO *JONES*

This Part traces the historic development of the standard for identifying a Fourth Amendment search; from a standard pegged to physical trespass in early cases towards one based on a person's reasonable expectation of privacy after the Supreme Court's 1967 decision in *Katz v. United States*.[10] It then explores the judicial application of the reasonable-expectation-of-privacy test post-*Katz*, and the challenges that advancing norms and technologies have posed to courts' applications of the test. In particular, Section I.C, *infra*, focuses on the development of judicial interpretation

10. *See* 1 WAYNE R. LAFAVE, SEARCH AND SEIZURE: A TREATISE ON THE FOURTH AMENDMENT §§ 1.1–1.2 (5th ed. 2011). Justice Scalia in his *Jones* opinion disputes this commonly understood characterization. *See infra* note 28; discussion *infra* Section II.B.

regarding the "voluntariness" of communication under the reasonable-expectation-of-privacy test as technology evolves.

In its first opportunity to revise the Constitution, the country's first Congress in 1789 approved an Amendment declaring that "[t]he right of the people to be secure in their persons, houses, papers, and effects, against unreasonable searches and seizures, shall not be violated."[11] The impetus for the Amendment stemmed from frustration over England's overuse of customs searches in prerevolutionary America, as well as concern over freedom of press and association.[12] Evidence collected in violation of the Amendment was eventually excluded from trial.[13] Over the course of two centuries, courts have offered varying interpretations of what constitutes a "search" under the Fourth Amendment. During the twentieth century, the standard for search transitioned from turning on law enforcement's trespass on physical places and items in order to obtain information to turning on violation of an individual's reasonable expectation of privacy in their person and property.[14] The definition of a "reasonable expectation of privacy" continues to evolve with societal and technological advances, but defining what is reasonable in light of such changes is essential to maintaining the relevance of the Fourth Amendment in the Information Age.

A. THE PHYSICAL TRESPASS TEST

Courts barely explored the Fourth Amendment for over a century after its adoption, but encountered particular difficulty in the late eighteenth and early nineteenth centuries defining a Fourth Amendment search.[15] However, by the second quarter of the twentieth century, the Supreme Court established a test in *Olmstead v. United States*,[16] holding that wiretaps did not violate the Fourth Amendment rights of citizens when the placing of the wiretap did not include a physical trespass on private property.[17] The Court held that federal agents did not conduct a Fourth Amendment search when installing several small wires alongside telephone wires that extended from the homes and an office of suspected conspirators because the outdoor sections of the wires that the officers traversed were not considered part of

11. U.S. CONST. amend. IV.
12. LAFAVE, *supra* note 10.
13. Potter Stewart, *The Road to* Mapp v. Ohio *and Beyond: The Origins, Development and Future of the Exclusionary Rule in Search-and-Seizure Cases*, 83 COLUM. L. REV. 1365 (1983).
14. *See* LAFAVE, *supra* note10.
15. *Id.* § 1.1(b)–(c).
16. Olmstead v. United States, 277 U.S. 438 (1928).
17. *Id.* at 465–66.

the property.[18] Namely, the Court held that an action must involve a physical imposition on material entities belonging to a person to constitute a Fourth Amendment search, noting that "[t]he well-known historical purpose of the Fourth Amendment . . . was to prevent the use of governmental force to search a man's *house, his person, his papers, and his effects*, and to prevent their seizure against his will."[19]

B. REASONABLE EXPECTATIONS

The *Olmstead* standard remained until the Court's 1967 decision in *Katz v. United States*,[20] which experts considered the "landmark decision" for judicial interpretation of the Fourth Amendment[21]—at least until *Jones*.[22] The opinions in *Katz* created a new standard for determining the occurence of a Fourth Amendment search—shifting from the *Olmstead* common-law trespass test towards a consideration of whether the search violated a person's "reasonable expectation of privacy."[23] The Court held that the FBI's placement of a recording device on the outside of a public telephone booth without a warrant qualified as a search that violated the "reasonable expectation of privacy" of a phone user who enclosed himself in the booth in order to use the telephone, even if the device did not physically penetrate the walls of the booth or his person or property.[24] The *Katz* opinions led to the creation of a two-part test for identifying a Fourth Amendment search of a person or property: "first that a person have exhibited an actual (subjective) expectation of privacy and, second, that the expectation be one that society is prepared to recognize as 'reasonable.' "[25]

The reasonableness standard established in *Katz* rests on the distinction between a person's reasonable expectation of privacy inside their home,

18. *Id.* at 456–57, 466.

19. *Id.* at 463 (emphasis added).

20. Katz v. United States, 389 U.S. 347 (1967).

21. *See* LAFAVE, *supra* note 10, § 2.1(a) ("[I]n 1967 the Supreme Court announced the 'seminal' and 'landmark decision' in *Katz v. United States*.").

22. *See* United States v. Jones, 132 S. Ct. 945, 950–51 (2012); LAFAVE, *supra* note10, § 2.1(b) ("Thus, it is no overstatement to say, as the commentators have asserted, that *Katz* 'marks a watershed in fourth amendment jurisprudence' because the Court 'purported to clean house on outmoded fourth amendment principles' and moved 'toward a redefinition of the scope of the Fourth Amendment.' " (citations omitted)).

23. *See Katz*, 389 U.S. at 361 (Harlan, J., concurring).

24. *Id.* at 353 (majority opinion).

25. *Id* at 361 (Harlan, J., concurring). Justice Harlan's concurrence in *Katz* has come to be relied upon for creating the test that resulted from *Katz*. LAFAVE, *supra* note 10 § 2.1(b) ("[L]ower courts attempting to interpret and apply *Katz* quickly came to rely upon the Harlan elaboration, as ultimately did a majority of the Supreme Court." (citations omitted)). *See also* California v. Ciraolo, 476 U.S. 207 (1986); Smith v. Maryland, 442 U.S. 735 (1979).

office, or other area they seek "to preserve as private," in contrast with objects, activities, or statements that a person exposes to plain view.[26] The test to determine whether a person has a reasonable expectation of privacy turns largely on actions the person takes to prevent exposure to the public, as an area that is technically accessible to the public can become constitutionally protected if an individual takes actions to preserve it as private.[27]

Whether the *Katz* reasonable-expectation-of-privacy test replaced or augmented the prior standard for defining a Fourth Amendment search remains a point of contention among scholars and judges,[28] despite the clear language with which the *Katz* Court seemed to explicitly reject the physical invasion standard: "[t]he premise that property interests control the right of the Government to search and seize has been discredited."[29] Regardless, *Katz* undeniably *changed* the standard by determining that the Fourth Amendment protects people rather than places or "constitutionally protected areas," and that a violation thus occurs when the government invades a person's reasonable expectation of privacy even without invading their physical space.[30]

C. CHANGING EXPECTATIONS IN THE INFORMATION AGE: THE NEW RELEVANCE OF NONTRESPASSORY, "VOLUNTARY" EXPOSURE TO REASONABLE EXPECTATIONS OF PRIVACY

Conceptions of reasonableness under the *Katz* test eventually had to adjust to new patterns of commerce and technology in the Information Age. Americans' relationships with previously "private" information shifted with the advent of phones and banks (and later smartphones, email, and GPS)

26. *Katz*, 389 U.S. at 361.

27. *Id.* Crucially in *Katz*, Justice Harlan noted that while a telephone booth is often accessible to the public, once a person enters it, shuts the door and begins using it, it becomes "a temporarily private place whose momentary occupants' expectations of freedom from intrusion are recognized as reasonable." *Id.*

28. In *Jones*, Justice Scalia argued that the *Katz* reasonable-expectation-of-privacy test augmented but did not replace the preexisting trespass test. United States v. Jones, 132 S. Ct. 945, 951 (2012). Justice Alito, in contrast, argued that the *Katz* replaced the prior trespass standard. *Id.* at 959–60 (Alito, J., concurring). Others argue that the trespass test never existed. Orin Kerr, *Why United States v. Jones Is Subject to So Many Different Interpretations*, VOLOKH CONSPIRACY (Jan. 30, 2012, 4:59 PM) http://www.volokh.com/2012/01/30/why-united-states-v-jones-is-subject-to-so-many-different-interpretations (refuting the contention that the standard ever actually existed and arguing that the trespass test was always treated as a reasonable-expectation-of-privacy test).

29. *Katz*, 389 U.S. at 353 (quoting Warden, Md. Penitentiary v. Hayden, 387 U.S. 294, 304 (1967)). The Court in *Katz* stated that even oral statements recorded without technical trespass could violate Fourth Amendment rights. *Id.*

30. *Id.* at 350–51.

that transfer personal information from the seclusion of a desk to the ownership of a company, making opportunities for trespass-less surveillance easier and more ubiquitous. Not only does violation of a person's privacy today no longer require physical interaction with their property, but citizens also "voluntarily" communicate increasing amounts of information to third parties as part of their participation in an information economy.[31] The reasonable-expectation-of-privacy test would be stymied if the Court presumed that people have no expectation of privacy in information they "voluntarily" communicate to third party companies or observers—from the numbers they text to their GPS location. Judicial evaluation of reasonableness under the *Katz* test should consider whether the volitional nature of these actions really means that every individual who acts has no reasonable expectation of privacy in the communicated information. This consideration is one of the most pressing modern questions related to search under the Fourth Amendment; this Note will thus explore the relevance of the *Jones* concurrences to resolving it despite the majority's avoidance. This Section will explore judicial treatment of this consideration before *Jones*, and Part IV will explore the potential effect of and questions raised by *Jones*, using third-party doctrine and aggregation (mosaic) theory as case studies.

When analyzing voluntariness, it is helpful to draw a distinction between a person's passive knowledge that a third party might collect information they voluntarily share—for instance, when driving down the street with the passive acknowledgement that someone could be observing their car's movements via plane—versus voluntary communication of information with the active knowledge that a third party will collect it—for example, downloading an app knowing that it will use their location information to recommend nearby restaurants. The *Jones* concurrences will shed light on judicial treatment of both types of volunteering of information. This Section discusses judicial treatment of both kinds of voluntariness before *Jones*.

The Supreme Court recently explored the need to adapt what the law considers reasonable under the *Katz* test to new technologies for passive voluntary communication of information in *Kyllo v. United States*.[32] The Court held that the use of a thermal imaging device on the outside of a person's home constituted a Fourth Amendment search even in the absence of a physical trespass because the use of the device invaded a person's reasonable

31. *See, e.g.*, Brenner, *supra*, note 4; JAMES B. MURRAY, JR., WIRELESS NATION (2001); Joanna Brenner, *Trend Data (Adults)*, PEW INTERNET & AMERICAN LIFE PROJECT, http://www.pewinternet.org/Static-Pages/Trend-Data-%28Adults%29/Device-Ownership.aspx (last visited Feb. 20, 2013).

32. Kyllo v. United States, 533 U.S. 27 (2001).

expectation of privacy inside their own home.[33] The majority opinion written by Justice Scalia noted that this could be a search because the Court had "decoupled violation of a person's Fourth Amendment rights from trespassory violation of her property."[34] He reasoned that while naked-eye observation of a home may be conducted without constituting a Fourth Amendment search, such observation with the aid of technology cannot, noting that "[t]he question we confront today is what limits there are upon this power of technology to shrink the realm of guaranteed privacy."[35] He emphasized the importance of adapting the Courts' decisions to technology by noting that while the technology in *Kyllo* was not particularly advanced, "the rule [the Court] adopt[s] must take account of more sophisticated systems that are already in use or in development."[36] It is unclear from the text of *Kyllo*, however, that the Court believes this protection in the face of new surveillance technologies should extend to a person or their property outside of the home. The conclusion in *Kyllo* may simply reflect the Court's tendency to apply a higher standard to protect the privacy of the home, which is for many justices the heart of the Fourth Amendment.[37]

In order to respond to more active, deliberate voluntary communication of information unrelated to the home, the Court created the "third-party doctrine" in 1976.[38] The doctrine dictates that when a person voluntarily gives her information up to a third party, she relinquishes her control over when or whether that information can be passed on to the government.[39] Such "active" volunteering of information initially applied to mostly physical actions—such as walking to the bank to deposit a check that became part of a bank record—but thanks to technology, it now applies to tasks that require minimal physical effort or planning—such as typing on one's smartphone to find directions to a restaurant or locate nearby ATMs.

The original standard governing a third party's ability to give its users' information to the government was established towards the end of the 19th century in *Boyd v. United States* when the Court strengthened Fourth

33. *Id.* at 40.

34. *Id.* at 32 (citing Rakas v. Illinois, 439 U.S. 128, 143 (1978)).

35. *Id.* at 34.

36. *Id.* at 36.

37. *See, e.g.*, *id.* at 28; United States v. Karo, 468 U.S. 705 (1984); Dow Chemical Co. v. United States, 476 U.S. 227, 238 (1986). The importance of protecting the home was obviously far more ingrained in the Constitution's framers than the importance of protecting electronic data, which did not become relevant until nearly 200 years after they wrote the text.

38. United States v. Miller, 425 U.S. 435 (1976).

39. *Id.*

Amendment protections by ruling against "compulsory production of a man's private papers to establish a criminal charge against him."[40] Almost one hundred years later and nine years after the establishment of the reasonable-expectation-of-privacy test in *Katz*, the Court in *United States v. Miller*[41] seemingly overturned the *Boyd* standard when it held that a customer's bank records were instead property of the bank, which had discretion to disclose the records to the government.[42] The Court held that "the Fourth Amendment does not prohibit the obtaining of information revealed to a third party and conveyed by him to Government authorities."[43] In creating the third-party doctrine, the Court held that the voluntary nature of the customer's communication of information to the bank expunged any expectation of privacy she had in the information.[44] The Court emphasized that this principle holds "even if the information is revealed on the assumption that it will be used only for a limited purpose and the confidence placed in the third party will not be betrayed."[45] It further concluded that "[w]hat a person knowingly exposes to the public . . . is not a subject of Fourth Amendment protection."[46]

The third-party doctrine eventually extended beyond bank records, when the Court in 1979 held in *Smith v. Maryland* that voluntary conveyance of dialed numbers to a phone company eliminated any reasonable expectation of privacy a customer might have in the list of numbers.[47] The Court contended that because all telephone users actively *know* that they convey the numbers they dial to their telephone company but choose to dial them anyway,[48] they must not harbor any expectation of secrecy in the numbers[49] and thus "assume[] the risk of disclosure."[50]

The transition of the test for search under the Fourth Amendment from one based on common-law trespass to one based on reasonable expectations of privacy allowed the Fourth Amendment to remain relevant in American

40. Boyd v. United States, 116 U.S. 616, 622 (1886).

41. *Miller*, 425 U.S. at 435.

42. *Id.* at 443.

43. *Id.*

44. *Id.* at 442–43.

45. *Id.* at 443 (citing United States v. White, 401 U.S. 745, 752 (1971); Hoffa v. United States, 385 U.S. 293, 302 (1966); Lopez v. United States, 373 U.S. 427 (1963)).

46. *Miller*, 425 U.S. at 442.

47. *See* Smith v. Maryland, 442 U.S. 735 (1979).

48. *Id.* at 742 (noting that customers presumably know that the companies routinely use this information "for the purposes of checking billing operations, detecting fraud and preventing violations of the law").

49. *Id.* at 743.

50. *Id.* at 744 (internal quotation omitted).

jurisprudence despite vast societal changes over the past hundred years. However, the Supreme Court has not yet fully addressed the challenge of applying the reasonable-expectation-of-privacy test in the Information Age. While *Jones* did not resolve the difficulty of doing so, the *Jones* concurrences did shed light on this crucial challenge for the future of Fourth Amendment jurisprudence.

II. *UNITED STATES V. JONES*

In January 2012, the Supreme Court decided *Jones*, unanimously holding that the attachment and use of a GPS tracking device to monitor the movements of Jones' car constituted a "search" under the Fourth Amendment.[51] Some considered *Jones* to be the most significant Supreme Court case to tackle the Fourth Amendment since *Katz*,[52] and that it countered the presumption that the Fourth Amendment was dead in the Information Age.[53] However, while the decision was unanimous, the justices filed three opinions, each representing a distinct approach to the law. The majority focused on the common-law trespass test, while the two concurrences articulated their opinions on the evolution of the reasonable expectation of privacy in the Information Age.[54]

A. FACTS/BACKGROUND

Jones concerned the legality of law enforcement's warrantless installation and use of a GPS tracking device on a car.[55] Suspicions of drug trafficking led law enforcement officers to place a tracking device on a car used by Antoine Jones while it was parked in a public parking lot, in order to track Jones' whereabouts.[56] Law enforcement tracked the car for twenty-eight days, and location information collected from the device through satellite connections

51. United States v. Jones, 132 S. Ct. 945 (2012).

52. *See, e.g.*, Fabio Arcila, Jr., *GPS Tracking Out of Fourth Amendment Dead Ends:* United States v. Jones *and the Katz Conundrum*, 91 N.C. L. REV. 1 (2012); *News Release: Civil Liberties and Defense Groups Seek to Require Warrants for Police GPS Surveillance*, NATIONAL ASSOCIATION OF CRIMINAL DEFENSE LAWYERS, (Oct. 5, 2011), http://www.nacdl.org/NewsReleases.aspx?id=22360&libID=22330.

53. *See* Daniel T. Pesciotta, *I'm Not Dead Yet: Katz, Jones, and the Fourth Amendment in the 21st Century*, 63 CASE W. RES. L. REV. 187 (2012); Kozinski, *supra* note 1 and accompanying text; Micah W.J. Smith & Babak Siavoshy, *The Fourth Amendment's Future*, ACS BLOG, (Jan. 24, 2012), www.acslaw.org/acsblog/the-fourth-amendment's-future (discussing the relevance of Judge Kozinski's quote after *Jones*).

54. *See Jones*, 132 S. Ct. at 954 (Sotomayor, J., concurring); *id.* at 957 (Alito, J., concurring).

55. *Id.* at 948 (majority opinion).

56. *Id.*

was transferred to law enforcement via cellular signal.[57] The information contributed to the indictment of Jones and others on drug trafficking conspiracy charges.[58]

Jones filed a motion to suppress the location information collected and relayed by the GPS tracker.[59] The D.C. Circuit, in a case titled *United States v. Maynard*, sided with Jones on this claim and stated that the evidence obtained by the warrantless search in violation of the Fourth Amendment could not be used in court.[60] The D.C. Circuit relied on a "mosaic theory" of exposure to hold that individuals have a greater expectation of privacy in the summation of their exposed movements than in each individual movement.[61] Under this theory, the court distinguished between actual and constructive exposure and concluded that a person's vehicular movements over the course of one month, while *actually* exposed to the public because they took place on public streets, were not *constructively* exposed because "the likelihood a stranger would observe all those movements is not just remote, it is essentially nil."[62] The court argued that the unlikeliness of such observation rendered Jones' expectation that it would not occur reasonable under the *Katz* test.[63] The court analogized the "intimate details" that would inevitably be collected during long-term surveillance of a car to the "intimate details" that were originally considered important enough to lead to the sanctity of the home under the Fourth Amendment.[64]

In forming the mosaic theory, the D.C. Circuit drew a parallel between Jones and the criminals in *U.S. Department of Justice v. Reporters Committee for Freedom of Press* who had a reasonable expectation of privacy in their rap sheets even though each individual incident listed on the sheet was public

57. *Id.* Law enforcement had previously obtained a warrant for placement and use of this device on the car, but it expired the day before the tracker was placed on Jones' car. *Id.* Additionally, the original warrant was for use in the District of Columbia, not the state of Maryland where it was placed. *Id.*

58. *Id.*

59. *Id.*

60. *Id.* at 949 (citing United States v. Maynard, 615 F.3d 544 (D.C. Cir. 2010), *aff'd sub nom.* United States v. Jones 132 S. Ct. 945 (2012)).

61. *Maynard*, 615 F.3d at 560.

62. *Id.* at 560.

63. *Id.* at 563 ("Society recognizes Jones's expectation of privacy in his movements over the course of a month as reasonable, and the use of the GPS device to monitor those movements defeated that reasonable expectation.").

64. *Id.* at 564–65 ("[P]rolonged GPS monitoring reveals an intimate picture of the subject's life that he expects no one to have—short perhaps of his spouse . . . [t]he intrusion such monitoring makes into the subject's private affairs . . . exceeds the intrusions occasioned by every police practice the Supreme Court has deemed a search under *Katz*.").

information.[65] In *Maynard*, the court similarly held that Jones' interest in the combined whole of his movements was stronger than that in information regarding one or several trips because the combined whole was capable of revealing a complete story about his actions and whereabouts.[66] The D.C. Circuit argued this concept was an implicit assumption in the Supreme Court's decision in *Smith v. Maryland*, because "[i]f . . . the privacy interest in a whole [list of phone numbers dialed] could be no greater (or no different) than the privacy interest in its constituent parts, then the Supreme Court would have had no reason to consider at length whether Smith could have a reasonable expectation of privacy in the list of numbers he had called."[67]

The U.S. Supreme Court unanimously affirmed the D.C. Circuit's decision on the grounds that the attachment and use of the GPS to monitor the car's movements constituted a search under the Fourth Amendment, but used different reasoning than the D.C. Circuit.[68] Although the result was unanimous, the justices did not agree as to *why* the use of the GPS device constituted a search. Justice Scalia authored the majority opinion onto which Chief Justice Roberts and Justices Kennedy, Thomas, and Sotomayor joined; Justice Alito authored a concurrence onto which Justices Ginsberg, Breyer, and Kagan joined[69] with Justice Sotomayor agreeing in part;[70] and Justice Sotomayor wrote a sole concurrence.[71]

B. THE MAJORITY OPINION IN *JONES*: TRESPASS IS ENOUGH

Justice Scalia authored the majority opinion in *Jones*, which held that the physical intrusion onto Jones's property that occurred when law enforcement placed the GPS tracker on his vehicle, combined with its use to obtain information without a warrant, constituted a search under the Fourth Amendment.[72] The majority opinion avoided reaching the *Katz* reasonable-expectation-of-privacy test and focused instead on the common-law trespass

65. U.S. Dep't of Justice v. Reporters Comm. for Freedom of Press, 489 U.S. 749 (1989).

66. *Maynard*, 615 F.3d at 562 ("Prolonged surveillance reveals types of information not revealed by short-term surveillance, such as what a person does repeatedly, what he does not do, and what he does ensemble. These types of information can each reveal more about a person than does any individual trip viewed in isolation.").

67. *Id.* at 561.

68. United States v. Jones, 132 S. Ct. 945 (2012).

69. *Id.*

70. *Id.* at 955 (Sotomayor, J., concurring).

71. *Id.* at 945.

72. *Id.* at 949 ("We have no doubt that such a physical intrusion would have been considered a 'search' within the meaning of the Fourth Amendment when it was adopted.").

test from *Olmstead*.[73] Though Justice Alito's concurrence challenged the majority's reasoning by arguing that the trespass standard was explicitly overturned in *Katz*,[74] and some scholars argue the standard never existed in the first place,[75] the opinion of the *Jones* majority—that the *Katz* reasonable-expectation-of-privacy test augmented the trespass standard rather than replacing it—will control in future cases. The *Jones* majority explained that the common-law trespass test was essentially a minimum test and that the *Katz* test was "*added to*, not *substituted for*, the common-law trespassory test,"[76] citing several post-*Katz* cases which they alleged did not follow *Katz*.[77] They concluded that the fact that law enforcement "physically occupied private property" in *Jones* by encroaching on a "constitutionally protected area" (the car) "for the purpose of obtaining information" was sufficient to decide the case.[78] The majority's opinion mandated that factors beyond trespass for purposes of collecting information need not be considered in future Fourth Amendment cases once trespass is found.[79]

C. JUSTICE SOTOMAYOR AND JUSTICE ALITO'S CONCURRENCES: REASONABLE EXPECTATIONS IN *JONES*

Justice Alito (joined by Justices Ginsburg, Breyer, Kagan, and Sotomayor in part) and Justice Sotomayor's concurrences acknowledged the importance of reevaluating citizens' expectations of privacy in the Information Age and shed significant light on how these expectations might be evaluated by the Court in the future.[80] Justice Alito found their consideration essential to deciding *Jones*; he argued strongly that the Court should have applied the *Katz*

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73. *Id.* at 950 ("[W]e need not address the Government's contentions, because Jones's Fourth Amendment rights do not rise or fall with the Katz formulation.").

74. Justice Alito's concurrence criticized the majority opinion for relying on antiquated law and misunderstanding the role that the *Katz* reasonable-expectation-of-privacy test played in the development of Fourth Amendment jurisprudence, arguing that the test eliminated the old reliance on physical trespass rather than augmenting it. *Id.* at 959–60 (Alito, J., concurring). To buttress his argument, Justice Alito drew a distinction between *installation* and *use* of a device to gather evidence, noting that it is the *use* of the device in collecting information that allows the incident to be considered a search rather than a trespass of no consequence to the Fourth Amendment. *Id.* at 961.

75. *See* Kerr, *supra* note 28.

76. *Jones*, 132 S. Ct.. at 952 (majority opinion).

77. *Id.* at 950–51 (citing Alderman v. United States, 394 U.S. 165, 176, 180 (1969); Soldal v. Cook County, 506 U.S. 56, 60–62 (1992)). In his concurrence, Justice Alito challenged this conclusion, stating that these cases are barely analogous to the facts in *Jones*. *Id.* at 960–61 (Alito, J., concurring) ("[T]he majority is hard pressed to find support in post-*Katz* cases for its trespass-based theory.").

78. *Id.* at 949, 952 (majority opinion).

79. *Id.* at 953–54.

80. *See id.* at 954–57 (Sotomayor, J., concurring); *id.* at 963–64 (Alito, J., concurring).

test instead of the common-law trespass test because *Katz* eliminated the trespass test.[81] Justice Sotomayor, in contrast, found exploration of the evolutions of citizens' expectations of privacy important in the context of *Jones*, but agreed with the majority that trespass was sufficient to decide the case.[82] Both concurrences expressed concern that the majority's decision would provide no guidance in a case where significant amounts of tracking data were obtained without a physical trespass, through voluntarily communicated information.[83]

While both Justice Alito[84] and Justice Sotomayor[85] agreed that advancing technologies can change individuals' expectations of privacy, they offered different responses to this development. Even though Justice Sotomayor's decision in *Jones* did not rest on application of the *Katz* test, she went further than Justice Alito in emphasizing the importance of updating the Court's evaluation of expectations of privacy in the Information Age.[86] Justice Alito suggested that individuals actively (and inevitably) trade privacy for the convenience afforded to them by technology and thus suggested the Court's approach should stay largely the same until statutes are changed, as the legislature is best positioned to increase protections through statute like they did with the Wiretap Act.[87] The best that he thought the Court could do to keep pace with these changes would be to reflect the level of privacy that a reasonable person in today's society *anticipates*.[88] Accordingly, Justice Alito argued that U.S. citizens today do not anticipate long-term surveillance of the location of their cars, and that the surveillance in *Jones* thus constituted a search.[89]

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81. *Id.* at 959–60 (Alito, J., concurring).

82. *Id.* at 954, 957 (Sotomayor, J., concurring).

83. *Id.* at 955; *id.* at 962 (Alito, J., concurring).

84. Justice Alito noted that before the Information Age, most privacy protections were the result of practical rather than legal constraints—noting that the type of surveillance data collected in *Jones* previously would have required a large team of agents, multiple vehicles, and aerial assistance. *Id.* at 963. It would thus have been previously warranted only by investigations of great importance whereas the same information can today be collected with the touch of a button. *Id.* at 964.

85. *Id.* at 955 (Sotomayor, J., concurring) ("As Justice Alito incisively observes, the same technological advances that have made possible nontrespassory surveillance techniques will also affect the *Katz* test by shaping the evolution of societal privacy expectations.").

86. *Id.* at 954–64 (Sotomayor, J., concurring) (Alito, J., concurring).

87. *Id.* at 962–64 (Alito, J., concurring) ("A legislative body is . . . well situated to gauge changing public attitudes, to draw detailed lines, and to balance privacy and public safety in a comprehensive way.").

88. *Id.* at 964.

89. *Id.* ("[R]elatively short-term monitoring of a person's movements on public streets accords with expectations of privacy that our society has recognized as reasonable. . . . But

Justice Sotomayor seemed to argue—in contrast to Justice Alito—that it is precisely because large proportions of society passively make the tradeoff of convenience for privacy that the Court *should* adapt the reasonable-expectation-of-privacy standard so that diminutions of expectations of privacy would not be inevitable.[90] Justice Sotomayor agreed with Justice Alito that long-term surveillance qualifies as a search,[91] thus lending the influence of five Justices to that position, but she took the critique one step further by examining more circumstances in which the Court should update its conception of what is reasonable given the norms to which society has adjusted.[92] By highlighting several shortcomings of current judicial treatment of "voluntary" communication of information, Justice Sotomayor brought attention to circumstances in which citizens do currently have an expectation of privacy that is not currently recognized by the Court.

Justice Sotomayor focused on two primary circumstances in which voluntary communication of information enabled by technology leads to exploitation of citizens' expectation of privacy that the *Katz* test should protect: first, the ability of third-party information collectors to pass information to the government and, second, the ability of law enforcement to easily and warrantlessly ascertain and aggregate the totality of a person's movements. She noted it may be necessary to reevaluate the concept that information "voluntarily" given up to a third party can be turned over to governmental requestors at the third party's discretion.[93] She argued that the third-party doctrine is "ill suited to the digital age, in which people reveal a great deal of information about themselves to third parties in the course of

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the use of longer term GPS monitoring in investigations of most offenses impinges on expectations of privacy."). The 28-day surveillance in this case was sufficiently long for Justice Alito to consider it a violation of Jones' reasonable expectation of privacy in his movements under *Katz* because "society's expectation has been that law enforcement agents and others would not—and . . . could not—secretly monitor and catalogue every single movement of an individual's car for a very long period." *Id.* However, Justice Alito did not propose a test for determining when exactly surveillance becomes long-term, which led the majority to conclude that his "test" would lead to "thorny problems" that need not be resolved in *Jones*. *Id.* at 954 (majority opinion).

90. *Id.* at 957 (Sotomayor, J., concurring) ("[Individuals' data] can attain constitutionally protected status only if our Fourth Amendment jurisprudence ceases to treat secrecy as a prerequisite for privacy.").

91. *Id.* at 955.

92. *Id.* at 956–57.

93. *Id.* at 957 ("[I]t may be necessary to reconsider the premise that an individual has no reasonable expectation of privacy in information voluntarily disclosed to third parties."); *id.* ("Those who disclose certain facts to a bank or phone company for a limited business purpose need not assume that this information will be released to other persons for other purposes." (quoting Smith v. Maryland, 442 U.S. 735, 749 (1979))).

carrying out mundane tasks."[94] She additionally addressed, albeit indirectly, the D.C. Circuit's argument that the assembling or "sum" of data documenting a person's public movements has a greater bearing on invasions of privacy than documentation of one or several movements.[95] She highlighted that evaluating society's belief of whether an expectation of privacy in the sum of one's movement is reasonable should require considering "whether people reasonably expect that their movements will be recorded and *aggregated* in a manner that enables the Government to ascertain, more or less at will, their political and religious beliefs, sexual habits, and so on," and that such information would be "amenable to misuse."[96] She cautioned that the current legal standards applied to these circumstances have the potential to alter "the relationship between citizen and government in a way that is inimical to democratic society."[97]

III. A DISCUSSION: THE IMPLICATIONS OF *JONES*

Though some credit *Jones* for reviving the Fourth Amendment in the modern era,[98] the majority in *Jones* bypassed the timely and important issues that the concurrences addressed pertaining to reasonable expectations of privacy in the Information Age. As a result, the decision did little to resolve many pressing legal questions for police surveillance. Fourth Amendment scholar Orin Kerr may have characterized *Jones* best when he stated that "[i]f anything is clear from the Supreme Court's decision . . . in *United States v. Jones*, it's that not very much is clear from the Supreme Court's decision in *United States v. Jones*."[99] Despite these shortcomings, however, the case has already had legal consequences in subsequent lower court decisions and both state and federal legislation, the effects of which are discussed in the following sections. The month after the decision, the Supreme Court granted certiorari in order to vacate and remand two circuit court cases for

94. *Id.* at 957. This applies not just to data obtained warrantlessly by law enforcement, but also information acquired lawfully by the government, as well as other entities.

95. *Id.* at 956.

96. *Id.*

97. Justice Sotomayor warned that the government's ability to easily and cheaply acquire, store, and assemble "a precise, comprehensive record of a person's public movements that reflects a wealth of detail about [the person's] familial, political, professional, religious, and sexual associations" with today's technology has significant implications for democracy, has the potential to "chill[] associational and expressive freedoms." *Id.* at 956.

98. *See* Pesciotta, Kozinski & Smith, *supra* note 53.

99. Kerr, *supra* note 28.

reconsideration in light of *Jones*.[100] As for practical consequences, the FBI turned off approximately 3,000 GPS trackers within one month of the *Jones* decision.[101] This Part explores *Jones'* effects on Fourth Amendment law by surveying how courts and legislatures have responded to the decision.

A. COURTS' APPLICATION OF THE FOURTH AMENDMENT POST-*JONES*

Circuit courts have encountered few difficulties applying the majority's common-law-trespass test in the wake of *Jones*. They largely accept the *Jones* majority's assertion that the *Katz* reasonable-expectation test added to, but did not replace, the common-law trespass test.[102] Some use *Jones* only as precedent for guidance in applying the pre-existing common-law trespass test,[103] seeing the majority opinion as reiterating[104] the existence of the test or clarifying how it should be applied.[105] For example, the Ninth Circuit stated that *Jones* clarified its confusion about whether the trespass test replaced or augmented prior tests,[106] thus reviving the trespass test in the Circuit.[107]

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100. United States v. Cuevas-Perez, 640 F.3d 272 (7th Cir. 2011), *vacated*, 132 S. Ct. 1534 (2012); Pineda-Moreno v. United States, 591 F.3d 1212 (9th Cir. 2010), *vacated*, 132 S. Ct. 1533 (2012), *remanded*, 688 F.3d 1087 (9th Cir. 2012).

101. *See* Julia Angwin, *FBI Turns off Thousands of GPS Devices after Supreme Court Ruling*, WALL ST. J. (Feb. 25, 2012, 3:36 PM), http://blogs.wsj.com/digits/2012/02/25/fbi-turns-off-thousands-of-gps-devices-after-supreme-court-ruling/.

102. *See, e.g.*, Free Speech Coal., Inc. v. Att'y Gen. of U.S., 677 F.3d 519, 543–44 (3rd Cir. 2012); United States v. Cowan, 674 F.3d 947, 956 (8th Cir. 2012), *reh'g denied* (May 11, 2012), *cert. denied*, 133 S. Ct. 379 (2012); Lavan v. City of Los Angeles, 693 F.3d 1022, 1029 (9th Cir. 2012); United States v. Patel, 485 Fed. App'x 702, 710–11 (5th Cir. 2012); Patel v. City of Los Angeles, 686 F.3d 1085, 1087 (9th Cir. 2012); United States v. Perea-Rey, 680 F.3d 1179, 1185–86 (9th Cir. 2012).

103. *See, e.g.*, United States v. Skinner, 690 F.3d 772, 780 (6th Cir. 2012) (distinguishing *Jones* because no physical trespass was involved); United States v. Wahchumwah, No. 11-30101, 2012 WL 5951624, at *3 (9th Cir. Mar. 4, 2012) (same); United States v. Davis, 690 F.3d 226, 241 n.23 (4th Cir. 2012) (same); United States v. Harrison, 689 F.3d 301, 307 n.2 (3d Cir. 2012) (same).

104. *See Lavan*, 693 F.3d at 1028–29 ("The Supreme Court has recently [in *Jones*] reiterated that a reasonable expectation of privacy is not required for Fourth Amendment protections to apply because 'Fourth Amendment rights do not rise or fall with the Katz formulation.' ").

105. *See, e.g.*, *Free Speech Coal., Inc.*, 677 F.3d at 543 ("[A]s the Supreme Court's recent decision in *Jones* makes clear, a Fourth Amendment search . . . occurs where the government unlawfully, physically occupies private property for the purpose of obtaining information."); United States v. Duenas, 691 F.3d 1070, 1080–81 (9th Cir. 2012) ("[A]s the Supreme Court recently clarified in [*Jones*] . . . the *Katz* 'expectation of privacy' test extends the traditional reach of the Fourth Amendment.").

106. *See Perea-Rey*, 680 F.3d at 1185–86. In *Perea-Rey*, the court stated

> this holding in *Katz* has created some confusion about the interaction between the reasonable expectation of privacy standard and 'the traditional pre-*Katz* interpretation of the Fourth Amendment' . . . [t]his

However, courts have struggled to apply the *Jones* concurrences' writings on long-term surveillance and have not fully assessed *Jones*'s implications for the reasonable-expectation-of-privacy test.[108] While some looked to *Jones* as a reaffirmation of the (albeit nonexclusive) viability of the *Katz* reasonable-expectations test,[109] many courts' attempts to apply that test highlight Justice Alito's concern that *Jones* would "present particularly vexing problems in cases involving surveillance that is carried out by making electronic, as opposed to physical, contact with the item to be tracked."[110] These attempts are explored in the remainder of this Part.

In *United States v. Graham*, the court struggled to apply *Jones* and noted that it was relevant but not controlling when applied to technology companies that track a person's location without a physical trespass and disclose the information to the government without a warrant.[111] The court rejected the defendant's argument that the continuous tracking of his cellphone location violated his reasonable expectation of privacy.[112] The court noted that while the long-term surveillance and mosaic theories were

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> confusion has persisted for decades . . . [t]he Supreme Court [in *Jones*] recently and emphatically repudiated [the] reasoning . . . [that the] *Katz* reasonable-expectation-of-privacy test . . . substituted for the common-law trespassory test.

Id.

107. *See id.* at 1185; United States v. Pineda-Moreno, 688 F.3d 1087, 1091 (9th Cir. 2012). However, in *United States v. Pineda-Moreno*, the Ninth Circuit refused to apply *Jones* retroactively. *Pineda-Moreno*, 688 F.3d at 1091 (holding that while the warrantless attachment of a GPS tracker to a car clearly constitutes a search under *Jones*, prior Ninth Circuit precedent did not yield this result, such that an incident occurring before the *Jones* decision was not subject to the *Jones* holding).

108. *See* United States v. Graham, 846 F. Supp. 2d 384, 394 (D. Md. 2012). The court stated:

> [I]t appears as though a five justice majority is willing to accept the principle that government surveillance over time can implicate an individual's reasonable expectation of privacy. However . . . the factual differences between the GPS technology considered in the *Jones* case and the historical cell site location data in the present case lead this Court to proceed with caution in extrapolating too far from the Supreme Court's varied opinions in *Jones*.

Id.

109. *See* United States v. Skinner, 690 F.3d 772, 780 (6th Cir. 2012).

110. United States v. Jones, 132 S. Ct. 945, 962 (2012) (Alito, J., concurring).

111. *Graham*, 846 F. Supp. 2d at 385 n.2. ("[T]he Supreme Court of the United States recently issued an opinion that is relevant but not controlling in this case, United States v. Jones . . . This Court did not order further briefing regarding the implications of [*Jones*] insofar as further briefing would not aid this Court's decision.").

112. *Id.* at 389.

compelling, the split nature of the *Jones* decision did not establish a clear test for determining what kind of cumulative surveillance constitutes a search.[113]

Additionally, the *Graham* court stated that "Justice Sotomayor's apparent endorsement of Justice Alito's concurrence" in *Jones* "can [allow *Jones* to] be plausibly understood as having two separate majority opinions."[114] The court previewed potential future applications of *Jones* by noting that "it appears as though a five-to-four majority of the Court might, in the future, endorse and craft some version of a mosaic Fourth Amendment doctrine"[115]—a view reiterated by several courts[116]—but did not apply it in this case due to the absence of an explicit Supreme Court ruling on the mosaic theory or clear test for long-term trespass in *Jones*.

In the meantime, several district courts functionally applied the long-term surveillance test by applying the D.C. Circuit's mosaic theory from *Maynard* to hold that a warrant is required for extended periods of historical cell site location data acquisition.[117]

B. LEGISLATION POST-*JONES*

In his *Jones* concurrence, Justice Alito suggested that legislatures rather than courts should update the laws to protect reasonable expectations of privacy in the Information Age because legislatures are "well situated to gauge changing public attitudes, to draw detailed lines, and to balance privacy and public safety in a comprehensive way.[118] Debates around the proper role of the legislatures versus the courts are longstanding, and cannot be resolved within the scope of this Note. Some scholars argue that the rapid pace of technological advancement means that courts should only adapt Fourth Amendment law with caution, and should defer to legislatures to update

113. *Id.* at 394 ("Until the Supreme Court or the United States Court of Appeals for the Fourth Circuit definitively conclude that an aggregation of surveillance records infringes a Fourth Amendment legitimate expectation of privacy, this Court must apply the facts of this case to the law as currently interpreted.").

114. *Id.* at 404 n.15.

115. *Id.*

116. *See, e.g.*, United States v. Brooks, No. CR 11-2265-PHX-JAT-003, 2012 WL 5984804, at *6 (D. Ariz. Nov. 28, 2012); United States v. Hanna, No. 11-20678-CR, 2012 WL 279435, at *3–4 (S.D. Fla. Jan. 30, 2012) (explaining the result of the case under both the *Jones* majority opinion and concurring opinions).

117. *See Graham*, 846 F. Supp. 2d at 388–89 (citing In re Application of the U.S., No. 11-MC-0113, 2011 WL 679925, at *1, *2 (E.D.N.Y. Feb. 16, 2011); In re Application of the U.S., 809 F. Supp. 2d 113, 117–18 (E.D.N.Y. 2011)).

118. United States v. Jones, 132 S. Ct. 945, 963–64 (2012) (Alito, J., concurring); *see also Graham*, 846 F. Supp. 2d at 394.

standards.[119] Others push back against this view, arguing that legislatures are not as well positioned to adapt the law to new circumstances and that legislative adaptations are often deleteriously delayed.[120] Regardless of the value of legislative rather than judicial action, legislatures have historically played such a role in regulating access to electronic information by passing the Electronic Communications Privacy Act and the Stored Communications Act.[121] Legislatures could enact statutes that protect individuals' privacy in a way that *Jones* did not.

Several legislatures took action in the wake of the *Jones* decision to reaffirm the privacy that people have in their location data. The impetus for action increased in the summer of 2012 when nine major cellphone carriers and 250 police departments released records for the first time that revealed an explosion of cellphone surveillance within the last five years, accompanied by a decrease in warrants for wiretapping.[122] Most of the police departments that released their records revealed that they did not obtain warrants before acquiring mobile location data.[123] In response, state legislatures in Delaware, Maryland, and Oklahoma proposed bills that would require law enforcement to obtain a warrant before requesting location data from cellphone carriers (except in cases of emergency).[124] California passed such a bill[125] but Governor Jerry Brown vetoed it, questioning whether it appropriately balanced the needs of law enforcement and individual expectations of privacy."[126] The U.S. House of Representatives also considered, but failed to pass, similar legislation.[127]

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119. *See* Orin S. Kerr, *The Fourth Amendment and New Technologies: Constitutional Myths and the Case for Caution*, 102 MICH. L. REV. 801 (2004).

120. *See* Daniel J. Solove, *Fourth Amendment Codification and Professor Kerr's Misguided Call for Judicial Deference*, 74 FORDHAM L. REV. 747 (2005).

121. Pub. L. No. 99-508, 100 Stat. 1848 (1986), codified at 18 U.S.C. §§ 2510–2522.

122. *See* Eric Lichtblau, *Wireless Firms Are Flooded by Requests to Aid Surveillance*, N.Y. TIMES, July 9, 2012, at A1, *available at* http://www.nytimes.com/2012/07/09/us/cell-carriers-see-uptick-in-requests-to-aid-surveillance.html; *Cell Phone Location Tracking Public Records Request*, ACLU, Sept. 10, 2012, http://www.aclu.org/protecting-civil-liberties-digital-age/cell-phone-location-tracking-public-records-request.

123. *See Cell Phone Location Tracking Public Records Request*, *supra* note 122.

124. Somini Sengupta, *Courts Divided over Searches of Cellphones*, N.Y. TIMES, Nov. 26, 2012, at A1, *available at* http://www.nytimes.com/2012/11/26/technology/legality-of-warrantless-cellphone-searches-goes-to-courts-and-legislatures.html.

125. S.B. 1434, 2011–2012 Leg. Sess. (Ca. 2012), *available at* http://www.leginfo.ca.gov/cgi-bin/postquery?bill_number=sb_1434&sess=1112 (last visited Feb. 20, 2013).

126. David Kravets, *California Governor Vetoes Landmark Location-Privacy Law*, WIRED.COM (Oct. 2, 2012), http://www.wired.com/threatlevel/2012/10/mobile-privacy-law-vetoed/.

127. H.R. 6529 Bill Summary & Status, 112th Congress (2011–2012): All Congressional Actions, THE LIBRARY OF CONGRESS: THOMAS, http://thomas.loc.gov/cgi-bin/bdquery/

While legislatures retain the ability to draw new lines regarding privacy, it remains the judiciary's role to interpret current law,[128] thus the latitude to apply the reasonable-expectation-of-privacy test still rests in the courts. The next Part addresses the challenges they face applying this test today.

IV. EVALUATING REASONABLENESS UNDER THE REASONABLE-EXPECTATION-OF-PRIVACY TEST TODAY

While the trespass standard ostensibly controls in the wake of *Jones*, it bears little relevance to the pressing Fourth Amendment questions facing courts in the Information Age. In a time when the founder and CEO of a billion member social network[129] declares "the end of privacy"[130] because so many people volunteer their information to technology companies daily, courts examining Fourth Amendment questions should consider whether such statements reflect citizens' *actual* expectations of privacy, as well as the expectation of privacy that society should seek to preserve. Advancing technologies have changed the relevance of trespass to search both because a trespass is generally not required to obtain the information from devices and services that individuals regularly use—from cell phone location data to toll booth records and vehicular location trackers—and because new surveillance technologies can now remotely detect information like heat levels emanating from a person's garage[131] and home energy use patterns.[132] The pervasiveness of mobile phones and the accompanying availability of location data mean that the days of visual observation and in-person eavesdropping as methods of law enforcement are long gone.[133] To continue to honor the presumption of the *Katz* test that the Fourth Amendment protects people rather than

z?d112:HR06529:@@@X (last visited Feb. 20, 2013); Declan McCullagh, *Privacy bill requires search warrants for e-mail, cell tracking*, CNET.COM, Sept. 25, 2012, http://news.cnet.com/8301-13578_3-57520147-38/privacy-bill-requires-search-warrants-for-e-mail-cell-tracking.

128. *See* Marbury v. Madison, 5 U.S. 137, 177 (1803) ("It is emphatically the province and duty of the judicial department to say what the law is. Those who apply the rule to particular cases, must of necessity expound and interpret that rule.").

129. *See* Ashlee Vance, *Facebook: The Making of 1 Billion Users*, BLOOMBERG BUSINESSWEEK (Oct. 4, 2012), http://www.businessweek.com/articles/2012-10-04/facebook-the-making-of-1-billion-users.

130. *See* Marshall Kirkpatrick, *Facebook's Zuckerberg Says the Age of Privacy Is Over*, READWRITE (Jan. 9, 2010), http://www.readwriteweb.com/archives/facebooks_zuckerberg_says_the_age_of_privacy_is_ov.php.

131. *See* Kyllo v. U.S., 533 U.S. 27 (2001).

132. Jack I. Lerner & Deirdre K. Mulligan, *Taking the "Long View" on the Fourth Amendment Stored Records and the Sanctity of the Home*, 2008 STAN TECH. L. REV. 3 (2008).

133. United States v. Jones, 132 S. Ct. 945, 963–64 (2012) (Alito, J., concurring).

places, the judiciary will have to look beyond trespass towards changing expectations of privacy when evaluating Fourth Amendment privacy in the future.[134]

The debate about how to evaluate changing expectations of privacy in the information age will undoubtedly be rekindled when the Supreme Court considers its next case of trespass-less search. It is accordingly useful to explore prior judicial opinions on this matter in light of the *Jones* concurrences in order to gain an understanding of how, and whether, judicial conceptions of reasonableness will change. This Part will begin by exploring judicial approaches to the evolution of the definition of a "search" under the Fourth Amendment and will proceed by focusing on the two biggest questions raised by the concurrences in *Jones* regarding the reasonable-expectation-of-privacy test: the relevance of voluntariness of exposure first, to the third-party doctrine; and second, to the mosaic theory used by the D.C. Circuit in *Maynard*.

A. THE SUPREME COURT'S STRUGGLE TO APPLY THE FOURTH AMENDMENT IN CHANGING TIMES

Justice Alito and Justice Sotomayor in their *Jones* concurrences appeared to advocate reconsidering reasonable expectations of privacy based on changing norms and realities—with Justice Alito proposing the long-term surveillance test and Justice Sotomayor agreeing but going further to question the third-party doctrine[135] and conceivably extend the long-term surveillance test into a characterization of the "mosaic" theory.[136] Both inevitably encountered difficulty applying a centuries-old Amendment to realities that could not have been envisioned at the time of its creation.

The *Jones* majority did not preclude such updating when it stated that the Court "must assur[e] preservation of that degree of privacy against government that existed when the Fourth Amendment was adopted," though they did not explore the question further in the context of *Jones*.[137] Justice Scalia even previously mentioned in *Kyllo*, as discussed *supra* Section I.C that "[t]he question we confront today is what limits there are upon this power of technology to shrink the realm of guaranteed privacy,"[138] noting that "the rule [the Court] adopt[s] must take account of more sophisticated systems

134. Katz v. United States, 389 U.S. 347, 351 (1967); *id.* at 361 (Harlan, J., concurring).

135. *See Jones*, 132 S. Ct. at 955–57 (2012) (Sotomayor, J., concurring); *id.* at 962–64 (Alito, J., concurring).

136. *See* discussion *infra* Section IV.C.

137. *Jones*, 132 S. Ct. at 950.

138. Kyllo v. United States, 533 U.S. 27, 34 (2001).

that are already in use or in development."[139] Justice Alito agreed with the majority's assertion that it is the Court's role to preserve the degree of privacy that existed at the time of the Amendment's creation, but noted that doing so still requires adapting to new circumstances since, for example, it is "almost impossible to think of late-18th-century situations that are analogous to what took place in [*Jones*]."[140] He contended that it would have been difficult for constables to secret themselves away in stagecoaches for the same amount of time that GPS devices are tracked today,[141] and therefore the contemporary legislature might need to adapt the law in order to preserve the same degree of privacy against government intrusion as existed at that time.[142] Justice Sotomayor goes further to reflect on the damage to democratic society if the standard is not reevaluated.[143]

In advocating for modern reevaluation of considerations of privacy in light of new technologies, Justices Alito and Justice Sotomayor echoed the earlier decision in *Katz* in which the majority noted the importance of preserving privacy in the use of an important modern communication device. The *Katz* Court stated that interpreting the Constitution narrowly enough to say that a person who occupies a phone booth, pays the toll, and shuts the door cannot rely on the protection of the Fourth Amendment "is to ignore the vital role that the public telephone has come to play in private communication."[144] Justice Stewart reiterated this point in his *Smith* dissent, noting that the private telephone has come to play an even more vital role than the public telephone in *Katz*, and judicial decisions should take the importance of the role of these devices to society into consideration.[145]

The majority in *Olmstead*,[146] in contrast, argued against adapting the standard for the Fourth Amendment search because the Court "[could not] justify enlargement of the language employed beyond the possible practical meaning of houses, persons, papers, and effects, or so to apply the words search and seizure as to forbid hearing or sight."[147] Justice Black in his *Katz* dissent similarly argued that he did "not believe that it is the proper role of [the Supreme] Court to rewrite the Amendment in order 'to bring it into harmony with the times' and thus reach a result that many people believe to

139. *Id.* at 36.
140. *Jones*, 132 S. Ct. at 958 (Alito, J., concurring).
141. *Id.*
142. *Id.* at 962–63 (citing 18 U.S.C. §§ 2510–2522 (2006)).
143. *Id.* at 955–57 (Sotomayor, J., concurring).
144. Katz v. United States, 389 U.S. 347, 350 (1967).
145. Smith v. Maryland, 442 U.S. 735, 746 (1979) (Stewart, J., dissenting).
146. Olmstead v. United States, 277 U.S. 438, 465 (1928).
147. *Id.*

be desirable."[148] He advocated against adapting the standard despite acknowledging that wiretapping was a completely unknown possibility when the framers authored the Constitution; he argued that eavesdropping was an analogous practice at the time, so wiretapping could be treated similarly.[149]

While the debate is far from settled, the prevalence of the *Katz* test mean that Courts will have to learn how to apply it in modern contexts, and will thus have to tackle the challenge of determining what is reasonable given existing realities. The following Sections will explore the most interesting concepts of reasonable expectations regarding voluntarily communicated information raised in the *Jones* concurrences: third-party doctrine and the summation of movements that form the "mosaic theory."

B. CONCEPT ONE: THE THIRD-PARTY DOCTRINE

Justice Sotomayor strongly suggested in *Jones* that the Court revisit the third-party doctrine given new norms and circumstances, potentially planting a seed for reconsideration of the doctrine.[150] The doctrine has always been highly controversial among judges and scholars alike, and is increasingly relevant to expectations of privacy under the Fourth Amendment given the amount of information citizens voluntarily communicate to third parties today. Orin Kerr wrote that "[a] list of every article or book that has criticized the doctrine would make this the world's longest law review footnote,"[151] and Wayne LaFave's influential Fourth Amendment treatise noted the Court's decisions applying it are "dead wrong"[152] and "make[] a mockery of the Fourth Amendment."[153] Justice Sotomayor, as a sitting Justice, adds an important voice to the critique of the third-party doctrine in her *Jones* concurrence. This Section will explore Justice Sotomayor's critique in the context of prior judicial and academic critique of the doctrine.

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148. *Katz*, 389 U.S. at 364 (1967) (Black, J., dissenting).

149. *Id.*

150. United States v. Jones, 132 S. Ct. 945, 957 (2012) (Sotomayor, J., concurring) ("[I]t may be necessary to reconsider the premise that an individual has no reasonable expectation of privacy in information voluntarily disclosed to third parties.") ("Those who disclose certain facts to a bank or phone company for a limited business purpose need not assume that this information will be released to other persons for other purposes." (quoting Smith v. Maryland, 442 U.S. 735, 749 (1979))).

151. Orin S. Kerr, *The Case for the Third-Party Doctrine*, 107 MICH. L. REV. 561, 563 n.5 (2009).

152. LAFAVE, *supra* note 10, § 2.7(c).

153. *Id.* § 2.7(b).

1. Judicial Treatment

Several of the cases that established the third-party doctrine as discussed *supra* Section I.C, included dissents in which justices argued strongly against the doctrine. Justice Stewart noted in his *Smith* dissent that "[a] telephone call simply cannot be made without the use of telephone company property and without payment to the company for the service"[154] and argued that "[i]t is simply not enough to say, after *Katz*, that there is no legitimate expectation of privacy in the numbers dialed because the caller assumes the risk that the telephone company will disclose them to the police."[155] Justice Marshall, who also dissented from the majority opinion in *Smith*, contested the idea that a person's knowledge that numbers they dial from a private telephone will be recorded means that they expect that information to be made available to the public or the government.[156] He noted that "[p]rivacy is not a discrete commodity, possessed absolutely or not at all. Those who disclose certain facts to a bank or phone company for a limited business purpose need not assume that this information will be released to other persons for other purposes."[157] Justice Marshall additionally rejected the majority's assumption-of-risk argument and claimed that "[i]t is idle to speak of 'assuming' risks in contexts where, as a practical matter, individuals have no realistic alternative."[158] He suggested a new standard for determining the legitimacy of privacy expectations based on *Katz* that "depends not on the risks an individual can be presumed to accept when imparting information to third parties, but on the risks he should be forced to assume in a free and open society."[159] He concluded by noting that privacy is of interest not just to those accused of criminal activity but also to "political affiliation and journalistic endeavor that are the hallmark of a truly free society."[160] This assertion parallels Justice Sotomayor's statement in *Jones* that constant surveillance is "inimical to democratic society."[161]

In *Miller*, Justice Brennan's dissent pointed out that disclosure of financial affairs to a bank was in practice "not entirely volitional, since it is impossible

154. Smith v. Maryland, 442 U.S. 735, 746 (1979) (Stewart, J., dissenting).

155. *Id.* at 747.

156. *Id. at* 749 (Marshall, J., dissenting) (citing Cal. Bankers Ass'n v. Shultz, 416 U.S. 21, 95–96 (1974)).

157. *Id.*

158. *Id.* at 750. Justice Marshall argued that, "unless a person is prepared to forgo use of what for many has become a personal or professional necessity, he cannot help but accept the risk of surveillance." *Id.* (citing Lopez v. United States, 373 U.S. 427, 465–66 (1963)).

159. *Id.* at 750.

160. *Id.* at 751.

161. United States v. Jones, 132 S. Ct. 945, 956 (2012) (Sotomayor, J., concurring).

to participate in the economic life of contemporary society without maintaining a bank account."[162] He emphasized that while the question in *Miller* focused on access to bank statements, the logical extension of the majority's argument was that all financial information a person supplied to the bank under the presumption of confidentiality would be available to police officers upon request, "without any judicial control as to relevancy or other traditional requirements of legal process."[163] He cautioned that the Court's approach "open[ed] the door to a vast and unlimited range of very real abuses of police power."[164]

Justice Marshall also dissented in *Miller* and argued that although the Court's conclusion about relinquishing privacy in *Miller* was broad, the policy rationale behind the decision was tied to the interpretation of an unconstitutional statute and thus may not be generally applicable. He found the Banking Secrecy Act to be unconstitutional because the recordkeeping requirements mandated "the seizure of customers' bank records without a warrant and probable cause."[165] He argued that this "giving up" of information was not voluntary because it was mandated by the government, and was thus a seizure under the Fourth Amendment.[166] The rule developed from the case may thus have been applicable only to those circumstances and not extendable to other circumstances.

Despite these judicial concerns voiced at the third-party doctrine's inception, courts apply it in modern contexts. However, many academics continue to challenge its creation and applicability, continuing the debate about reasonable expectations of privacy in the Information Age.

2. *Academic Treatment*

As technology continues to advance well beyond touchtone telephones, proponents of the third-party doctrine argue that it ensures technological neutrality and provides clarity for the Fourth Amendment.[167] Orin Kerr, the doctrine's primary academic advocate, argues that the doctrine serves these two useful functions—even though the Supreme Court has never provided a

162. United States v. Miller, 425 U.S. 435, 451 (1976) (Brennan, J. dissenting).

163. *Id.*

164. *Id.*

165. *Id.* at 456 (Marshall, J., dissenting).

166. *Id.* at 455 (citing Cal. Bankers Ass'n v. Shultz, 416 U.S. 21, 97 (1974)). Marshall stated that the Court held as it did largely because Congress, in enacting the Act, required maintenance of records, specifically because they "have a high degree of usefulness in criminal tax, and regulatory investigations and proceedings." *Id.* at 442–43 (citing the Banking Secrecy Act, 12 U.S.C. § 1829b(a)(1)).

167. Kerr, *supra* note 151, at 564.

rationale for the doctrine when applying it.[168] First, he argues that the doctrine maintains technological neutrality of the Fourth Amendment by ensuring that evidence from crimes committed with the aid of technology is subject to the same rules as in crimes committed with the aid of a friend.[169] He maintains that there is no reason that technology companies with third party knowledge of the facts of a crime should not be allowed the same opportunity for disclosure to law enforcement as a tattletale comrade in a typical crime.[170] Second, by ensuring that all evidence possessed by third parties is subject to the same across-the-board disclosure rule, the doctrine provides "ex ante clarity" where the reasonable-expectation-of-privacy test cannot (since it, by definition, varies based on circumstances).[171] In response to critics who find the doctrine persistently violates reasonable expectations of privacy, Kerr argues that the third-party doctrine is better understood in terms of consent, and that consent is clearly given when information is disclosed to third parties.[172] This idea of consent arguably parallels Justice Alito's argument in *Jones* that people consciously trade privacy for the convenience afforded by modern-day technological devices.[173]

Academic critiques of the doctrine, however, are far more plentiful than endorsements.[174] They run the gamut from questioning the caselaw basis for creation of the doctrine[175] to suggesting that it be "retooled" for modern technologies[176] or overruled altogether given the prevalence of technology today.[177] Fourth Amendment scholar Richard Epstein argues in response to Orin Kerr that Kerr's conception of the doctrine as a consent doctrine

168. *Id.* (explaining that the Supreme Court has regularly applied the third-party doctrine without explaining its reasoning).

169. *Id.*

170. *Id.*

171. *Id.* at 565.

172. *Id.* at 565, 589.

173. United States v. Jones, 132 S. Ct. 945, 962 (2012) (Alito, J., concurring).

174. *See, e.g.*, Stephen E. Henderson, *Learning from All Fifty States: How to Apply the Fourth Amendment and Its State Analogs to Protect Third Party Information from Unreasonable Search*, 55 CATH. U. L. REV. 373 (2006); Stephen E. Henderson, *The Timely Demise of the Fourth Amendment Third Party Doctrine*, 96 IOWA L. REV. BULL. 39 (2011); Erin Murphy, *The Case Against the Case for Third-Party Doctrine: A Response to Epstein and Kerr*, 24 BERKELEY TECH. L.J. 1239 (2009).

175. Susan W. Brenner & Leo L. Clarke, *Fourth Amendment Protection for Shared Privacy Rights in Stored Transactional Data*, 14 J.L. & POL'Y 211 (2006); Arnold H. Loewy, *The Fourth Amendment as a Device for Protecting the Innocent*, 81 MICH. L. REV. 1229 (1983).

176. Matthew D. Lawless, Note, *The Third Party Doctrine Redux: Internet Search Records and the Case for a "Crazy Quilt" of Fourth Amendment Protection*, 11 UCLA J.L. & TECH. 1, 3–4 (2007).

177. Andrew J. DeFilippis, Note, *Securing Informationships: Recognizing a Right to Privity in Fourth Amendment Jurisprudence*, 115 YALE L.J. 1086, 1092 (2006).

changes very little; it is simply another way of saying individuals "assume risk" when using modern technological devices.[178] He argues that consent is irrelevant because these individuals are nonetheless unlikely to forego these devices given their utility in society.[179]

The controversial nature of the third-party doctrine and its growing relevance in the Information Age suggest that the endorsement of a sitting Justice could lead to reconsideration of the third-party doctrine in future cases.

C. CONCEPT TWO: SUMMATION OF MOVEMENTS AND MOSAIC THEORY

The fact that Justice Sotomayor agreed with Justice Alito that length of surveillance could render a nontrespassory observance a search leant the weight of five justices to this conclusion. Although Justice Alito did not establish a clear threshold test for determining what constitutes "long-term," the *Jones* concurrences nevertheless play an important role in the debate over the evolution of doctrine related to "voluntary" communication of information today.[180]

The five-justice support for Justice Alito's conclusion that long-term surveillance constitutes a search is closely tied to the argument by the D.C. Circuit that the summation of individual movements to create a mosaic of a person's life violates a person's reasonable expectation of privacy in a way that individual surveillance incidents do not.[181] While Justice Alito and Justice Sotomayor did not equate the voluntariness implicated in each and thus reach no joint conclusion, these two concepts are closely related and judicial support for them is best explored in tandem.

Under the mosaic theory, the core argument is that a person's interest in privacy regarding the totality of their movements is greater than that in each individual movement.[182] The D.C. Circuit posited that reasonable people presume that they can be filmed at the bank and gas station without a warrant, but they may not necessarily presume that their every movement in between and thereafter could be similarly cataloged and pieced together to

178. Richard A. Epstein, *Privacy and the Third Hand: Lessons from the Common Law of Reasonable Expectations*, 24 BERKELEY TECH. L.J. 1199, 1204, 1206 (2009) ("The acceptance of a risk does not follow from knowledge of the risk. Whatever one thinks of Kerr's conclusions, his analytical approach is wrong for its excessive reliance on consent.").

179. *Id.*

180. Courts have already attempted to apply Justice Alito's explanation of long-term surveillance as a test as explored in Section III.A, *supra*.

181. United States v. Maynard, 615 F.3d 544, 558 (D.C. Cir. 2010), *aff'd sub nom.* United States v. Jones 132 S. Ct. 945 (2012).

182. *Id.*

create a complete record of their movements.[183] As discussed in Section II.A, *supra*, the D.C. Circuit looked to *U.S. Department of Justice v. Reporters Committee for Freedom of Press* and *Smith v. Maryland* in order to argue that individuals clearly have a different privacy interest in a list of phone numbers dialed than they do in one phone number, as people have more privacy interest in a total rap sheet than a particular incident.[184] Even though individuals may know that they volunteer their location, the phone numbers they dial, and each criminal offense they commit, the D.C. Circuit argued that while Jones *actually* voluntarily and passively exposed the totality of his movements, these movements would not have been previously considered *constructively* exposed because constant, aggregated surveillance would have been very unlikely with prior technologies.[185] The D.C. Circuit characterized the *Katz* test by explaining that when "considering whether something is 'exposed' to the public as that term was used in *Katz*, we ask not what another person can physically and may lawfully do but rather what a reasonable person expects another might actually do."[186] It thus held that Jones would not have anticipated continuous surveillance despite knowing the technology for such surveillance existed and that his voluntary actions would have enabled such observation.

A close examination of long-term surveillance as characterized by Justice Alito reveals that the issues under the mosaic theory and long-term surveillance are fundamentally the same. The Supreme Court has held that "[a] person traveling in an automobile on public thoroughfares has no reasonable expectation of privacy in his movements from one place to another"[187] because travel on public streets constitutes a voluntary conveyance of information regarding the person's whereabouts to "anyone who wanted to look."[188] However, five justices took issue with this sort of long-term surveillance in *Jones* precisely because of the way in which information can now be aggregated in a way that people do not anticipate—as Justice Alito mentioned in *Jones*, the surveillance methods may "involve[] a degree of intrusion that a reasonable person would not have anticipated."[189] Justice Alito noted the relevance of advancing technology to these changes in what people reasonably anticipate. He stated that "[i]n the pre-computer age, the greatest protections of privacy were neither constitutional nor statutory,

183. *Id.* at 560.
184. *Id.* at 561.
185. *Id.* at 560.
186. *Id.* at 559.
187. United States v. Knotts, 460 U.S. 276, 281 (1983).
188. *Id.* at 281–82.
189. United States v. Jones, 132 S. Ct. 945, 963 (2012).

but practical" because such surveillance was much rarer due to the costs and difficulty it previously required.[190]

Despite the absence of an explicit endorsement of the mosaic theory by either concurrence, the close relation of their alternative long-term surveillance arguments, endorsed by five justices, creates the possibility that the mosaic theory could prove successful in future cases. Moreover, both the Supreme Court and D.C. Circuit's treatments of *Jones* present crucial questions about "voluntariness" generally that the Court will undoubtedly need to address in future cases implicating technology-enabled search without a trespass. If the Court considers reasonable expectations of privacy and "voluntariness" in the context of both aggregation arguments and the third-party doctrine, the Court would likely be able to adopt an understanding of Fourth Amendment searches that reflects reasonable expectations of privacy in the Information Age.

V. CONCLUSION

The binding elements of the *Jones* decision establish a minimum test for identifying Fourth Amendment violations. *Jones* considers all trespass for the purpose of collecting information to be a search; thus, courts do not need to consider *Katz*'s reasonable-expectations-of-privacy test when a trespass has occurred. Regardless of whether the test is a reversion or brand new, it will govern future cases and require courts to apply the reasonable-expectation-of-privacy test only in the absence of a physical trespass. Courts are already learning to apply this approach to new cases, and it provides clarity in many of them.

Additionally, Justices Alito and Sotomayor in *Jones* gave significant fodder to commentators and judges attempting to predict whether, and how, the Supreme Court will apply the reasonable-expectation-of-privacy test in the future. The *Jones* concurrences allowed for the possibility of five votes in favor of reconsidering the voluntariness at the heart of disclosure of information in today's highly technological, data-intensive society. They indicate how Justices Alito, Sotomayor, and their cosigners may vote in future cases involving technologies that surveil without a trespass. The *Jones* concurrences seem to establish a five-justice majority for the proposition that long-term surveillance qualifies as a search even in the absence of a trespass. Lower courts, however, have indicated that they will need clarification before adopting this agreement as a rule. Lastly, Justice Sotomayor's concurrence may have planted a seed for reconsidering the third-party doctrine.

190. *Id.*

In the opening quote of this Note, Ninth Circuit Court Judge Alex Kozinski questioned whether people will regret investing their personal data in keychains and online accounts, given what can occur when such information is out of one's own control. The question may well be moot, as individuals' use of technology to facilitate their personal and professional lives is already ingrained in modern society and unlikely to decrease, regardless of Fourth Amendment concerns. If the Fourth Amendment is going to retain value in the Information Age, it is difficult to accept the idea that law enforcement should not need a warrant to obtain cellphone location data in the same vein that they would need a warrant to attach a GPS tracker to a car. The question that remains is whether the law will primarily adjust to protect citizens given these shifting norms or to support law enforcement given their evolving capabilities. *Jones* does not answer this question or provide any clear test, but it lays the groundwork for future cases that may consider it and suggests the steps that courts and legislatures may take in adapting to the Information Age.

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WHEN THE MILLION-DOLLAR PITCH DOESN'T PAY A DIME: WHY IDEA SUBMISSION CLAIMS SHOULD SURVIVE COPYRIGHT PREEMPTION

Julie A. Byren†

Every successful screenplay, whether destined for the silver screen or the small screen, begins with an idea. Among those success stories is USA Network's *Royal Pains*, a television show set in the Hamptons, which chronicles the fictional life of a so-called "concierge doctor"—a doctor who makes a living conducting house calls to wealthy clientele.[1] In a brief interview, co-producers Andrew Lenchewski and Michael Rauch revealed their inspiration for the show.[2] Lenchewski explained, "A friend of mine told me about a concierge doctor that his family started to use out of frustration with the system."[3] In an instant, he knew it would be the perfect idea for a series.[4]

In 2010, however, the veracity of Lenchewski's story came under attack. In a complaint filed by film company Forest Park Pictures ("Forest Park"), operated in part by actor Hayden Christensen, a conflicting story about the show's provenance emerged. Forest Park alleged that the idea for *Royal Pains* had instead come from materials that it had prepared and pitched to USA Network in 2005 under the title *Housecall*.[5] The submitted materials, known in the entertainment industry as a "series treatment," included character biographies, themes, and story lines, many of which were later featured prominently in the show that USA Network began airing in 2009.[6] Unfortunately for many writers in the industry, falling victim to idea theft is familiar territory.

Since the dawn of the entertainment industry, idea pitches have been integral to the development of film, television, and other media. To meet the

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1. *See* Forest Park Pictures v. Universal Television Network, Inc. (*Forest Park II*), 683 F.3d 424, 428 (2d Cir. 2012).

2. *Royal Pains: Producers on Inspiration*, HULU (June 18, 2009), http://www.hulu.com/watch/78773.

3. *Id.*

4. *Id.*

5. *Forest Park II*, 683 F.3d at 428.

6. *Id.*

demand for ideas, many screenwriters and boutique film companies, like Forest Park, make a living developing, pitching, and ultimately selling their ideas to large-scale film studios and production houses.[7] Underlying this transaction is a mutual expectation that the producer will provide compensation for ideas that reach the screen. This implicit promise and resulting contract took center stage in *Forest Park Pictures v. Universal Television Network, Inc.*[8]

For Forest Park, and other similarly situated screenwriters relying on a contract theory to recover the reasonable value of their ideas, proving the existence of such a promise and a breach thereof—failure to pay the writer pursuant to industry custom of compensation—does not present the greatest legal hurdle during litigation. Rather, the survival of the complaint turns on the preemption provision of the Copyright Act, which threatens to bar the claim altogether without ever reaching the merits. The fundamental question is this: can ideas, which are expressly excluded from federal copyright protection,[9] nevertheless be protected under another legal theory?[10]

This Note argues against preemption of contract-based idea submission claims in the entertainment context. Although ideas are traditionally "free as the air,"[11] those underlying a screenwriter's script or treatment deserve legal protection in order to optimally encourage the development and distribution of creative works. Although the analysis herein contemplates the distinctive challenges facing screenwriters, it also applies to other pitch-based segments of the entertainment economy.

This Note proceeds in five parts. Part I describes the development of the contract-based idea submission claim as an alternative to copyright

7. For simplicity's sake, this Note refers to all individuals, organizations, and companies that develop and subsequently submit ideas for television and film projects as "screenwriters," and all recipient studios, networks, and production houses as "producers."

8. *Forest Park II*, 683 F.3d at 428.

9. 17 U.S.C. § 102(b) (2006) (excluding from copyright protection "any idea, procedure, process, system, method of operation, concept, principle, or discovery, regardless of the form in which it is described, explained, illustrated, or embodied" in an original work of authorship).

10. *See Forest Park II*, 683 F.3d at 429–33 (exploring and ultimately accepting contract theory as an acceptable means to protect against idea theft).

11. Melville B. Nimmer, *The Law of Ideas*, 27 S. CAL. L. REV. 119, 119 (1953–1954) (explaining that ideas reside in the public domain); *see also* Desny v. Wilder, 46 Cal. 2d 715, 731 (1956) ("But there can be circumstances when neither air nor ideas can be acquired without cost."); Robert M. Schwartz, Alicia K. Hancock, Kristopher D. Rossfeld & Jordan P. Raphael, *Disputes Over Literary Contributions Outside the Realm of Copyright (Implied-in-Fact Contracts, Express Contracts, Confidential Relationships, and Screen Credit)*, *in* ENTERTAINMENT LITIGATION 281, 283 (Charles J. Harder ed., 2011) ("Even though ideas are not considered personal property, that does not mean another's 'ideas may be acquired without cost.' ").

infringement actions, which routinely prove inadequate in this context because federal copyright protection does not extend to ideas. It further discusses how the entertainment industry has responded to this alternative cause of action by reining in the idea submission process, making it difficult for writers to penetrate the industry's (many) barriers to entry. Part II introduces copyright preemption as a potential obstacle to the success of the contract-based claim and discusses judicial findings on the issue. Part III considers the facts of the Second Circuit case *Forest Park v. Universal* and its central holding that the Copyright Act does not preempt contract-based idea submission claims. Part IV takes a normative position in agreement with the Second Circuit, relying on research of the entertainment industry and idea submission cases in general to support the legitimacy of its holding. Part V addresses an oft-recited "floodgates" argument—that judicial recognition of a new cause of action will lead to a barrage of meritless litigations—by illustrating how the heavy burdens on the plaintiff will be effective in keeping claims against producers in check.

I. THE EVOLUTION OF THE IDEA SUBMISSION CLAIM

Screenwriters have long resorted to the courts when seeking retribution against producers accused of stealing their ideas, and over the last six decades breach-of-contract has emerged as the most promising cause of action.

Forest Park exemplifies a common pathology in the entertainment industry. A screenwriter, confident that she has come up with the next smash hit, approaches a producer with the objective of selling her idea. After reviewing the screenwriter's submission and perhaps agreeing to hear a pitch presentation, the producer declines. Later, the screenwriter discovers that the producer released a new film or TV series that bears an uncanny resemblance to the idea she pitched. Should she have ever disclosed the idea in the first place?

The screenwriter's predicament reflects a phenomenon known as "Arrow's paradox of information."[12] Named for economist Kenneth J. Arrow, the paradox describes a scenario in which one party develops valuable information but cannot capitalize on its economic value without first disclosing the information to another.[13] After disclosure occurs, however, the recipient of the information already possesses the information

12. ROBERT P. MERGES, PETER S. MENELL & MARK A. LEMLEY, INTELLECTUAL PROPERTY IN THE NEW TECHNOLOGICAL AGE 1016 (5th ed. 2010).

13. *Id.*

he would have otherwise purchased.[14] In the entertainment context, Arrow's paradox manifests when a screenwriter wishes to sell her idea to a producer. Prior to disclosure, the producer cannot evaluate the commercial viability of the idea and no sale occurs. After disclosure, however, the screenwriter has nothing left to sell.[15]

Intellectual property law aims to solve this problem by conferring a property right on the creator, which provides a means to prohibit others from making use of the information without the creator's consent.[16] Federal intellectual property law is not, however, an adequate solution when it comes to screenwriters and their pitch presentations because the Copyright Act does not cover ideas.[17] In the absence of any unified doctrine tailored specifically to handle idea submission cases,[18] contract law provides a solution.

A. COPYRIGHT LAW AS AN ILL-FITTING SOLUTION FOR IDEA PROTECTION

Because a screenwriter's ideas are routinely captured in a script, treatment, or other literary work,[19] copyright law would appear the natural and obvious choice for vindicating one's right to compensation for use of the idea.[20] However, limitations of copyrightable subject matter and the heavy burden imposed of proving infringement make it nearly impossible for screenwriters to prevail under a copyright theory.[21]

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14. *See* Kenneth J. Arrow, *Economic Welfare and the Allocation of Resources for Invention*, THE RATE AND DIRECTION OF INVENTIVE ACTIVITY: ECONOMIC AND SOCIAL FACTORS 609, 615 (1962).

15. *See* MERGES ET AL., *supra* note 12.

16. For example, Arrow explains, patent law grants a limited monopoly in making and using a patented invention so that patentees can disclose their work and offer them for sale without worrying that a competitor might reap the benefits of the patentee's hard work. *See* MERGES ET AL., *supra* note 12, at 1016-17.

17. *See* 17 U.S.C. § 102(b) (2006).

18. 4 MELVILLE B. NIMMER & DAVID NIMMER, NIMMER ON COPYRIGHT § 19D.01[A] (Matthew Bender rev. ed. 2012) [hereinafter NIMMER ON COPYRIGHT].

19. *How Far Should You Develop an Idea Before Selling It?*, GROWTHOLOGY (Sept. 20, 2012), http://www.growthology.org/growthology/2012/09/how-far-should-an-entrepreneur-develop-an-idea-before-selling-it.html (encouraging screenwriters to get ideas down on paper and register written material with the Copyright Office and the Writers Guild of America).

20. 17 U.S.C. § 102(a)(1) (2006) (identifying literary works as a category eligible for copyright protection).

21. NIMMER ON COPYRIGHT, *supra* note 18, § 19D.01[A] (quoting Art Buchwald's attorney, who told him before filing the lawsuit *Buchwald v. Paramount* that "the copyright approach is a dead-bang loser," and "you'll get tossed out of court so fast that you won't know that you were ever there").

A copyright "subsists in . . . original works of authorship fixed in any tangible medium of expression,"[22] which includes any written material a screenwriter might submit while pitching an idea. However, the scope of protection does not extend to the ideas expressed in that material,[23] and screenwriters often find themselves on the wrong side of the idea-expression dichotomy.[24] For instance, when a producer steals a screenwriter's ideas but the screenwriter's exact language does not appear verbatim in the final script, as is usually the case, copyright law has little to offer by way of recovery because there is no longer a "substantial similarity" between the expression embodied in the works.[25]

Screenwriters face a similarly formidable challenge in proving infringement. Section 501 requires plaintiffs to prove that the defendant

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22. 17 U.S.C. § 102(a) (2006).

23. *Id.* ("In no case does copyright protection for an original work of authorship extend to any idea . . . regardless of the form in which it is described, explained, illustrated, or embodied in such work."). A number of reasons justify exclusion of ideas from federal copyright law. First, rarely are ideas truly original—most in film and TV are recycled, whether intentional or not. *See* Brian Devine, *Free as the Air: Rethinking the Law of Story Ideas*, 24 HASTINGS COMM. & ENT. L.J. 355, 363 (2002) (citing findings that only thirty-six fundamental dramatic situations appear on screen, or that every film or television show derives from seventeen different plot variations). Second, the constitutional right to freedom of speech under the First Amendment dictates that ideas remain in the public domain available for others to use and build on. *See* Paul Goldstein, *I've Got a Great Idea: I'll Sue!*, LOS ANGELES TIMES, Aug. 26, 2006, at 15. *See also* Arthur R. Miller, *Common Law Protection for Products of the Mind: An "Idea" Whose Time has Come*, 119 HARV. L. REV. 703, 716 (2006) ("From the perspective of copyright law, the taking [of ideas] is not tortious or unfair; rather it is the type of exchange between author and the public that the statute was designed to facilitate."). Third, ideas are relatively cheap to produce and therefore do not merit the same protection reserved for those who put in the costly and time-consuming work of fixing those ideas in a tangible medium of expression. Paul Goldstein, *supra*.

24. The "idea-expression dichotomy" doctrine examines the "division between protectable expression and unprotectable ideas." MERGES ET AL., *supra* note 12, at 441–42. To prevail in a copyright infringement suit, the copyright owner must demonstrate that the alleged infringer has copied the expression embodied in the work, and not merely the underlying ideas. Courts employ the so-called "level of abstraction" test, first articulated by Judge Learned Hand in 1930, to determine whether the copied elements of a particular work are copyright-eligible. *See id.* at 446 (citing Nichols v. Universal Pictures Corp., 45 F.2d 119, 121 (2d Cir. 1930)). The test instructs courts to reimagine the copyrighted work with "increasing generality" until the allegedly infringing work aligns with it; whether that level constitutes an expression or an idea determines the outcome of the case. *Nichols*, 45 F.2d at 121.

25. Anna R. Buono & Alonzo Wickers IV, Montz v. Pilgrim Films & Television, Inc.: *Copyright Preemption and Idea Submission Cases*, COMMUNICATIONS LAWYER, Aug. 28, 2011, at 5 (noting the futility of searching for verbatim plagiarism when comparing a one- to two-page treatment to a completed film or TV series).

violated one or more of the exclusive rights granted in § 106.[26] In idea submission cases, the exclusive right typically at issue is the right of reproduction. Unfortunately, the "substantial similarity" test, which courts employ to determine copying,[27] is notoriously difficult to satisfy. Rarely do plaintiffs prevail under this test.[28] Thus, copyright cannot provide the legal guarantee that screenwriters need to feel confident about disclosing their idea to prospective producers.

B. ADVENT OF THE CONTRACT-BASED CLAIM AS A MEANS TO PROTECT IDEAS

In the 1950s, California courts recognized the need for some form of legal protection for ideas, especially in the entertainment context,[29] but struggled to find an equitable alternative to copyright law that would not run afoul of the historical notion that ideas cannot be protected as property.[30] With contract law, they succeeded.[31]

In 1950, the California Supreme Court first granted idea protection under an implied contract theory in *Stanley v. CBS*, a case involving a "format" for a radio program that plaintiff Jack Stanley had submitted to CBS.[32] Stanley contended that based on the circumstances surrounding disclosure of the idea, CBS had impliedly agreed to compensate him if the network decided to

26. 17 U.S.C. § 501(a) (2006) (referring to 17 U.S.C. § 106, which lists the rights of (1) reproduction, (2) preparing derivative works, (3) distribution, (4) public performance, and (5) public display among a copyright owner's exclusive rights).

27. To prove copying, copyright owners generally must demonstrate (1) that the alleged infringer had access to the copyrighted work and (2) that the infringing work is "substantially similar." Brian Casido, Benay v. Warner Bros Entertainment, Inc.*: New Standard Needed for Determining Actual Use*, 41 GOLDEN GATE U. L. REV. 327, 331 (2010–2011). Substantial similarity can be measured either "intrinsically," based on whether an ordinary, reasonable audience finds the works similar when viewed in their entirety, or "extrinsically," based on similarities between individual expressive elements. *Id.* at 331–35.

28. *See* Buono & Wickers, *supra* note 25, at 5 n.15 (citing Benay v. Warner Bros. Entm't, Inc., 607 F.3d 620 (9th Cir. 2010); Shaw v. Lindheim, 919 F.2d 1353 (9th Cir. 1990); Grosso v. Miramax Film Corp. (*Grosso I*), 383 F.3d 965 (9th Cir. 2004)).

29. *See* NIMMER ON COPYRIGHT, *supra* note 18, § 19D.01 (recalling how writers in the 1950s, who were entirely at the mercy of Hollywood producers, often lamented their lack of autonomy in the entertainment industry).

30. *See* NIMMER ON COPYRIGHT, *supra* note 18, § 19D.01[B]; Eric Hoyt, *Writer in the Hole*: Desny v. Wilder*, Copyright Law, and the Battle over Ideas*, CINEMA JOURNAL, Winter 2011, at 22.

31. *See* Hoyt, *supra* note 30, at 27 ("The California Supreme Court . . . believed that contract theory—which did not restrict the use of the idea beyond the agreeing parties—could protect writers and pitchmen without sacrificing the public interest.").

32. Stanley v. Columbia Broad. Sys., 35 Cal. 2d 653, 656 (1950).

develop his format into a radio program.[33] The jury agreed, finding that CBS's failure to pay a reasonable sum after producing a radio program that substantially embodied Stanley's ideas entitled him to breach-of-contract damages.[34] The California Supreme Court affirmed, adding only that contract liability is appropriate when the idea at issue is both novel and reduced to concrete form.[35]

Justice Traynor, who filed a dissenting opinion, disagreed that Stanley met his burden of proving formation and breach of the contract alleged in this case.[36] He agreed with the majority, however, that contract law could provide a means of recovery for idea theft.[37] In an eloquent exposition on the topic, Justice Traynor conceived a new law of ideas:

> The policy that precludes protection of an abstract idea by copyright does not prevent its protection by contract. Even though an idea is not property subject to exclusive ownership, its disclosure may be of substantial benefit to the person to whom it is disclosed. That disclosure may therefore be consideration for a promise to pay. . . . Even though the idea disclosed may be "widely known and generally understood," it may be protected by an express [or implied] contract providing that it will be paid for regardless of its lack of novelty.[38]

Six years later the California Supreme Court adopted Traynor's philosophy in *Desny v. Wilder*,[39] laying the foundation for California's idea submission cases today. In that case, screenwriter Victor Desny developed a sixty-five-page plot for a movie about Floyd Collins, a boy who made

33. *Id.* at 656–57.

34. *Id.* at 663.

35. *Id.* (nodding to several New York cases from the 1940s that permitted contract-based recovery for misappropriation of ideas, but under a theory that nevertheless regarded ideas as a form of property). Today, New York state law distinguishes contract-based idea submission claims from property-based claims, but the plaintiff must still prove novelty and concreteness as require elements of consideration. *See* Nadel v. Play-By-Play Toys & Novelties, Inc., 208 F.3d 368, 374–76 (2d Cir. 2000).

36. *Stanley*, 35 Cal. 2d at 679–82 (Traynor, J., dissenting). Unlike the majority, Justice Traynor believed that no implied contract existed between the parties because plaintiff's concept of using listener participation to select stories and celebrities for movies was not novel enough to lead to an inference that the defendant would have paid for the idea. *Id.* Furthermore, Justice Traynor was not persuaded that the idea was substantially similar to defendant's radio programs, which used listener participation to simulate "the glamour [of attending] a Hollywood preview." *Id.* at 689.

37. *Id.* at 674.

38. *Id.*

39. 46 Cal. 2d 715 (1956).

headlines after getting trapped in a cave.[40] Desny telephoned the office of Paramount Pictures producer Billy Wilder in 1949 with the goal of selling his story.[41] When Wilder's secretary asked Desny to read a synopsis to her over the phone so that she could forward it to studio producers in verbatim, Desny first insisted that he would allow Paramount to use the idea only if the studio promised to pay its "reasonable value" upon use.[42] The secretary replied, "Naturally, we will pay you for it."[43] Several years later, Paramount released the film *Ace in the Hole*, which closely resembled the story that Desny had pitched over the phone.[44] After the studio ignored multiple demands for compensation, Desny sued for breach of contract.[45] Despite the trial court's decision to dismiss the claim on summary judgment, Desny prevailed on appeal.[46]

The California Supreme Court, expressing concern that an adverse ruling might open the door to fraud and unjust enrichment, held that the law implies a promise to compensate where the idea purveyor has clearly conditioned disclosure of the idea upon an obligation to pay for it upon use, and the recipient, knowing the condition before hearing the idea, voluntarily accepts its disclosure, finds the idea valuable, and uses it.[47] More than fifty years later, *Desny*'s formulation of the breach-of-implied-contract theory remains the dominant strategy for screenwriters who believe that a producer has stolen his or her ideas. Although some idea submission claims rest on other legal theories, the so-called *Desny* claim[48] continues to carry the most promise.[49]

C. REPERCUSSIONS IN THE ENTERTAINMENT INDUSTRY

Times have changed since *Desny*. Gone are the days when screenwriters can call a studio directly to pitch an idea or when producers will

40. *Id.* at 726.
41. *Id.* at 726–27.
42. *Id.* at 727.
43. *Id.*
44. *Id.* at 724–26.
45. *Id.* at 728.
46. *Id.* at 724.
47. *Id.* at 739.
48. The *Desny* name is now ubiquitous, and indeed many courts have adopted it to describe any contract-based idea submission claim brought against entertainment industry players. *See, e.g.*, Montz v. Pilgrim Films & Television, Inc. (*Montz II*), 649 F.3d 975, 976 (9th Cir. 2011) (en banc), *cert. denied*, 132 S. Ct. 550 (2011).
49. *See* NIMMER ON COPYRIGHT, *supra* note 18, § 19D.02 (listing breach of confidence, breach of confidential relationship, misappropriation, and breach of quasi-contract, or unjust enrichment as cause-of-action alternatives). In some cases, plaintiffs have even asserted fraud or trade secret theories for protecting their ideas. *Id.*

expressly promise anything.[50] As the entertainment industry became more sophisticated,[51] it also became more risk-averse. *Desny* gave producers, already concerned about copyright infringement actions, a new reason to tighten idea submission policies and reconsider the way they conduct business.[52] For this reason, although *Desny v. Wilder* involved an express promise to pay for the use of the idea, *Desny* claims today rely almost exclusively on an implied contract theory, which looks to the circumstances attending the disclosure of the idea to determine whether the producer voluntarily accepted the conditions of the screenwriter's offer.[53] Some scholars claim that in the end, *Desny* backfired; they lament that studio restructuring resulted in fewer opportunities to pitch ideas.[54]

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50. *See* Hoyt, *supra* note 30, at 23. One scholar writes:

> *Desny v. Wilder* impacted both California law and the entertainment industry, changing the way studios, networks, and producers handled and continue to handle idea submission. Reverberations of the case can still be felt every time a hopeful screenwriter picks up the phone, dials, and cries to convince the Hollywood assistant on the other end to listen to a fantastic, unusual idea.

Hoyt, *supra* note 30, at 23.

51. For clarity's sake, this Note simplifies the composition of players in the entertainment industry. In addition to screenwriters and producers, the remaining groups exerting considerable influence over idea submission practices are agents, managers, and the Writers Guild of America ("WGA"). Agents and managers work on behalf of many industry players and act as liaisons between them. The WGA, a labor union with nearly 10,000 members nationwide, is the sole collective bargaining organization for writers in the motion picture, television, radio, interactive, and new media industries. JOHN SCOTT LEWINSKI, THE SCREENWRITER'S GUIDE TO AGENTS AND MANAGERS 182 (2001). A writer's working conditions, wages, screen credits, and other employment standards are governed by the WGA's Theatrical and Television Minimum Basic Agreement. BROOKE A. WHARTON, THE WRITER GOT SCREWED (BUT DIDN'T HAVE TO): A GUIDE TO THE LEGAL AND BUSINESS PRACTICES OF WRITING FOR THE ENTERTAINMENT INDUSTRY 64–65 (1996).

52. *See* Hoyt, *supra* note 30, at 23.

53. *See* Schwartz et al., *supra* note 11, at 301–02. As several scholars explain:

> The elements of a claim for a breach of an implied-in-fact contract are: (1) the plaintiff prepared the work at issue, (2) the plaintiff disclosed the work to the defendant/offeree for sale, (3) under all circumstances attending disclosure it can be concluded that the offeree voluntarily accepted the disclosure knowing the conditions on which it was offered, (4) the offeree made use of the idea of a part of it thereof, and (5) the idea/work had value.

Schwartz et al., *supra* note 11, at 301–02.

54. *See* Hoyt, *supra* note 30, at 38 ("[*Desny*] closed more doors to writers than it opened . . . . Desny's triumph led to more protective barriers of entry to prevent new, untested talent from entering the industry."). Some scholars speculate that a WGA memorandum written in 1966 exacerbated the *Desny* backlash by misconstruing the Court's holding to suggest that *any* dealings between a writer and producer automatically give rise to

In today's post-*Desny* world, screenwriters interested in submitting their work[55] to producers must seek representation with an agent or manager who can facilitate the submission.[56] They cannot approach producers directly, as most now refuse to accept unsolicited submissions to reduce exposure to accusations of idea theft.[57] Producers who elect not to return submission materials unopened will typically refuse to read materials unless the screenwriter agrees to sign a release or waiver, effectively eliminating any legal recourse for idea theft.[58]

Consequently, screenwriters now depend on agents and managers to provide access to producers. Unfortunately, finding effective representation is a notoriously competitive process and nearly impossible without a strong referral network.[59] Those privileged enough to sign with a reputable agency or managing company must then leverage that relationship to secure the

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an implied contract. *See, e.g.*, Hoyt, *supra* note 30, at 38 (criticizing the WGA for "seiz[ing] upon the legal ammunition of implied contract in idea submission cases and tak[ing] the argument one step further than actual law").

55. Submission deliverables take on a number of forms. On one end of the spectrum is the (typically oral) pitch presentation, which paints the basic plots, characters and themes in broad brushstrokes. *How Far Should You Develop an Idea?*, *supra* note 19. On the other end, many writers prepare a full screenplay, sometimes referred to as a "spec script," when written on speculation that a producer may wish to purchase it. MICHAEL C. DONALDSON, CLEARANCE & COPYRIGHT: EVERYTHING YOU NEED TO KNOW FOR FILM AND TELEVISION 474 (3d ed. 2008). In between are "treatments" or "specs," which are abbreviated versions of a script, typically in outline form. *Id.* at 20, 475.

56. *See* Devine, *supra* note 23.

57. LEWINSKI *supra* note 51, at 68 (reciting the "dark mantra" that "unsolicited scripts go unread undoubtedly"). Producers' fears about liability are generally well-founded, as courts have held that studios and producers notified of a forthcoming script are deemed to have implicitly promised to pay for the ideas therein, if used, if they open and review the submission when it arrives. *See, e.g.*, Whitfield v. Lear, 751 F.2d 90, 93 (2d Cir. 1984).

58. WHARTON, *supra* note 51, at 25. Although functionally consistent, these release forms limit producers' liability in a variety of ways. *See, e.g.*, Hoyt, *supra* note 30, at 38 (agreement that no contractual relationship exists between the parties); Buono & Wickers, *supra* note 25, at 6. (same); *Write Angles: Industry Pros Discuss Writing and Selling Scripts for Stage & Screen*, BACK STAGE, May 5, 1989, at 1A (covenant not to sue); Gary Dretzka, *Prime Time for Pilots: Networks Have Mysterious Process for Choosing New Shows*, CHICAGO TRIBUNE, May 16, 2000, at 5 (indemnification of the producer).

59. To increase chances of signing with an agency, screenwriters must often rely on industry-sponsored networking events, which can be costly and time-consuming. *See, e.g.*, WHARTON, *supra* note 51, at 79, 249–54 (recommending that writers enter, and win, screenwriting contests to catch agents' attention); LEWINSKI, *supra* note 51, at 101–107 (advising writers to attend screenwriting conferences); Brooke O'Neill, *Seven Minutes in Heaven: How to Court Heavy Hitters at Hollywood Pitch Festival*, BACK STAGE WEST, June 21, 2007, at 5 (describing the Hollywood Pitch Festival, a large-scale "speed dating" event during which screenwriters can pitch their ideas to a rotating group of 200 producers, agents, and development executives for seven-minutes each).

opportunity to pitch their ideas.[60] A screenwriter's objective during the pitch presentation is to sell a screenplay or treatment, and the underlying idea, in an outright purchase.[61] Alternatively, the producer might buy an option to purchase the writer's work at a later time.[62] Should the project progress, and should the producer decide to hire the writer for further revisions, the writer can expect additional compensation in the form of a percentage of total profits.[63] However, securing pay at the idea stage is important because, on average, only one out of every thirty scripts makes it to the final stages of production.[64] Thus, the probability of reaching the point at which the writer can collect royalties is slim. At almost every stage, a screenwriter's career is in the hands of another.[65]

A screenwriter's financial incentives and expectations are well understood in the entertainment industry. Because of the mutual recognition that screenwriters do not perform their work gratis, it is customary to pay them reasonable compensation for furnishing an idea during a pitch presentation

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60. On occasion, agents will pitch ideas on the screenwriter's behalf. *See, e.g.*, Benay v. Warner Bros. Entm't, Inc., 607 F.3d 620, 622 (9th Cir. 2010).

61. A producer purchasing a script outright typically hires the screenwriter to develop their pitch into a first-draft screenplay and then produce a series of revisions based on feedback from the studio. WHARTON, *supra* note 51, at 137. If the project moves forward, the producer may choose to hire the writer for a second series of revisions. *Id.*

62. *See* DONALDSON, *supra* note 55, at 113 ("Instead of paying out a large sum of the cash up front, the filmmaker offers a small cash amount to the owner of the property. This guarantees that the [option holder] can purchase the film rights, in the future, under certain specified conditions."). From the sale of an option, a screenwriter typically earns between $5,000 and $50,000. *Pitch It To Me*, MOVIE PITCH, http://www.moviepitch.com/pitch/ (last visited Dec. 22, 2012).

63. *See* LEWINSKI, *supra* note 51, at 110.

64. *Write Angles*, *supra* note 58, at 1A.

65. As the entertainment industry evolves, new opportunities for commercializing ideas may help neutralize the power imbalances and release screenwriters from the grip of the studios. Some data suggests that today's norm of pitching ideas to traditional "gatekeepers" of consumer media will give way to internet-enabled direct-to-consumer content creation, which will allow writers to get around studios altogether. *See* MICHAEL MASNICK & MICHAEL HO, FLOOR 64, THE SKY IS RISING: A DETAILED LOOK AT THE STATE OF THE ENTERTAINMENT INDUSTRY 6–7 (Jan. 2012), *available at* http://www.techdirt.com/skyisrising/ (describing studios and producers as "gatekeepers"). Websites like Kickstarter, which allows artists to "crowdfund" the creation of new works based on short pitches of their ideas and objectives ($32 million pledged to film and video in 2011), and TopSpin, which provides content creators with tools to connect more easily with fans via their website, already exist. *Id.* For screenwriters aspiring to be the creative force behind projects based on their own ideas, these so-called "enablers" are a dream come true, as most screenwriters today still subsist on assignments for projects conceived by others. WHARTON, *supra* note 51, at 137, 169 (1996). As long as the entertainment industry maintains the status quo, however, plaintiffs will continue to rely on existing legal mechanisms, such as contract-based idea submission claims, to capitalize on their ideas.

that is ultimately used by a studio.[66] This industry custom, an attending circumstance that can give rise to a producer's implied promise to pay, is the linchpin of the *Desny* claim.

II. COPYRIGHT PREEMPTION AND THE FATE OF THE *DESNY* CLAIM

Amendments to the Copyright Act in 1976 established a new strategy for defending against *Desny* claims, which producers have since embraced in full force: dismissal on the grounds of federal copyright preemption.[67] Section 301, which preempts all claims functionally equivalent to copyright infringement actions, poses a substantial threat to the viability of contract-based idea submission claims that involved copyrightable works. For decades, conflicting federal court rulings in California and New York, the two metropolitan heavyweights of today's entertainment industry, seemed to suggest the emergence of a circuit split as to whether the Copyright Act preempts *Desny* claims. The Second Circuit settled this split in *Forest Park*.[68]

A. PREEMPTION AS A SIGNIFICANT OBSTACLE TO CONTRACT CLAIMS FOR IDEAS

1. *Copyright Preemption Under § 301*

Under the Supremacy Clause,[69] state and common law claims, like breach of contract, are subject to preemption when they conflict or interfere with the federal government's exclusive authority to control a particular substantive area of the law.[70] In the Copyright Act, § 301 asserts Congress's supremacy through express statutory language and prescribes a two-part test to parse out the claims subject to preemption.[71] Section 301 involves a two-

66. Buono & Wickers, *supra* note 25, at 4. Two facts give rise to this common understanding. First, screenwriters make a living by selling their ideas and their writing. Second, agents and managers work on commission and would have little incentive to arrange pitch presentations in the first place without the possibility of financial gain. WHARTON, *supra* note 51, at 123 (explaining that agents can only make up to 10% in commission, and that managers make 5–15%); Brian Devine, *supra* note 23, at 388.

67. 17 U.S.C. § 301 (2006).

68. Forest Park Pictures v. Universal Television Network, Inc. (*Forest Park II*), 683 F.3d 424 (2d Cir. 2012).

69. U.S. CONST. art. VI, cl. 2 ("This Constitution, and the Laws of the United States, which shall be made in Pursuance thereof, and all Treaties made, or which shall be made, under the Authority of the United States, shall be the supreme Law of the Land.")

70. *See* NIMMER ON COPYRIGHT, *supra* note 18, § 1.01[B].

71. *Id.* As a practical matter, the express preemption provision of the Copyright Act releases courts from the cumbersome tasks of determining "whether the federal interest in [the] field is dominant, whether the field of federal regulation is sufficiently comprehensive

prong test, which prohibits any state or common law from granting rights (1) that are "equivalent to any of the exclusive rights within the general scope of copyright" and (2) concern "works of authorship that are fixed in a tangible medium of expression and come within the subject matter of copyright."[72] In short, both the nature of the right and the nature of the work at issue must align with protections granted under federal copyright law.

Courts applying the first prong of the test—equivalency of the claims—look for an "extra element" that "[changes] the nature of the action so that it is qualitatively different from a copyright infringement claim."[73] "Extra elements" that merely change the scope of the claim, as opposed to the "fundamental nature of the right," will not escape preemption.[74] In the context of contract law, § 301 preempts a breach-of-contract claim if "one party to the contract merely promises to refrain from infringing on the other's exclusive copyright" but not if the contract "binds one party to do or not do something outside copyright's general scope."[75] While the "extra element" test for equivalency has endured criticism over the years,[76] the test

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to raise an inference of intent to preempt, or whether any of the other preemption tests apply," which typically governs preemption analysis. *Id.* Ironically, the two-part test described in § 301 often proves just as burdensome and has precipitated a doctrine just as nebulous.

72. 17 U.S.C. § 301(a) (2006).

73. Miller, *supra* note 23, at 756 (citing Mayer v. Josiah Wedgwood & Sons, Ltd., 601 F. Supp. 1523 (S.D.N.Y. 1985), the case from which the "extra element" test purportedly originated). *See also* Briarpatch Ltd., L.P. v. Phoenix Pictures, Inc., 373 F.3d 296, 306 (2d Cir. 2004).

74. Forest Park Pictures v. Universal Television Network, Inc. (*Forest Park II*), 683 F.3d 424, 431 (2d Cir. 2012); *Briarpatch*, 373 F.3d at 306–307.

75. Michael Palmisciano, *Resurrecting the Spirit of the Law: Copyright Preemption and Idea Protection*, *in* Montz v. Pilgrim Films, 53 B.C. L. REV (E-SUPPLEMENT) 209, 213–14 (2012) (citing Montz v. Pilgrim Films & Television, Inc. (*Montz II*), 649 F.3d 975, 979–980 (9th Cir. 2011) (en banc)).

76. *See* NIMMER ON COPYRIGHT, *supra* note 18, § 1.01[B][1] (noting that some scholars and courts denounce the "extra element" test as an exercise in circular logic); Schwartz et al., *supra* note 11, at 33 (same); Ritchie v. Williams, 395 F.3d 283, 287 n.3 (6th Cir. 2005) (noting the difficulty in determining whether an alleged "extra element" is "merely illusory"). One scholar explains:

> The problem with this test is that it does not provide any real guidance to the courts. There is always some difference between the state law and the Copyright Act, so a court that wants to avoid preemption can always find some difference, however small, that is the "extra element" needed to avoid preemption. The net result is that courts seem to first decide independently whether or not they think preemption should apply, and then label the result accordingly. . . . Thus, the "extra element" test has proved circular in practice, and the cases are ad hoc, inconsistent, or wrong.

is widely accepted among courts and continues to shape preemption doctrine.[77]

2. *Justifications for § 301 Preemption*

Prior to the enactment of § 301, copyright protection in the United States derived from a dual system of state and federal copyright law.[78] Until Congress overhauled the Copyright Act in 1976, separate copyright protection under state law[79] was considered an integral and indispensible piece of the copyright puzzle because it covered unpublished works, a category that the framers of the 1909 Copyright Act had explicitly excluded.[80] Once Congress expanded the scope of copyrightable subject matter to include unpublished works,[81] there was no longer a need for concurrent state law copyright protection; Congress could finally consolidate copyright law into one unified regime.[82] Chief among the motivations for doing so was a desire to eliminate widespread inconsistencies that inevitably arose within the dual system.[83] With § 301's express preemption provision, Congress

Schuyler Moore, *Straightening Out Copyright Preemption*, 9 UCLA ENT. L. REV. 201, 203–04 (2002).

77. NIMMER ON COPYRIGHT, *supra* note 18, § 1.01[B]. *See, e.g.*, *Montz II*, 649 F.3d at 980; Computer Assocs. Int'l, Inc. v. Altai, Inc. 982 F.2d 693, 716 (2d Cir. 1992); Stromback v. New Line Cinema, 384 F.3d 283, 301 (6th Cir. 2004); Utopia Provider Sys., Inc. v. Pro-Med Clinical Sys., LLC, 596 F.3d 1313, 1326 (11th Cir. 2012).

78. *See* H.R. REP. NO. 94-1476, at 129–133 (1976) (Conf. Rep.); NIMMER ON COPYRIGHT, *supra* note 18, § 1.01. The first case to acknowledge and endorse the dual copyright system was *Wheaton v. Peters*, 33 U.S. 591 (1834), which upheld a state/common law copyright in unpublished manuscripts. NIMMER ON COPYRIGHT, *supra* note 18, § 1.01[A]. It persisted until the eve of the new Copyright Act. *See* Goldstein v. California, 412 U.S. 546, 559–60 (1973) (holding that the power granted under federal copyright law is nonexclusive, eradicating any doubt that the states could retain a concurrent right to protect an author's work so long as it did not directly conflict with federal law).

79. *See* NIMMER ON COPYRIGHT, *supra* note 18, § 19D.01[B] (explaining that in most states a body of law referred to as "common law copyright" protected against plagiarism). In California, however, "common law copyright" was statutory, under Cal. Civ. Code § 980 (1872). NIMMER ON COPYRIGHT, *supra* note 18, § 19D.01[B].

80. *See* H.R. REP. NO. 94-1476, at 129 (1976) (Conf. Rep.); NIMMER ON COPYRIGHT, *supra* note 18, § 1.01.

81. 17 U.S.C. § 102 (2006) (defining copyright able subject matter as "original works of authorship fixed in a tangible medium of expression," without further categorizing on the basis of publication).

82. *See* Miller, *supra* note 23, at 763.

83. *See* H.R. REP. NO. 94-1476, at 129 (1976) (Conf. Rep.) (noting the problems arising from inconsistent definitions of "publication" across states, especially with regard to intangible media, including a loophole that occasionally created a perpetual monopoly in a single work). *See also* NIMMER ON COPYRIGHT, *supra* note 18, § 1.01; Miller, *supra* note 23, at 761–63. Secondary goals included bringing United States copyright law more in line with the

alleviated the confusion that arose from conflicting bodies of laws and frustrated courts for decades.

Parallels with patent law reveal an alternative justification for copyright preemption: preventing states from granting property rights in works that Congress unequivocally intended to keep in the public domain. A string of Supreme Court cases from the second half of the 20th century collectively stood for the proposition that the line Congress draws between protectable and unprotectable subject matter reflects a policy judgment, not only about which inventions merit monopoly rights, but also about those which should not.[84] Similar arguments about the dormant effects of copyright might also justify preemption under § 301.

3. Contract Law and § 301

Preemption analysis of *Desny*-style idea submission claims falls within a greater dialogue that asks whether breach-of-contract actions should ever be subject to federal copyright preemption. Two competing philosophies inform judicial decision-making on this issue. "Freedom to contract" proponents contend that copyright merely provides a shortcut to the transactions that would naturally occur between copyright owners and those who wish to

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principles of the Berne Convention, the treaty governing copyright law at an international level. *See* H.R. REP. NO. 94-1476, at 129–133 (1976) (Conf. Rep.).

84. *See* Bonito Boats, Inc. v. Thunder Craft Boats, Inc., 489 U.S. 141, 144–45 (1989); Sears, Roebuck & Co. v. Stiffel Co., 376 U.S. 225, 230–31 (1964); Compco Corp. v. Day-Brite Lighting, 376 U.S. 234, 237 (1964). In *Bonito Boats*, the Court struck down a Florida statute that prohibited boat manufacturers from using a "direct molding process" to duplicate a particular unpatented boat hull design, or knowingly selling copycat boat hulls created by that process. *Bonito Boats*, 489 U.S. at 144–45. In striking down the statute on preemption grounds, the Court underscored the "strong federal policy of favoring free competition in ideas which do not merit patent protection," and invoked the Supremacy Clause to preempt state action that jeopardized it. *Id.* at 168 (quoting Lear, Inc. v. Adkins, 395 U.S. 653, 656 (1969)). This line of reasoning traces back even decades earlier:

> [T]he patent system is one in which uniform federal standards are carefully used to promote invention while at the same time preserving free competition. Obviously a State could not, consistently with the Supremacy Clause of the Constitution, extended the life of a patent beyond its expiration date or give a patent on an article which lacked the level of invention required for federal patents. To do either would run counter to the policy of Congress of granting patents only to true inventions, and then only for a limited time. Just as a State cannot encroach upon the federal patent laws directly, it cannot, under some other law, such as that forbidding unfair competition, give protection of a kind that clashes with the objective of the federal patent laws.

Sears, 376 U.S. at 230–31. *See also Compco Corp.*, 376 U.S. at 237.

purchase or license their works.[85] They contend that the Copyright Act is no more than a compilation of socially desirable default rules; the Act cannot prevent the parties from contracting around the rights granted by copyright or creating their own property rights.[86]

Opponents of the "freedom to contract" philosophy take the position that copyright legislation is a scheme "carefully balanced to advance the public interest by providing an incentive to authors to create while safeguarding the free flow of the information on which such creativity is based."[87] Under this theory, parties should not be permitted to undermine the balance of rights, even with private ordering.[88] Under this "public interest" theory, a contract might be subject to preemption, pursuant to the two-part test in § 301. Under the "freedom to contract" theory, however, contracts will never be subject to preemption.

There is some legislative history to support the theory that contracts were not intended to fall within § 301.[89] Yet, most courts are reluctant to commit the fate of contract and copyright law to either position. Instead of establishing a categorical, bright-line rule that applies to all contract-based claims, courts most frequently limit their rulings to the specific facts of the case, resulting in a fragmented preemption doctrine built from small pockets of law. Idea submission claims occupy one of these pockets.

B. THE STATE OF THE LAW SURROUNDING CONTRACTS AND COPYRIGHT PREEMPTION

Pursuant to § 301, courts evaluate preemption challenges to *Desny* claims by applying the two-prong test described in Section II.A.1, *supra*.[90] Producer defendants rarely have difficulty satisfying the "subject matter" prong of the test, as screenwriters generally "fix" their ideas in a script, treatment, or other

85. Maureen O'Rourke, *Copyright Preemption after the ProCD Case: A Market-Based Approach*, 12 BERKELEY TECH. L.J. 54, 77–78 (1997).

86. *Id.*

87. *Id.*

88. *Id.*

89. *See, e.g.*, MCCLELLAN, COPYRIGHT LAW REVISION, S. REP. NO. 94-473, at 19 (1975) (an earlier Senate version of § 301 of the Copyright Act indicating that "[n]othing in this title annuls or limits any rights or remedies under the common law or statutes of any State with respect to . . . activities violating rights that are not equivalent to any of the exclusive rights within the general scope of copyright . . . including . . . breaches of contract . . . ."); H.R. REP. NO. 94-1476, at 132 (1976) (Conf. Rep.) (discussing proposed amendments for the Copyright Act and stating that "[n]othing in the bill derogrates from the rights of parties to contract with each other and to sue for breaches of contract . . . .").

90. To summarize, any claim that concerns copyrightable subject matter and seeks to vindicate rights equivalent to those exclusively granted to copyright owners fails under the preemption provision. 17 U.S.C. § 301(a) (2006).

written work prior to pitching their idea.[91] Instead, litigants stumble on the equivalency prong.[92] Often, the success of a preemption defense hinges on the following question: does the alleged implied-in-fact contract contain an "extra element" that renders the screenwriter's right to compensation qualitatively different than the exclusive rights granted under the Copyright Act? The next sections will recount how courts in the Ninth and Second Circuits, the jurisdictions that tend to attract the most *Desny*-style idea submission claims, have historically answered this question.

1. Ninth Circuit Precedent

Considering that Hollywood has become a Mecca for writers and producers working in the entertainment industry, it comes as no surprise that the Ninth Circuit exerts considerable influence in this area of law.[93] In *Grosso v. Miramax Film Corp.* (*Grosso I*), the first case testing the viability of the *Desny* claim at the circuit level, the Ninth Circuit held that the Copyright Act did not preempt a breach-of-implied-contract claim seeking to recover compensation for the use of ideas embodied in a screenplay previously submitted to the studio.[94] In that case, screenwriter Jeff Grosso developed a screenplay about poker players titled *The Shell Game*.[95] He alleged that he submitted the script to Miramax through the Gotham Entertainment Group, an intermediary company that had a so-called "first look" agreement with Miramax, which gave Miramax a first right of refusal.[96] Miramax allegedly used the ideas and themes in the screenplay to make the movie *Rounders* but failed to pay Grosso, thereby breaching an implied contract to provide

91. Buono & Wickers, *supra* note 25, at 5. The incorporation of some non-copyrightable material in the written work will not defeat copyright eligibility for the purposes of preemption. *See* Forest Park Pictures v. Universal Television Network, Inc. (*Forest Park II*), 683 F.3d 424, 429 (2d Cir. 2012). As explained by the Fourth Circuit, "scope and protection are not synonyms . . . . [T]he shadow actually cast by the Act's preemption is notably broader than the wing of its protection." Berge v. Trs. of the Univ. of Alabama, 104 F.3d 1453, 1463 (4th Cir. 1997), *cert. denied*, 522 U.S. 916 (1997).

92. The Supreme Court has urged courts to adopt a "restrictive view" when determining which "extra elements" transform an otherwise equivalent claim into one that is qualitatively different from a copyright infringement claim. Nat'l Basketball Ass'n v. Motorola, Inc., 105 F.3d 841, 851 (2d Cir. 1997) ("[T]he 'extra element' test should not be applied so as to allow state claims to survive preemption easily.").

93. In fact, some have sardonically adopted the nickname "Hollywood Circuit." *See, e.g.*, White v. Samsung Elecs. Am., Inc., 989 F.2d 1512, 1521 (9th Cir. 1993) (Kozinski, J., dissenting) ("For better or worse, we are the Court of Appeals for the Hollywood Circuit.").

94. Grosso v. Miramax Film Corp. (*Grosso I*), 383 F.3d 965, 968 (9th Cir. 2004). *See also* DONALDSON, *supra* note 55, at 16.

95. *Grosso I*, 383 F.3d at 967.

96. Grosso v. Miramax Film Corp (*Grosso II*), No. B193872, 2007 WL 2585053, at *1 (Cal. Ct. App. Sept. 20, 2007).

reasonable compensation for use of the idea.[97] Relying on precedent in *Landsburg v. Scrabble Crossword Game Players, Inc.*, a case involving the alleged uncompensated use of the plaintiff's idea for a Scrabble strategy book, the Court reasoned that the implied promise to pay constituted an "extra element" because it "transform[ed] the action from one arising under the ambit of federal statute to one sounding in contract."[98]

The Court reiterated this finding seven years later in *Montz v. Pilgrim II*, in an en banc decision concerning *Ghost Hunters*, a reality television series that follows paranormal investigators.[99] In that case, plaintiffs alleged that they had pitched a similar idea to NBC and its affiliates with the objective of securing a partnership with the studio and a share of profits derived from the use of the idea.[100] After rejecting the plaintiffs' offer due to a lack of interest, NBC allegedly partnered with studio Pilgrim Films and Television, Inc. to produce the show.[101] The Court held again that the implied promise to pay for the use of the submitted idea, even if indirectly manifested in a promise to hire plaintiff as a production partner, constituted an "extra element" that proved dispositive for the preemption analysis.[102]

2. *Second Circuit Precedent*

Up until the Second Circuit issued its *Forest Park* decision, many courts in New York, the other epicenter of the entertainment industry, embraced a more restrictive interpretation of the "extra element" test, finding that *Desny*-type claims lacked the "extra element" necessary to defeat copyright preemption under § 301.[103]

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97. *Grosso I*, 383 F.3d at 967.

98. *Id.* at 968 (citing Landsberg v. Scrabble Crossword Game Players, Inc., 802 F.2d 1193, 1196 (9th Cir. 1986) ("The contract claim turns not upon the existence of a [copyright] . . . but upon the implied promise to pay the reasonable value of the material disclosed.")).

99. Montz v. Pilgrim Films & Television, Inc. (*Montz II*), 649 F.3d 975, 977 (9th Cir. 2011) (en banc).

100. *Id.* at 978.

101. *Id.* at 967.

102. *Id.* at 978.

103. *See, e.g.*, Muller v. Twentieth Century Fox Film Corp., 794 F. Supp. 2d 429, 448 (S.D.N.Y. 2011) (holding that the plaintiff's breach of implied contract claim arising from defendants' purported failure to compensate and credit the plaintiff for the alleged unauthorized use of his screenplay was preempted under § 301); Smith v. New Line Cinema, No. 03-5274, 2004 WL 2049232, at *5 (S.D.N.Y. Sept. 13, 2004) (holding that plaintiff's breach-of-implied-contract claim, based on defendants' use of the plaintiff's screenplay without compensation was preempted by Copyright Act); Price v. Fox Entm't Group, Inc., 473 F. Supp. 2d 446, 461 (S.D.N.Y. 2007) (holding that an alleged promise to treat a screenwriter as a co-author and account to him in profits in exchange for authorization to

In *Muller v. Twentieth Century Fox*, a court in the Southern District of New York ruled that the Copyright Act preempted plaintiff screenwriter's implied breach of contract claim, which alleged that defendant Twentieth Century Fox Corporation copied his original screenplay titled *The Lost Continent* when developing the movie *AVP: Alien vs. Predator*.[104] The court provided no other explanation for its holding, beyond an observation that "Muller's state law right to receive credit and compensation for the alleged unauthorized use of his screenplay is equivalent to the exclusive rights protected by federal copyright law," as well as citations to *Smith v. New Line Cinema*, [105] a similar case decided seven years earlier by the same district court judge.[106]

Based on the appellate decisions in the Ninth Circuit and the district court decisions in the Second Circuit, it seemed inevitable that any *Desny* litigation proceeding to the Second Circuit would result in a circuit split. Not so after *Forest Park*, which reversed the trend among New York district courts and brought the Second Circuit in alignment with the Ninth.

III. FOREST PARK: PRESERVING THE VIABILITY OF THE DESNY CLAIM

In the most recent idea submission case to stem from the entertainment industry, the Second Circuit took a cue from the Ninth Circuit's en banc ruling in 2011 and joined it on the issue of preemption under the Copyright Act,[107] bolstering support for the proposition that contract-based idea submission claims based on an expectation to receive compensation for use of the idea are not preempted by federal copyright law.

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use his idea did not make screenwriter's breach of contract claim qualitatively different than a co-authorship claim under the Copyright Act). *But see* Katz Dochrerman & Epstein, Inc. v. Home Box Office, No. 97-7763, 1999 WL 179603, at *4 (S.D.N.Y. Mar. 31, 1999) (ruling against preemption of a breach-of-implied-contract idea submission claim in the advertising context, where the defendant advertiser solicited plaintiff for an ad campaign idea, because "implicit in this request was a promise to compensate KDE for its time, talent and effort," and that made the claim "entirely separate and apart from any claim for copyright infringement").

104. *Muller*, 794 F. Supp. 2d at 432, 448.

105. *Id.* at 447–48. The dispute in *Smith v. New Line Cinema* arose from a movie called *The Cell*, the idea for which allegedly came from the plaintiff's screenplay *Inner Mind's Eye*. *Smith*, 2004 WL 2049232, at *1. The plaintiff claimed that he had submitted the screenplay to one of New Line Cinema's former subsidiaries more than eight years before the release of the movie and that the studio's failure to give him writing credit and adequate compensation to the plaintiff violated an implied contract governing the use of the idea. *Id.*

106. The same district court judge decided both of these cases. *Muller*, 794 F. Supp. 2d at 431 (opinion written by Judge Chin); *Smith*, 2004 WL 2049232, at *1 (same).

107. Forest Park Pictures v. Universal Television Network, Inc. (*Forest Park II*), 683 F.3d 424, 428 (2d Cir. 2012).

A. BACKGROUND OF THE CASE

In 2005 Forest Park developed an idea for a television show called *Housecall*, which was about a doctor who, "after being expelled from the medical community for treating patients who could not pay, became a concierge doctor to the rich and famous in Malibu."[108] The company packaged its ideas for plots, characters, and themes in a "series treatment" and submitted the materials to USA Network via mail.[109] After following up, Forest Park secured a meeting with Alex Sepiol, an agent working on behalf of the network.[110] Allegedly admitting that the idea was a novel and "fascinating concept for a television show," Sepiol began negotiations with Forest Park, but communications ceased one week later when the deal fell through.[111] Approximately four years later, USA Network began airing a show called *Royal Pains*, which matched many of the characteristics of Forest Park's treatment.[112] Forest Park did not participate in the development of the show, nor was it compensated for its idea.[113]

Forest Park filed suit in the Southern District of New York against USA Network for breach of implied contract to pay reasonable compensation if the concepts embodied in the *Housecall* series treatment were used in a television show. In its allegations, Forest Park noted the industry custom whereby writers "pitch creative ideas to prospective purchasers with the object of selling those ideas for compensation."[114] Furthermore, Sepiol and USA Network were allegedly aware of this common practice and knew that Forest Park and other writers pitched ideas "with the expectation of compensation in the event of use."[115]

USA Network responded with a motion to dismiss, arguing that § 301 of the Copyright Act preempted Forest Park's breach-of-implied-contract claim.[116] In May 2011, the district court agreed with USA Network and

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108. *Id.*

109. *Id.*

110. *Id.* (citing Complaint ¶ 12).

111. *Id.* (citing Complaint ¶ 15).

112. *Id.* One of the only differences noted by the Court was that USA Network's show took place in the Hamptons, not in Malibu. *Id.*

113. *Id.*

114. *Id.* (citing Complaint ¶ 9).

115. *Id.* (citing Complaint ¶¶ 9, 13).

116. USA Network also argued that even if the claim survives preemption, Forest Park had failed to adequately plead breach of contract because it did not specify the price that it allegedly promised to pay, and therefore the implied contract is too vague to be enforceable. *Id.* This issue, although not considered in the district court, was ultimately decided in favor of Forest Park at the Circuit level. *Id.* However, this aspect need not be discussed in detail in this Note as it does not bear on preemption.

granted its motion, holding that the developers' breach of implied contract claim (1) embodied copyrightable subject matter and (2) sought relief "equivalent to the exclusive right protected by the copyright law and [was] therefore preempted by the Copyright Act."[117] Forest Park appealed.

B. SECOND CIRCUIT OPINION

On appeal, the Second Circuit considered the viability of *Desny* claims for the first time since the amended Copyright Act was enacted in 1976. Writing for a unanimous panel, Circuit Judge John Walker held that the breach of implied contract was not subject to preemption under the Copyright Act.[118] Interestingly, the Court's analysis ignored the Southern District of New York cases whose contrary holdings had dominated federal law in New York up to that point.

Judge Walker's opinion began with the two-part test prescribed by § 301.[119] Under the "subject matter" prong of the test, the Second Circuit held that the series treatment constituted copyrightable subject matter because it was an "original work of authorship fixed in a tangible medium of expression."[120] The fact that the treatment might contain some ideas not eligible for copyright protection under § 102(b) did not prevent the work from satisfying the subject matter requirement.[121]

In applying the "equivalency" prong of the test, the court held that Forest Park's contract-based claim aimed to vindicate rights beyond those conferred by the Copyright Act, thereby precluding a finding of preemption.[122] The Court identified three "extra elements" that undermined equivalency in this case. First, the implied contract allegedly contained a right to reasonable compensation, which is not one of the exclusive rights enumerated in the Copyright Act. Second, the breach of contract claim required the plaintiff to prove mutual assent and consideration, which again,

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117. Forest Park Pictures v. Universal Television Network, Inc. (*Forest Park I*), No. 10-5168, 2011 WL 1792587, at *3 (S.D.N.Y. May 10, 2011) (citing Muller v. Twentieth Century Fox Film Corp., 794 F. Supp. 2d 429 (S.D.N.Y. 2011); Smith v. New Line Cinema, No. 03-5274, 2004 WL 2049232, at *5 (S.D.N.Y. Sept. 13, 2004); Panizza v. Mattel, Inc., No. 02-7722, 2003 WL 22251317 (S.D.N.Y. Sept. 30, 2003)).

118. *Forest Park II*, 683 F.3d at 436 (vacating the district court ruling and remanding the case with instructions to deny USA Network's motion to dismiss).

119. *Id.* at 429.

120. 17 U.S.C. § 102(a) (2006).

121. *Forest Park II*, 683 F.3d at 429 (citing Harper & Row Publishers, Inc. v. Nation Enters., 723 F.2d 195 (2d. Cir. 1983), *rev'd on other grounds*, 471 U.S. 539 (1985) (holding that President Ford's autobiography was a copyrightable work despite the fact that it contained uncopyrightable historical facts)).

122. *Forest Park II*, 683 F.3d at 432–33.

are elements absent in copyright law. Lastly, the breach of contract claim asserted a right only against another party to the contract, not "against the world."[123] These "extra elements" sufficed to support a finding that the rights allegedly protected under the implied contract were not equivalent to the exclusive rights established under the Copyright Act.

With this opinion, the Second Circuit foreclosed the possibility of a circuit split on the issue of *Desny* claim copyright preemption and reinforced the message that, at least in the two largest entertainment markets, producers can no longer hide behind the Copyright Act when defending against claims of idea theft.

IV. WHY THE CIRCUIT COURTS GOT IT RIGHT: *DESNY* CLAIMS AS A PROPER FORM OF RELIEF FOR IDEA SUBMISSION CLAIMS

Although the Ninth and Second Circuit majority opinions send a clear message that *Desny* claims should not be subject to preemption, not all rulings have been unanimous. In *Montz v. Pilgrim Films & Television, Inc.* (*Montz II*), for example, dissenting Judges O'Scannlain and Gould of the Ninth Circuit expressed concern that permitting *Desny* claims to survive preemption effectively legitimizes an "end-run around the Copyright Act,"[124] which improperly allows screenwriters to gain copyright protection without meeting the strict standards of copyrightability.[125] Furthermore, Judge Gould

123. *Id.* at 428 (quoting ProCD v. Zeidenberg, 86 F.3d 1447, 1454 (7th Cir. 1996)). This last argument, made famous in *ProCD*, the landmark "shrink wrap license" case, is oft recited in preemption cases and seems to be a driving force behind the trend in at least the Second and Ninth Circuits to recognize contract-based idea submission claims as separate and valid causes of actions. *See, e.g.*, Montz v. Pilgrim Films & Television, Inc. (*Montz II*), 649 F.3d 975, 980 (9th Cir. 2011) (en banc) (quoting *ProCD*'s "right against the world" language in support of its ruling against copyright preemption).

124. Marc Handelman, *Ninth Circuit Rules in Ghost Hunters Idea Submission Case*, ENTERTAINMENT LAW MATTERS, May 10, 2011.

125. *Montz II*, 649 F.3d at 985 (O'Scannlain, J., dissenting). The court stated:

> Here, Montz attempts to use an implied contract claim to do what the Copyright Act does (i.e., to protect the unauthorized use of copyrighted materials). The only difference is that Montz's implied contract claim would protect those rights more broadly because California implied contract law does not require as strict a showing of substantial similarity as federal copyright law.

Id. Scholars such as Professor Paul Goldstein who oppose preemption, yet nevertheless wish to correct the apparent broadening of copyright protection authorized in the context of *Desny* claims, suggest that courts apply the "same exacting standards" of copyright protection to contract claims. *See* Paul Goldstein, *supra* note 23, at 15; Casido, *supra* note 27, at 347

warned that the court's failure to preempt *Desny* claims would "lead to uncertainty by making state law—with its ambiguity, variability, and volatility—available to litigants who bring nebulous state law claims that in substance assert rights in the nature of copyright."[126] These considerations are compelling,[127] but they nevertheless should not carry the day.

The particularities of idea submission claims in the broader context of intellectual property litigation and the unique vulnerabilities of screenwriters in the entertainment industry warrant the form of relief that *Desny* claims provide (and that § 301 threatens to eliminate). Although the Second and Ninth Circuits' doctrinal analysis of the "extra element" test is persuasive in its own right, external factors also bear heavily on the fairness of preemption rulings.

Desny claims are essential because contract law provides screenwriters and other idea submission plaintiffs with their only legal recourse against idea theft.[128] As discussed in Section I.A, *supra*, the limited scope of copyrightable subject matter leaves ideas unprotected under the Copyright Act, creating a

(proposing that "courts should model the substantial-similarity standard in California breach of implied-in-fact contract claims after the federal copyright infringement standard").

126. *Montz II*, 649 F.3d at 986 (Gould, J., dissenting).

127. To the contrary, the handful of pre-*Forest Park* cases in the Southern District of New York provide feeble—if at all existent—reasoning to support their preemption findings, and they appear to rest on faulty precedent. The holdings in these cases trace back to, and continue to cite, *Panizza v. Mattel*, which did address copyright preemption, but not in the context of a breach-of-implied-contract claim. *See* Smith v. New Line Cinema, No. 03-5274, 2004 WL 2049232, at *5 (S.D.N.Y. Sept. 13, 2004) (citing only *Panizza* in its application of § 301 to a *Desny* claim based on implied contract theory); Muller v. Twentieth Century Fox Film Corp., 794 F. Supp. 2d 429, 448 (S.D.N.Y. 2011) (citing *Smith* and *Panizza* in a comparable preemption analysis, without further elaboration on the court's rationale); Forest Park Pictures v. Universal Television Network, Inc. (*Forest Park I*), No. 10-5168, 2011 WL 1792587, at *3 (S.D.N.Y. May 10, 2011) (citing *Muller*, *Smith*, and *Panizza* without further elaboration). Rather, the case involved a quasi-contract claim based on an unjust enrichment theory, a particular category that is routinely dismissed under § 301 for asserting rights "equivalent" to copyright. Panizza v. Mattel, Inc., No. 02-7722, 2003 WL 22251317, at *4 (S.D.N.Y. Sept. 30, 2003). *See also* Briarpatch Ltd., L.P. v. Phoenix Pictures, Inc., 373 F.3d 296, 306 (2d Cir. 2004) (finding no extra element in an unjust enrichment claim); NIMMER ON COPYRIGHT, *supra* note 18, § 19D.02[B][2]. Unjust enrichment claims are consistently rejected because they "solely concern[] the benefit defendant allegedly received by using the plaintiff's idea." *Panizza*, 2003 WL 22251317, at *4. In other words, they lack a bilateral exchange, which is precisely the characteristic that makes a breach of contract claim qualitatively different for the purposes of defeating preemption under § 301.

128. *See* Palmisciano, *supra* note 75, at 219 (arguing that denying a plaintiff's state law contract claim "ensure[s] that [he or she] would have no way to recover for the defendants' alleged unauthorized use"). *See also* Buono & Wickers, *supra* note 25, at 7; Hoyt, *supra* note 30, at 38 ("From a legal standpoint, the *Desny* precedent offered a necessary level of protection to writers who might otherwise be fleeced and left without any legal recourse.").

gap between federal and state law protection.[129] *Desny* claims fill this gap in the entertainment context. In *Montz II*, the Ninth Circuit supplemented its statutory preemption analysis by reasoning:

> The *Desny* innovation serves to give some protection for those who wish to find an outlet for creative concepts and ideas but with the understanding that they are not being given away for free. Without such legal protection, potentially valuable creative sources would be left with very little protection in a dog-eat-dog business.[130]

Ensuring protection of ideas in this context incentivizes screenwriters to continue developing and sharing new ideas, which ultimately benefits not only the screenwriters but also the entertainment industry at large.[131] It also deters unscrupulous producers from misappropriating a screenwriter's ideas without authorization and eroding existing industry standards to pay for those ideas. In short, the additional protection afforded by the *Desny* claim secures an optimal level of productivity from the writer and simultaneously keeps abusive producer behavior in check. Distinctive characteristics of both idea submission claims and the entertainment industry inform these policy goals.

A. UNIQUE CHARACTERISTICS OF IDEA SUBMISSION CASES THAT MILITATE AGAINST PREEMPTION

The factual particularities of idea submission cases in general, and the underlying policy goals they promote, justify recognition of an additional contract-based cause of action to supplement the limited protection available to written submission materials under federal copyright law.

1. Ideas Are an Acceptable Form of Consideration

Pleading the elements of a *Desny* claim is now considered to be sufficient to establish the formation of an enforceable contract—this is due to widespread agreement that ideas may be valuable enough to constitute the consideration required for an express or implied-in-fact contract.[132] In a scenario where both contracting parties have implicitly acknowledged the value of the idea through their conduct—the plaintiff by offering the idea for

129. *See* 17 U.S.C. § 102(b) (2006). *See also Montz II*, 649 F.3d at 981; Buono & Wickers, *supra* note 25, at 9.

130. *Montz II*, 649 F.3d at 981.

131. *See* Miller, *supra* note 23, at 30.

132. *See* 13 B.E. WITKIN, SUMMARY OF CALIFORNIA LAW § 70 (10th ed. 2005) (explaining that although "an abstract idea is not the subject of ownership" in California and therefore cannot be protected under state property doctrines, an idea may nevertheless merit protection under a contract theory).

sale, and the defendant by commercializing the idea in the same manner the plaintiff proposed—the plaintiff should be permitted to recover compensation consistent with the implied terms of the contract.[133]

Despite a consensus regarding an idea's potential to constitute consideration, courts in various states disagree as to how to assign value to a particular idea, which produces inconsistencies in idea submission doctrine. New York courts, for example, anchor the notion of consideration in the value of the idea to the buyer. As established in *Nadel v. Play-by-Play Toys & Novelties, Inc.*, a leading Second Circuit idea submission case from the toy industry, a plaintiff must demonstrate that the idea is both "concrete" and "novel as to the buyer" in order to demonstrate that there was sufficient consideration for the implied or express payment.[134]

In California, the value of an idea derives from the act of disclosing the idea, not its content.[135] Some courts dating back to *Desny* characterize this transaction as "the rendition, on request, of services by a person with specialized knowledge, constituting the conveyance of an idea."[136] Unlike in New York, California law does not require that the idea itself be novel[137]—or

133. A Supreme Court case concerning preemption under the Patent Act is instructive here. In *Aronson v. Quick Point Pencil Co.*, the licensee manufacturer of a new keychain design brought a declaratory action against the licensor of the idea, seeking judgment that the license agreement became unenforceable after the Patent Office rejected the licensor's patent application for the keychain idea. 440 U.S. 257, 259–60 (1979). Although the idea did not meet the requirements of patentability under Title 35, and therefore did not entitle the licensor to exclude others from making, using, or selling her keychain design, the Court nevertheless upheld the contract and ordered payment of the royalties because "the inventiveness and novelty [of the keychain design] were sufficiently apparent to induce an experienced novelty manufacturer to agree to pay for the opportunity to be first in the market." *Id.* As in *Aronson*, the submission of an idea, especially at a time when the market may be particularly receptive to the idea, might be valuable enough to make the recipient's promise to pay reasonable.

134. Nadel v. Play-By-Play Toys & Novelties, Inc., 208 F.3d 368, 374–76 (2d Cir. 2000).

135. *See* Grosso v. Miramax Film Corp. (*Grosso I*), 383 F.3d 965, 978 (9th Cir. 2004) ("The *Desny* rule is justified on the theory that the bargain is not for the idea itself, but for the services of conveying that idea."). *See also* Schwartz et al., *supra* note 11, at 281, 285 (citing Colvig v. KFSO, 224 Cal. App. 2d 357, 367 (1964)). The notion of deriving value from disclosure, as opposed to the intrinsic value of the idea itself, comports with "Arrow's paradox of information," which explains that the idea purveyor cannot extract the value of an idea, and the recipient cannot determine the value of an idea, until disclosure has occurred. *See supra* text accompanying notes 12–15.

136. 13 B.E. WITKIN, SUMMARY OF CALIFORNIA LAW § 70 (10th ed. 2005) (citing Desny v. Wilder, 46 Cal. 2d 715, 733 (1956)).

137. Faris v. Enberg, 97 Cal. App. 3d 309, 317 (1979) (quoting *Desny*, 46 Cal. 2d at 739 ("Even though the idea disclosed may be 'widely known and generally understood' it may be protected by an express contract providing that it will be paid for regardless of its lack of novelty.")). Other courts outside of California appear to favor its approach. *See, e.g.*, Reeves

concrete, for that matter[138]—in order for the plaintiff to recover on an implied contract. According to Justice Traynor, "even though the idea disclosed may be widely known and generally understood, it may be protected by an express [or implied] contract providing that it will be paid for regardless of its lack of novelty."[139] However, depending on the particular facts of a case, an inquiry into novelty may be useful in assessing whether the value of the disclosure rises to the level of consideration.[140]

2. *The Factual Predicates of Copyright and Contract-Based Idea Submission Claims are Incompatible, so the Rights These Claims Assert are Qualitatively Different*

The unique factual posture of idea submission claims renders the contractual rights asserted under a breach-of-implied-contract theory inherently different from the exclusive rights protected under the Copyright Act, so courts should not invoke § 301 to preempt such contracts. Whereas the gravamen of a copyright infringement claim is that the defendant copied or produced a work without the copyright owner's permission, the breach of contract claim presumes that the alleged contract granted permission and proceeds on the theory that the defendant did not perform his contractual obligation to pay to make use of the plaintiff's work.[141] In the absence of a

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v. Alyeska Pipeline Service Co., 926 P.2d 1130, 1130, 1141–42 (Alaska, 1996); Wrench LLC v. Taco Bell Corp., 256 F.3d 446, 462 (6th Cir. 2001).

138. Chandler v. Roach, 156 Cal. App. 2d 435, 441–42 (1957).

139. Stanley v. Columbia Broad. Sys., 35 Cal. 2d 653, 674 (1950) (Traynor, J., dissenting).

140. *See, e.g.*, *id.* at 679–82 (Traynor, J., dissenting) (reasoning that because the defendant "unequivocally disclaimed any intention to pay for the use of a non-novel idea," the implied promise to pay upon use extended only to novel ideas, and therefore disclosure would not be valuable enough to form a legally binding contract without novelty).

141. *See* Schwartz et al., *supra* note 11, at 281, 295. Recasting the preemption debate over *Desny* claims in terms of authorization appears to be a legal maneuver that even opponents of the *Montz II* ruling would endorse:

> If the point is to fill "the gap that would otherwise exist between state contract law and copyright law," then I suggest that a focus on authorization is entirely appropriate. Where a copyright owner authorizes the use of his work, but does not receive the consideration he was promised, he has a contract claim; where a copyright owner does not authorize the use of his work, but, nonetheless, someone uses it to produce a substantially similar work, he has a copyright claim.

Montz v. Pilgrim Films & Television, Inc. (*Montz II*), 649 F.3d 975, 985 (9th Cir. 2011) (O'Scannlain, J., dissenting). In his dissent, however, Judge O'Scannlain took fault with the fact that the plaintiff had not explicitly alleged that "he sold the ideas embodied in his Ghost Hunters materials to Pilgrim and that Pilgrim simply failed to pay." *Id.* Judge O'Scannlain's reasoning is too formalistic. A plaintiff seeking to enforce a contract through an action for breach of contract must first demonstrate his own performance on the contract—thus, the

compulsory license scheme or some other copyright provision that might obligate a user to pay as an operation of law,[142] a plaintiff's right to compensation diverges significantly from the exclusive rights enumerated in § 106. Scholars point out that this discrepancy not only renders the contractual rights qualitatively different than copyright rights, but it also makes them fundamentally incompatible with one another—a plaintiff cannot prevail on both theories simultaneously.[143] Because preemption seeks to eliminate redundant claims, not factually irreconcilable claims, preempting contract-based claims under the Copyright Act seems improper.

3. Policy Goals of Copyright Preemption Would Not Be Served Here

Finally, contract-based idea submission claims should not be subject to preemption because they do not run afoul of the policy considerations justifying copyright preemption.[144] First, copyright policy concerns the extent to which an individual should be entitled to monopoly rights.[145] However, two defining characteristics of monopoly rights are not present when a plaintiff asserts rights under a contract: (1) the ability to assert rights against all others simultaneously and (2) the ability to assert rights unilaterally, without any negotiation or input from the other party. Enforcement of idea protection using contract principles does not interfere with the exclusive rights granted under copyright law because a breach-of-contract plaintiff can only assert her claim against a party with whom she has privity of contract,

sale and grant of permission must have already occurred. Regardless of the specific language used in the complaint, all plaintiffs properly alleging the essential elements of a *Desny* claim do implicitly incorporate the authorization theory that Judge O'Scannlain finds to be so important in this context.

142. For example, § 115 prescribes compulsory licenses to individuals wishing to "make and distribute phonorecords" of a nondramatic musical work that has already been "distributed to the public in the United States under the authority of the copyright owner." 17 U.S.C. § 115(a)(1) (2006).

143. *See* Schwartz et al., *supra* note 11, at 281, 295. It is true, however, that many *Desny* plaintiffs plead copyright infringement action simultaneously. *See, e.g.*, Benay v. Warner Bros. Entm't, Inc., 607 F.3d 620, 622 (9th Cir. 2010). The Federal Rules of Civil Procedure grant plaintiffs the right to plead in the alternative under Rule 8(d)(2), even if the factual premises of multiple claims are inconsistent. Fed. R. Civ. P. 8(d)(2).

144. Stanley v. Columbia Broad. Sys., 35 Cal. 2d 653, 674 (1950) (Traynor, J., dissenting) ("The policy that precludes protection of an abstract idea by copyright does not prevent its protection by contract.").

145. 17 U.S.C. § 106 (2006) (conferring upon a copyright owner an *exclusive* right to reproduce, prepare derivative works of, distribute, perform, and display the copyrighted work).

and that contract must have emanated from a bilateral exchange.[146] No monopoly right has materialized.

Furthermore, unlike the Copyright Act, which prescribes stringent subject matter limitations to prevent private parties from hijacking ideas that belong in the public domain, contract law does not alter the careful balance of the public domain. Justice Traynor observes that enforcement of a contract "does not withdraw the idea from general circulation. Any person not a party to the contract is free to use the idea without restriction."[147] Justice Traynor continues with the following exposition of copyright law:

> The very function of creative activity is to keep the common field in continuous germination; it is not for copyright law to render it barren by a succession of enclosures denying access to those who would cultivate it. The object of copyright is to promote science and the useful arts. If an author, by originating a new arrangement and form of expression of certain ideas or conceptions, could withdraw these ideas or conceptions from the stock of materials to be used by other authors, each copyright would narrow the field of thought open for development and exploitation, and science, poetry, narrative, and dramatic fiction and other branches of literature would be hindered by copyright, instead of being promoted. . . . To insure free trade in ideas, therefore, the monopoly created by copyright is limited to the arrangement and combination of the ideas . . . the form, sequence, and manner in which the composition expresses the ideas.[148]

Contract law does not bear these burdens, as it does not implicate the entirety of the public domain.

In the context of idea submissions, a contract-based claim does not entitle the idea purveyor to recovery from any party that plucks the idea from the public domain and uses it to his advantage—it only attaches liability to the party who, prior to disclosure, explicitly or implicitly promised to pay for it, should he decide to use it, and does not do so.

B. UNIQUE CHARACTERISTICS OF THE ENTERTAINMENT INDUSTRY THAT JUSTIFY RECOGNITION OF CONTRACT-BASED IDEA SUBMISSION CLAIMS

As explained in Section I.C, *supra*, the idea pitch is a deeply rooted and necessary fixture in the entertainment industry. Crucial to this practice is an

146. *See Stanley*, 35 Cal. 2d at 674 ("Unlike a copyright, a contract creates no monopoly; it is effective only between the contracting parties.").

147. *Id.*

148. *Id.* at 673–74 (Traynor, J., dissenting) (quotations omitted).

implied promise and expectation that the screenwriter will be compensated a reasonable sum for an idea that the producer uses and ultimately pushes toward production. This industry custom should be enforced through *Desny* claims because (1) it is well-suited to judicial enforcement and (2) the power imbalance between producers and screenwriters justifies additional measures of protection for submission materials.

1. *Desny Claims Reflect and Reinforce Industry Norms that Should Inform Judicial Rulings*

A growing body of scholarship queries whether courts should read industry practices into contracts as implied terms. Although scholars approach industry customs with varying degrees of skepticism, applying the tests from both sides of the spectrum to the idea submission context illustrates that compensating screenwriters for their ideas is precisely the sort of custom that merits judicial recognition.

In 2007 Professor Jennifer E. Rothman, well-known for cautioning courts against blindly adopting industry customs, especially in the intellectual property sphere,[149] developed a "six-vector" test to determine whether a particular custom is robust enough to inform contract interpretation.[150] Professor Rothman's test assesses (1) the certainty of the custom,[151] (2) the motivation behind the custom,[152] (3) whether parties on all sides of the debate—and with varying degrees of influence on the industry—participated in the development of the custom,[153] (4) whether the party against whom the custom is asserted had adequate representation in the formation of the custom,[154] (5) whether the custom is offered as a "positive proposition" to prove what conduct would be reasonable,[155] and (6) the policy implications of adopting the custom as fact.[156]

The entertainment industry practice among producers of compensating screenwriters who pitch successful ideas satisfies Professor Rothman's rigorous test. First, the practice is now ubiquitous and has been a prominent

149. *See* Jennifer E. Rothman, *Best Intentions: Reconsidering the Best Practices Statements in the Context of Fair Use and Copyright Law*, Legal Studies Paper No. 2010-41, JOURNAL OF THE COPYRIGHT SOCIETY 371, 372 (2010); Richard A. Epstein, *Some Reflections on Custom in the IP Universe*, 93 VA. L. REV. (IN BRIEF) 223, 223 (2008).

150. Jennifer E. Rothman, *The Questionable Use of Custom in Intellectual Property*, 93 VIRGINIA L. REV. 1899, 1900–01 (2010).

151. *Id.* at 1967–70.

152. *Id.* at 1970–72; Rothman, *Best Intentions*, *supra* note 149, at 383.

153. Rothman, *The Questionable Use of Custom*, *supra* note 150, at 1972–74.

154. *Id.* at 1974.

155. *Id.* at 1975–76.

156. *Id.* at 1976–78; Rothman, *Best Intentions*, *supra* note 149, at 385.

fixture in the industry for over sixty years.[157] Second, all evidence suggests that both screenwriters and producers (1) voluntarily participated in the development of the custom[158] and (2) continue to act in accordance with the custom for honest, respectable reasons—the screenwriter to make a living and the producer to secure exclusive use of the idea. As a matter of policy, the custom represents a fair exercise of the parties' freedom to contract and achieves a socially optimal solution for sustaining the idea-generating economy.[159] Even under Professor Rothman's demanding standard, this custom is defensible.

Scholars such as Richard Epstein, who are more eager to defend judicial adoption of industry customs than Professor Rothman, would have even fewer qualms with enforcing a producer's obligation to pay for the use of an idea pitched in a formal presentation. In Epstein's more forgiving analysis, so long as a practice is commonly used and uniformly defined within a particular community, contracting parties should be left to their own devices and courts should enforce their practices accordingly.[160] In the contract setting, Epstein argues that customs are best suited for dealings (1) between repeat transacting parties who are "well-disposed" to each other and (2) which exist in a limited market.[161] Screenwriters and producers operating within the entertainment industry meet both of these criteria.

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157. *See, e.g.*, Stanley v. Columbia Broad. Sys., 35 Cal. 2d 653, 656 (1950) (demonstrating that the practice of compensating writers for their ideas has been judicially recognized since 1950).

158. *See, e.g.*, Desny v. Wilder, 46 Cal. 2d 715, 727 (1956) (recounting plaintiff's allegations that Wilder's secretary voluntarily agreed to his terms of disclosure, which illustrates the inherent reasonableness of the custom to compensate writers for their ideas).

159. As explained in Section IV.A.3, *infra*, entitling writers to compensation in idea pitch scenarios does not interfere with the policy goals of the preemption provision of the Copyright Act, as it neither alters the composition of the public domain nor confers a monopoly right. Furthermore, as discussed in Part V, *infra*, the claim does not pose a slippery slope risk of inadvertently mandating compensation for all ideas submitted to producers.

160. Richard A. Epstein, *Confusion About Custom: Disentangling Informal Customs from Standard Contractual Provisions*, 66 U. CHI. L. REV. 821, 825 (1999). Epstein agrees with Rothman, however, that courts should be skeptical of customs founded on improper legal threats. Epstein, *Some Reflections on Custom in the IP Universe*, *supra* note 149, at 224 (citing Rothman, *The Questionable Use of Custom*, *supra* note 150, at 1912 n.33) (recalling Professor Rothman's example in which aggressive copyright owners bully parties who have a valid fair use defense yet wish to avoid litigation into paying licensing fees). The producer's superior bargaining power makes clear that this is not the case in idea submission claims emanating from the entertainment industry. *See infra* Section IV.B.2.

161. Epstein, *Confusion About Custom: Disentangling Informal Customs from Standard Contractual Provisions*, *supra* note 160, at 825 (noting that geographic expansion of the market unravels customs because it "introduces potentially wider variation in contract terms," which erodes any meeting of the mind).

By construing pitch presentations as an offer for sale premised on an implied promise to pay for any idea that the producer later uses, courts will be enforcing an industry custom that is not only fair but also one which all parties have come to expect.

2. *Why Desny Claims Matter: The Plight of the Screenwriter*

From the beginning, screenwriters face an uphill battle to get on equal footing when pitching their ideas to producers and, when they are lucky, negotiating the sale of those ideas. With so much opportunity and incentive to take advantage of screenwriters who disclose the culminations of their hard work, producers must be held liable when they fail to honor the conditions of disclosure. *Desny* claims provide an effective mechanism for policing producer misconduct and restoring some balance to the idea transaction. Copyright preemption should not interfere.

Screenwriters face adversity when trying to break into the business. For most, the hardest challenge is finding an effective agent (or manager),[162] a necessary step for the advancement of a writer's career.[163] Because producers typically only consider scripts received from agents—a corollary of their sweeping refusal to accept unsolicited manuscripts—emerging writers tend to inundate agencies with screenplays.[164] This creates a bottleneck effect, which burdens the agent's task of sorting through manuscripts to find exceptional talent.[165] In a twist on Arrow's information paradox, emerging screenwriters

162. *See* LEWINSKI, *supra* note 51, at 4.

163. Ironically, dependence on agents and managers might also be fatal to a screenwriter's career. Horror stories of bad "agenting" abound among screenwriters who, desperate to get a foot in the door, naively let their agent take the reins and send out a script before it's ready, pigeon-hole the writer into an unpopular genre, or poorly negotiate the sale of a script. *See id.* at 5–6.

164. Some practices and entrepreneurial enterprises have emerged to alleviate the challenges of finding representation in the entertainment industry. The Screenwriters' Room, for example, functions as a matchmaking service that accepts unsolicited screenplays and provides referrals to agents, producers, and studio executives who may be interested in the project. *Id.* at 8. Some agents engage in a practice called "hip-pocketing," which allows them to work with writers unofficially (i.e., without signing the writer to an agency contract), usually on a single project basis. *Id.* at 25; WHARTON, *supra* note 51, at 88. Finally, entertainment attorneys are often expected to provide their screenwriter clients with referrals, helping to fill the gap between writers and agents. LEWINSKI, *supra* note 51, at 111; WHARTON, *supra* note 51, at 105.

165. *See* LEWINSKI, *supra* note 51, at 3–4. To make matters worse, writers already attract minimal attention from agencies, which can earn far more revenue on commission from higher-earning clients like actors and directors. *See id.* at 90.

often find themselves in a "Catch-22": writers need to sell scripts in order to sign with an agent, and writers need an agent to sell their script.[166]

Even for those screenwriters talented enough to secure representation with an agent who can get their screenplay onto a producer's desk, actually making the deal presents a new round of challenges. Screenwriters today face a high rate of refusal due to a recent downturn in the market for original screenplays[167] compared to so-called "pre-branded material," such as sequels, remakes, and adaptations of popular books, which appeal more broadly to risk averse studios.[168] Even more obstacles confront writers looking for work in the television industry.[169] The WGA Writer's Strike of 2007 and the economic recession, which began the following year, exacerbated these problems by forcing "sharp retrenchment in filmmaking."[170] Ironically, this deficit of available work coincides with an increase in the number of screenwriters entering the industry.[171]

The growing disparity between the supply of writing talent and the demand for it[172] creates an imbalance of bargaining power that grants studios a great deal of leverage in negotiations for new material.[173] With the upper

166. *See* LEWINSKI, *supra* note 51, at 1.

167. *See* Hoyt, *supra* note 30, at 39; Patrick Goldstein, *The Big Picture*, LOS ANGELES TIMES, June 6, 2006, at 1.

168. *See* Hoyt, *supra* note 30, at 39. *See also* Richard Verrier, *Company Town: Studios Cut Back Work for Writers*, LOS ANGELES TIMES, July 3, 2010.

169. For example, a push towards syndication erodes the "real estate" on television schedules available to new shows. Dretzka, *supra* note 58, at 5 (explaining that shows reach syndicated status upon hitting a 100-episode milestone). Some producers continue developing new episodes for shows long past their prime for the purposes of reaching syndication, a practice that may preclude new shows from airing that better appeal to contemporary TV audiences. Furthermore, because television shows are developed and aired seasonally, screenwriters face limited windows of opportunity for selling their work. *See* LEWINSKI, *supra* note 51, at 31. On the other hand, once a screenwriter sells an idea for a television show and secures a spot on the writing staff, work is generally more stable and more lucrative than a writing career in film. *See* WHARTON, *supra* note 51, at 82.

170. Verrier, *supra* note 168. In 2011, feature film earnings declined by 12.6% to $349.1 million. The 2011 numbers also reflect a 34% drop in earnings since 2007, when the pre-strike numbers were at $526.6 million. Dave McNary, *Scribes Not Feeling Love from Studios*, VARIETY (DAILY), July 25, 2012.

171. *See* LEWINSKI, *supra* note 51, at 82 (explaining how dwindling consumer interest in printed media, like books and newspapers, is changing the landscape for writers and motivating many to migrate to new industries, such as entertainment).

172. LEWINSKI, *supra* note 51, at 82.

173. *Write Angles*, *supra* note 58, at 1A. As the attorney representing the plaintiff in *Grosso I* explained:

> It's a small group of people that have all the juice, and if you're not in that crowd, you're really at their mercy. . . . There's a real lack of moral compass on the issue in Hollywood. And there's an ego-driven arrogance

hand, producers have begun to tailor the submission process in their favor, by designing new ways to solicit more ideas from writers while promising less in return. For example, as described in Section I.C, *supra*, many producers now condition acceptance of unsolicited submissions on signing waivers and liability release forms.[174] Although some scholars speculate that creative defense theories, like unconscionability, may someday permit screenwriters to circumvent these releases,[175] most courts find them to be enforceable, provided that they are not used to justify an "overt act of plagiarism."[176]

Other questionable practices are proliferating. Studies show that producers are increasingly subjecting screenwriters to "sweepstakes pitching," which pits dozens of screenwriters against one another in a competition for a single job.[177] Under a so-called "one-step deal" scheme, producers interested in a screenwriter's idea purchase only one draft at a time, eschewing the standard practice of hiring writers for the full duration of the editing process.[178] "One-step" deals destabilize income channels, eliminate the screenwriter's opportunity to negotiate additional fees for script re-writes, and often short-change the writing process, leading to lower quality work.[179] A recent Writers Guild of America ("WGA") survey reveals that

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> about it, like how dare you challenge this producer, this director, this studio? They'll spend $10 million fighting a case where the demand is $100,000.

Sandy Cohen, *Prized, Pricey and Hard to Protect: Million-Dollar ideas Often Stolen in Hollywood*, AP DATASTREAM, Nov. 9, 2006 (quoting Jeff Grosso's attorney John Marder).

174. *See* Joseph J. Siprut, *Are Ideas Really Free as the Air? Recent Developments in the Law of Ideas*, 51 IDEA 111, 116 (2011); *Court Case Prompts Hollywood Plagiarism Debate*, NPR WEEKEND EDITION SATURDAY, Sept. 16, 2006, at 5; *Pitch It To Me*, MOVIE PITCH, http://www.moviepitch.com/pitch/ (last visited Dec. 22, 2012) ("One-sided releases are a fact of life in Hollywood."). Industry insiders quip that these releases should instead be called "waiver-of-all-rights-just-to-get-a-chance-to-pitch agreements." DONALDSON, *supra* note 55, at 17.

175. *See, e.g.*, Kerry Ryan, *Using the Uniform Commercial Code to Protect the 'Ideas' That Make the Movies*, 27 SANTA CLARA L. REV. 693, 711–12 (1987). Under the unconscionability doctrine, a court may render a contract unenforceable if it is found both procedurally and substantively unconscionable. AT&T Mobility LLC v. Concepcion, 131 S. Ct. 1740, 1746 (2011). As a non-negotiable standard form agreement, idea submission waivers may meet the "procedural" prong of the test, and their broad limitations on liability may suffice under the "substantive" prong. *See* Ryan, *supra*.

176. DONALDSON, *supra* note 55, at 172.

177. *See* Verrier, *supra* note 168; McNary, *supra* note 170 (contrasting "sweepstakes pitching" with the standard practice of approaching each pitch as an individual opportunity for a deal).

178. Verrier, *supra* note 168.

179. *Id.* (describing "one-step deals" as short-sighted solutions to screenwriter hiring, since most scripts do not come together until after multiple rewrites). The WGA describes "one-step" deals as "harmful and exploitative to the creative process." McNary, *supra* note

demanding free rewrites and "prewrites" has become more common as well.[180]

Although these practices comport with economic and business principles and in many cases are legally defensible, they arguably tread on the boundaries of good faith and fair dealing,[181] especially considering the relative vulnerability of screenwriters in the industry. Once producers commit idea theft, however, the injustice is self-evident. In addition to immediately depriving the screenwriter of her hard-earned wages, the misconduct also runs the risk of jeopardizing the screenwriter's career, should she attempt to bring a lawsuit against the producer. Idea submission litigation creates two primary risks: first, it will destroy the screenwriter's relationship with the producer. Second, it may lead to "blacklisting" within the industry.[182] The high costs of litigation additionally threaten the already precarious financial position of most screenwriters and at times may even discourage legal action altogether.

The unique power dynamics at play in the entertainment industry—dynamics that caused Judge Schroeder to refer to the industry as a "dog-eat-dog" world in *Montz II*[183]—produce fairness concerns that warrant the availability of additional causes of action beyond copyright infringement. Even without producer misconduct, screenwriting is a competitive and risky career. Once a producer begins interfering with a screenwriter's contractual right to compensation, the effects can be devastating. Victims of idea theft should have reliable legal mechanisms to vindicate those rights without the threat of copyright preemption.

V. CLOSING THE "FLOODGATES" WITH INCREASED AWARENESS

Renewed judicial support for the *Desny* claim has alarmed producers, causing them to clamp down on idea submissions out of fear that multitudes

170. Because writers are not guaranteed an opportunity to fine-tune their ideas in subsequent drafts, "one-step" deals encourage writers to play it safe, rather than explore new, creative, and perhaps unconventional content. *See* Verrier, *supra* note 168.

180. McNary, *supra* note 170.

181. The implied duty of good faith and fair dealing is an age-old common law principle that continues to inform all contractual relationships. *See* RESTATEMENT (SECOND) OF CONTRACTS § 205 (1981).

182. *See* Schwartz et al., *supra* note 11, at 281, 294; Hoyt, *supra* note 30, at 38–39 ("Studios are not eager to hire up-and-coming writers who sue them. . . . Even if you win, you lose.").

183. Montz v. Pilgrim Films & Television, Inc. (*Montz II*), 649 F.3d 975, 981 (9th Cir. 2011) (en banc) (quoting Woody Allen, CRIMES & MISDEMEANORS (Orion Pictures 1989)).

of writers will flood the courts with unmeritorious idea theft claims.[184] Studios argue that they should not have to defend against every writer who might once have had the same idea, especially when that idea is unoriginal.[185] They further contend that screenwriters might take advantage of expanded protection of ideas and bring frivolous cases for the purpose of disgorging the studios of success.[186] These "floodgate" arguments may not be entirely unfounded.[187] Yet, it is important to keep in mind that although the *Desny* claim opens a new door for litigation, *Desny* plaintiffs nevertheless have a heavy burden to prove the defendants' liability; frequently, a screenwriter whose claim survives preemption nevertheless fails on the merits of the contract claim.[188] In an industry where news spreads like wildfire and triumphant underdog stories have irresistible appeal, publicizing the preemption rulings from cases like *Montz II* and *Forest Park* may artificially inflate the confidence of prospective *Desny* plaintiffs.

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184. DONALDSON, *supra* note 55, at 17. In response to *Grosso I*:

> Studio lawyers went nuts. They gave endless interviews about how this was going to make life very difficult for studios. They said this ruling would spawn a lot of frivolous suits from writers who didn't have a good copyright claim, but might be able to spot a few stolen ideas.

DONALDSON, *supra* note 55, at 17.

185. In many cases, the use of a particular idea is the product of independent creation, common knowledge or experience, or a different idea submission entirely. *See* Paul Goldstein, *supra* note 23, at 15 (noting that Oliver Wendall Holmes, Sr. once opined that "literature is full of such coincidences, which some love to believe plagiarisms. There are always thoughts abroad in the air, which it takes more wit to avoid than to hit upon.").

186. This notion has entertained the minds of judges and scholars alike since the dawn of *Desny*. As early as 1954, scholars balanced the "desire to prevent a shabby producer from bilking an honest writer of his due [against a] desire to prevent a slippery writer from impressing a polite form of extortion on an innocent producer." Hoyt, *supra* note 30, at 28 (quoting Benjamin Kaplan, *Implied Contract and the Law of Literary Property*, 42 CALIF. L. REV. 28 (Spring 1954)).

187. One study shows that there was a spike in *Desny* litigation within the Ninth Circuit after the ruling in *Grosso I* came down in 2004. DONALDSON, *supra* note 55, at 17; Paul Goldstein, *supra* note 23, at 15. As several entertainment law scholars remind us, "success has many fathers, but failure is an orphan." Schwartz et al., *supra* note 11, at 281, 283.

188. *Grosso II* serves as a sobering reminder of the difficulty prevailing on a *Desny* claim. Grosso v. Miramax Film Corp (*Grosso II*), No. B193872, 2007 WL 2585053, at *8–9 (Cal. Ct. App. Sept. 20, 2007). Despite a highly publicized victory on the preemption issue, the plaintiff ultimately lost the case for failing to meet his burden of showing that a valid implied contract in fact existed. *Id.*; DONALDSON, *supra* note 55, at 17. As the Second Circuit noted in *Forest Park II*, "[a] plaintiff must actually allege the elements of an enforceable contract (whether express or implied-in-fact), including offer, acceptance, and consideration, in addition to adequately alleging the defendant's breach of the contract." Forest Park Pictures v. Universal Television Network, Inc. (*Forest Park II*), 683 F.3d 424, 431 (2d Cir. 2012).

Because of this, an effective first step in mitigating the "floodgates" problem would be to raise awareness among writers about the essential elements of the *Desny* claim, as well as the relief it actually provides, with the objective of creating realistic expectations among screenwriters. This Section attempts to illustrate how creation of such realistic expectations can be achieved.[189]

First, this Section will elucidate various elements of the *Desny* cause of action for which the weight of the plaintiff's burden of proof tends to be the heaviest: mutual assent and breach. Next, it catalogues a number of (known) damage awards to illustrate that successful *Desny* claims generally entitle plaintiffs to only very modest awards. Ultimately, a dose of reality may succeed in keeping the floodgates closed and the volume of *Desny* claims at bay.

A. REALITY DOSE #1: MUTUAL ASSENT AND CONTRACT FORMATION

Under the common law, a plaintiff must prove the existence of an enforceable contract in order to prevail on a breach-of-contract claim. Contract formation consists of mutual assent and consideration. Because *Desny* claims involve allegations of an implied contract, as opposed to an express contract, litigation often turns on the issue of mutual assent—that is, does the conduct of the parties and the surrounding circumstances give rise to a plausible inference that the parties intended to contract with one another? In *Desny* claims, mutual assent manifests only after the screenwriter "has clearly conditioned the disclosure upon an obligation to pay, and the offeree, with knowledge of that duty, voluntarily accepted the information."[190] This requirement tends to create a great amount of friction during litigation.

Courts adjudicating *Desny* claims rely on a set of limited factors to indicate whether a plaintiff has met his burden of proving mutual assent. At a minimum, the plaintiff must demonstrate that the defendant had an opportunity to reject the plaintiff's submission before disclosure.[191] The occurrence of a formal business meeting or negotiation will increase a plaintiff's chances for a favorable ruling on mutual assent, as will a

189. Courts should take it upon themselves to send stronger, clearer messages about the factual requisites for a legally cognizable *Desny* claim. In addition, the WGA, which already acts as a centralized resource for screenwriters, is uniquely positioned to propagate the information that could help manage plaintiff expectations.

190. *Grosso II*, 2007 WL 2585053, at *6 (citing Desny v. Wilder, 46 Cal. 2d 715, 738–39 (1956)).

191. *See* Glen L. Kulik, *The Idea Submission Case: When is an Idea Protected Under California Law?*, 32 BEVERLY HILLS B. ASS'N J. 99, 107 (1998) (citing *Desny*, 46 Cal. 2d at 739).

defendant's solicitation of a pitch or submission.[192] In New York, "a studio or producer [who] is notified that a script is forthcoming and opens and reviews it when it arrives . . . has by custom implicitly promised to pay for the ideas if used."[193] Under no circumstance will a court entertain the argument that the defendant assented to the implied contract if the plaintiff blurted out the idea before the bargain was made.[194] Neither will a court rule in favor of the plaintiff whose only communication with the defendant was in mailing an unsolicited submission.[195] A plaintiff's "own expectation and understanding of custom in the industry" alone will not suffice.[196]

Because of the difficulties of proving mutual assent, some entertainment attorneys recommend that screenwriters keep a record of all correspondence with studios at critical junctures of idea exchanges.[197] A paper trail will not only keep track of what ideas were disclosed and when but will also memorialize the expectations of the parties during the pitching process.[198]

B. REALITY DOSE #2: BREACH OF THE *IMPLIED* CONTRACT

A *Desny* defendant breaches an implied contract when he *actually uses* the plaintiff's idea and subsequently fails to provide reasonable compensation. Plaintiffs typically prove "actual use" through circumstantial evidence of (1) defendant's access to the ideas and (2) similarity between the idea and the final product.[199] Proof of access requires more than the "bare possibility of viewing the plaintiff's work."[200] *Desny* claims alleging the occurrence of a formal pitch meeting will have little trouble meeting this requirement.

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192. *Id.*; Schwartz et al., *supra* note 11, at 281, 307. *See also* Gunther-Wahl Prods. v. Mattel, Inc., 104 Cal. App. 4th 27, 29–30 (2002) (finding mutual assent where defendant toy company met plaintiffs at a trade show, invited them to "come in and show Mattel what they were doing," and met with plaintiffs several times, resulting in the submission of three "properties" to Mattel).

193. Whitfield v. Lear, 751 F.2d 90, 93 (2d Cir. 1984). *See also* Schwartz et al., *supra* note 11, at 281, 307.

194. *See* Kulik, *supra* note 191, at 107 (citing Aliotti v. R. Dakin & Co., 831 F.2d 898, 903 (9th Cir. 1987)).

195. *See Grosso II*, 2007 WL 2585053, at *7 (finding no mutual assent where plaintiff mailed a screenplay to a third party intermediary on the assumption that the third party would forward the script to defendant, and the third party failed to forward the script as expected).

196. *Id.* at *7 (rejecting plaintiff's personal declaration as evidence of an implied contract).

197. *See* DONALDSON, *supra* note 55, at 19–20.

198. *See id.*

199. Schwartz et al., *supra* note 11, at 281, 310.

200. Mann v. Columbia Pictures Inc., 128 Cal. App. 3d 628, 636-37, 643, 651 (1982) (holding that there was insufficient evidence to support a factual inference of access where

Proving similarity tends to be a much more rigorous task, as most states now require a showing of "substantial similarity" before imposing liability.[201] Importantly, although this doctrine aligns with copyright in many respects, a court's finding of substantial similarity for the purposes of adjudicating a contract claim need not be limited to copyrightable elements,[202] even where the plaintiff submitted a full script.[203] Including ideas in the substantial similarity analysis does broaden the scope of liability as compared with copyright, but the plaintiff's burden of proving actual use nevertheless remains very hard to satisfy, even in meritorious cases. This is primarily due to the fact that scripts change significantly over the course of production; even if the screenwriter furnished the original idea that inspired the film or television project, the final product may no longer meet the requirements of substantial similarity.

The "independent creation" defense, similar to but not entirely coextensive with the independent creation defense in copyright law,[204] amplifies the plaintiff's burden of proving defendant's breach.[205] A paper trail of correspondence informing the screenwriter of similar projects already in the works or of other pitch presentations reflecting a similar idea, could help a defendant prevail on an "independent creation" theory.[206]

Increased awareness of these evidentiary burdens, which demonstrate why only a narrow category of plaintiffs will be able to prevail under a *Desny* claim, may help to prevent a "floodgates" scenario.

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plaintiff submitted a screenplay to a friend's neighbor's friend, who claimed to know someone at Columbia but failed to pass along the script).

201. *See* Benay v. Warner Bros. Entm't, Inc., 607 F.3d 620, 631 (9th Cir. 2010); NIMMER ON COPYRIGHT, *supra* note 18 § 19D.08[A].

202. Some argue that the standards for substantial similarity in a copyright infringement action should be equivalent to those in a breach-of-implied-contract claim. *See, e.g.*, Casido, *supra* note 27, at 329.

203. *See Benay*, 607 F.3d at 631–32 (citing Blaustein v. Burton, 9 Cal. App. 3d 161 (1970)) ("There is nothing unreasonable in the assumption that a producer would obligate himself to pay for the disclosure of an idea which he would otherwise be legally free to use, but which, in fact, he would be unable to use but for the disclosure.").

204. *See* THOMAS SELZ, MELVIN SIMENSKY, PATRICIA NASSIF ACTION & ROBERT LIND, ENTERTAINMENT LAW, THIRD EDITION § 15:6 (2009); Schwartz et al., *supra* note 11, at 281, 317.

205. *See* Schwartz et al., *supra* note 11, at 281, 317. *See also* Nadel v. Play-By-Play Toys & Novelties, Inc., 208 F.3d 368, 380 n.10 (2d Cir. 2000) ("[W]here there is an independent source for the idea, there may be no breach of contract.").

206. *See* DONALDSON, *supra* note 55, at 19.

C. REALITY DOSE #3: MODEST DAMAGE CALCULATIONS

Unrealistic expectations of high damage awards might also create a "floodgates" risk. Although very few *Desny* cases have been litigated all the way through to the damage assessment phase,[207] the limited statistics we do have suggest that even plaintiffs with strong cases tend to recover a mere fraction of the amount originally sought.

For example, in *Stanley*, a jury awarded $35,000 to a plaintiff for the studio's use of an idea for a radio show,[208] a small sum compared to the $100,000 originally claimed as a reimbursement.[209] In *Desny*, the plaintiff filed suit to recover "the reasonable value of his literary property," which he appraised at $150,000.[210] After the California Supreme Court ruled that there were sufficient legal grounds for the implied contract claim to proceed to trial, the parties settled for a mere $14,350 in damages.[211] More recently, in a case filed in New York regarding the alleged use of a screenwriter's script in developing the movie *The Truman Show*, the plaintiff sought $300 million in damages for breach of implied contract.[212] The case eventually settled out-of-court for an undisclosed amount, but scholars speculate that the settlement delivered closer to $1.2 million, which the studio had paid for a similar screenplay developed for the film.[213] Without more facts describing the courts' basis for calculating damages, the fairness of these figures is in dispute.

Since *Desny*, courts have measured damages in an idea submission case according to "the reasonable value of the ideas" submitted by plaintiff and subsequently used by the defendant.[214] However, this standard is wrought with uncertainty, which prevents prospective litigants from understanding the stakes of their claims with any modicum of accuracy.[215]

As an initial matter, the fact that the contract in the *Desny* claim is implied necessarily means that the value of the idea is determined ex post. Because

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207. *See* Schwartz et al., *supra* note 11, at 281, 290 (explaining that most cases are either dismissed or settled long before trial).

208. Stanley v. Columbia Broad. Sys., 35 Cal. 2d 653, 667 (1950).

209. *Id.* at 679 (Traynor, J., dissenting).

210. Hoyt, *supra* note 30, at 25.

211. *Id.* at 31–33.

212. Devine, *supra* note 23, at 358 (citing Second Complaint at 25-26, Dunn v. Paramount Pictures (S.D.N.Y. Apr. 2, 1999)).

213. *Id.* at 398.

214. Kulik, *supra* note 191, at 108–09 (citing Desny v. Wilder, 46 Cal. 2d 715, 744 (1956)).

215. *See id.* at 108 ("While [the 'reasonable value'] standard is easy to cite, it leaves many questions unanswered.").

the screenwriter and producer never reached an actual agreement for the sale of the idea, no contractual price terms are available. In addition, uncertainties remain, for example, as to whether "reasonable value" is to be determined from the perspective of the plaintiff or the defendant.[216] Furthermore, there is no clear doctrine governing the extent to which the loss of screen credit—arguably more valuable to a new writer than compensation from the sale of a script—should factor into a damage calculation.[217] Although most courts now recognize the effect that a loss of screen credit can have on the momentum of a screenwriter's career,[218] these damages are susceptible to an attack that the claims are too speculative or conjectural to afford recovery.[219]

The value of an idea remains exceedingly difficult to quantify, yet a couple cases on record have suggested some sort of methodology for calculating damages in contract-based idea submission cases. In *Donohue v. United Artists Corp.*, an idea submission case involving the television show *Sea Hunt* from the late 1950s, a California Superior Court upheld a damage award of $200,000—two dollars for each of the 100,000 times the series aired.[220] The court was ultimately persuaded by the testimony of defendant's Vice President, who explained that the studio frequently compensated idea creators with fixed, per-episode royalties.[221] Like other courts in idea submission cases, the *Donohue* court relied heavily on expert testimony[222] and adopted a flexible case-by-case approach that conformed to practices of the industry.[223]

In *Buchwald v. Paramount Pictures Corp.*, a California Superior Court elaborated the fact-based methodology prescribed in *Donohue* and provided a number of factors that should be taken into account when calculating or

216. *See id.* at 110–11.

217. *See* Kulik, *supra* note 191, at 111 ("California courts have danced around the issue, acknowledging to some extent that loss of screen credit (or loss of publicity) is compensable, but never directly saying as much in clear terms."). *See also* Schwartz et al., *supra* note 11, at 281, 292–93.

218. *See, e.g.*, Clemens v. Press Publ'g Co., 122 N.Y.S. 206, 207 (1910) ("The fact that [the writer] is permitted to have his work published under his name, . . . necessarily affects his reputation and standing and thus impairs or increases his future earning power."); Wellman v. Writers Guild of Am. W., Inc., 146 F.3d 666, 668 (9th Cir. 1998) ("In Hollywood, a screenwriter's name is his most coveted asset. Ordinarily a writer who contributes to a script can expect to see his name in the credits of the film.").

219. *See* Schwartz et al., *supra* note 11, at 281, 293 (recalling the "reasonably certain and specific" rule for damages under contract law).

220. Donohue v. United Artists Corp., 2 Cal. App. 3d 794, 804–05 (1969).

221. *Id.* at 804.

222. Kulik, *supra* note 191, at 109.

223. *Id.* at 108–09 (citing *Donohue*, 2 Cal. App. 3d at 804–05).

reviewing a damage reward.[224] Among those factors were: (1) the uniqueness of the concept, (2) the effect of the concept on the success of the movie, (3) the screenwriter's level of celebrity, and (4) the gross profits that the movie earned.[225] The court explained that its "task is to produce a fair and equitable result—neither a windfall to [the plaintiff] nor unjust enrichment for [the defendant]. . . . [T]he standard for an expert witness "is not mathematical exactness but only a reasonable approximation."[226]

In the end, management of plaintiff expectations will depend heavily on clarification on the issue of damages. Because courts have often relied on compensation customs to calculate damages in idea submission cases,[227] prospective plaintiffs should expect a court to use, as a starting point, a payment plan that the parties might reasonably have expected had the pitch presentation led to an agreement. For example, screenwriters who likely would have been hired for multiple rewrites might expect to receive five percent of the net profits of the film or television show.[228] Screenwriters subject to "one-step" deal-making might instead expect a fixed fee for their contribution to a film or television project.[229]

After settling on an initial compensation scheme, the *Buchwald* factors provide prospective plaintiffs with a crude checklist for determining which facts might also bear on the damage calculations.

Ultimately, equipped with a more realistic understanding of the evidentiary demands of *Desny* claims, screenwriters will be able to more effectively assess their likelihood of prevailing in litigation. Furthermore, with a better idea of damage calculation methodology, even prospective plaintiffs with strong cases can better determine whether they will be able to recover

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224. Buchwald v. Paramount Pictures Corp., No. 706083, 1992 WL 1462910, at *1–2, 4–5 (Cal. Sup. Ct. Mar. 16, 1992) (rejecting plaintiffs' "gun-to-the head" method for arriving at a cumulative fair market value of $6.2 million, as well as defendant's highly mathematical "regression analysis," which arrived at a value between $274,000–334,000, and instead using various factors to come up with a damage award of $750,000 for Bernheim and $150,000 for Buchwald).

225. *Id.* at *5. Scholars point out that amounts paid to other screenwriters for comparable contributions to similar projects, as well as whether that compensation is transferred as a fixed sum or in the form of royalties, can also be a helpful metric. *See* Schwartz et al., *supra* note 11, at 281, 290–91.

226. *Buchwald*, 1992 WL 1462910, at *4 (quoting Sheldon v. Metro-Goldwyn Pictures Corp., 309 U.S. 390, 408 (1940)).

227. *See* Stanley v. Columbia Broad. Sys., 35 Cal. 2d 653, 667 (1950) (affirming a jury verdict for $8,000 for the unauthorized use of a writer's idea for a radio program, based on an expert witness's testimony that it was customary in the radio industry to pay the author a certain percentage of production costs).

228. *See* LEWINSKI, *supra* note 51, at 110.

229. *See infra* Section IV.B.2; Verrier, *supra* note 168.

enough in damages to justify litigation. Combined, these efforts to educate plaintiffs will effectively combat the "floodgates" problem about which producers, courts, and other stakeholders are concerned.

VI. CONCLUSION

In many ways, *Forest Park* perfectly illustrates why *Desny* must remain available to screenwriters who fall victim to idea theft. Not only did Forest Park allegedly secure a formal pitch presentation after USA Network reviewed its written materials, but Forest Park also attended the meeting upon USA Network's own invitation.[230] Even more, the parties continued to negotiate for the purchase of the *Housecall* script more than a week after the pitch. Should the allegations ring true, Forest Park has a strong argument that an implied agreement did indeed exist between the parties. This was not a case of "blurt[ing] out [an] idea without having first made [a] bargain."[231] Preemption would destroy Forest Park's right to compensation pursuant to that agreement.

The continued viability of *Desny* claims is critical to budding screenwriters in the business of developing and pitching their ideas to producers in Hollywood, New York, and other entertainment markets. Where copyright law fails to provide adequate protection for the plots, characters, and themes that are vulnerable to theft from producers, contract law steps in. As Justice Schauer stated in *Desny v. Wilder*, "the law is dedicated to the proposition that for every wrong there is a remedy. . . . [T]o that end, the law of implied contracts assumes particular importance in literary idea and property controversies."[232] As long as power imbalances in the entertainment industry threaten the careers of aspiring screenwriters, courts should not subject *Desny* claims to preemption under § 301. After all, in a pitch, it's all they've got.

230. Forest Park Pictures v. Universal Television Network, Inc. (*Forest Park II*), 683 F.3d 424, 428 (2d Cir. 2012). Case law suggests that the pitch meeting invitation alone is enough to establish an enforceable implied contract to pay for the ideas embodied in the written materials. *See* Gunther-Wahl Prods. v. Mattel, Inc., 104 Cal. App. 4th 27, 36 (2002).

231. Desny v. Wilder, 46 Cal. 2d 715, 739 (1956).

232. *Id.* at 734.

NONCOMPETE CLAUSES: EMPLOYEE MOBILITY, INNOVATION ECOSYSTEMS, AND MULTINATIONAL R&D OFFSHORING

Grant R. Garber†

The business mantra of the twenty-first century—innovate or die—solemnly resonates amongst bedridden companies like AOL, MySpace, and Barnes & Noble.[1] In order to compete, companies need to be innovative, adaptable, and cognizant of game-changing technologies that stand to destabilize the pillars of incumbent firm success.[2] Yet spurring innovation[3] within an established corporation is difficult, and innovation remains a "hit-or-miss proposition with more misses than hits at most companies."[4] One response to this challenge has been to offshore innovation activities to emerging markets, where cost savings and access to a throng of skilled talent ideally increase a firm's ability to turn ideas into cash-generating products and services.[5] Indeed, as of 2010, 11% of North American companies spent a quarter of their research and development ("R&D") budget in emerging markets; this figure is expected to double by 2015.[6]

Although business innovation activities used to be concentrated in the United States, Europe, and Japan, the new rising powers of China, India, and Brazil are "encroaching on this 'bastion' of old powers."[7] As the global

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1. *Innovate or Die!*, FORBES (July 23, 2011, 3:05 PM), http://www.forbes.com/sites/thesba/2011/07/23/innovate-or-die/.

2. *Id.*

3. Throughout this Note, "innovation" refers to a corporation's ability to turn ideas into cash-generating commercial products and services. *See* Vinod Baya & Alan Radding, *Several Technologies Help Raise the Innovation Performance of Enterprises*, PRICEWATERHOUSECOOPERS LLP, http://www.pwc.com/us/en/technology-forecast/2011/issue2/features/powering-innovation-life-cycle.jhtml (last visited Jan. 22, 2013).

4. *Id.*

5. *Ideas Economy: (Brazil) Innovation*, THE ECONOMIST (May 10, 2012), *available at* http://www.economist.com/events-conferences/americas/brazil-innovation-2012.

6. Joe Light, *More Companies Plan to Put R&D Overseas*, WALL ST. J., Feb. 22, 2011, http://online.wsj.com/article/SB10001424052748703803904576152543358840066.html.

7. *How Business Innovation Power is Shifting to Brazil and India*, INSTITUTE OF DEVELOPMENT STUDIES (Oct. 24, 2012), http://www.ids.ac.uk/news/how-business-innovation-power-is-shifting-to-brazil-and-india; Rasmus Lema, Ruy Quadros, and Hubert Schmitz, *Shifts in Innovation Power to Brazil and India: Insights from the Auto and Software Industries*,

economy shifts towards Chinese, Indian, and Brazilian markets, new techniques and ideas are consequently emerging in these regions.[8] Locating innovation subsidiaries in emerging markets is still an infant phenomenon, but R&D subsidiaries are increasingly following manufacturing subsidiaries into emerging markets because firms stand to gain significant cost savings from utilizing the resources of these markets.[9] Moreover, these emerging markets may benefit because foreign R&D investments have simultaneously been found to cause technology spillovers[10] and positively promote regional economic growth.[11] As multinational firms continue to move R&D activities offshore, "China, India, and Brazil are becoming true centers of innovation and research."[12]

From a legal perspective, this new trend poses a number of challenges, particularly with regard to the protection of trade secrets in the high-technology sector.[13] In the high-tech sector, trade secrets are both highly valuable and hard to protect, especially because employees are becoming increasingly mobile, often leaving to work for competitor firms upon termination of their employment agreement.[14] There is thus a fear that when employees leave a firm, they will take trade secrets with them.[15]

INSTITUTE OF DEVELOPMENT STUDIES (Feb. 2012), http://www.ids.ac.uk/files/dmfile/RR73.pdf (last visited Jan. 22, 2013).

8. Jules Gray, *IDS Suggests Brazil and India Lead Way in Innovation*, THE NEW ECONOMY, *available at* http://www.theneweconomy.com/latest-news/brazil-and-india-lead-way-in-innovation (last visited Jan. 22, 2013).

9. Nicolai Pogrebnyakov and Jonas Kristensen, *Building Innovation Subsidiaries in Emerging Markets: The Experience of Novo Nordisk*, 54 RES. TECH. MGMT. J. 4, 30–37 (2011). Moreover, placing R&D activities next to manufacturing facilities yields considerable synergies, with some companies experiencing 30–40% improvements in their time to market. *See* Simon Longbottom, *Moving Your R&D Offshore*, LONDON BUSINESS SCHOOL (2006), *available at* http://bsr.london.edu/lbs-article/337/index.html (last visited Jan. 22, 2013).

10. The term "spillover" broadly refers to externalities of economic activity. However, throughout this Note the term "spillover" refers specifically to the diffusion of knowledge between firms in a region.

11. Chun-Chien Kuo & Chih-Hai Yang, *Knowledge Capital and Spillover on Regional Economic Growth: Evidence from China*, 19 CHINA ECON. REV. 4 (2009); Yan Zhang, Haiyang Li, Yu Li, & Li-An Zhou, *FDI Spillovers in an Emerging Market: The Role of Foreign Firms' Country Origin Diversity and Domestic Firms' Absorbitve Capacity*, 31 STRAT. MGMT. J. 969 (2010); Lei Zhu & Bang Nam Jeon, *International R&D Spillovers: Trade, FDI, and Information Technology as Spillover Channels*, 15 REV. OF INT'L. ECON. 955 (2007).

12. Light, *supra* note 6.

13. Donald Dowling, *Global HR Hot Topic—July 2012: Non-Competes and Other Restrictive Covenants in the Cross-Border Context*, WHITE & CASE LLP (July 2012), http://www.white case.com/hrhottopic-0712/.

14. *Id.*

15. *Id.*

Consequently, employee mobility is a source of friction for most companies harboring high-value trade secrets.[16]

To combat the growing threat of trade secret misappropriation, many companies require their employees to sign post-employment noncompetition agreements ("noncompetes") that restrict their ability to work for a competitor or to start their own firm.[17] These restrictive covenants are becoming common; however, their enforcement varies by jurisdiction, both internationally and domestically within the United States.[18] In implementing an enforcement regime, legislators must balance the competing interests of corporations seeking to protect trade secrets with the interests of employees in their freedom to work. However, balancing these interests has become increasingly controversial, especially in the midst of a global recession in which restricted employee mobility better serves corporations trying to fortify their intellectual property protection schemes while unrestricted mobility better serves employees trying to gain employment at firms with healthier growth trajectories.

Furthermore, a variety of reports over the past decade conclude that the inherent restriction of employee mobility associated with the enforcement of noncompete clauses negatively affects the development of innovation ecosystems.[19] While the concept of an innovation ecosystem is multidimensional and dynamic, such a system is typically characterized by a network of interconnected public and private institutions within an economic system that directly contributes to the development and diffusion of new technologies.[20] The focus on knowledge production is not isolated to research and the supply of science and technology, instead, the innovation ecosystem concept shifts attention "towards the whole process of innovation, in which research is only one element."[21] Other significant elements include private companies, universities, research institutions, venture capital organizations, and a functioning intellectual property regime.[22] The concept has gained popularity with policymakers over the past two decades and has been endorsed by a variety of agencies, including the

16. *Id.*

17. *Id.*

18. *Id.*

19. *Boosting Innovation: The Cluster Approach*, ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT (1999).

20. *Id.*

21. *The 'System of Innovation' Approach, and Its Relevance to Developing Countries*, SCIENCE AND DEVELOPMENT NETWORK (Apr. 1, 2005) http://www.scidev.net/en/policy-briefs/the-system-of-innovation-approach-and-its-relevanc.html.

22. *Id.*

Organisation for Economic Co-Operation and Development (OECD) and the World Bank.[23] Accordingly, nations around the world are working to foster such innovation systems within their borders.[24]

Given that there may be a negative correlation between enforcing noncompetes and the development of innovation ecosystems, some commentators argue that a region seeking to foster innovation should not enforce noncompetes. However, China, India, and Brazil—countries poised to be the world's future hubs of innovation—differ significantly in their enforcement of noncompetes. This Note posits that China, India, and Brazil—as emerging economies that have yet to attain the innovation capabilities of the West—are each in a similar position in which they must continue to attract multinational companies in order to potentially reap the benefits of technology spillovers. At the same time, these countries must also promote the freedom of their citizens to compete against these multinationals in order to construct a domestic innovation ecosystem. Therefore, simply prohibiting the enforcement of noncompete agreements may not produce the most advantageous noncompete enforcement regime in each nation.

While the enforcement regime of noncompetes is but one factor in an abstruse equation, it is a significant factor that bears consideration for any region aiming to stimulate an innovation ecosystem. This Note examines the innovation environments and noncompete enforcement regimes of the three nations in light of research concerning the effects of noncompete enforcement. Moreover, the Note seeks to contribute to the discussion regarding the enforcement of noncompetes and, in particular, proposes that the nonenforcement of these clauses may be detrimental to the development of innovation ecosystems in emerging markets.

I. CHINA, INDIA & BRAZIL: THE FUTURE OF TECHNOLOGY INNOVATION?

Over the last decade, "emerging economies have become fertile sources for creativity and disruptive business models."[25] China, India, and Brazil are no exception. Nonetheless, the three nations currently rank far below developed economies like the United States, Europe, and Japan with regard to their innovation capabilities.[26] Since one of the keys to long-term growth

23. *Id.*

24. *Id.*

25. *See Ideas Economy: (Brazil) Innovation*, *supra* note 5.

26. In 2012, China, India, and Brazil ranked thirty-fourth, sixty-fourth, and fifty-eighth, respectively. Soumitra Dutta, *The Global Innovation Index 2012*, INSEAD and WORLD

and economic wealth is indigenous innovation by a nation's domestic firms and its citizens, it is no surprise that China, India, and Brazil are striving to foster innovation ecosystems within their borders.[27] While this Note focuses on the role noncompete enforcement may have on promoting innovation in each nation, this Part introduces the innovation environments of China, India, and Brazil, highlighting government policies, foreign investment, current achievements, and future challenges with regard to the development of these systems within each nation.

A. CHINA

The People's Republic of China is the world's most populous nation and the world's second-largest economy in terms of nominal GDP.[28] It is also the world's fastest growing economy, with growth rates averaging 10% over the past thirty years.[29] However, China's growth is slowing; its energy and labor costs are rising, it is coated with pollution, and the government is "clearly unhappy with the long-term prospects of remaining 'factory to the world.' "[30]

INTELLECTUAL PROPERTY ORGANIZATION, http://www.globalinnovationindex.org/gii/main/fullreport/index.html (last visited Jan. 22, 2013).

27. Joshua Kurlantzick, *The Rise of Innovative State Capitalism*, BLOOMBERG BUSINESSWEEK (June 28, 2012), http://www.businessweek.com/articles/2012-06-28/the-rise-of-innovative-state-capitalism; *see also* Gary Shapiro, *Can China Eclipse the U.S. on Innovation?*, FORBES (July 11, 2012, 9:20 AM), http://www.forbes.com/sites/garyshapiro/2012/07/11/can-china-eclipse-the-u-s-on-innovation/; Roben Farzad, *Are the BRIC Nations Cracking?*, BLOOMBERG BUSINESSWEEK (June 26, 2012), http://www.businessweek.com/articles/2012-06-26/are-the-bric-nations-cracking#r=lr-fs.

28. *The World Factbook: China*, CENTRAL INTELLIGENCE AGENCY (Jan. 2, 2013), *available at* https://www.cia.gov/library/publications/the-world-factbook/geos/ch.html.

29. *Report for Selected Countries and Subjects*, WORLD ECONOMIC OUTLOOK DATABASE, INTERNATIONAL MONETARY FUND (2011), *available at* http://www.imf.org/external/pubs/ft/weo/2011/02/weodata/weorept.aspx?sy=1980&ey=2016&sort=country&ds=.&br=1&pr1.x=40&pr1.y=0&c=924&s=NGDP_RPCH%2CPPPPC&grp=0&a= (last visited Jan. 22, 2013).

30. *China's Five-Year Plan, Indigenous Innovation and Technology Transfers and Outsourcing*, UNITED STATES-CHINA ECONOMIC AND SECURITY REVIEW COMMISSION (June 15, 2011), *available at* http://www.uscc.gov/hearings/2011hearings/transcripts/11_06_15_trans/11_06_15_final_transcript.pdf, pg. 71; *see also* Bob Davis and Tom Orlik, *China's Growth Continues to Slow*, THE WALL ST. J. (Oct. 18, 2012, 8:53 AM), *available at* http://online.wsj.com/article/SB10000872396390444868204578063363516399122.html. The Article reports that growth

> in China's gross domestic product fell to 7.4% in the third quarter [of 2012] compared with a year earlier . . . down from 7.6% in the second quarter and the weakest since the beginning of 2009. The seventh consecutive deceleration reflected a combination of weak demand from abroad, flagging investment at home, and insufficient spending by China's households to pick up the slack.

Id.

Eager to dawn a new economic era, China has realized that it must foster its domestic science and technology sector in order to continue its rapid growth.[31] Accordingly, the nation has announced that it is determined to become an "innovation nation" and a world power in the science and technology field by the middle of the twenty-first century.[32]

This goal has been reiterated in the nation's twelfth Five-Year Plan ("FYP") (2011–2015), which states that China seeks to increase R&D as a percentage of GDP, realize 3.3 patents per 10,000 people, and provide more sophisticated education with an emphasis on scientific achievement by 2015.[33] Indeed, the U.S.-China Economic and Security Review Commission reports that "[s]cientific development and a move up the value chain sits at the heart of the 12th FYP."[34] In the plan, the Chinese government has endorsed the idea of modernizing the nation's industrial structure with advanced technologies that create more jobs and have higher added value.[35] The government is attentive to the nation's need to become indigenously innovate in order to sustain its growth and is aggressively pursuing policies that it hopes will encourage this innovation.

However, Chinese innovation is currently a "mixed bag."[36] For instance, the National Bureau of Asian Research reports that "Chinese companies lack core technology, depend on foreign companies for crucial parts, are at the lower end or the middle range of the global industrial chain, rely on multinational companies for technological support and rely on the global sales chain."[37] Critics further contend that although China's "sweat produces many of the world's goods, it is designers in Scandinavia and marketers in

31. *From Brawn to Brain*, THE ECONOMIST (Mar. 10, 2012), *available at* http://www.economist.com/node/21549938; *see also* John Foley, *Chinese Reforms Could Trigger Domino Effect*, THOMSON REUTERS (Nov. 5, 2012), *available at* http://blogs.reuters.com/breakingviews/2012/11/05/chinese-reforms-could-trigger-domino-effect/.

32. Yang Lei, *China Sets Goal for Developing Science, Technology in 15 Years*, GOV.CN (Feb. 9, 2006), http://www.gov.cn/english/2006-02/09/content_183774.htm.

33. Joseph Casey and Katherine Koleski, *Backgrounder: China's 12th Five-Year Plan*, U.S.-CHINA ECONOMIC & SECURITY REVIEW COMMISSION 1, 8 (June 24, 2011), http://www.uscc.gov/researchpapers/2011/12th-FiveYearPlan_062811.pdf.

34. *Id.*

35. Ren Xianfang, *New Five-year Plan a Shift to Quality*, CHINA DAILY (Mar. 11, 2011, 10:25 AM), *available at* http://europe.chinadaily.com.cn/epaper/2011-03/11/content_12155002.htm.

36. *See supra* note 31.

37. Richard Suttmeier, Xiangkui Yao, and Alex Zixiang Tan, *China's Post-WTO Technology Policy: Standards, Software, and the Changing Nature of Techno-Nationalism*, NATIONAL BUREAU OF ASIAN RESEARCH (May 2004), *available at* http://www.nbr.org/publications/issue.aspx?id=61; *see also China's Five-Year Plan, Indigenous Innovation and Technology Transfers and Outsourcing*, *supra* note 30, at 72.

California who create and capture most of the value from those products."[38] Nonetheless, the nation has shown a talent for process innovation, and Internet startups like Alibaba[39] and Tencent[40] "have had a genius for copying Western business models and adapting them to the Chinese market."[41]

Moreover, companies like Huawei[42], Lenovo,[43] and BYD[44] demonstrate that Chinese companies are capable of creating innovative, novel products, and services.[45] Yet commentators argue that this domestic innovation "is being strongly accelerated by China's effective policy of acquiring technology through joint ventures with U.S. corporations."[46] Since U.S. corporations are increasingly locating their R&D in China, "Chinese exports have acquired a competitive edge that would take much longer to produce by the actual development of superior productivity or might not occur at all."[47] It is thus no surprise that the nation strongly encourages multinational corporations to create R&D centers within its borders.

However, China's path to becoming a self-sustaining innovation hub is rife with challenges. For example, the nation's twelfth FYP has received considerable scrutiny from abroad. Critics write that the Chinese "government thinks it can foster [indigenous innovation] by subsidising

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38. *From Brawn to Brain*, *supra* note 31.

39. *Company Overview*, ALIBABA GROUP, http://news.alibaba.com/specials/about alibaba/aligroup/index.html (last visited Feb. 23, 2013).

40. Margaret Rhodes, *For Fueling China's Internet Boom—And Boldly Moving West*, FAST COMPANY, http://www.fastcompany.com/most-innovative-companies/2012/tencent (last visited Feb. 23, 2013).

41. *From Brawn to Brain*, *supra* note 31.

42. *Huawei Receives Innovation Awards for Contributions to CDMA Development*, HUAWEI (June 17, 2011), http://www.huawei.com/ilink/en/about-huawei/newsroom/press-release/archive/HW_093167?KeyTemps=CDMA,Award,Guangzhou.

43. *The World's 50 Most Innovative Companies: Top 10 China*, FAST COMPANY, *available at* http://www.fastcompany.com/most-innovative-companies/2012/industry/china (last visited Jan. 22, 2013). ("China's top-selling PC maker continuously outpaces its competition in speed, quality, and innovation (it unveiled the first-ever eye-controlled laptop in 2011).").

44. *Id.* For instance:

> The ever-innovative Chinese automobile company created the world's first purely electric bus. BYD's e-BUS 12 releases zero emissions, can go for more than 150 miles on a single charge, and uses solar panels located on the roof to convert solar energy into electricity. The buses have been tested in China, Southeast Asia, and Europe; Hertz car rentals will use the buses to transport passengers at LAX.

Id.

45. *Id.*

46. *China's Five-Year Plan, Indigenous Innovation and Technology Transfers and Outsourcing*, *supra* note 30, at 109.

47. *Id.*

'strategic' industries and strong-arming foreign firms to transfer intellectual property to budding national champions."[48] The complaint is not new and stems from sophisticated regulations of foreign investment during the 1990s through which access to the Chinese market was traded for technology transfer.[49] In 2011, China actually cut three of its indigenous innovation policies after major technology firms complained that they discriminated unfairly against foreign firms.[50] In contrast, domestic firms contend that "foreign firms 'crowd out' domestic firms in the market for highly skilled labor, monopolize technology standards, and thwart technology transfer and knowledge spillovers."[51] From a cultural perspective, Thomas Friedman argues that the "biggest thing preventing modern China from becoming an innovative society . . . is that it remains a very low-trust society."[52] Theoretically, a society can foster innovation only when its citizens trust one another to share ideas without the fear of having those ideas or subsequent creations stolen.[53] Corruption and a globally infamous reputation for IP theft will also prove problematic in encouraging foreign investment in R&D.[54]

Furthermore, the nation has been pouring billions of dollars into R&D in order to stimulate indigenous innovation, yet the OECD reports that much of this investment is wasted on development and not research.[55] China's state

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48. *From Brawn to Brain*, *supra* note 31.

49. *Technology Transfer to China*, U.S. DEPARTMENT OF COMMERCE, http://www.bis.doc.gov/defenseindustrialbaseprograms/osies/defmarketresearchrpts/techtransfer2prc.html (last visited Feb. 23, 2013).

50. William Pentland, *China Pulls Back Indigenous Innovation Policies*, FORBES (July 3, 2011), http://www.forbes.com/sites/williampentland/2011/07/03/china-pulls-back-indigenous-innovation-policies/.

51. *China's Five-Year Plan, Indigenous Innovation and Technology Transfers and Outsourcing*, *supra* note 30, at 72.

52. Thomas Friedman, *In China We (Don't) Trust*, N.Y. TIMES (Sept. 11, 2012), *available at* http://www.nytimes.com/2012/09/12/opinion/friedman-in-china-we-dont-trust.html?_r=0.

53. *Id.*

54. *China: Intellectual Property Infringement, Indigenous Innovation Policies, and Frameworks for Measuring the Effects of the U.S. Economy*, U.S. INT'L TRADE COMM'N (2010), http://www.usitc.gov/publications/332/pub4199.pdf.

55. *From Brawn to Brain*, *supra* note 31; *see also China: Intellectual Property Infringement, Indigenous Innovation Policies, and Frameworks for Measuring the Effects of the U.S. Economy*, *supra* note 54.

> China is implementing indigenous innovation policies . . . . These policies . . . aim to achieve several long-term goals . . . [including] building domestic research and development (R&D) capabilities to facilitate Chinese firms' innovative capacity, limiting dependence on foreign technology and companies, and generally increasing the value that domestic companies add to China's economy. The indigenous innovation

owned enterprises ("SOEs"), which as of 2011 accounted for about 50% of the nation's GDP, may also prove troublesome.[56] While China is no longer a centrally planned economy, the dominance of state-owned enterprises arguably does not aid innovation because SOEs are sheltered from competition, which likely reduces incentives to be creative.[57] Yet proponents of state capitalism debate that it is a mistake to underestimate the innovative potential of SOEs, citing examples in India and Brazil in which the government promoted innovation in targeted sectors of the economy, producing world-class companies in the process.[58] Nevertheless, the influence of China's SOEs will likely affect the country's ability to develop domestic innovation because they harm both foreign and domestic private firms, which are perceived as an essential element of innovation ecosystems.[59]

Despite these challenges, KPMG's *Global Tech Innovation Survey 2012* found that a plurality (45%) of global executives polled believe China will be the next technology innovation center of the world by 2016, dethroning Silicon Valley.[60] While many remain skeptical, the past few decades have proven that China moves quickly and collectively to achieve the goals set in each of its FYPs, thus a domestically innovative China may be materializing on the horizon.

B. INDIA

The Republic of India is the second most populous country in the world and has the tenth-largest economy by nominal GDP.[61] Like China, it has one of the world's fastest growing economies—fueled by a rising consumer class, growing labor force, increased education levels, and significant foreign investments.[62] Although the nation has distinguished itself as a strong

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> 'web of policies' is expected to make it difficult for foreign companies to compete on a level playing field in China.

Id.

56. Bob Davis, *Just How Powerful Are China's State-Owned Firms?*, WALL ST. J. (Oct. 26, 2011, 10:15 PM), http://blogs.wsj.com/chinarealtime/2011/10/26/just-how-powerful-are-chinas-state-owned-firms/.

57. Foley, *supra* note 31.

58. Kurlantzick, *supra* note 27.

59. *Not Just Tilting at Windmills*, THE ECONOMIST (Oct. 6, 2012), *available at* http://www.economist.com/node/21564235.

60. *China to Overtake Silicon Valley, Claims Report*, WALL ST. J. (June 27, 2012, 3:06 PM), http://blogs.wsj.com/chinarealtime/2012/06/27/china-to-over-take-silicon-valley-claims-report/; *see also* Shapiro, *supra* note 27.

61. *The World Factbook: India*, CENT. INTELLIGENCE AGENCY (Jan. 2, 2013), *available at* https://www.cia.gov/library/publications/the-world-factbook/geos/in.html.

62. *Id.*

destination for outsourcing, India is also gaining attention as a center for innovation.[63] The Indian government has prioritized domestic innovation, creating organizations and implementing a variety of policies designed to galvanize innovation within the nation.[64] Although small domestic firms are currently conducting novel research and developing new products, "the key driver of R&D activity in [India] is large multinationals."[65] Indeed, approximately half of the world's largest R&D spenders have centers in India.[66] Despite the government's efforts and foreign investments, India currently ranks far behind China on the 2012 Global Innovation Index.[67]

The Indian government has declared the years from 2010 to 2020 as the "Decade of Innovations."[68] The main aim of "this declaration is to develop an innovation eco-system in the country to stimulate innovations and to produce solutions" for society, particularly with regard to healthcare, energy, urban infrastructure, water, and transportation.[69] The Ministry of Science and Technology promotes innovation through various schemes, including technology business incubators, research initiatives, and entrepreneurial programs.[70] In addition, the government's Cluster Innovation Centre specifically seeks to redefine India's innovation paradigm beyond R&D and is focused on building twenty innovation clusters across the country that will support the national innovation agenda.[71]

Moreover, proponents of India's current innovation capabilities claim that the nation "has contributed significantly to innovation around the world, but in a distinctly invisible way—the contributions of India and Indians are encapsulated in millions of well-known products, but an Indian company name is not on any labels."[72] It is true that India has developed a highly

63. *India Innovation*, BLOOMBERG EXCHANGE, http://bx.businessweek.com/india-innovation/ (last visited Jan. 22, 2013).

64. *India Innovation Portal*, GOV'T OF INDIA NAT'L INNOVATION COUNCIL, *available at* http://innovation.gov.in/innovation/fetchAllHomeItems.action (last accessed Jan. 22, 2013).

65. Shilpa Kannan, *R&D Gives India Its Big Boost in the Tech World*, BBC NEWS (June 6, 2012, 7:03 PM), http://www.bbc.co.uk/news/business-18330837.

66. *Id.*

67. Dutta, *supra* note 26.

68. Lok Sabha, *Decade of Innovation Press Release*, MINISTRY OF SCI. & TECH. (Mar. 10, 2010), http://www.dst.gov.in/whats_new/press-release10/pib_10-3-2010.htm.

69. *Id.*

70. *Id.*

71. *Decades of Innovation: 2010–2012 Roadmap*, CLUSTER INNOVATION CTR., *available at* http://innovation.gov.in/innovation/inntoolkit/Cluster%20Innovation%20Centre/CIC.html (last visited Feb. 20, 2013).

72. Nirmalya Kumar and Phanish Puranam, *India Inside: The Emerging Innovation Challenge to the West*, HARVARD BUS. REV. PRESS (2012).

skilled technical competency, but foreign multinationals are capturing much of the value of this workforce.[73] Nonetheless, "multinational corporations are helping the Indian cause by building R&D centers there . . . [which] should have the effect of seeding R&D work in India, as those who participated at the lowest levels grow into mature scientists and entrepreneurs who start their own companies—inside India."[74]

Indeed, India is currently producing visible contributions to worldwide innovation through distinctly Indian companies.[75] For example, Tata Motors revolutionized the global automobile market with its Tata Nano, a small passenger vehicle available to the nation's burgeoning consumer market for a mere USD $2,500.[76] Narayana Hrudayalaya Hospitals is also being heralded for its innovative methods of bringing medical care to the masses; the company now treats minor illnesses at patients' homes to avoid crowding hospitals, and its operational efficiencies have reduced the cost of an open-heart surgery at one of its cardiac centers to less than USD $2,000.[77] Both Tata Motors and Narayana Hrudayalaya Hospitals have taken advantage of opportunities within India for low-cost innovation.[78]

These opportunities have been created by the nation's rapid expansion which, in addition to many positive externalities, also resulted in vast income gaps, overpopulation, widespread corruption, and poor access to education and healthcare.[79] Consequently, advocates promoting innovation within India believe that domestic firms should focus on reverse innovation—innovation that is adopted first in the developing world.[80] The fundamental driver of reverse innovation is the "income gap that exists between emerging markets

73. Shilpa Kannan, *R&D Gives India Its Big Boost in the Tech World*, BBC NEWS (June 6, 2012), *available at* http://www.bbc.co.uk/news/business-18330837.

74. Kumar and Puranam, *supra* note 72.

75. *The World's 50 Most Innovative Companies*, FAST COMPANY, *available at* http://www.fastcompany.com/most-innovative-companies/2012/industry/india (last visited Jan. 24, 2013).

76. *Top 10 India*, FAST COMPANY, *available at* http://www.fastcompany.com/most-innovative-companies/2012/industry/india (last visited Jan. 24, 2013).

77. Chuck Salter, *For Bringing Medical Care to the Masses*, FAST COMPANY, *available at* http://www.fastcompany.com/most-innovative-companies/2012/narayana-hrudayalaya-hospitals (last visited Jan. 24, 2013).

78. Jennifer Chu, *Building Innovation in India*, MIT (Sept. 26, 2011), *available at* http://web.mit.edu/newsoffice/2011/india-conference-0927.html.

79. *Id.*

80. *Vijay Govindarajan: How Reverse Innovation Can Change the World*, INDIA KNOWLEDGE@WHARTON (Mar. 29, 2012), *available at* http://knowledge.wharton.upenn.edu/india/article.cfm?articleid=4678.

and developed countries."[81] For example, Western solutions for polluted water, agriculture, overpopulation, access to education, and affordable healthcare are not necessarily applicable in a growing nation of over a billion people. There is thus an opportunity for domestic firms to innovate for India.[82] However, critics argue that reverse innovation is not cutting-edge like the types of products and services coming from Silicon Valley, but instead is an application of technology to meet consumer needs specific to India.[83]

Despite these opportunities, the nation will have many hurdles to overcome as it aims to enhance its innovation capability, including weak intellectual property protection regimes, low domestic consumption levels, a limited education system, and low levels of venture capital activity.[84] However, one of the largest challenges confronting India's growth and domestic innovation potential is the nation's slowing economy. While India faces an economic challenge similar to China, the nation has few solutions to rebound from an economic growth rate that is creeping along at its slowest pace in nine years.[85] With inflation at 7.6%, a rupee that is tumbling against the dollar, and government debt at an estimated 67.6% of GDP, foreign analysts are forecasting the nation is without "fiscal ammo" that would otherwise protect it from having to endure a slowdown.[86] Accordingly, the threat of a severe slowdown further underscores the nation's need to become domestically innovative.

Many are skeptical of India's potential for becoming an innovation hub in the near future. Moreover, critics believe India's limitations lie not in its technical capabilities, but in its government officials.[87] Others note, however, that the nation's innovation ecosystem has vastly improved and that the "ingenuity and innovativeness of India is all around us, and if we can channel

81. Vijay Govindarajan, *The $2,000 Car*, HARVARD BUS. REV. (Mar. 12, 2012 10:26 AM), http://blogs.hbr.org/cs/2012/03/the_2000_car.html.

82. *Govindarajan: How Reverse Innovation Can Change the World*, *supra* note 80.

83. Rishikesha Krishnan, *Silicon Valley to India: Build an Innovation Ecosystem and Good Things Will Come*, IVEY BUS. J. (2011), *available at* http://www.iveybusinessjournal.com/topics/innovation/silicon-valley-to-india-build-an-innovation-ecosystem-and-good-things-will-come#.UNZvm280WSo.

84. Kumar and Puranam, *supra* note 72.

85. Amol Sharma and Bob Davis, *China, India Grapple with Growth Challenges*, WALL ST. J. (July 8, 2012, 9:55 PM), http://online.wsj.com/article/SB10001424052702304058404577496443063859250.html

86. *Id.*

87. Kumar and Puranam, *supra* note 72.

that so it becomes repeatable, reliable, scalable, we may see India develop into a global innovation engine. But this will take time."[88]

C. BRAZIL

Brazil is the largest economy in Latin American, the sixth largest in the world, and the fifth most populous nation.[89] The nation's technology sector is abuzz, attracting "venture capital funds to invest in local startups and luring foreign firms to its growing market."[90] Its web and mobile startup ecosystem is booming and a bevy of foreign entrepreneurs and investors—Americans, Germans, Spaniards—are looking for opportunities to make money in Brazil.[91] The main attraction for investors is a booming consumer market; the nation already spends $13 billion a year online with just 40% of the country using the Internet.[92] Indeed, Brazil "now boasts the second highest number of Facebook users after the United States."[93] Accordingly, the Economic Commission for Latin American and the Caribbean ("ECLAC") reported that "Brazil is the only country [in Latin America] that has positioned itself as a prime location for . . . transnationals seeking to internationalize their R&D activities."[94] Nonetheless, domestic innovation within Brazil is still incipient.[95]

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88. Seema Singh, *Philips Wakes Up to Reverse Innovation*, FORBES (May 12, 2012), http://forbesindia.com/blog/technology/philips-wakes-up-to-reverse-innovation/; Seema Singh, *Science's Second Coming to India*, FORBES (Mar. 3, 2012), http://forbesindia.com/article/innovation-special/sciences-second-coming-to-india/32308/1.

89. *The World Factbook: Brazil*, CENTRAL INTELLIGENCE AGENCY (Jan. 18, 2013), https://www.cia.gov/library/publications/the-world-factbook/geos/br.html.

90. Shasta Darlington, *'Geeks on a Plane' Flock to Brazil*, CNN (May 22, 2012), http://articles.cnn.com/2012-05-22/tech/tech_innovation_geeks-plane-brazil_1_brazilian-economy-tech-companies-local-startups?_s=PM:TECH.

91. Katie Fehrenbacher, *10 Things to Know About Tech Startups in Brazil*, GIGAOM (May 17, 2012), *available at* http://gigaom.com/2012/05/17/10-things-to-know-about-tech-start ups-in-brazil/.

92. *Brazil Tech Sector Aims Higher After Instagram*, THOMSON REUTERS (Apr. 23, 2012, 1:31 PM), http://www.reuters.com/article/2012/04/23/internet-brazil-idUSL2E8FJG9W 20120423.

93. Darlington, *supra* note 90.

94. Álvaro Calderón, Miguel Pérez Ludeña, and Sebastián Vergara, *Foreign Direct Investment in Latin America and the Caribbean*, ECON. COMM'N FOR LATIN AMERICA AND THE CARIBBEAN (2011), http://www.eclac.cl/publicaciones/xml/2/46572/2012-182-LIEI-WEB.pdf.

95. *Innovation Promotion in Brazil*, WORLD INTELLECTUAL PROPERTY ORGANIZATION (Sept. 2010), *available at* http://www.wipo.int/wipo_magazine/en/2010/05/article_0005.html; *Innovation in Brazil*, BRITISH EMBASSY BRASILIA, http://ukinbrazil.fco.gov.uk/en/about-us/working-with-brazil/science-innovation/innovation-in-brazil/ (last visited Jan. 24, 2013).

In January of 2012, Brazil's newly appointed minister of science, technology, and innovation commented that "[i]innovation is not an option, it is imperative . . . . The future of [Brazil] depends on this creative effort."[96] In April of 2012, Secretary of State Hillary Clinton launched the Accelerating Market-Driven Partnerships ("AMP") initiative to promote investment in innovation in Brazil and to identify critical elements necessary to foster "the development of entrepreneurship and innovation ecosystems."[97] Throughout Brazil, important governmental and private-sector initiatives "are sprouting up, creating fresh opportunities to incubate the next generation of innovators and entrepreneurs."[98] Moreover, the Brazilian government has

> underscored that to truly succeed as an international competitor the 'complexity of the entire innovation paradigm' requires governments to adopt a more holistic approach to public policy. That means increasing capital and labor mobility, public and private sector cooperation . . . [and that] support for the development of only science and technology, is not sufficient to create a virtuous circle of innovation.[99]

Like China and India, Brazil is attentive to its need to become domestically innovative and is promoting policies to develop innovation systems within its borders, particularly those that promote the private sector's ability to increase human capital and generate goods with higher-added value.[100]

These policies are attracting the attention of both foreign nations and corporations. According to Secretary Clinton, in 2011 trade between the United States and Brazil reached approximately $75 billion, "with much of that in sectors driving innovation."[101] The same year, China invested $4.5

96. Luisa Massarani, *Innovation is 'Imperative,' Says Brazil Science Minister*, NATURE (Jan. 25, 2012), *available at* http://www.nature.com/news/innovation-is-imperative-says-brazil-science-minister-1.9903.

97. *Secretary Clinton Announces Launch of New Partnership to Drive Investment in Innovation*, U.S. DEPARTMENT OF STATE (Apr. 27, 2012), http://www.state.gov/r/pa/prs/ps/2012/04/188848.htm.

98. *Ideas Economy: (Brazil) Innovation*, *supra* note 5.

99. Ricardo Sennes, *Innovation in Brazil: Public Policies and Business Strategies*, WOODROW WILSON INTERNATIONAL CENTER FOR SCHOLARS 1, 11 (2009), http://www.wilsoncenter.org/sites/default/files/Innovation%20Public%20Private%20Strategies%20English.pdf (last visited Feb. 22, 2013).

100. *Id.* at 25.

101. Andrew Rogers, *US Delegation to Discuss Support for Innovation Ecosystem*, BUS. NEWS AMERICAS USA (Apr. 17, 2012), http://www.bnamericas.com/news/technology/us-delegation-to-discuss-support-for-innovation-ecosystem.

billion in Brazil's technology sector.[102] Microsoft has already opened three of its Advanced Technology Laboratories in the nation and has plans to invest $100 million in a fourth laboratory that will specifically house the Bing search engine and a business accelerator for fifteen startups.[103] Cisco is planning strategic investments of over $546 million to foster innovation and create a platform for high-tech entrepreneurship in Brazil.[104] IBM and GE already have research centers in Rio; Intel is en route.[105] Globally, 5% of the world's R&D projects flowed into Brazil in 2011.[106] More importantly, Western corporate R&D centers are reportedly "yielding substantial positive local impacts in terms of technology transfer, production capacity building and innovation [in Brazil]."[107] The continuation of this trend is exactly what Brazil needs to develop its domestic innovative capabilities.

Indeed, as foreign corporations and governments invest in Brazil's technology sector, some of the nation's firms are already making international headlines for their innovative capabilities. For example, in 2012 two Brazilian companies were ranked among the fifty most innovative companies in the world: Bug Agentes Biológicos,[108] which mass-produces wasps to combat threats to agricultural production; and Boo-box,[109] a novel advertising and social media player.[110] São Paulo is ground zero for Brazil's tech sector, but Recife, Campinas, and Belo Horizonte have become smaller startup hubs.[111]

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102. *China Invests $12.67 billion in Brazil*, ECON. TIMES (July 5, 2011, 5:16 PM), http://articles.economictimes.indiatimes.com/2011-07-05/news/29738779_1_brazil-accounts-chinese-investment-brazil-s-ministry.

103. *Microsoft to Invest in Brazil*, YAHOO! FINANCE (Nov. 9, 2012, 1:59 PM), http://finance.yahoo.com/news/microsoft-invest-brazil-185912815.html.

104. *Cisco Announces Strategic Investments in Brazil to Foster Innovation, Transformation and Socio-Economic Development*, CISCO (Apr. 2, 2012), http://newsroom.cisco.com/press-release-content?type=webcontent&articleId=776598.

105. *Microsoft to Invest in Brazil* , *supra* note 103.

106. Calderón, Ludeña, and Vergara, *supra* note 94, at 45.

107. *Id.*

108. David Lidsky, *Bug Agentes Biológicos*, FAST COMPANY, http://www.fastcompany.com/most-innovative-companies/2012/bug-agentes-biologicos (last visited Feb. 22, 2013); *see also A Empresa*, BUG AGENTES BIOLÓGICOS, http://www.bugbrasil.com.br/empresa.asp (last visited Feb. 22, 2013).

109. *Sobre a boo-box*, BOO-BOX, http://boo-box.com/site/home/institutional (last visited Feb. 22, 2013).

110. Ricardo Geromel, *Brazil's Top 10 Most Innovative Companies*, FORBES (Feb. 21, 2012), http://www.forbes.com/sites/ricardogeromel/2012/02/21/brazils-top-10-most-innovative-companies/.

111. Fehrenbacher, *supra* note 91.

Since 2003, over 30 million Brazilians have been lifted out of poverty, yet the nation still has many economic and societal issues to overcome.[112] Like other developing nations, poor access to healthcare and education, inadequate infrastructure, and crime make doing business in Brazil difficult.[113] The nation also has a high tax rate in which it is not uncommon for a company to pay 100% in taxes on employee salaries and revenues. [114] All employees also have to be members of unions.[115] Furthermore, granting equity to new members of tech companies is legally very complicated, thus it is uncommon. [116] Consequently, a blockbuster exit like the PayPal acquisition will not create a wave of angel investors that can seed venture capital organizations.[117]

Like China, Brazil's state-backed companies may also affect competitiveness within the nation, depending on their influence.[118] Brazil, however, "is perhaps the best current example of how a state-capitalist system can build innovative industries."[119] For example, Brazil has created internationally competitive firms in a range of high-tech industries by supporting certain industries when private capital was scarce.[120] Today, many of Brazil's state-backed companies have faired the global recession far better than multinationals because they can rely on government assistance.[121] Nonetheless, the nation is struggling as it strives to maintain growth and economists are reiterating that "[i]nnovation is an urgent matter in Brazil."[122]

Although Brazil will have many challenges to overcome as it attempts to build innovation ecosystems, the nation is starting to draw some of the world's attention away from China and India. However, some warn that Brazil's incipient startup ecosystem is growing too fast and evidences an impending bubble.[123]

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112. *The World Factbook: Brazil*, CENTRAL INTELLIGENCE AGENCY (Feb. 20, 2013), https://www.cia.gov/library/publications/the-world-factbook/geos/br.html.

113. *Id.*

114. Fehrenbacher, *supra* note 91.

115. *Id.*

116. *Id.*

117. *Id.*

118. *Id.*

119. Kurlantzick, *supra* note 27.

120. *Id.*

121. *Id.*

122. Vinod Sreeharsha, *Brazil Steps Up Investment in Overlooked Tech Start-Ups*, N.Y. TIMES (Dec. 5, 2012, 5:49 PM), http://dealbook.nytimes.com/2012/12/05/brazil-steps-up-investments-in-overlooked-tech-start-ups/.

123. Fehrenbacher, *supra* note 91.

II. THE HISTORY, ENFORCEMENT, AND SIGNIFICANCE OF NONCOMPETES

China, India, and Brazil will most likely need to increase their innovation capabilities by promoting domestic innovation in order to advance their economic development. While numerous factors contribute to the development of an innovation ecosystem, the remaining portions of this Note examine the role noncompete agreements may play in the development of these ecosystems within China, India, and Brazil. Section II.A, *infra*, provides an overview of noncompetes and the controversy surrounding their enforcement; Section II.B, *infra*, describes how noncompetes are enforced; and Section II.C, *infra*, synthesizes research regarding the effects of enforcing noncompetes within the high-technology sector.

A. OVERVIEW OF NONCOMPETE CLAUSES

Common types of restrictions against employees include noncompetition covenants, non-solicitation covenants, non-dealing covenants, non-poaching covenants, and garden leave clauses.[124] An employment-context covenant not to compete is a clause in an employment contract that expressly forbids an employee from competing with their employer upon termination.[125] Noncompetes are but one tool in an arsenal of intellectual property protections that corporations wield to safeguard their intangible property.[126] However, unlike patents or nondisclosure agreements, noncompetes do not aim to protect specific information.[127] Instead, they are largely designed to protect general knowledge and experience—gained by a former employee—from being utilized to advance competitor interests.[128]

Dating back to 1414 England, restraints on trade were perceived as unenforceable.[129] However, by the nineteenth century the fall of guilds and the Industrial Revolution gave rise to the concept of trade secrets.[130] As companies consequently sought ways to protect this form of intellectual property, courts "were compelled to reconcile the perceived demands of

124. Gaurav Sharma, *Garden Leave Clause: Restrictive Covenant in Employment Contracts (with Special Reference to its Applicability in India)*, NATIONAL LAW UNIVERSITY, 5 (2012), *available at* http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2141186.

125. *Id.*

126. *Id.*

127. Martha Lagace, *The Power of the Noncompete Clause*, HARVARD BUS. SCH. (Feb. 26, 2007), http://hbswk.hbs.edu/item/5628.html.

128. *Id.*

129. Matt Marx, Deborah Strumsky, & Lee Fleming, *Mobility, Skills, and the Michigan Experiment*, 55 J. MGMT. SCI. 6, 875, 876 (2009).

130. *Id.*

industrialization with the ideology of freedom of contract and the realities of factory work, and the corporate control of ideas with the ideology of free labor."[131] The law of restrictive covenants was thus adapted to prevent employees from using workplace knowledge.[132] Today, noncompetes are widely enforced, primarily justified as a reasonable means to protect trade secrets.[133]

Conceptually, noncompetes balance the opposing interests of employers and employees. Employers perceive noncompetes as valuable because they are a means to protect intangible investments in employees.[134] In contrast, employees disfavor noncompetes because they limit an employee's ability to pursue various opportunities upon both voluntary and involuntarily termination.[135] Policymakers enforce noncompetes to the extent that these interests are balanced in a manner that is perceived fair to both parties.[136] However, the doctrine is imperfect and critics argue that noncompetes encapsulate the collision of employee freedom with corporate control of intellectual property.[137]

Noncompetes have become increasingly controversial because the competing interests these devices balance have appreciated due to poor economic conditions, increased employee mobility, and the increasing value of trade secrets.[138] Primarily, opponents of noncompetes claim that noncompetes unfairly burden employees and allot employers too much bargaining power.[139] For example, in jurisdictions where noncompetes are more stringently enforced, employees risk having to take career detours or relocate in order to gain employment that is not in violation of their noncompete agreement.[140] Proponents nonetheless argue that noncompetes

131. Catherine Fisk, *Working Knowledge: Trade Secrets, Restrictive Covenants in Employment, and the Rise of Corporate Intellectual Property, 1800–1920*, 52 HASTINGS L. J. 2, 534 (2001).

132. *Id.*

133. *Id.*

134. Jacquelyn Gutc, *Non-compete Agreements May Restrict Employees' Mobility, But Experts Say They Have Benefits*, WORCESTER BUS. J. (Sept. 3, 2012), *available at* http://www.wbjournal.com/apps/pbcs.dll/article?AID=/20120903/PRINTEDITION/308309983/0/PRINTEDITION.

135. *Id.*

136. *Id.*

137. Fisk, *supra* note 131.

138. Gutc, *supra* note 134.

139. Robert Shea and Scott Connolly, *Enforcing Noncompetition Agreements*, MORSE BARNES-BROWN PENDELTON, PC (June 2006), http://www.mbbp.com/resources/employment/noncomps.html.

140. Gutc, *supra* note 134.

are a "necessary evil" that provide employers with confidence that their trade secrets and investments in employee training are protected.[141]

B. ENFORCEMENT

Noncompete enforcement regimes vary around the world. For example, within the United States noncompete clause enforcement varies from state to state.[142] Most states enforce noncompetes to some extent, with courts often employing a flexible, multi-factor test when deciding whether to uphold a noncompete clause.[143] However, in a small minority of states, including California, post-employment noncompetes are for the most part void.[144]

Massachusetts' position on noncompetes is "largely in line with the rest of the [United States] in viewing noncompetes as generally enforceable."[145] In particular, courts will enforce a noncompete if: "(1) it is necessary to protect a legitimate business interest, (2) reasonably limited in time and geographic scope, (3) consonant with the public interest, and (4) supported by consideration."[146] Legitimate business interests are typically recognized as "the protection of trade secrets, confidential information, and goodwill."[147] Massachusetts, like many states, exemplifies the predominant view that an employee's freedom to work can be reasonably impinged upon by an employer with a legitimate interest to protect.

Contrarily, California exemplifies the minority position and the opposite side of the spectrum on noncompete enforcement. In 1872, California adopted California Civil Code Section 1673, which generally prohibited noncompetition agreements.[148] The law has remained virtually unchanged

141. *Id.*

142. Jay Kesan and Carol Hayes, *The Law and Policy of Non-Compete Clauses in the United States and Their Implications*, UNIVERSITY OF ILLINOIS COLLEGE OF LAW (2011), *available at* http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1948593.

143. *Id.*

144. Dowling, *supra* note 13.

145. Kesan and Hayes, *supra* note 142.

146. *Massachusetts Non-Compete Agreements in a Nutshell*, CONFORTO LAW GROUP, P.C. (Jan. 16, 2008), http://www.confortolaw.com/2008/01/massachusetts-non-compete-agreements-in-a-nutshell/; *see also* Marine Contractors Co., Inc. v. Hurley, 365 Mass. 280, 287 (1974), Novelty Bias Binding Co. v. Shevrin, 342 Mass. 714, 716 (1961); Edwards v. Athena Capital Advisors, Inc., C.A. No. 07-2418-E, 2007 Mass. Super. LEXIS 378, 4–5 (Super. Ct. Aug. 7, 2007).

147. David Carr, *The Protection of Trade Secrets, Confidential Information and Goodwill: Drafting Enforceable Confidentiality, Non-Compete and Non-Solicitation Agreements: 10 Tricks and Traps*, AMERICAN BAR ASS'N (2002), http://www.americanbar.org/content/dam/aba/migrated/labor/basics/tradesecrets/papers/carr.authcheckdam.pdf.

148. David Trossen, *Edwards and Covenants Not to Complete in California: Leave Well Enough Alone*, 24 BERKELEY TECH. L.J. 539, 540 (2009).

and, today, California Business & Professional Code Section 16600 provides that "every contract by which anyone is restrained from engaging in a lawful profession, trade, or business of any kind is to the extent void."[149] Beyond a few statutory exceptions, non-compete agreements in California are unenforceable.

Internationally, many noncompete enforcement regimes either apply reasonableness tests similar to the state of Massachusetts or largely hold noncompetes to be unenforceable like California.[150] In addition, many foreign jurisdictions either directly or indirectly require employees to be compensated during the noncompete period.[151] Post-employment compensation can take a variety of forms, but it is justified as consideration given by the employee for agreeing to limit their freedom to work upon termination.[152]

Lastly, the variation in enforcement of noncompetes creates conflict of laws issues as to which jurisdiction governs the noncompete.[153] To avoid these issues, many companies opt to include a choice of law clause in the employment agreement.[154] However, these clauses can be inadequate because noncompetes are evaluated in the jurisdiction where the employee breaches the noncompete, not the jurisdiction where the noncompete was drafted.[155] Therefore, practitioners advise employers to execute noncompete clauses that are in accord with the rules of the jurisdiction in which the employee is most likely to breach.[156]

C. NONCOMPETE ENFORCEMENT: THE HIGH-TECHNOLOGY SECTOR, INNOVATION, AND SPILLOVERS.

Noncompete clauses in the high-technology industries are prevalent, with nearly 90% of technical workers having signed them in the United States.[157]

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149. CAL. BUS. & PROF. CODE § 16600 (2012).

150. Dowling, *supra* note 13.

151. *Id.*

152. *Id.*

153. Paulo McKeeby, *Solving the Multi-State Non-Compete Puzzle Through Choice of Law and Venue*, LAW.COM (Oct. 17, 2012), http://www.law.com/corporatecounsel/PubArticleCC.jsp?id=1202575160689&Solving_the_MultiState_NonCompete_Puzzle_Through_Choice_of_Law_and_Venue&slreturn=20121124011858.

154. *Id.*

155. *Id.*

156. *Id.*

157. Sampsa Samila and Olav Sorenson, *Noncompete Covenants: Incentives to Innovate or Impediments to Growth*, 57 MGMT. SCIENCE 3, 425, 425–37 (2011), *available at* http://mansci.journal.informs.org/content/57/3/425.full.pdf. ("In the United States nearly 90% of technical workers and upper-level management employees have signed noncompete agreements (Leonard 2001, Kaplan and Strömberg 2003).").

The logic of the noncompete clause "reflects the limited useful life knowledge in high technology industries. Given the speed of innovation and the corresponding telescoping of product life cycles, knowledge more than a year or two old likely no longer has significant competitive value."[158] Noncompetes thus function to help companies protect their human capital, intellectual property, and business relationships.[159] Restricting employee mobility ensures that employers realize the gains from their investments in employee training, R&D, and client development, which thereby promotes these productivity-enhancing activities.[160]

Although courts may find an employer's justification for enforcing a noncompete as reasonable, recent studies suggest that the mere enforcement of noncompetes has negative impacts on employee mobility, the creation of spinoffs, and knowledge spillovers. For example, there is evidence that nonenforcement of noncompetes increases employee mobility and that there are higher levels of mobility "among executives and technical workers in states with [nonenforcement] regimes."[161] The enforcement of noncompetes more significantly affects employees with technology-specific skills who are not widely marketable beyond direct competitors; indeed, these employees were found to be 16.2% less likely to change jobs when subject to noncompete enforcement.[162] Employees with firm-specific human capital were 15.4% less likely to change jobs.[163] Furthermore, a recent study found that the enforcement of noncompetes may also prevent a former employee from launching their own organization, particularly if noncompetes bind potential hires with relevant experience in the industry.[164]

The restriction of employee mobility is significant because employee mobility is a critical driver in promoting spinoff firms and spillovers. The term "spinoffs" in this context refers to independent firms formed by former employees of an existing entity, the parent company. Notably, former higher-level employees of a parent firm often form spinoffs by exploiting knowledge they learned while working at the parent firm.[165] Spinoffs are perceived as

158. Ronald Gilson, *The Legal Infrastructure of High Technology Industrial Districts: Silicon Valley, Route 128, and Covenants Not to Compete*, 74 NYU L. Rev. 3, 575, 603 (1999).

159. Samila and Sorenson, *supra* note 157, at 425–37.

160. April Franco and Matthew Mitchell, *Covenants Not to Compete, Labor Mobility, and Industry Dynamics*, 17 J. ECON. MGMT. STRAT. 3, 581, 581–06 (2008).

161. Samila and Sorenson, *supra* note 157, at 425–26.

162. Marx, Strumsky, and Fleming, *supra* note 129, at 887–88.

163. *Id.*

164. Samila and Sorenson, *supra* note 157.

165. Steven Klepper, *The Origin and Growth of Industry Clusters: The Making of Silicon Valley and Detroit*, J. URBAN ECON. 67, 15, 21 (2010).

desirable because they are integral to the formation of innovation ecosystems. For example, the development of Silicon Valley is attributed, in part, to spinoffs in the semiconductor industry.[166] Indeed, most Silicon Valley firms are connected to Fairchild Semiconductor, founded in 1957, "either as a spinoff of Fairchild, a spinoff of one of its spinoffs, or having a founder that at one point worked for Fairchild."[167] Between 1957 and 1986, nearly all of the semiconductor entrants to Silicon Valley were spinoffs.[168] Importantly, these spinoffs typically do not stray geographically far from the parent company, thus as these new firms cluster, the potential for the development of an innovation ecosystem increases.[169]

Employee mobility is also a significant factor in promoting spillovers. Knowledge that firms create is "tacit and embodied in individuals. The diffusion of these ideas across firms therefore depends on the movement of employees."[170] Increasing employee mobility between firms thus promotes knowledge spillovers because ideas are more likely to disseminate when employees can freely transition between competing firms or start their own firms. Moreover, this diffusion of knowledge between firms may improve competitiveness in a region to the extent that firms benefit from ideas developed and paid for by competitors.[171] For example, as leading firms lose knowledge to competitors, their competitive advantage erodes.[172] Spillovers are desirable if they do indeed promote competition within a region since "a competitive environment pushes companies to innovate."[173] Consequently, policymakers seeking to promote innovation within a region argue that the positive externalities attributed to spillovers justify not enforcing noncompetes.

These conclusions have particular significance when coupled with research regarding foreign investments in R&D facilities. Although empirical studies are mixed, foreign investments in R&D facilities can positively

166. *Id.* at 15.

167. *Id.* at 17.

168. Cristobal Cheyre, Steven Klepper, and Francisco Veloso, *Spinoffs and the Mobility of US Merchant Semiconductor Inventors*, STANFORD INST. FOR ECON. POL'Y RESEARCH 1, 3 (2012), *available at* http://siepr.stanford.edu/system/files/shared/jobhopping_v54.pdf.

169. *Id.* at 27.

170. Samila and Sorenson, *supra* note 157, at 425–37; *see also* Gilson, *supra* note 158, at 575–629.

171. Samila and Sorenson, *supra* note 157, at 425–37.

172. Juan Alcácer and Minyuan Zhao, *Local R&D Strategies and Multi-location Firms: The Role of Internal Linkages*, HARVARD BUS. SCH. 1, 1–4 (2010), http://www.hbs.edu/faculty/Publication%20Files/10-064.pdf.

173. Rachel Bradenburger, *Promoting Innovation through Competition*, DEP'T OF JUSTICE (Sept. 22, 2011), http://www.justice.gov/atr/public/speeches/279093.pdf.

contribute to spillovers in an emerging market, especially within that market's technology sector.[174] For example, developing countries often have relatively weak knowledge intensive sectors, thus the "entry of [foreign direct investment] has greater potential for vertical inter-firm linkages, diffusion of new knowledge and other spillovers with the host economy."[175] Consequently, the potential for foreign direct investment ("FDI") led spillovers to domestic firms will likely be higher in knowledge based sectors. More importantly, these spillovers may be more likely in an environment with a high labor turnover rate and unrestricted mobility.[176]

Despite variances in methodology, there are two takeaways from the research in this area: (1) the enforcement of noncompete agreements negatively affects employee mobility, and (2) employee mobility is a key component with regards to promoting spinoffs and spillovers. Therefore, even though a region's ability to foster an innovation ecosystem and benefit from spinoffs and spillovers depends on a variety of factors, employee mobility is one of those factors. Since employee mobility is a function of a region's noncompete enforcement regime, such enforcement regimes likely have an impact on innovation within a regional economy. Even though the positive or negative effects of the noncompete enforcement regime may be negated by other externalities, the enforcement regime is nonetheless a significant consideration that policy makers should be mindful of when endeavoring to develop an innovation ecosystem.[177]

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174. Zhiqiang Liu, *Foreign Direct Investment and Technology Spillovers: Theory and Evidence*, J. DEV. ECON. 85, 176, 191–92 (2008); *see also* Holger Görg and David Greenaway, *Much Ado About Nothing? Do Domestic Firms Really Benefit From Foreign Direct Investment?*, THE WORLD BANK RESEARCH OBSERVER, 171, 189–90 (2004).

175. Nagesh Kumar, *Globalization and the Quality of Foreign Direct Investment*, OXFORD UNIVERSITY PRESS (2002).

176. David Kemme, Volodymyr Lugovskyy, & Deepraj Mukherjee, *Labor Mobility, Knowledge Transfer and Productivity Spillover of Multinationals: Evidence from Indian Firms*, UNIVERSITÀ DI PERUGIA (June 14, 2009), *available at* http://www.stat.unipg.it/aissec2009/Documents/papers/CI2_Kemme_Lugovskyy_Mukherjee.pdf.

177. Marc Muendler and James Rauch, *Employee Spinoffs and the Formation of Teams – Evidence from Brazil*, INT'L GROWTH CTR. (May 2011), *available at* http://www.theigc.org/sites/default/files/11_0270_muendler_policybrief_v2_2.pdf.

III. COMPARING THE ENFORCEMENT REGIMES OF CHINA, INDIA, AND BRAZIL

Innovation is the future.[178] At the country and company level, it is the basis for both job creation and gaining a competitive advantage.[179] The ability to invent and adapt "is the difference between a middle-income country reliant on technologies and services from abroad, and a wealthy one that makes its own fortune."[180] Profound innovations surface when policymakers create a space that encourages people to engage in developing pioneering products and services.[181] As exemplified by numerous countries and regions around the world, a good combination of "government policies and business strategies is central to the creation of an environment propitious to generate innovation."[182] Accordingly, China, India, and Brazil—countries that need to become domestically innovative in order to sustain growth—are each in the process of designing policies that will best promote the development of innovation ecosystems within their respective borders.

Employee mobility likely plays a significant role in the development of these ecosystems. Hence, some jurisdictions, like California, have found it beneficial to void noncompetes as a means to promote employee mobility. However, China, India, and Brazil are all in a position in which to promote domestic innovation, they most likely need to continue to attract foreign investments in R&D facilities in order to incentivize knowledge based spillovers and the creation of spinoffs. Since protecting intellectual property is vital for emerging countries seeking to attract this type of FDI, developing nations may seek to replicate the IP protection regimes of the developed nations to which tech-multinationals have grown accustomed.[183] Noncompete enforcement varies in developed nations, thus there are a variety of options. While nonenforcement may seem attractive given California's renowned success in fostering Silicon Valley, policymakers are faced with a difficult analysis in China, India, and Brazil because these nations likely need to promote FDI in R&D facilities while simultaneously promoting policies that liberalize employee mobility. The two goals are not mutually exclusive and need to be balanced, with the ideal result being a

178. Hal Gregersen, *The Great Innovation Wall of China*, BLOOMBERG BUSINESSWEEK (May 9, 2012), http://www.businessweek.com/articles/2012-05-09/the-great-innovation-wall-of-china#r=lr-fs.

179. *Id.*

180. Foley, *supra* note 31.

181. Gregersen, *supra* note 178.

182. Sennes, *supra* note 99.

183. *Innovation Promotion in Brazil*, *supra* note 95.

spillover effect from the foreign R&D facilities that begets innovative domestic firms. This Part seeks to analyze and evaluate how China, India, and Brazil have elected to balance these interests and whether or not their regimes are attractive to foreign investment.

A. CHINA

In China, noncompete agreements are routinely used. The Labor Contract Law of the People's Republic of China, effectuated on January 1, 2008, regulates employee noncompete clauses.[184] Article 23 provides that an employer may stipulate a noncompetition clause within an employment contract or confidentiality agreement for employees with confidentiality obligations.[185] However, the employer is required to provide monthly compensation to the employee for the duration of the noncompete period.[186] Unless specified by local rules or regulation, the contracting parties can mutually agree to a reasonable amount of compensation.[187] If the employee violates the noncompete clause, they are liable for penalties for breach of contract.[188]

Article 24 qualifies Article 23 by limiting the use of noncompete clauses to "senior [managers], senior technicians and other personnel who have the obligation to keep secrets in the entity."[189] It further states that the "range, geographical scope and time limit for limitation" are to be stipulated by the employer and the worker, but must not violate any law or regulation.[190] Moreover, under Article 24, noncompete clauses in China cannot exceed two years.[191]

China's noncompete regime appears to be more balanced than the regimes of its emerging market counterparts. While most employees within China cannot be restricted by noncompetes, senior management, technical personnel, and persons entrusted with trade secrets may be subject to the limitations imposed by a noncompete. The law thus promotes employee mobility for a majority of its citizens, but simultaneously caters to the concerns of corporate interests by permitting restrictions on "higher-value" employees.

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184. *Labor Contract Law of the People's Republic of China*, INVEST IN CHINA (June 29, 2007), *available at* http://www.fdi.gov.cn/pub/FDI_EN/Laws/law_en_info.jsp?docid=82499.

185. *Id.*

186. *Id.*

187. *Id.*

188. *Id.*

189. *Id.*

190. *Id.*

191. *Id.*

Although China's new Labor Contract Law permits the use of noncompetes, Chinese courts are concerned about the relationship between noncompetition clauses and protecting an employee's legitimate interests. For example, according to the *Supreme People's Court Opinions on Several Issues Regarding the Implementation of the National Intellectual Property Strategy*, "courts are required to properly strike the balance between protection of trade secrets and freedom of employment."[192] In balancing these interests, the government has already decided that noncompetes are unreasonable unless the parties to the agreement are senior and technical personnel, the individuals most likely to have access to sensitive information and trade secrets.[193] Moreover, the mandatory requirement for compensation during the noncompete period values an employee's interest in their right to work and likely discourages employers from indiscriminately executing noncompetes with employees since the post-employment costs can become significant.[194]

Despite recognizing and protecting employee interests, China's enforcement regime is advantageous for multinationals as well because it provides guidelines on how to craft a noncompete that will be upheld by a Chinese court. Articles 23 and 24 thus resolve some of the contentious issues that arise in jurisdictions which enforce noncompetes more broadly. Although employers cannot freely subject all of their employees to noncompetes, their most valuable employees are restricted. Moreover, creative employers may find ways to strategically structure their management structure in China so that noncompetes may be enforced against a broader array of employees.

Although employers' interests may be protected by the employee class restriction proscribed by China's noncompete enforcement regime, this class distinction may have significant effects on the development of an innovation ecosystem in light of research that suggests spinoffs are primarily created by higher level employees of parent firms. The effect of employee mobility on the creation of innovation ecosystems may thus be diluted if the employees that most often aid in the development of these systems are restricted.

There are of course many other external factors that affect employee mobility. For example, the influence of SOEs and the prevalence of

192. J. Benjamin Bai and Guoping Da, *Strategies for Trade Secrets Protection in China*, 9 NW. J. TECH. & INTELL. PROP. 351 (2011), *available at* http://scholarlycommons.law.northwestern.edu/cgi/viewcontent.cgi?article=1005&context=njtip.

193. *Employee Non-Disclosure and Non-Competition Agreements*, CHINAHOT.COM, http://resources.chinahot.com/for-employers/labor-force-management/employee-non-disclosure.html (last visited Jan. 24, 2013).

194. *Id.*

corruption may encourage employees to remain in their current position given that the economic environment is not freely competitive, particularly when compared to the environment of the United States. Nevertheless, China's noncompete enforcement regime balances both the interests of employees and the interests of foreign multinationals fairly well.

B. INDIA

The Indian Contract Act of 1872 is the predominate source of law regulating contracts in India today and is applicable to every state within the nation except Kashmir and Jammu.[195] Section 27 of the Act provides that "[e]very agreement by which any one is restrained from exercising a lawful profession, trade or business of any kind, is to that extent void."[196] Consequently, Indian courts have consistently refused to enforce post-termination noncompete clauses in employment contracts because they are a "restraint of trade."[197]

Section 27 is based upon the English common law doctrine of restraint of trade and "was enacted to encourage competition and [to] promote economic development"[198] at a time when Indian trade was in its infancy. The language of the section is wholly lifted from a New York draft code based upon the old English doctrine of restraint on trade, the exact same civil code that begot California's Section 16600.[199] Despite 140 years of economic development in India, judicial interpretations of Section 27 have not changed since the Act's inception.

India gives complete deference to employee interests with regards to its nonenforcement of noncompetes. The lack of an enforcement regime thus

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195. Indian Contract Act, No. 9, INDIA CODE (1872), *available at* http://chddistrictcourts.gov.in/THE%20INDIAN%20CONTRACT%20ACT.pdf).

196. There is but one exception to Section 27, which concerns the sale of goodwill of a business:

> One who sells the goodwill of a business may agree with the buyer to refrain from carrying on a similar business, within specified local limits, so long as the buyer, or any person deriving title to the goodwill from him, carries on a like business therein, provided that such limits appear to the Court reasonable, regard being had to the nature of the business.

Id.

197. Valérie Demont and Janaki Rege Catanzarite, *Non-Compete Clauses Are Unenforceable in India*, PEPPER HAMILTON LLP (Feb. 25, 2010), http://www.pepperlaw.com/publications_update.aspx?ArticleKey=1714.

198. Karandeep Makkar and Abhishek Kumar, *Enforceability of Non-Solicit, Non-Compete and Non-Disclosure Clauses in Light of Restraint of Trade Doctrine*, CORPORATE LAW ADVISER (Jan. 6, 2012), *available at* http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2035377.

199. Trossen, *supra* note 148, 541; Makkar and Kumar, *supra* note 198.

enables employee mobility, but does not advance employer interests in protecting intangible property. Furthermore, multinationals are consistently incorporating noncompetes into employment contracts in India despite these clauses being invalid under Section 27.[200] Proponents of stronger noncompete enforcement in India argue that if "India wants to grow as an emerging market and compete in the globalizing world, its legal system must keep pace with the fast-changing global business environment"[201] There is thus a concern that if India continues not to enforce noncompetes, multinationals will offshore R&D operations elsewhere.

However, multinationals clearly perceive India to be an advantageous destination for offshoring R&D operations.[202] If India can continue to attract foreign R&D investments without enforcing noncompetes, its enforcement regime may be best suited for fostering innovation ecosystems. Ultimately, technology companies that are able to compete in California may not be significantly deterred by India's nonenforcement regime, given that both jurisdictions generally refuse to enforce noncompetes. Moreover, India's lack of enforcement may prove advantageous for companies if employees transition between both foreign and domestic firms. For example, employees leaving Tata Motors for a foreign automotive firm with an R&D facility in India may aid that firm by diffusing knowledge learned at Tata. However, this type of benefit is unlikely to materialize until India fosters a substantial amount of domestically innovative firms.

Therefore, while India's nonenforcement regime may be attractive in a developed nation, it is unclear whether it will support India in developing domestic innovation ecosystems. The nation's lack of enforcement of noncompetes clearly does not incentivize foreign investment from firms with high value trade secrets; however, whether or not nonenforcement will disadvantage India relative to China or Brazil depends on the nation's ability to attract foreign high-tech investment by other means. Given a variety of external concerns—from a sluggish economy to poor access to education—this ability may be tested in the near future.

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200. Makkar and Kumar, *supra* note 198.

201. *Id.*

202. *R&D in India: The Curtain Rises, The Play Has Begun*…, KNOWLEDGE@WHARTON (Nov. 21, 2005), http://knowledge.wharton.upenn.edu/article.cfm?articleid=1278&specialid=40.

C. BRAZIL

Restrictive covenant law in Brazil is underdeveloped, but Brazilian courts do not expressly ban noncompetes.[203] While there is no civil code regarding post-employment noncompetition, the right-to-work provision in the Brazilian Constitution "cast[s] a long shadow over the enforceability of post-term restrictive covenants."[204] Specifically, Article 5 of Title II provides that "the practice of any work, trade or profession is free, observing the professional qualifications which the law may establish."[205] Given that most companies do not intend to restrict a former employee's constitutional right to work, noncompetes can be enforced in Brazil; indeed, there is a developing trend of courts upholding noncompetes, provided that the agreements are reasonable in their limitations.[206]

When evaluating noncompetes, Brazilian labor courts examine the reasonableness of the clause's limitation of time, territory, core business, and financial compensation for the noncompetition period.[207] While noncompetition compensation is not mandatory in Brazil, practitioners advise clients that such compensation tips the reasonableness evaluation in favor of the employer.[208] Indeed, the predominate view in Brazil, "is that post-term non-competes are unconstitutional unless the employer pays enough to assuage the constitutional concern. Compensation amounts, though not fixed, may need to run about 50–60% of the final average pay."[209] Case law regarding post-employment noncompetes is scarce in Brazil, but Brazilian legislation does not restrict enforcement of noncompetes to certain classes of employees.[210]

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203. Dowling, *supra* note 13.

204. *Id.*

205. Constituição Federal [C.F] [CONSTITUTION] art. 5. (Braz.) *available at* http://www.imprensaoficial.com.br/PortalIO/download/pdf/Constituicoes_declaracao.pdf ("Todos são iguais perante a lei, sem distinção de qualquer natureza, garantindo—se aos brasileiros e aos estrangeiros residentes no País a inviolabilidade do direito à vida, à liberdade, à igualdade, à segurança e à propriedade, nos termos seguintes: (XIII) é livre o exercício de qualquer trabalho, ofício ou profissão, atendidas as qualificações profissionais que a lei estabelecer."); *see also Constitution of Brazil*, UNIVERSITY OF BRAZIL, *available at* http://www1.umn.edu/humanrts/research/brazil-constitution.html (last visited Feb. 22, 2013).

206. *Non-Competition*, LEX MUNDI (2012), *available at* www.lexmundi.com/Document.asp?DocID=3904.

207. Vilma Toshie Kutomi, *Labor and Employment Practice Group Non-Competition*, LEX MUNDI (2010), *available at* www.lexmundi.com/Document.asp?DocID=1487 (last visited Jan. 24, 2013).

208. Dowling, *supra* note 13; Kutomi, *supra* note 207.

209. Dowling, *supra* note 13.

210. Kutomi, *supra* note 207.

Brazil's noncompete enforcement regime is not as defined as that of China or India. However, Brazil occupies an interesting place on the spectrum of enforcement because theoretically any employee can be bound by a noncompete since the nation employs a reasonableness test in determining when to enforce a noncompete. Relative to China and India, Brazil thus gives the most deference towards employer interests in protecting trade secrets. Indeed, multinationals are continuing to include noncompetes in Brazilian employment contracts, but few have been litigated.[211] Employers must thus draft noncompetes cautiously given a lack of precedent.

Despite a lack of formality, the nation's noncompete enforcement regime may prove advantageous for companies that strongly prefer to execute noncompete agreements with a variety of employees that may not fit within the classifications permitted by China. However, like China, Brazil does validate employee interests by requiring compensation during the noncompete period. To the extent employers are financially constrained, this cost limits their ability to enforce noncompetes as freely as they might otherwise in a regime that does not require compensation.

Since Brazil employs a reasonableness test that is used by many developed world jurisdictions, its enforcement regime may be best designed for attracting foreign investment. However, as noncompetes become more prevalent in Brazil, the nation's ability to innovate may be subdued if employees become increasingly less mobile as a result.

IV. CONCLUSION

As the twenty-first century progresses, governments around the world are seeking to foster innovation within their borders in order to compete on a global scale. While prior research suggests that regions seeking to foster innovation should not enforce noncompete agreements, this conclusion does not necessarily translate in the emerging nation context. As discussed in this Note, China, India, and Brazil are all creating policies to develop domestic innovation ecosystems. However, given that China, India, and Brazil likely need to continue to attract foreign R&D investments in order to become innovative, the nonenforcement of noncompetes likely does not promote this goal. A bevy of other economic and noneconomic factors contribute to

211. John Barry, Daniel Ornstein, and Yasmine Tarasewicz, *Tying and Untying the Knot: Non-Compete Agreements in the UK, EU and Latin America—How to Write Them; How to Fight Them*, PROSKAUER ROSE LLP (June 17, 2010), http://www.internationallaborlaw.com/files/2012/10/Tying-and-Untying-the-Knot.pdf.

regional economic growth, however, labor law matters.[212] Therefore, policymakers in each of these nations should be cautious in the design of their noncompete enforcement regimes in order to strike a balance between employee and employer interests in order to foster domestic innovation while continuing to attract foreign investments. In striking this balance, moderate enforcement of noncompetes may be beneficial.

212. AnnaLee Saxenian, *Regional Advantage: Culture and Competition in Silicon Valley and Route 128*, FIRST HARVARD UNIVERSITY PRESS (1996).

SURVEY OF ADDITIONAL IP DEVELOPMENTS

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I. PATENT DEVELOPMENTS

A. *BARD PERIPHERAL VASCULAR, INC. V. W.L. GORE & ASSOCIATES*[1]

The United States Court of Appeals for the Federal Circuit, in a rehearing en banc, held that the threshold objective prong of the willfulness standard is a question of law based subject to de novo review.

1. 682 F.3d 1003 (Fed. Cir. 2012) (en banc).

Bard Peripheral Vascular, Inc. ("Bard") brought an action against W.L. Gore & Associates, Inc. ("Gore") alleging infringement of a patent for a polytetrafluoroethylene ("ePTFE") vascular graft. Gore counterclaimed alleging inequitable conduct and invalidity. The patent application, entitled "Prosthetic Vascular Graft," was filed on October 24, 1974, and a patent was finally issued nearly twenty-eight years later on August 20, 2002. In 2007, a jury in the United States District Court for the District of Arizona found Bard's patent valid and Gore liable for willful infringement. The jury awarded enhanced damages, attorneys' fees and costs, and an ongoing royalty to Bard. The court also denied Gore's motions for judgment as a matter of law on the issues of patent validity and willfulness. On appeal, the U.S. Court of Appeals for the Federal Circuit upheld the validity of Bard's patent and the judgment against Gore, including the allowance of enhanced damages and attorneys' fees under 35 U.S.C. § 284. Gore timely filed a petition for a rehearing and rehearing en banc. At the rehearing, the court once again found willful infringement. Separately, the court granted Gore's petition for a rehearing en banc for the "sole purpose of revisiting the issue of willfulness and further explicating the standard of review applicable to it."

In the en banc rehearing, the court reaffirmed all of its positions except those portions relating to willfulness. The court noted that *In re Seagate Technology*, 497 F.3d 1360 (Fed. Cir. 2007), set forth a two-pronged test for establishing the requisite level of recklessness required for willful infringement. To satisfy the first prong, "a patentee must show by clear and convincing evidence that the infringer acted despite an objectively high likelihood that its actions constituted infringement of a valid patent." If the threshold objective standard is satisfied, the analysis proceeds to the second, subjective prong, where "the patentee must also demonstrate that this objectively-defined risk . . . was either known or so obvious that it should have been known to the accused infringer."

The court stated that the *Bard* trial court failed to address the objective prong of willfulness as a separate legal test from *Seagate*'s subjective component. The court found that "simply stating that willfulness is a question of fact over-simplifies the issue." Following *Seagate*, the " 'objective' prong of *Seagate* tends not to be met where an accused infringer relies on a reasonable defense to a charge of infringement." Thus the first prong of the *Seagate* test requires an inquiry into reasonableness and is a mixed question of law and fact. The court held that judge, rather than jury, "is in the best position for making the determination of reasonableness." In particular, the court stated that "the objective determination of recklessness, even though predicated on underlying mixed questions of law and fact, is best decided by a judge as a question of law subject to de novo review."

Although a judge may still allow the jury to determine the underlying facts relevant to a reasonableness defense under the first prong in *Seagate*, the court's decision establishes that the ultimate legal question of reasonableness is a matter of law decided by a judge.

B. *IN RE BAXTER INTERNATIONAL, INC.*[2]

A divided panel of the Federal Circuit ruled that a district court's prior affirmance of a validity challenge did not prevent the Patent and Trademark Office ("PTO") from later finding those same claims invalid. Allowing the PTO to essentially overrule a district court decision creates a potential clash between the courts and administrative hearings, as reexamination hearings could function to overturn litigation rather than serve as an alternative to it.

Baxter International Inc. ("Baxter") owns the '434 patent, which claims a hemodialysis machine integrated with a touch screen user interface that functions in place of a patient's kidney. The machine cleanses the blood of toxins by pumping the patient's blood into the machine, where a dialysate solution absorbs the toxins from the blood. Fresenius USA, Inc. ("Fresenius"), one of Baxter's competitors, filed a declaratory judgment action in the Northern District of California on the basis of invalidity, arguing that claims twenty-six through thirty-one of Baxter's patent would have been obvious to one of ordinary skill in the art. Baxter and Fresenius tried the case in front of a jury, which concluded that Fresenius had proven that claims twenty-six through thirty-one were obvious through clear and convincing evidence. After trial, Baxter moved for summary judgment and the district court overruled as a matter of law. Fresenius appealed.

While Fresenius was being litigated in district court, Fresenius instigated a PTO reexamination. The Examiner found claims twenty-six through thirty-one obvious, relying on Fresenius's prior art presented at trial and other references not argued at trial. Baxter appealed the Examiner's final rejection to the Board of Patent Appeals and Interferences ("the Board"). After briefing and oral argument before the Board, but before the Board's decision, the Federal Circuit affirmed the Northern District of California's ruling. Baxter subsequently petitioned the Director of the PTO to remand the re-examination to the Examiner.

The Director denied the petition, but ordered the Board to consider the Federal District Court's decision. After consideration, the board affirmed the examiner's rejections of claims twenty-six through thirty-one, concluding that "[a]lthough claims twenty-six through thirty-one were not proven invalid in

2. 678 F.3d 1357 (Fed. Cir. 2012).

court, a lower standard of proof and the broadest reasonable interpretation standard of claim construction apply at the PTO and therefore the agency is not bound by the court's determination." Baxter requested a rehearing, which the Board denied, and timely appealed to the Federal Circuit.

The Federal Circuit affirmed the PTO's determination, despite its earlier opinion in favor of Baxter. The majority reasoned that the court system and PTO's reexamination proceedings "take different approaches" in determining validity and could come to different conclusions given the same evidence, though "ideally" the conclusions should be the same.

Even if the standard of proof were the same, the majority reasoned that the PTO reexamination was not bound by the court ruling because the reexamination hearing relied on prior art references that Fresenius did not present during trial. The court argued that the Director found a new question of patentability had been raised, thus entitling the examiner to conduct a reexamination on "the basis of a new art and her search of a prior art."

The dissent disagreed with the significance of new prior art references presented at trial but argued that, even if they were significant, Fresenius's failure to present the issue at trial did not negate judicial finality. If the Federal Circuit reached an unjust decision, the dissent reasoned that judicial reopening would be the proper mechanism for correction. The dissent argued the majority permitted litigants a second bite at the apple through reexamination proceedings, which unconstitutionally vests finality in the hands of the PTO rather than the courts.

To attack the validity of patent claims in civil litigation, a challenger has a statutory burden to prove invalidity by clear and convincing evidence. Fresenius's failure to meet its burden to demonstrate that Baxter's patent is invalid for obviousness does not, the court concluded, mean that the court found the patent valid but only that the challenger did not meet the burden of validity in the particular case in question. In a PTO reexamination proceeding, by contrast, there is no presumption of validity, and the standard of proof is substantially lower than in a civil case—a mere preponderance of evidence. Because both entities apply different burdens of proof, they could come to different conclusions, although even with a more lenient standard "the PTO ideally should not arrive at a different conclusion."

C. INTELLECTUAL VENTURES I LLC V. ALTERA CORP.[3]

In *Intellectual Ventures I LLC v. Altera Corp.*, the United States District Court for the District of Delaware denied the defendants' motions to

3. 842 F. Supp. 2d 744 (D. Del. 2012).

transfer venue to the Northern District of California in a patent infringement case. Both plaintiffs and defendants had ties to both the District of Delaware and the Northern District of California. The two plaintiff companies are limited liability companies organized under the laws of Delaware, however both companies' principal places of business are in the state of Washington and both companies maintain offices in California. All four defendants are incorporated in Delaware but headquartered in the San Francisco Bay Area. Moreover, the disputed technology was partly developed and produced in California. The parties did not dispute that the action could have been brought in the Northern District of California—as opposed to in the District of Delaware—therefore the crucial issue was whether the transfer would be "in the interest of justice" pursuant to 28 U.S.C. § 1404(a).

Judge Stark of the District of Delaware denied the defendants' motions. At the outset, the court emphasized the broad discretion § 1404(a) affords courts in determining on an individual, case-by-case basis, whether convenience and fairness considerations weigh in favor of a transfer of venue. Since the plaintiff's choice of venue should not be disturbed lightly, a party seeking a transfer faces a heavy burden. The court then applied the eleven factors articulated in *Jumara v. State Farm Insurance Co.*, 55 F.3d 873 (3d Cir. 1995). The factors in favor of transfer were defendants' choice of forum, location of operative events, convenience of the parties, convenience to witnesses, and location of relevant evidence. Against a transfer weight the plaintiff's choice of forum, practical considerations, and public policy. Other factors were neutral. On the whole, in consideration of the appropriate weight to be granted to each factor, the court held that defendants failed to satisfy their burden of showing that the balance of convenience factors and interests of justice weigh strongly in favor for a transfer.

In the decision, Judge Stark distinguished the case at hand from the Federal Circuit's holding in *Marvell International Ltd. v. Link-A-Media Device Corp.*, 662 F.3d 1221 (Fed. Cir. 2011). In *Marvell* the Federal Circuit granted a petition for a writ of mandamus and directed that a patent infringement action pending in the District of Delaware be transferred to the Northern District of California. Judge Stark shared three general observations with regards to the *Marvell* decision. Firstly, while *Marvell* contains guidance for how a court must review a motion to transfer, it does not call into question the broad discretion of the court to consider convenience and fairness on an individualized, case-by-case basis. Second, unlike in this case, the plaintiff in *Marvell* was not incorporated in Delaware and had no other connection to the state. Third, the Federal Circuit believed that in *Marvell*, the district court had accorded dispositive weight on a single factor and refused to evaluate any of

the other factors. Unlike in *Marvell*, the court considered and weighed each of these factors.

The decision *Intellectual Ventures* is significant, since it provides an application of the *Jumara* factors in light of the Supreme Court's decision in *Stewart Organization, Inc. v. Ricoh Corp.*, 487 U.S. 22 (1988), which emphasized court's broad discretion in applying § 1404(a), and the Federal Circuit's *Marvell* decision, which held that a district court applied the factors deficiently. Although three of the defendants in *Intellectual Ventures* sought a writ of mandamus from the Federal Circuit, the court denied the defendants' petition. The Federal Circuit explained that *Marvell* did not generally limit the district court's discretion to deny transfers and distinguished *Marvell* from *Intellectual Ventures*. According to the Federal Circuit, Judge Stark correctly applied the *Jumara* factors and accorded the proper weight to the plaintiffs' choice of forum and the convenience of witnesses.

II. COPYRIGHT DEVELOPMENTS

A. *INTERCOLLEGIATE BROADCASTING SYSTEM INC. V. COPYRIGHT ROYALTY BOARD*[4]

The D.C. Circuit held that Copyright Royalty Judges ("CRJs")—in their positions as previously constituted—violated the Appointments Clause of the U.S. Constitution. The court eliminated restrictions on the Librarian of Congress' ability to remove the CRJs from office, which rendered the CRJs "inferior" officers instead of "principal" officers and remedied the constitutional issue in the least disruptive manner.

In 2008, the nonprofit clearinghouse SoundExchange, Inc. ("SoundExchange"), initiated proceedings before the CRJs to set the default webcasting rates for the years 2011 through 2015. SoundExchange entered into voluntary settlements with all but two of the forty parties that filed petitions to participate. One such party was Intercollegiate Broadcasting System, Inc. ("Intercollegiate"), an association of "noncommercial" webcasters who transmit music over the Internet in educational environments. Intercollegiate submitted a proposal to the CRJs to establish different fee structures for small, noncommercial webcasters. The CRJs rejected the proposal, and Intercollegiate appealed, challenging the constitutionality of the Copyright Royalty Board's structure.

Intercollegiate argued that the CRJs' significant ratemaking authority—without unrestricted removability from office—qualified them as "principal"

4. 684 F.3d 1332 (D.C. Cir. 2012) *cert. denied*, 133 S. Ct. 2735 (2013).

officers who must be appointed by the President with Senate confirmation. The court said that the CRJs exercised considerable power to make consequential decisions in setting the rates for musical works distributed through both traditional and digital means. As such, the CRJs' decisions had paramount significance in an industry in which a large percentage of a firm's potential expenses are subject to royalty rates and shifts can seriously disturb a firm's fiscal situation.

Based on *Edmonds v. United States*, 520 U.S. 651 (1997), the court found that the "CRJs' nonremovability and the finality of their decisions" fell short of that which would render the CRJs "inferior officers." The Librarian of Congress could only remove the CRJs for misconduct or neglect of duty. Furthermore, no other entity in the executive branch had the power to reverse or correct the CRJs' rate determinations. Because the low level of supervisory functions of the Librarian of Congress and Register of Copyrights lacked influence in the CRJs' substantive decisions, the court found that the CRJs were "principal officers who must be appointed by the President and confirmed by the Senate," and without Senatorial advice and consent, the "structure of the Board" violated the Appointments Clause.

The court found that the least disruptive way to eliminate the constitutional problem was to "invalidat[e] and sever the restrictions on the Librarian's ability to remove the CRJs." The court held that the Librarian is properly considered a Head of Department and may "permissibly appoint the Copyright Royalty Judges." The court thus held "[t]he Librarian of Congress may sanction or remove a Copyright Royalty Judge." In turn, the Librarian's "unfettered removal power" rendered the CRJs validly appointed "inferior" officials, which essentially preserved the structure of the Copyright Royalty Board.

B. *CAMBRIDGE UNIVERSITY PRESS V. BECKER*[5]

The United States District Court for the Northern District of Georgia held that a university making copyrighted material available for classroom use via its electronic course reserves likely constitutes fair use under the following circumstances: (1) for books of nine or fewer chapters, the amount copied is less than ten percent; (2) for books of ten or more chapters, the amount copied is no more than one chapter of a book; and (3) when more than ten percent of a chapter is copied, excerpts from the book are not digitally licensed or the book does not make significant revenues from licensing.

5. 863 F. Supp. 2d 1190 (N.D. Ga. 2012).

In 2008, SAGE Publications, Oxford University Press, and Cambridge University Press sued Georgia State University ("GSU") and its President, Mark P. Becker, alleging copyright infringement under the Copyright Act, 17 U.S.C. § 101, for allowing unlicensed portions of its copyrighted books to be posted online for GSU students as assigned class readings. In its defense, GSU claimed that use of the unlicensed copies was not copyright infringement because it was allowed under the fair use doctrine of the Copyright Act.

At trial, GSU successfully convinced the court to only consider supposed violations occurring after 2009, as GSU instituted a new electronic course reserves policy that year, which included a fair use checklist for professors to use to reduce unlicensed electronic copying. The publishers initially submitted ninety-nine excerpts from their works that they alleged were infringed by GSU, but only seventy-five excerpts were analyzed by the court. Over one-third of the excerpts failed to make it to the court's fair use analysis because the plaintiffs were unable to prove that they owned the copyrights for the excerpts. Additionally, some claims were not analyzed under the fair use doctrine. They were judged to be de minimis use since the copies were never actually downloaded by any student. Ultimately, the court held that only five of the seventy-five excerpts infringed.

In determining whether GSU's use of copyrighted works was fair use within the meaning of § 107, the court looked to the four factors outlined in the statute: (1) the purpose and character of the use (commercial versus non-commercial), (2) the nature of the copyrighted work, (3) how much of the work was being copied, and (4) the effect upon the value of the copyrighted work or the impact on the potential market for it.

The court began by noting that the first and second factors favored GSU. Its use was solely educational and for nonprofit purposes, and the copyrighted works were of an informational, rather than creative, nature. As to the third factor concerning how much of the work was copied, the Court rejected the strict limits set out in the "Classroom Guidelines" prior to the enactment of the 1976 Copyright Act as "impractical," "unnecessary," and incompatible with the intent of fair use. The court then crafted its own test, holding that for books of nine or fewer chapters, copying of less than ten percent of the total page count was "decidedly small" enough to be considered fair use; for books of ten chapters or more, copying of a single complete chapter would also be treated as fair use. Finally, regarding the fourth factor and the effect upon the potential market, the court held that when a license for digital excerpts of a book is readily available at a reasonable price, this factor would favor the plaintiffs. However, if a digital license is not readily available, this factor would favor the defendant.

Only in seven of the seventy-five cases did GSU's copying exceed the limits as laid out by the court. The court analyzed these seven cases in terms of whether the book made significant revenues through licensing. In two of these cases, the books did not make significant revenues through licensing, and the court concluded that making the copyrighted material available via electronic course reserves did little to harm the market for the books. In the five other cases, the books did make significant revenue from licensing, and such uses were deemed unfair.

C. WIPO BEIJING TREATY ON AUDIOVISUAL PERFORMANCES[6]

On June 26, 2012, the member states of the World Intellectual Property Organization ("WIPO") signed the Beijing Treaty on Audiovisual Performances ("Beijing Treaty"), which grants greater protections to performers for their audiovisual performances. The conference scored the highest level of participation ever reached at a WIPO Diplomatic Conference. One-hundred fifty-six member states, six intergovernmental organizations, and forty-five non-intergovernmental organizations attended the conference.

The Beijing Treaty is the first WIPO Treaty drafted since the 1996 conclusion of the general WIPO Copyright Treaty and the WIPO Performances and Phonographs Treaty. The adoption of the latter two treaties was necessary to protect the rights of performers over musical performances and sound recordings, as the Internet and new digital technologies increased the ease of making unauthorized copies of audio files. However, the WIPO member states did not create similar protections at that time for audiovisual performances.

Before the adoption of the Beijing Treaty, the Rome Convention was the primary means of protecting performers of audiovisual works. The Convention gave performers limited rights against unauthorized broadcasting or recording of their performances. However, the performers had no way to control the use of their work in other countries. For a TV series that is distributed abroad without authorization, the actor would have no legal right to receive payment for the foreign broadcast or DVD sales. Rather, payment often went entirely to the producer according to national laws.

Between 1996 and 2000, international discussions regarding the adoption of a treaty for audiovisual performances were blocked because the United States and Europe disagreed on how to transfer rights to producers. In the

6. Beijing Treaty on Audiovisual Performances, June 26, 2012, AVP/DC/20, *available at* http://www.wipo.int/edocs/mdocs/copyright/en/avp_dc/avp_dc_20.pdf.

United States, performers' rights were automatically transferred to the producers. The European Union, however, contested the automatic transfer.

This roadblock was addressed by provisions in the recent Beijing Treaty. Under Article 12, which was proposed by the WIPO's standing Committee on Copyrights and Related Rights, national legislation would be the basis for the transfer of rights from performs to producers. In addition, Article 13 provides that contracting states could provide the same limitations and exceptions for performers' rights as they do under national law in connection with the protection of copyright in literary and artistic works.

While the Beijing Treaty provides member states some flexibility under Articles 12 and 13, the treaty also articulates specific requirements to increase protection for audiovisual works. For example, Articles 7 to 11 grant exclusive rights to performers over their audiovisual works. Performers would be given the exclusive right to authorize the reproduction (Article 7), the distribution (Article 8), and the rental of their performances (Article 9). They also would have the exclusive right to make their fixed performances available to the public (Article 10), which has raised some concern in the United States because the U.S. Copyright Act does not contain such a provision. Additionally, Article 5 grants moral rights to performances in audiovisual fixations. These rights include the right to be identified as the performer and the right to object to any distortion, mutilation, or other modification of performances that would be prejudicial to the performer's reputation. Finally, Article 14 provides that the protection should last at least until the end of a period of fifty years, from the end of the year in which the performance was fixed. If at least thirty eligible parties ratify the Beijing Treaty, the new rights would be put into effect, thus improving the ability of performers to control and to commercially benefit from the use of their works.

D. *GOLAN V. HOLDER*[7]

In *Golan v. Holder*, the Supreme Court upheld the constitutionality of 17 U.S.C. § 104(a), a provision of the Copyright Act that extends copyright protection to foreign works previously in the public domain.

In 2001, petitioners brought an action against the U.S. Attorney General challenging the constitutionality of § 104(a), which codified section 514 of the Uruguay Round Agreement Act ("URAA") of 1994. In adopting section 514 of the URAA, Congress extended copyright protection to foreign works that had copyright protection in their country of origin, but remained in the

7. 132 S. Ct. 873 (2012).

public domain in the United States for one of three reasons: (1) the United States did not protect works from the source country at the time of publication, (2) the United States did not protect sound recordings fixed before 1972, and (3) the author(s) failed to comply with U.S. statutory formalities (no longer required by Congress). Section 514 took all such works out of the public domain and "restored" copyright protection "for the remainder of the term of copyright that the work would have otherwise been granted . . . if the work never entered the public domain."

Petitioners in this case included orchestra conductors, musicians, publishers, and others who "formerly enjoyed free access to works section 514 removed from the public domain." Petitioners argued that Congress (1) exceeded its authority under the Copyright and Patent Clause of the Constitution and (2) violated the First Amendment.

In support of the first argument that Congress exceeded its authority, petitioners cited Article I, section 8, clause 8 of the U.S. Constitution: "Congress shall have Power . . . [to] promote the Progress of Science . . . by securing for limited Times to Authors . . . the exclusive Right to their . . . Writings." Petitioners argued that the phrase "for limited Times" prohibits Congress from removing works in the public domain once they have entered the public domain. Petitioners also claimed that restoring copyrights to existing works does not produce an incentive to create "new works," and thus fails to serve the purpose of promoting the "Progress of Science." In support of the second argument, petitioners argued that Congress violated their right to free speech since they had "vested rights" in works that were already in the public domain.

The United States District Court for the District of Colorado granted summary judgment for the Attorney General. On appeal, the Tenth Circuit affirmed in part and remanded in part, concluding that Congress did not violate the Copyright Clause but that petitioners' First Amendment claims required "further inspection." On remand, the District Court granted summary judgment to the petitioners, holding that section 514's "constriction of the public domain was not justified by any of the asserted federal interests." The Tenth Circuit reversed, holding that section 514 was designed to "fit the important government aim of protecting U.S. copyright holders' interest abroad."

In a 6–2 decision, the Supreme Court affirmed the Tenth Circuit's ruling. First, the Court found that Congress did not violate the Copyright Clause. Citing the Court's earlier decision in *Eldred v. Ashcroft*, 537 U.S. 186 (2003), the Court rejected petitioners' argument that the word "limited" means "fixed" or "inalterable." The Court relied on *Eldred* for the proposition that the Copyright Clause does not "command that a time prescription, once set,

becomes forever fixed or inalterable." The Court also relied on *Eldred* to support its holding that the Copyright Clause does not confine the "Progress of Science" exclusively to the creation of new works; rather the Clause "empowers" Congress to "serve the ends of the Clause" in ways that extend beyond the sole creation of at least one new work. Referring to its reasoning in *Eldred*, the Court held that the "dissemination of information" was a valid means of promoting science, and thus Congress's extension of copyright protection under section 514 did not violate the Copyright Clause.

Secondly, the Court concluded that since section 514 does not alter the "traditional contours of copyright"—for instance fair use and the dichotomy of expression—"heightened scrutiny" of the petitioners' First Amendment claims was unnecessary. The Court therefore held that Congress, by adopting section 514, neither exceeded its Constitutional authority, nor infringed upon First Amendment free speech rights.

E. *DRAMATICO ENTERTAINMENT LTD. V. BRITISH SKY BROADCASTING LTD.*[8]

In *Dramatico Entertainment Ltd. v. British Sky Broadcasting Ltd.*, the High Court of England and Wales held operators and users of the Swedish, peer-to-peer ("P2P") file-sharing website The Pirate Bay ("TPB") liable for copyright infringement. Accordingly, the court ordered British internet service providers ("ISPs") to block access to TPB. The decision is significant because it evaluates the extent to which ISPs are responsible for users' infringing acts online.

Claimants included recording companies who held the rights for approximately 99.8% of all sound recordings sold legally in the United Kingdom. The claimants contended that none of their industry-wide members granted a license to TPB for the copyrighted recordings and sought a blocking order from the six main retail ISPs pursuant to s.97A of the Copyright, Design and Patents Act of 1988 ("CDPA"), which requires defendants to take measures to block or at least impede access by their customers to TPB. Claimants argued that TPB users infringed their copyrights by copying sound recordings and communicating sound recordings to the public and that both acts constituted a breach of the CDPA. Further, claimants asserted that because TPB operators authorized user activities on the torrent, they were jointly liable for the copyright infringement of its U.K. users.

8. [2012] EWHC (Ch) 268, No. HC11C04518.

In order to grant the "blocking order" sought by the claimants, the court first had to resolve whether or not it had jurisdiction. Holding that it did have jurisdiction, the court found that requiring claimants to join or serve both operators and users of TPB would have been "impracticable" or at least "disproportionate" because they were impossible to locate. The court went on to find that TPB users who were uploading and/or downloading copyrighted sound recordings without the specific authorization of the copyright holder had infringed the copyright owner's exclusive rights of reproduction and communication to the public.

With regard to TPB operators, the court similarly found infringement because the features of TPB were "plainly designed" to afford users the precise means necessary to engage in infringing activities. The court also noted that infringement was not the "inevitable consequence" of the provision of torrent files, but rather TPB's "objective and intention." TPB "actively encouraged" infringement and "treated any attempts to prevent it with contempt." The court concluded that the operators of TPB induced, incited, and/or persuaded its users to commit copyright infringement, and were thus jointly liable for infringement committed by its users.

Upon finding infringement, the court granted the blocking order, thus affirming the notion that the CDPA empowered judges to grant injunctions against an ISP "where that service provider has actual knowledge of another person using their services to infringe copyright." Thus, in finding that users and/or operators of TPB used defendants' service to infringe copyright, the court exercised its discretionary power to compel ISPs to block access to TPB.

III. TRADEMARK DEVELOPMENTS

A. *LOUIS VUITTON MALLETIER S.A. V. WARNER BROTHERS ENTERTAINMENT INC.*[9]

The United States District Court for the Southern District of New York dismissed a trademark infringement action on grounds that the defendant's use of a knock-off bag in a film that resembled a luxury brand's distinctive design was artistically relevant and unlikely to cause confusion as to the source of the bag.

In *Louis Vuitton Malletier S.A. v. Warner Brothers Entertainment Inc.*, luxury fashion house Louis Vuitton brought suit against motion picture company Warner Brothers for trademark infringement. Louis Vuitton is renowned for

9. 868 F. Supp. 2d 172 (S.D.N.Y. 2012).

its high-quality luggage and handbags and its principle trademark, the famous Toile Monogram. In 2011, Warner Brothers released "The Hangover: Part II," which featured a scene set in an airport where characters are pictured with Louis Vuitton bags in a luggage dolly. One of the characters is pictured with a bag that appears to be a Louis Vuitton bag, but is actually an infringing version made by Diophy, a company whose products incorporate a knockoff design of the Louis Vuitton Toile Monogram. When another character attempts to move the bag, the character exclaims, "careful that is . . . that is a Lewis Vuitton." This statement is the sole reference to either Louis Vuitton or to the Diophy bag in the movie.

Louis Vuitton brought claims under the Lanham Act and New York state law, asserting that Warner Brothers' use of the Diophy bag and affirmative misrepresentation that it was a Louis Vuitton bag was likely to confuse viewers into believing (1) that the knockoff was an authentic Louis Vuitton product and (2) that Louis Vuitton had sponsored and approved Warner Brothers' misrepresentation of the Diophy bag as a genuine product. Louis Vuitton also claimed that Warner Brothers' use of the Diophy bag in the film and in advertisements for the film exacerbated the harm generally caused by the sale of the inferior quality, less expensive Diophy bags throughout the United States. Louis Vuitton further argued that the use would tarnish its marks by associating the brand with the poor quality of knockoff products. Warner Brothers moved to dismiss Louis Vuitton's claims on grounds that its noncommercial use of the Diophy bag in the film was protected by the First Amendment. Under the framework established by the Second Circuit in *Rogers v. Grimaldi*, 875 F.2d 994 (2d Cir. 1989), the First Amendment bars any claim under the Lanham Act where a use was "artistically relevant" and was not "explicitly misleading" as to the source or content of the work.

Adopting the *Rogers* framework, the court analyzed whether the use was (1) artistically relevant and (2) explicitly misleading. Though Louis Vuitton did not contest whether Warner Brothers' use was noncommercial, the court nevertheless concluded the use was intended to create an artistic association with Louis Vuitton. The court found that the character's mispronunciation of the French "Louis" as "Lewis" added to the image of the character as "a socially inept and comically misinformed character." Emphasizing that the threshold for artistic relevance was low, the court held that the use had some artistic relevance to the plot of the film.

The court then addressed the question of confusion as to sponsorship and authorization. The court favored freedom of expression and construed the Lanham Act narrowly. The court noted that the likelihood of confusion must be "particularly compelling" where an expressive work is alleged to infringe a trademark. Because the Diophy bag appeared on screen for no

more than a few seconds at a time, and only in the background, out of focus or partially obscured, the court found it was too difficult to notice the difference between the authentic and knockoff bags. The court found Louis Vuitton's further assertion that viewers would take the character's statements seriously implausible. The court therefore concluded that the likelihood of confusion was "at best minimal" and "not nearly significant enough to be considered 'particularly compelling.' " The court thus dismissed Louis Vuitton's claim based on Warner Brothers' protected use of the Diophy bag under *Rogers* because it had some artistic relevance to the plot of the film and was not explicitly misleading.

B. *AMERIGAS PROPANE, L.P. V. OPINION CORP.*[10]

The United States District Court for the Eastern District of Pennsylvania denied Opinion Corp.'s ("Opinion") motion to dismiss Amerigas Propane L.P.'s ("Amerigas") claim of trademark infringement because it found that Amerigas sufficiently alleged that Opinion used its trademark in commerce and that consumers were likely to be confused by the use. However, the court dismissed all claims of contributory infringement. Finally, the court held that the Communications Decency Act ("CDA") did not immunize Opinion from state law claims.

In February 2012, Amerigas brought action against Opinion alleging trademark infringement, unfair competition, and false designation of origin in violation of 15 U.S.C. §§ 1114 and 1125(a). Additionally, Amerigas alleged state law claims for violation of Pennsylvania's Unfair Trade Practices and Consumer Protection Law ("UTPCPL"), contractual interference, and unjust enrichment. Amerigas is a propane distributor and owns a trademark registration for "Amerigas." Opinion owns and operates a website called "www.pissedconsumer.com," which allows individuals to post complaints about services and products they have used. Amerigas alleged that Opinion used the "Amerigas" trademark in its website subdomain and metadata. Furthermore, Amerigas claimed that consumers were likely to be confused because Opinion displayed advertisements for Amerigas's competitors alongside descriptions of Amerigas's business. In April 2012, Opinion filed a motion to dismiss Amerigas's complaint for failure to state a claim pursuant to Federal Rule of Civil Procedure 12(b)(6).

The court rejected Opinion's contention that it did not use "Amerigas" as a trademark but merely used the company's name within a critical speech message. The court found that the allegations satisfied the Lanham Act's

10. No. 12-713, 2012 WL 2327788 (E.D. Pa. June 19, 2012).

"use in commerce" and "in connection with goods and services" requirements. In reaching its conclusion, the court noted that Amerigas's complaint alleged that Opinion used the "Amerigas" trademark in its website's text, subdomain name, and metadata in connection with the sale of advertisements to Amerigas's competitors.

The court also rejected Opinion's contention that its use of the "Amerigas" trademark was protected as nominative fair use. The court concluded that it would be premature to make any findings regarding nominative fair use before discovery. The court said it could not apply the Third Circuit's normative fair use two-part test because it could neither (1) assess the likelihood of confusion nor (2) determine whether Opinion's use was necessary to describe Amerigas's services on its own website.

The court examined ten factors in its determination of whether Opinion's use of the trademark was likely to confuse consumers and found that Amerigas's complaint was sufficiently pleaded. Opinion used the exact trademark owned by Amerigas, the services of both companies are marketed through the same media, and Amerigas alleged that Opinion profited from attracting Amerigas's customers to its website "www.pissedconsumer.com." Although Opinion did not sell propane, the court found that the initial interest confusion doctrine may apply because it is at least possible for a consumer to visit Opinion's website and purchase propane from another company while thinking that they were purchasing from Opinion.

The court found that Amerigas's claim of contributory negligence failed because the complaint only alleged that third-party advertisers used the trademark in its hyperlink, not that this use was infringing. Absent a specific allegation that some entity or person other than Opinion infringed the Amerigas trademark, the court dismissed all claims premised on contributory infringement.

Lastly, the court rejected Opinion's argument that Amerigas's state law claims were barred by the CDA. Opinion argued that it should be granted immunity under CDA because (1) it is an interactive computer service, and (2) the state law claims are premised on its role in publishing content created by others. The court found that Amerigas's allegations that Opinion created some of the posts itself and exercised control over the advertisements were sufficient reasons to proceed under the state law claims.

Finding that Amerigas had sufficiently alleged its trademark claims against Opinion and noting that it was premature to make findings of fair use prior to discovery, the court denied Opinion's motion to dismiss in all respects except those claims premised on a theory of contributory infringement.

IV. TRADE SECRET DEVELOPMENTS

A. *CLEARVALUE, INC. V. PEARL RIVER POLYMERS, INC.*[11]

ClearValue, Inc. ("ClearValue") brought a claim against Pearl River Polymers ("Pearl River") for infringement of its '690 patent. The patent was for a process utilizing a combination of di-allyl di-methyl ammonium chloride ("DADMAC") and poly-aluminum hydroxychloride ("ACH") to clarify water of "raw alkalinity less than or equal to [fifty parts per million ("ppm")]." Pearl River filed a motion for judgment as a matter of law ("JMOL") for invalidity and noninfringement, claiming that the '690 patent was anticipated by U.S. Patent No. 4,800,039 ("Hassick patent"). The Hassick patent disclosed that a combination of DADMAC and ACH clarifies water of alkalinity 150 ppm or less. ClearValue argued that the Hassick patent's range was too broad to anticipate the '690 patent, citing the Fifth Circuit's decision in *Atofina v. Great Lakes Chem. Corp.* ("*Atofina*"). The jury found that ClearValue's '690 patent had not been anticipated, and the district court denied Pearl River's motion for JMOL. On appeal, the Fifth Circuit reversed the denial of JMOL for invalidity and held that Pearl River's '690 patent had been anticipated, distinguishing the case from *Atofina*.

Under 35 U.S.C. § 102, a reference anticipates a claim when it describes each and every limitation of the claimed invention. In *Atofina*, the Fifth Circuit held that a reference does not automatically anticipate a claim describing a narrow limitation within the reference's stated broader limitations. If the narrower limitation yields "considerably different" operations outside of its scope and is "critical" to the claim's function, then a reference's broader range does not anticipate the claim. A claim's narrower range is "considerably different" from the reference's broader range when a technology operates differently outside of the narrow range when applied by a user of ordinary skill in the art. The narrower range is "critical" if the technology does not yield the claimed function when operating outside of said range.

Here, the court found that ClearValue's narrower claim did not meet the requirements outlined in *Atofina* and therefore had been anticipated. In *Atofina*, a claim for a chemical synthesis at a temperature range of 330–450 degrees Celsius was not anticipated by a prior claim for the process, which disclosed a temperature range of 100–500 degrees Celsius. The Fifth Circuit found that the narrow temperature range in *Atofina* was "considerably different" because the synthesis operated differently when it was conducted

11. 668 F.3d 1340 (5th Cir. 2012).

outside of the narrow range but within the broad range described in the reference. Further, the narrow range was "critical" because outside of the range, the synthesis would be problematic and not function as described.

The court held that since ClearValue did not allege any distinction in the function of its technology within the more limited range, the '690 patent could not be regarded as "considerably different" from the Hassick patent. Furthermore, ClearValue did not claim that a fifty ppm threshold was "critical" to the proper operation of its technology, and the '690 patent's narrower restriction did not teach application of the chemical process beyond the disclosure in the Hassick patent. Thus, the court found that the process of using DADMAC and ACH to clarify water of alkalinity below fifty ppm was anticipated by Hassick's disclosure of the process for water at alkalinity 150 ppm or less.

ClearValue also alleged that Pearl River misappropriated ClearValue's Trade Secret #1 for using a combination of DADMACs and ACH to clarify water. The district court overturned the jury's finding of misappropriation due to lack of substantial evidence that Trade Secret #1 was a trade secret, thereby granting Pearl River's motion for JMOL. It also held that the Hassick patent had already publicly disclosed the elements of Trade Secret #1. The Fifth Circuit found unpersuasive ClearValue's argument on appeal that the Hassick patent did not disclose Trade Secret #1 because the Hassick patent did not state that the blend of DADMAC and ACH was "effective" for water clarification. Thus, the Fifth Circuit affirmed the district court ruling that Pearl River did not misappropriate ClearValue's Trade Secret #1 and found that there was no substantial evidence to support the jury finding because the jury presentation of Trade Secret #1 did not assert an "effectiveness" requirement.

B. *AQUA CONNECT, INC. V. CODE REBEL, LLC*[12]

The United States District Court for the Central District of California held that breach of an End User License Agreement prohibiting reverse engineering was not sufficient to establish a cause of action for misappropriation of a trade secret. The court held that breach of an End User License Agreement did not elevate reverse engineering to the level of "improper means," nor did it create a "duty to maintain secrecy."

Defendant Code Rebel, LLC ("Code Rebel") downloaded a trial version of the Aqua Connect Terminal Software and, in doing so, agreed to an End

12. No. CV 11-5764-RSWL, 2012 WL 469737 (C.D. Cal. Feb. 13, 2012), *and denied plaintiff's motion to amend and remand*, No. CV 11-5764 MANX, 2012 WL 1535769 (C.D. Cal. Apr. 27, 2012).

User Licensing Agreement that prohibited reverse engineering of the software. Code Rebel then proceeded to reverse engineer the software and distribute its own competing version. Aqua Connect, Inc. ("Aqua Connect") filed suit for misappropriation of trade secrets.

In order to state a claim for the misappropriation of trade secrets in California, the plaintiff must prove that (1) the plaintiff owned a trade secret, (2) the defendant acquired, disclosed, or used the trade secret through improper means, and (3) the plaintiff was damaged as a result. The court's analysis in this case was centered on the second element: whether Code Rebel had obtained Aqua Connect's trade secret by improper means.

The court held that reverse engineering of software, in conjunction with a breach of the End User License Agreement, does not constitute "improper means" for the misappropriation of trade secrets cause of action. Section 3426.1 of the California Civil Code states: "Reverse engineering or independent derivation alone shall not be considered improper means." Aqua Connect argued that Code Rebel's breach of the End User License Agreement was sufficient to elevate reverse engineering to the level of "improper means." The court referenced the Legislative Committee Comment to Section 3426.1 and found that reverse engineering may constitute improper means only where the defendant obtained the original software through unfair or dishonest means. Quoting *DVD Copy Control Association Inc. v. Bunner*, 116 Cal. App. 4th 241 (2004), the court noted that "nowhere has it been recognized that a party . . . may employ a consumer contract to, in effect, change the statutory definition of 'improper means' under trade secret law to include reverse engineering."

In response to the plaintiff's alternative argument, the court held that an End User License Agreement cannot create the "duty to maintain secrecy" sufficient to prove the "improper means" element of a trade secret misappropriation claim. Section 3426.1 provides that a trade secret disclosed or used was acquired using improper means, where the acquisition occurred "under circumstances giving rise to a duty to maintain secrecy." In response to Aqua Connect's assertion that the End User License Agreement created such a duty, the court held that for trade secret misappropriation claims, "duty" generally only applies to fiduciary duty and has never been found to arise from an End User License Agreement.

Thus, the court found that Aqua Connect failed to state a claim and granted Code Rebel's 12(b)(6) motion to dismiss.

C. *DESIGN INSIGHTS, INC. V. SENTIA GROUP, INC.*[13]

The U.S. Court of Appeals for the Fourth Circuit, in an unpublished opinion, re-affirmed the principle that compilations can constitute a trade secret even when individual components are known to the public. Specifically, the Fourth Circuit confirmed that source code may qualify as a trade secret under Virginia law even when its components are in the public domain, as long as the method by which those components are compiled is not generally known.

In this case, Decision Insights, Inc. ("DII") brought suit against Sentia Group, Inc. ("Sentia"), a company formed by the four named defendants, including three former employees of DII, for inter alia misappropriation of trade secrets under Virginia's Trade Secret Misappropriations Act ("the Act"). In the 1980s, DII created the Dynamic Expected Utility Model ("EU Model"), a software program that applies game theory concepts "to predict the outcome of a given political or business situation" for DII's clients.

Sentia formed in 2002 with the idea of obtaining a software license from DII to operate in particular geographic territories; however, the two parties never reached a license agreement. Sentia then hired Carol Alsharabati, a former consultant who had worked on DII's source code, to develop software for a Sentia product that would compete directly with DII's software. Alsharabati completed the task within six weeks, which, according to DII, could only have been accomplished had Alsharabati used DII's source code to create Sentia's software. Moreover, DII claimed that Sentia's software was "almost identical to DII's EU Model, both in terms of method and in the results obtained." While DII's EU Model uses certain mathematical formulas available in the public domain, DII asserted that the combination and implementation of these formulas in DII's software source code constitutes a trade secret.

The Act, which closely tracks the Uniform Trade Secrets Act, defines a "trade secret" as "information, including but not limited to a formula, pattern, compilation, program, device, method, technique or process" that "derives independent economic value, actual or potential, from not being generally known to, and not being readily ascertainable by proper means" and "is the subject of efforts that are reasonable under the circumstances to maintain its secrecy."

Initially, the district court granted summary judgment for Sentia, finding that DII's EU Model software did not qualify as a trade secret. On appeal,

13. 416 F. App'x 324 (4th Cir. 2011).

the Fourth Circuit affirmed in part and reversed in part, finding that the district court failed to address "whether or not the software program, as a total compilation, could qualify as a trade secret." The Fourth Circuit instructed the district court to consider, in light of its decision in *Trandes Corp. v. Guy F. Atkinson Co.*, 996 F.2d 655 (4th Cir. 1993) (applying Maryland law), whether DII's compilation claim constitutes a trade secret under Virginia's statute. On remand, the district court again granted summary judgment for Sentia, finding that "DII failed to satisfy its burden to show that DII's software, as a compilation, was not generally known or readily ascertainable by proper means."

The Fourth Circuit again vacated and remanded the district court's decision granting summary judgment. Reaffirming that computer source code as a complication could qualify as trade secret under the Virginia statute, the Fourth Circuit considered de novo whether the record supported DII's contention that its software is not generally known or readily ascertainable by proper means. The Fourth Circuit focused on testimony offered by two witnesses: Dr. Bruce Bueno de Mesquita (a politics professor, founder of DII and co-author of the original source code for DII's EU Model), and Gary Slack (a current DII employee and author of DII's software program). Bueno de Mesquita testified that "the method for calculating the value of the discount term that . . . leads to the predicted outcome is proprietary; that is unpublished." Slack testified that "many aspects of the source code, and hence the compilation of the source code as a whole" had "never been disclosed to anyone." Specifically, portions of the process "as well as the entire sequencing of the process" had not been "shared with anybody who [had] not signed a confidential[ity] agreement." Sentia argued that this testimony did not provide evidence but rather offered "ultimate conclusions." However, the Fourth Circuit found otherwise, holding that DII had adduced sufficient evidence during discovery to overcome the summary judgment standard. The Fourth Circuit noted that on remand the district court should consider the other elements of Virginia's statute: whether DII's software code has independent economic value and whether DII engaged in reasonable efforts to maintain the code's secrecy.

The Fourth Circuit also remanded the district court's decision to grant summary judgment for DII's various breach of contract claims. The district court had granted summary judgment on these claims because of its holding that DII had failed to meet its evidentiary burden with respect to its software compilation trade secrets claim. The Fourth Circuit said that DII's breach of contract claim need not require a finding on the trade secrets claim because the language in DII's nondisclosure clauses were broader than the definition

of "trade secret" under Virginia law and therefore may apply to software and other proprietary materials not covered by the Act.

V. CYBERLAW DEVELOPMENTS

A. *UNITED STATES V. NOSAL*[14]

The United States Court of Appeals for the Ninth Circuit, sitting en banc, held that the phrase "exceeds authorized access" in the Computer Fraud and Abuse Act ("CFAA") pertains to having limited access to a computer and exceeding the restrictions on that access rather than to having unrestricted physical access to a device but using information stored there for unauthorized purposes.

Defendant David Nosal worked for Korn/Ferry International—an executive search firm—until October 2004. Soon after Nosal left the firm, he solicited three former colleagues who remained employed by Korn/Ferry to assist him in starting a competing company. These employees used their login credentials to download Korn/Ferry source lists and then provided these lists to Nosal. The employees were authorized to access these lists, but company policy forbade them from disclosing the information to individuals outside of the company. The government indicted Nosal on twenty counts including violations of 18 U.S.C. § 1030(a)(4), "for aiding and abetting the Korn/Ferry employees in 'exceed[ing their] authorized access' with intent to defraud."

The United States District Court for the Northern District of California denied Nosal's motion to dismiss the indictment, but subsequently granted a motion for reconsideration after the United States Court of Appeals for the Ninth Circuit ruled in *LVRC Holdings LLC v. Brekka*, 581 F.3d 1127 (9th Cir. 2009), that "exceeds authorized use" should be construed more narrowly than a misappropriation in violation of company use policies. The District Court dismissed the five counts against Nosal pertaining to "exceeding authorized use." The government appealed and the Court of Appeals for the Ninth Circuit reviewed de novo sitting en banc.

The CFAA defines "exceeds authorized access" as "to access a computer with authorization and to use such access to obtain or alter information in the computer that the accesser is not entitled so to obtain or alter." Nosal argued that the CFAA applied only to hackers who have access to some portion of a computer or network, but exceed that access by hacking into

14. 676 F.3d 854 (9th Cir. 2012).

additional data. The government claimed that the CFAA prohibits violating a company use policy and using authorized access for improper purposes.

The court noted that the CFAA is focused on hacking, not those committing more minor violations of use restrictions. The court found that the statute should not be interpreted more broadly unless Congress explicitly states their intention to dramatically expand federal prosecutorial power. The more narrow interpretation advocated by the court focuses specifically on two forms of hacking: (1) accessing a computer "without authorization" from outside of a network and (2) "exceed[ing] authorized use" of a computer when only limited access has been granted.

The court additionally found the government's argument for a broader interpretation untenable given the other mentions of "exceeds authorized access" throughout the statute. In one instance, where the statute criminalizes one who "exceeds authorized use" even without culpable intent, a broader reading would punish harmless violations of company use policies. Since Congress, according to the court, both did not intend to criminalize such everyday use violations and meant for a consistent definition of these identical words throughout the law, the phrase must be interpreted narrowly.

The court said that the more expansive view of "exceeds authorized use" also fails to provide notice to potential offenders. Given lengthy and infrequently read company manuals and often-changed terms of service agreements with social networks, if unauthorized access were defined as a violation of those manuals and agreements, users would not have sufficient notice to know what constituted a criminal act.

Finally, the court refused to accept the government's claim that it would not prosecute minor offenses of these terms of service agreements and company policies. The court found that adopting the broader interpretation would lead to too much prosecutorial discretion and potential discrimination. Despite other circuits ruling differently, the court held that it must narrowly construe ambiguous criminal statutes to maintain legislative supremacy in defining crimes and not turn ordinary citizens into criminals absent legislative intent.

Judge Silverman, dissenting, found the government's reading correct and suggested that the CFAA's limits on authorized access apply to the purposes of one's access and what one can do with the information accessed. The dissent also argued that a broader reading would not—as the majority suggested—implicate ordinary citizens. The statutory language specific to the defendant's indictment is about accessing a computer without authorization and exceeding authorized access with intent to defraud.

The dissent wrote that the court should only consider the definition of "exceeds authorized use" in the pertinent subsection where an intent to

defraud is part of the criminal definition, not where a culpable mental state is lacking. According to the dissent, if ordinary but prohibited use of computers is prosecuted in future cases, the court can revisit the issue in an as-applied challenge, but should not have done so in the present case.