

BERKELEY TECHNOLOGY LAW JOURNAL

VOLUME 22

NUMBER 1

ANNUAL REVIEW 2007

TABLE OF CONTENTS

I. INTELLECTUAL PROPERTY

A. PATENT

1. Notes

- *SCHERING-PLOUGH AND IN RE TAMOXIFEN: LAWFUL REVERSE PAYMENTS IN THE HATCH-WAXMAN CONTEXT* by *Jeff Thomas*..... 13
- *STILL TIED UP: ILLINOIS TOOL WORKS V. INDEPENDENT INK* by *Puneet V. Kakkar* 47
- *THE AFTERMATH OF EBAY: PREDICTING WHEN DISTRICT COURTS WILL GRANT PERMANENT INJUNCTIONS IN PATENT CASES* by *Jeremy Mulder* 67
- *PATENTABLE SUBJECT MATTER MATTERS: NEW USES FOR AN OLD DOCTRINE* by *Jeffrey M. Kuhn* 89
- *MONSANTO V. SCRUGGS: THE NEGATIVE IMPACT OF PATENT EXHAUSTION ON SELF-REPLICATING TECHNOLOGY* by *Jason Savich*..... 115
- *LG ELECTRONICS, INC. V. BIZCOM ELECTRONICS, INC.: SOLVING THE FOUNDRY PROBLEM IN THE SEMICONDUCTOR INDUSTRY* by *Mehdi Ansari*..... 137
- *BICON, INC. V. STRAUMANN CO.: THE FEDERAL CIRCUIT SPECIFICALLY EXCLUDED CLAIM VIATION TO ILLUSTRATE A NEW LIMITING PRINCIPLE ON THE DOCTRINE OF EQUIVALENTS* by *Blake B. Greene* 155
- *IS THE PTO AUTHORIZED TO PROMULGATE THE PROPOSED RULE CHANGE TO THE CONTINUATION PRACTICE?* by *Laxman Sahasrabudde*..... 193
- *A SURVEY OF POST-PHILLIPS CLAIM CONSTRUCTION CASES* by *Michael Saunders*..... 215
- *EVERYONE IN THE PATENT POOL: U.S. PHILIPS CORP. V. INTERNATIONAL TRADE COMMISSION* by *David W. Van Etten*..... 241

2. Additional Developments

- *GOLDEN BLOUNT, INC. V. ROBERT H. PETERSON CO.*
- *IN RE ECHOSTAR COMMUNICATIONS CORP.*
- *IPXL HOLDINGS, LLC V. AMAZON.COM, INC.*
- *LAVA TRADING, INC. V. SONIC TRADING MANAGEMENT, LLC*

- *LAWMAN ARMOR CORP. V. WINNER INTERNATIONAL, LLC*
- *PFIZER INC. V. RANBAXY LABORATORIES LTD.*
- *ZOLTEK CORP. V. UNITED STATES*
- SOVEREIGN IMMUNITY DEVELOPMENTS

B. COPYRIGHT

1. Notes

- A BITE OUT OF APPLE? iTUNES, INTEROPERABILITY, AND FRANCE'S DADVSI LAW by *Deana Sobel* 267
- PRESERVING COMPETITION FOR COMPUTER MAINTENANCE IN THE DMCA ERA: 17 U.S.C. § 117(C) AND § 1201(A)(1) AFTER *STORAGETEK* by *Alan Galloway* 293
- FAIR USE IN THE 21ST CENTURY: *BILL GRAHAM AND BLANCH V. KOONS* by *Jeannine M. Marques* 331
- *WALL DATA INC. V. LOS ANGELES COUNTY SHERIFF'S DEPARTMENT: LICENSE VERSUS SALE AT THE CROSSROADS OF CONTRACT AND COPYRIGHT* by *Christopher B. Yeh* 355

2. Additional Developments

- *WB MUSIC CORP. V. RTV COMMUNICATION GROUP*
- *LAWS V. SONY MUSIC ENTERTAINMENT, INC.*
- *TWENTIETH CENTURY FOX FILM CORP. V. ENTERTAINMENT DISTRIBUTING*
- *EGILMAN V. KELLER & HECKMAN, LLP*
- *MACROVISION V. SIMA PRODUCTS CORP.*
- *NCR CORP. V. ATM EXCHANGE, INC.*
- *PARKER V. GOOGLE, INC.*
- *PERFECT 10 V. GOOGLE, INC.*
- COPYRIGHT ENFORCEMENT ON THE INTERNET

C. SEMICONDUCTOR CHIP PROTECTION ACT

1. Developments

- *ALTERA V. CLEAR LOGIC*

D. TRADEMARK

1. Notes

- INITIAL INTEREST CONFUSION IN METATAG CASES: THE MOVE FROM CONFUSION TO DIVERSION by *Niki R. Woods* 393

2. Additional Developments

- *CENTURY 21 REAL ESTATE CORP. V. LENDINGTREE, INC.*
- *BRETFORD MANUFACTURING, INC. V. SMITH SYSTEM MANUFACTURING CORP.*
- *STENZEL V. PIFER*

E. TRADE SECRET

1. Note

- *BURBANK GREASE SERVICES, LLC V. SOKOLOWSKI: FRUSTRATING UNIFORMITY IN TRADE SECRET LAW* by *Sarah Gettings* 423

- 2. *Additional Developments*
 - *DIOMED, INC. v. VASCULAR SOLUTIONS, INC.*
 - *MANUEL v. CONVERGYS CORP.*
 - *ARCOR, INC. v. HAAS*

II. CYBERLAW

A. *Notes*

- ARE GOOGLE SEARCHES PRIVATE? AN ORIGINALIST INTERPRETATION OF THE FOURTH AMENDMENT IN ONLINE COMMUNICATION CASES
by *Jayni Foley*..... 447
- LOG ME IN TO THE OLD BALLGAME: *C.B.C. DISTRIBUTION & MARKETING., INC. v. MAJOR LEAGUE BASEBALL ADVANCED MEDIA, LP*
by *Dana Howells*..... 477
- TALES OF THE (VIRTUAL) CITY: GOVERNING PROPERTY DISPUTES IN VIRTUAL WORLDS by *Bobby Glushko*..... 507
- CLICKS AHOY! NAVIGATING ONLINE ADVERTISING IN A SEA OF FRAUDULENT CLICKS by *Sajjad Matin*..... 533
- WHO CAN FIX THE SPYWARE PROBLEM? by *Liyang Sun*..... 555
- PRESUMED ASSENT: THE JUDICIAL ACCEPTANCE OF CLICKWRAP
by *Nathan J. Davis*..... 577

B. *Additional Developments*

- *PEBBLE BEACH COMPANY v. CADDY*
- *UNITED STATES v. ZIEGLER*
- *YAHOO! INC. v. LA LIGUE CONTRE LE RACISME ET L'ANTISEMITISME*
- *SNOW v. DIRECTV, INC.*
- *BEYOND SYSTEMS INC. v. KEYNETICS INC.*
- COMMUNICATIONS DECENCY ACT (CDA) IMMUNITY
- COMPUTER FRAUD AND ABUSE ACT

III. CONSTITUTIONAL LAW

A. *Developments*

- *ALMEIDA v. AMAZON.COM, INC.*
- *DOE v. MCFARLANE*

IV. TELECOMMUNICATIONS

A. *Notes*

- BRINGING NEUTRALITY TO NETWORK NEUTRALITY by *Kai Zhu*..... 615
- STRETCH BEFORE EXERCISE: THE FCC'S OVERBROAD INTERPRETATION OF CALEA AND THE D.C. CIRCUIT'S DEFERENTIAL REVIEW
by *Kamilla Mamedova*..... 647

B. *Additional Developments*

- *COVAD COMMUNICATIONS CO. v. FCC*

SUBSCRIBER INFORMATION

The *Berkeley Technology Law Journal* (ISSN 1086-3818), a continuation of the *High Technology Law Journal* effective Volume 11, is edited by the students of the University of California School of Law, Berkeley (Boalt Hall), and published four times each year (March, June, September, January) by the Regents of the University of California, Berkeley, Journal Publications, Boalt Hall School of Law, 313 Boalt Hall, University of California, Berkeley, CA 94720-7200. Application to Mail at Periodicals Postage Rate is Pending at Berkeley, CA 94704-9998, and at additional mailing offices. POSTMASTER: Send address changes to Journal Publications, 313 Boalt Hall, Boalt Hall School of Law, University of California, Berkeley, CA 94720-7200.

Correspondence. Address all correspondence regarding subscriptions, address changes, claims for non-receipt, single copies, advertising, and permission to reprint to Journal Publications Coordinator, 313 Boalt Hall, Boalt Hall School of Law, Berkeley, CA 94720-7200; (510) 643-6600; JournalPublications@law.berkeley.edu. Authors: see section entitled Information for Authors.

Subscriptions. Annual subscriptions are \$65.00 for individuals, and \$85.00 for organizations. Single issues are \$27.00. Please allow two months for receipt of the first issue. Payment may be made by check, international money order, or credit card (MasterCard/Visa). Domestic claims for non-receipt of issues should be made within 90 days of the month of publication; overseas claims should be made within 180 days. Thereafter, the regular back issue rate (\$27.00) will be charged for replacement. Overseas delivery is not guaranteed.

Form. The text and citations in the *Journal* conform generally to the UNITED STATES GOVERNMENT PRINTING OFFICE STYLE MANUAL (29th ed. 2000) and to THE BLUEBOOK: A UNIFORM SYSTEM OF CITATION (Columbia Law Review Ass'n et al. eds., 18th ed. 2005). Please cite this issue of the *Berkeley Technology Law Journal* as 22 BERKELEY TECH. L.J. ____ (2007).

BTLJ ONLINE

The full text and abstracts of many *Berkeley Technology Law Journal* and *High Technology Law Journal* articles published in previous issues can be found at <http://www.btlj.boalt.org>. Our site also contains a cumulative index, general information about the *Journal*, selected materials related to

FOREWORD

By A.H. Rajani[†] & Alison Watkins[‡]

Since its inception, the Berkeley Technology Law Journal—formerly the High Technology Law Journal—has sought to address “the novel legal issues posed by advancing technologies, mixing scholarly analysis with useful research tools for the practitioner.”¹ In keeping with this objective, the *Annual Review of Law & Technology*, now in its tenth volume, provides practitioners, judges, policymakers, scholars, and students with detailed analyses and summaries of the most significant developments in technology law during the past year. And as technology plays an ever-expanding role in our society, it should come as no surprise that the *Annual Review* covers an increasingly wider range of legal issues.

This year’s *Annual Review* includes twenty-four Notes. Most follow the traditional case note model while others provide broader policy discussions. The thirty-two Additional Developments summarize other significant cases and developments in the law from the past year.

Read collectively, these Notes highlight legal issues common to different areas of technology and intellectual property law. For example, many Notes analyze the extent to which licenses and other forms of contract may alter the scope of intellectual property rights as traditionally defined. A number of the Notes explore this tension in the context of patented inventions and copyrighted works, while others identify similar issues in rapidly emerging virtual worlds and fantasy sports leagues.

Another issue highlighted in this year’s *Annual Review* is the extent to which technological protection measures may enforce or extend copyright protection for software and digital media. This movement to technological self-help is also illustrated in the way some patentees are building protec-

© 2007 A.H. Rajani & Alison Watkins

[†] Senior *Annual Review* Editor, Berkeley Technology Law Journal; J.D. Candidate, 2007, University of California, Berkeley School of Law (Boalt Hall).

[‡] Senior *Annual Review* Editor, Berkeley Technology Law Journal; J.D. Candidate, 2007, University of California, Berkeley School of Law (Boalt Hall).

We are grateful to Professor Peter S. Menell for his continued dedication to this project. Without his guidance and expertise, publication of the *Annual Review* would be impossible. Thanks are also due to Robert Barr, Executive Director of the Berkeley Center for Law and Technology, for his valuable contribution to this year’s patent Notes. In addition, the *Annual Review* advisors and the Journal’s editorial board were instrumental to the successful completion of this project. Finally, we owe our most sincere thanks to our authors for their enthusiasm, thoughtfulness, and perseverance.

1. Editors’ Page, 1 HIGH TECH. L.J. 1 (1986).

tion measures into their products rather than relying on licenses or their patent rights.

Finally, as the importance of the internet as a commercial marketplace, a resource for information, and a forum for speech increases, Congress and the courts continue to grapple with how to regulate the commercial, personal and government use of the internet, and indeed the ongoing debate over net neutrality challenges us to perhaps re-envision the structure of the internet itself.

I. INTELLECTUAL PROPERTY

A. Patent

This year's *Annual Review* explores a wide range of issues within patent law. Some Notes analyze doctrinal issues, including patentable subject matter, the doctrine of equivalents, claim construction methodology, continuation practice, and the issuance of permanent injunctions. Other Notes address conflicts arising from licensing or other contractual agreements, including potential antitrust liability.

1. *Doctrinal Developments and Analysis*

Many of the patent Notes employ empirical analysis to explain the current state of the law. The first of these Notes looks at the effect of the Supreme Court's holding in *eBay Inc. v. MercExchange, LLC* that a district court must apply a four-factor test to determine whether to grant a permanent injunction in patent cases.² This Note examines some post-*eBay* decisions and predicts that courts will grant permanent injunctions when an infringer directly competes with a patentee, but will deny an injunction when an infringer merely indirectly competes with a patentee.

Another Note analyzes the effect that the Federal Circuit's decision en banc in *Phillips v. AWH Corp.*³ has had on methodology of claim construction.⁴ This Note examines subsequent case law to identify how panels of the Federal Circuit and district courts have applied *Phillips*. The Note's empirical analysis of post-*Phillips* claim construction appeals in the Federal Circuit uncovers a willingness to rely on specifications rather than dictionaries to interpret claims, a methodology arguably less predictable

2. *eBay Inc. v. MercExchange, LLC*, 126 S. Ct. 1837, 1838-39 (2006).

3. *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc).

4. *Phillips* was also the subject of a 2006 *Annual Review* Note. David Sanker, Note, *Phillips v. AWH Corp.: No Miracles in Claim Construction*, 21 BERKELEY TECH. L.J. 101 (2006).

where the court will use dictionary definitions under the guise of “ordinary meaning.”

The Federal Circuit doctrine of equivalents jurisprudence is the subject of another Note. The Note examines the new limiting principle adopted by the Federal Circuit in *Bicon, Inc. v. Straumann Co.*⁵ and recounts the evolution of the doctrine of equivalents, offering a thorough explanation of the major principles instituted by the Federal Circuit which limit the application of the doctrine. And while the general contours of the doctrine suggest that the principle will not have as drastic of an effect on the doctrine of equivalents as some of the other limiting principles, it remains yet another doctrine of equivalents defense applicable against any structural claim.

In January 2006, the United States Patent and Trademark Office (PTO) proposed a controversial rule that could significantly affect how applicants may use patent continuation applications to protect the priority date of earlier filed applications. One Note investigates whether the PTO is authorized to promulgate the proposed rule and concludes that if the proposed rule is promulgated and its validity is challenged, the Federal Circuit should review and invalidate the rule under a “hard look” standard of review.

Another Note uses the Supreme Court’s dismissal of certiorari in *Laboratory Corporation of America Holdings v. Metabolite Laboratories, Inc.*⁶ as a starting point to examine the development of patentable subject matter and its role in a modern patent system. This Note contends that subject matter has a role to play in the modern patent system, but not as a traditional bright-line restriction. Instead, courts should treat subject matter as a relevant factor in analyzing other requirements of patentability and should take care to apply those doctrines strictly for patents that cover traditionally unpatentable subject matter.

2. *Contract and Antitrust in the Patent Context*

Contracts and licensing are often critical elements to the successful exploitation and protection of a patentee’s rights. One Note reviews the Federal Circuit’s decision in *LG Electronics, Inc. v. Bizcom Electronics, Inc.*⁷ within the context of the foundry problem in the semiconductor industry and notes how a carefully drafted licensing agreement can over-

5. *Bicon, Inc. v. Straumann Co.*, 441 F.3d 945 (Fed. Cir. 2006).

6. *Lab. Corp. of Am. Holdings v. Metabolite Labs., Inc.*, 126 S. Ct. 2921 (2006).

7. *LG Elecs., Inc. v. Bizcom Elecs., Inc.*, 453 F.3d 1364 (Fed. Cir. 2006).

come the doctrine of patent exhaustion, which creates the foundry problem.

Contracts and licensing agreements can also give rise to antitrust liability. One Note analyzes the Supreme Court's holding in *Illinois Tool Works, Inc. v. Independent Ink, Inc.*⁸ The Note makes two observations: first, that the Court unequivocally removed the presumption that a patent confers market power and second, that the Court arguably removed the applicability of the *per se* analysis for patent-tying arrangements. The Note concludes that even if the Supreme Court's holding in *Illinois Tool* is unclear as to applicability of the *per se* standard, as a normative matter, the rule of reason should govern future cases challenging patent-tying arrangements.

The recent responses by government agencies and the courts to reverse payment settlements in the context of the Hatch-Waxman Amendments is the subject of another Note. This Note describes how the Hatch-Waxman Amendments created incentives for reverse payments, and set forth the legal standard announced in two circuit court cases, *Schering-Plough Corp. v. FTC*⁹ from the Eleventh Circuit and *In re Tamoxifen Citrate Antitrust Litigation*¹⁰ from the Second Circuit. This Note approves of the approach taken by the Second and Eleventh Circuits to determine the legality of reverse payment settlements in the Hatch-Waxman context because they suggest that future antitrust plaintiffs should attack the patent, not the payment.

Another Note addressing the use of licensing examines the implications of *U.S. Philips Corp. v. International Trade Commission*¹¹ on block licenses, also known as patent pools. This Note finds that the Federal Circuit's decision in *Philips* serves to restrict patent misuse doctrine and encourage patent pools, and concludes that *Philips* creates a legal presumption that encourages the creation of, participation in, and enforcement of package licenses.

Within the agricultural industry, the fact that seed are naturally self-replicating has forced patentees to protect their market in a number of ways. One Note examines *Monsanto Co. v. Scruggs*¹² and *Monsanto Co. v. McFarling*,¹³ two cases in which seed producers enforced the single-use

8. *Ill. Tool Works, Inc. v. Indep. Ink, Inc.*, 126 S. Ct. 1281, 1293 (2006).

9. *Schering-Plough Corp. v. FTC*, 402 F.3d 1056 (11th Cir. 2005), *cert. denied*, 126 S. Ct. 2929 (2006).

10. *In re Tamoxifen Citrate Antitrust Litig.*, 466 F.3d 187 (2d Cir. 2006).

11. *U.S. Philips Corp. v. Int'l Trade Comm'n*, 424 F.3d 1179 (Fed. Cir. 2005).

12. *Monsanto Co. v. Scruggs*, 459 F.3d 1328, 1333 (Fed. Cir. 2006).

13. *Monsanto Co. v. McFarling*, 363 F.3d 1336 (Fed. Cir. 2004).

terms of their licenses against farmer-licensees, and proposes that the Federal Circuit's refusal to apply the patent exhaustion doctrine to seeds, despite its negative financial impact on individual farmers, was appropriate given patent law's role in providing incentives for innovation. The Note also observes that rather than relying solely on licenses, many within the industry have begun to employ technological protection measures such as genetic use restriction technologies (GURTs).

B. Copyright

The interplay between licenses, technological protection measures, and consumer welfare is apparent in the dispute between Apple Computers and French authorities over the application of the "Law on Copyright and Neighboring Rights in the Information Society" (Dadvisi).¹⁴ One Note examines the interoperability debate, focusing on the European consumer actions targeting Apple's FairPlay platform, the consumer right to interoperability, and the right of companies like Apple to use DRM without regulation. The Note proposes ways that governments may more effectively regulate DRM and concludes that, in view of France's approach to copyright and the nature of Dadvisi's interoperability provisions, intellectual property rights will most likely enjoy priority over consumer rights under Dadvisi.

Licensing continues to be crucial to the software industry. In examining the Ninth Circuit's decision in *Wall Data Inc. v. Los Angeles County Sheriff's Department*,¹⁵ one Note discusses the tension between contract and copyright law and the ongoing "license versus sale" debate within software copyright cases.

One Note builds on the discussion in previous issues of the *Annual Review*¹⁶ and examines the scope of protection afforded by the Digital Millennium Copyright Act (DMCA) in relation to the copyright protection in the underlying work. The Note examines the Federal Circuit's decision in *Storage Technology Corp. v. Custom Hardware Engineering & Consult-*

14. In French, Dadvisi stands for *Loi relative au droit d'auteur et aux droits voisins dans la société de l'information*, which translates as "Law on Copyright and Neighboring Rights in the Information Society." See Law No. 2006-961 of Aug. 1, 2006, Journal Officiel de la République Française [J.O.] [Official Gazette of France], Aug. 3, 2006, at 11529, available at <http://www.legifrance.gouv.fr/WAspad/UnTexteDeJorf?numjo=MC CX0300082L>.

15. *Wall Data Inc. v. L.A. County Sheriff's Dep't*, 447 F.3d 769 (9th Cir. 2006).

16. A.H. Rajani, Note, *Davidson & Associates v. Jung: (Re)interpreting Access Controls*, 21 BERKELEY TECH. L.J. 365 (2006); Diane Barker, Note, *Defining the Contours of the Digital Millennium Copyright Act: The Growing Body of Case Law Surrounding the DMCA*, 20 BERKELEY TECH. L.J. 47 (2005).

*ing, Inc.*¹⁷ against the legal background of both the Computer Maintenance Competition Assurance Act's (CMCAA) safe harbor for maintenance and the DMCA's anti-circumvention provision. The Note concludes that *StorageTek* exhibits generally sound reasoning, preserves the CMCAA safe harbor, sensibly limits copyright liability and remedies to disputes that infringe the exclusive rights defined by copyright law, and represents a positive development for both for copyright law and the computer service market.

Another Note illustrates that traditional copyright law is just as dynamic as digital copyright. One Note discusses how two recent Second Circuit opinions in *Bill Graham Archives v. Dorling-Kindersley Ltd.* and *Blanch v. Koons*¹⁸ seem to diverge from the Second Circuit's traditionally conservative approach to fair use. This Note explores how these rulings seem to evince a broader definition of transformative use and consequently find secondary uses fair despite their impact on a copyright holder's potential market, which could be promising for appropriation art in the twenty-first century. These predictions are tempered by the lack of predictability within fair use jurisprudence, and the problems this causes, echoing the concerns raised in two Notes in the 2006 *Annual Review*.¹⁹

These Second Circuit opinions could represent a counterbalance within fair use jurisprudence to the restrictive interpretation of fair use in the digital context from the Central District of California in *Perfect 10 v. Google, Inc.*²⁰ That case is discussed as an Additional Development rather than a full case note because of its pending review by the Ninth Circuit.

C. Trademark

The internet's role as a commercial marketplace, a resource for information, and a forum for speech continues as a theme of this year's *Annual Review*. The sole Note addressing trademark law examines the application of the initial interest confusion doctrine to the use of trademarked terms within website metatags.²¹ The Note explains the evolution of the initial

17. *Storage Tech. Corp. v. Custom Hardware Eng'g. & Consulting, Inc.*, 421 F.3d 1307 (Fed. Cir. 2005), *further opinion on denial of reh'g*, 431 F.3d 1374 (Fed. Cir. 2005).

18. *Bill Graham Archives v. Dorling-Kindersley Ltd.*, 448 F.3d 605 (2d Cir. 2006); *Blanch v. Koons*, 467 F.3d 244 (2d Cir. 2006).

19. Emily Proskine, Note, *Google's Technicolor Dreamcoat: A Copyright Analysis of the Google Book Search Library Project*, 21 BERKELEY TECH. L.J. 213 (2006); Alison Watkins, Note, *Surgical Safe Harbors: The Family Movie Act and the Future of Fair Use Legislation*, 21 BERKELEY TECH. L.J. 241 (2006).

20. *Perfect 10 v. Google, Inc.*, 416 F. Supp. 2d 828 (C.D. Cal. 2006).

21. The application of the initial interest confusion doctrine in internet-related cases has been the subject of past *Annual Review* Notes. Yas Raouf, Note, *Lamparello v. Fal-*

interest confusion doctrine, and discusses in detail several cases decided between 2002 and 2006 that represent a growing trend of misapplication and undue broadening of the doctrine. The Note argues that initial interest confusion should not be used as a less stringent substitute for the traditional likelihood of confusion test. The Note locates the source of the courts' misapplication of the doctrine to metatags with both a misunderstanding of internet search technology and a misunderstanding of the way most consumers use internet search technology to shop on the internet.

D. Trade Secret

In *Burbank Grease Services, LLC v. Sokolowski*, the Supreme Court of Wisconsin held that the Wisconsin Uniform Trade Secret Act does not preempt common law claims based information that is confidential, but that does not rise to the level of a "trade secret."²² The sole Note on trade secret law examines this decision and argues that it frustrates the Uniform Trade Secret Act's goal of achieving uniformity among states with regard to trade secret protection, and thus concludes that the court's holding is misplaced both as a matter of statutory interpretation and as a matter of policy.

II. CYBERLAW

The growing importance of the internet as a source of information begs the question: "Are the questions we ask and the information we seek over the internet protected?" One Note delves into the constitutional and statutory protections (or lack thereof) for search query strings. This Note examines *Gonzales v. Google, Inc.*, where the Northern District of California rejected the federal government's request for thousands of search query strings entered by users of Google's search engine.²³ The Note wrestles with how to balance the privacy rights of individuals with providing law enforcement appropriate access to relevant information, ultimately proposing that courts should adopt an originalist interpretation of the Fourth Amendment in deciding online communication cases and advo-

well & Bosley Medical v. Kremer, *Undercutting the Applicability of Initial Interest Confusion to Trademark-in-Domain-Name Gripe Sites*, 21 BERKELEY TECH. L.J. 445 (2006); Joseph V. Marra, Note, *Playboy Enterprises, Inc. v. Netscape Communications Corp.: Making Confusion a Requirement for Online Initial Interest Confusion*, 20 BERKELEY TECH. L.J. 209 (2005).

22. *Burbank Grease Services, LLC v. Sokolowski*, 717 N.W.2d 781, 788 (Wis. 2006).

23. *Gonzales v. Google, Inc.*, 234 F.R.D. 674, 678, 688 (N.D. Cal. 2006).

cates expanding the Electronic Communications Privacy Act (ECPA) to cover search query strings.²⁴

The internet is not solely a commercial marketplace; it also serves as a platform for the development of online communities. Two Notes explore legal disputes arising from two types of internet communities: fantasy sports leagues and massively-multiplayer online games (MMOGs).

The first of these Notes explores the world of fantasy sports leagues at issue in *C.B.C. Distribution & Marketing, Inc. v. Major League Baseball Advanced Media, LP*.²⁵ The Note explains why Major League Baseball's claim of right of publicity is better understood as an attempt to claim ownership over its ballplayers' performance statistics. The Note sets forth the public policies underlying publicity rights, and suggests that in light of these policies and other countervailing concerns that Major League Baseball should not be allowed to claim ownership over these statistics.

The second Note examines three disputes over virtual property that exists within the online worlds of MMOGs. The Note discusses the suitability of the end-user licensing agreements (EULAs) in resolving disputes that arise out of these virtual worlds. The Note suggests that because of confusion over EULA terms and the current underenforcement of the EULAs by the game developers, EULAs do not provide adequate protection for the online community's substantial investments of time and money. The Note identifies problems with most virtual world EULAs, makes a normative argument for revising them, and suggests specific changes that would make EULAs more responsive to the unique needs of inhabitants of virtual worlds.

Regulating activity on internet necessarily involves immense technological challenges. For example, one Note explores the anatomy of click fraud, its growing sophistication, and its impact on the advertising industry. The Note also considers possible legal, regulatory, and market-based solutions that may mitigate the effect and prevalence of click fraud. The second Note reviews the effectiveness of litigation initiated by individual states, the Federal Trade Commission (FTC), and private citizens challenging various actors within numerous sectors of the spyware industry, and concludes that the promising results achieved since 2005 suggest that

24. Amending ECPA to better protect email was the subject of a 2006 *Annual Review* Note. Katherine A. Oyama, Note, *E-Mail Privacy After United States v. Councilman: Legislative Options for Amending ECPA*, 21 BERKELEY TECH. L.J. 499 (2006)

25. *C.B.C. Distrib. & Mktg., Inc. v. Major League Baseball Advanced Media, LP*, 443 F. Supp. 2d 1077, 1091 (E.D. Mo. 2006).

these multiple legal mechanisms working together can effectively control the spyware problem.²⁶

The final cyberlaw Note examines judicial review of electronic standard form contracting (or “clickwrap” agreements). Setting aside the question of whether individuals read standard form contracts, the Note suggests that a review of the cases in which clickwrap terms have been litigated demonstrates that contractors are not vigorously exploiting their ability to extract assent in a way that requires drastic judicial response. This Note also argues that although the current analytical framework for adjudicating clickwrap agreements does not include a particularly rigorous assent analysis, it has adequately addressed the types of agreements that have been litigated thus far.

III. TELECOMMUNICATIONS

The first Note on telecommunications addresses the debate over net Neutrality and provides a detailed description of the technical structure of the internet in an effort to point out how the engineering and economic realities of that structure have been overlooked in the debate. The Note posits that a technical understanding of the internet is necessary to properly appreciate the debate over Net Neutrality. The Note argues that (1) the internet has never been neutral and has never been designed to be neutral; (2) internet traffic prioritization can both coexist with and encourage internet innovation; and (3) some minimal regulation is needed to prevent market power abuses and usage discrimination in the internet service market. The Note also proposes a middle-ground solution that can unite both sides of the debate.

The second telecommunications Note discusses the Federal Communications Commission’s (FCC) order to include broadband providers under the substantial replacement provision of the Communication Assistance to Law Enforcement Act’s (CALEA) definition of a telecommunications carrier and the D.C. Circuit’s subsequent review of this decision in *American Council on Education v. FCC*.²⁷ This Note analyzes the application of CALEA to Voice over Internet Protocol (VoIP), including Congress’ purpose in crafting its surveillance regulatory legislation, the potential threats to privacy and innovation, and the costs to VoIP providers (and presuma-

26. The CAN-SPAM Act was given a less glowing endorsement in a 2005 *Annual Review* Note. Lily Zhang, Note, *The CAN-SPAM Act: An Insufficient Response to the Growing Spam Problem*, 20 BERKELEY TECH. L.J. 301 (2005).

27. *Am. Council on Educ. v. FCC*, 451 F.3d 226, 227-28 (D.C. Cir. 2005).

bly to consumers) of CALEA compliance.²⁸ The Note argues that the FCC's order and the D.C. Circuit's decision affirming it were improper in light of both the architectural differences between VoIP and the older Public Switched Telephone Network (PSTN), as well as the legislative history of CALEA, which did not support the FCC's interpretation.

28. FCC regulation of VoIP was also the subject of a 2005 *Annual Review Note*, Sunny Lu, Note, *Cellco Partnership v. FCC & Vonage Holdings Corp. v. Minnesota Public Utilities Commission: VoIP's Shifting Legal and Political Landscape*, 20 BERKELEY TECH. L.J. 859 (2005).

BERKELEY TECHNOLOGY LAW JOURNAL
ANNUAL REVIEW OF LAW AND TECHNOLOGY

INTELLECTUAL PROPERTY

BERKELEY TECHNOLOGY LAW JOURNAL

SCHERING-PLOUGH AND IN RE TAMOXIFEN: LAWFUL REVERSE PAYMENTS IN THE HATCH-WAXMAN CONTEXT

By Jeff Thomas

In 2005, the United States spent \$2.0 trillion on health care, accounting for 16% of the country's gross domestic product.¹ Expenditures for prescription drugs alone reached \$201 billion.² The U.S. government has struggled to contain health care spending.³ Congress passed the Hatch-Waxman Amendments in 1984 to address high drug costs.⁴ The Amendments provide regulatory and financial incentives that ease access to generic versions of branded pharmaceutical drugs. The Hatch-Waxman provisions have been highly successful in this regard.⁵ When Congress passed the Amendments, generic drugs accounted for about 19% of drug prescriptions, but today they account for more than half.⁶ Generic drugs, which typically cost 30-80% less than their branded pharmaceutical equivalent, save consumers billions of dollars each year.⁷

In order to expedite the market availability of generic drugs, the Hatch-Waxman provisions encourage generic manufacturers to challenge drug patents by providing a limited period of market exclusivity to the initial generic challenger. Under these provisions, the assertion of patent in-

© 2007 Jeff Thomas

1. These data are maintained by the Centers for Medicare & Medicaid Services (CMS) of the U.S. Department of Health & Human Services (HHS), <http://cms.hhs.gov/statistics/nhe/default.asp>.

2. *See id.*

3. *See generally* FTC & DOJ Report, *Improving Health Care: A Dose of Competition Executive Summary*, 31 J. HEALTH POL. POL'Y & L. 437 (2006).

4. Formally known as the Drug Price Competition and Patent Term Restoration Act, the legislation amends the Federal Food, Drug and Cosmetic Act. The amendments were sponsored by Representative Henry Waxman and Senator Orrin Hatch. Provisions of the Hatch-Waxman Amendments are found within titles 21, 35 and 42 of the U.S.C.

5. *See generally* FDA, Generic Competition and Drug Prices, http://www.fda.gov/cder/ogd/generic_competition.htm (last visited February 20, 2007); CONGRESSIONAL BUDGET OFFICE, HOW INCREASED COMPETITION FROM GENERIC DRUGS HAS AFFECTED PRICES AND RETURNS IN THE PHARMACEUTICAL INDUSTRY (1998) [hereinafter CBO STUDY], <http://www.cbo.gov/ftpdocs/6xx/doc655/pharm.pdf>.

6. *See* FTC, FTC GENERIC DRUG ENTRY PRIOR TO PATENT EXPIRATION: AN FTC STUDY, at i (2002) [hereinafter FTC GENERIC DRUG STUDY], <http://www.ftc.gov/os/2002/07/genericdrugstudy.pdf>.

7. *See, e.g.*, CBO STUDY, *supra* note 5, at xi (noting that consumers saved \$ 8-\$ 10 billion from generic drugs in 1994).

validity or non-infringement in a filing with the Food & Drug Administration (FDA) for approval of a generic drug forces the branded drug manufacturer to respond with an infringement suit to protect its exclusive rights to the drug. The filing is an “artificial” act of patent infringement because the generic manufacturer has yet to make any sales and does not risk damages for the patentee’s lost profits. But the branded drug manufacturer risks losing patent rights worth hundreds of millions to billions of dollars. Given the high stakes and the uncertainty of trial, branded drug manufacturers have settled litigation with their generic challengers, sometimes making payments to the generic manufacturer. Because patent litigation settlements typically entail some form of payment from the defendant to the plaintiff, payments in which money flows instead from the patentee to the alleged infringer are called “reverse payments.”

This Note discusses recent responses by government agencies and the courts to reverse payment settlements in the Hatch-Waxman context. Part I provides background on the interplay of the patent and antitrust laws, describes the statutory scheme of the Hatch-Waxman generic drug approval process, and examines two 2003 circuit court opinions that disagreed over the legal standard for judging antitrust liability for reverse payment settlements arising from Hatch-Waxman patent litigation. Part II summarizes two recent circuit court cases, *Schering-Plough Corp. v. FTC*⁸ from the Eleventh Circuit and *In re Tamoxifen Citrate Antitrust Litigation*⁹ from the Second Circuit, which held that reverse payments are not inherently unlawful but that courts should determine whether reverse payment settlements extend the patentee’s exclusionary power beyond the bounds of the patent. Part III describes how Hatch-Waxman creates incentives for reverse payments, sets forth the legal standard announced by the *Schering-Plough* and *In re Tamoxifen* courts, and analyzes the courts’ reasoning. This Part also analyzes the recent petition for certiorari by the *In re Tamoxifen* plaintiffs. Part IV concludes that the approach taken by the Second and Eleventh Circuits is appropriate for determining the legality of reverse payment settlements in the Hatch-Waxman context.

8. *Schering-Plough Corp. v. FTC*, 402 F.3d 1056 (11th Cir. 2005), *cert. denied*, 126 S. Ct. 2929 (2006).

9. *In re Tamoxifen Citrate Antitrust Litig.*, 466 F.3d 187 (2d Cir. 2006).

I. BACKGROUND

A. Intersection of the Patent and Antitrust Laws

1. *Patent and Antitrust Laws*

Patent law is intended to encourage innovation by granting inventors the exclusive right to their inventions for a limited term.¹⁰ Infringing acts include making, using, selling, or offering to sell the patented invention without the patentee's authorization.¹¹ In reality, a patent confers only the right to sue to exclude an alleged infringer because patent validity or infringement are uncertain until the end of litigation.¹² If the court rules in the patentee's favor, the court may enjoin the infringing acts¹³ or order the infringer to pay damages.¹⁴ A court can also award treble damages in the case of willful infringement.¹⁵ Given these powerful remedies and the uncertainty of litigation, the vast majority of patent litigation is settled without trial.¹⁶

The antitrust laws prohibit behavior which is anticompetitive or constitutes an unfair business practice, such as price-fixing, bid-rigging, geographic market allocation between competitors, and monopolistic behavior.¹⁷ The Federal Trade Commission (FTC) is empowered by the Federal Trade Commission Act and Clayton Act to investigate anticompetitive behavior including collusion, monopolization or unlawful trade restraints.¹⁸ The Antitrust Division of the Department of Justice (DOJ) cooperates with the FTC to enforce the antitrust laws.¹⁹ The FTC may request

10. U.S. CONST. art. I, § 8 ("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."); *Bonito Boats, Inc. v. Thunder Craft Boats, Inc.*, 489 U.S. 141, 150-51 (1989) ("The federal patent system thus embodies a carefully crafted bargain for encouraging the creation and disclosure of new, useful, and nonobvious advances in technology and design in return for the exclusive right to practice the invention for a period of years.").

11. 35 U.S.C. § 271(a) (2004).

12. See Mark A. Lemley & Carl Shapiro, *Probabilistic Patents*, 19 J. ECON. PERSP. 75, 75 (2005).

13. 35 U.S.C. § 283.

14. 35 U.S.C. § 284.

15. *Id.*

16. Lemley & Shapiro, *supra* note 12, at 75. For example, a settlement agreement might require the alleged infringer to obtain a license from the patentee.

17. See generally HERBERT HOVENKAMP, *ANTITRUST LAW* (1999 & 2004 Supp.).

18. 15 U.S.C. § 45 (2000).

19. See Federal Trade Commission Bureau of Competition, <http://www.ftc.gov/ftc/antitrust.htm>.

that parties cease anticompetitive practices, or it may sue in federal court or in an administrative proceeding.²⁰ Private parties can also bring actions against allegedly anticompetitive behavior under the Sherman Antitrust Act.²¹

Courts employ two standards to analyze potential antitrust violations: the rule of reason and *per se* illegality. Courts scrutinize all but the most egregious anticompetitive behavior under the rule of reason.²² Under this approach, courts consider a number of factors when determining whether the “questioned practice imposes an unreasonable restraint on competition.”²³ These factors include “the relevant business, its condition before and after the restraint was imposed, and the restraint’s history, nature, and effect.”²⁴ Under the rule of reason, the antitrust plaintiff bears the initial burden to demonstrate market power and anticompetitive effect.²⁵ If the antitrust defendant rebuts this assertion by showing a pro-competitive objective,²⁶ the burden switches back to the plaintiff to demonstrate that the restraint is unnecessary to meet this objective.²⁷

Alternately, anticompetitive behavior may be ruled unreasonable *per se* “[o]nce experience with a particular kind of [behavior] enables the Court to predict with confidence that the rule of reason will condemn it.”²⁸ Unlike the rule of reason analysis, the *per se* approach imposes a “conclusive presumption” of illegality—one that cannot be rebutted by showing lack of market power or pro-competitive effect.²⁹ If a court finds that unlawful behavior has occurred under either a rule of reason or *per se* analysis, the plaintiff must still demonstrate an “antitrust injury,” meaning an injury of the type the antitrust laws are meant to prevent, in order to state a valid claim.³⁰

20. *See id.*

21. *See* 15 U.S.C. §§ 1-2.

22. *See* State Oil Co. v. Khan, 522 U.S. 3, 10 (1997).

23. *Id.*

24. *Id.*

25. Schering-Plough Corp. v. FTC, 402 F.3d 1056, 1065 (11th Cir. 2005) (citing FTC v. Ind. Fed’n of Dentists, 476 U.S. 447, 460-61 (1986)), *cert. denied*, 126 S. Ct. 2929 (2006).

26. *Id.* (citing Nat’l Soc’y of Prof’l Eng’rs v. United States, 435 U.S. 679 (1978)).

27. *Id.* (citing Bhan v. NME Hosps., Inc., 929 F.2d 1404, 1413 (9th Cir. 1991)).

28. Arizona v. Maricopa County Med. Soc., 457 U.S. 332, 344 (1982).

29. *See id.*

30. Brunswick Corp. v. Pueblo Bowl-O-Mat, Inc., 429 U.S. 477, 489 (1977).

2. *The Patent Right to Exclude and Antitrust Liability*

Because patents confer a legal right to exclusionary behavior, courts apply a different legal standard to determine antitrust liability when a patent is involved.³¹ In such cases, the patentee risks antitrust liability for behavior that extends the patentee's realm of exclusivity beyond that granted by the patent laws.³² For example, courts have imposed antitrust liability for patent misuse and "bad faith" patent enforcement. At least three forms of patent misuse potentially violate the antitrust laws: (1) "tying" the license or sale of patented articles to the purchase or licensing of unpatented articles, (2) prohibiting licensees from producing competing goods, or (3) requiring licensees to agree to licenses that extend beyond the life of the patent.³³ To determine when patent misuse has violated the antitrust laws, courts inquire whether the patentee is solely exercising his statutory patent rights.³⁴ If the answer is yes, the patentee should not face antitrust liability regardless of whether the conduct would constitute an antitrust violation in the absence of the patent.³⁵ Bad faith patent enforcement arises when a patentee attempts to enforce a patent that is almost certainly invalid.³⁶

31. Historically, the patent and antitrust laws were considered at odds because patents were perceived as limited-term lawful monopolies whereas antitrust strives to prohibit monopolistic behavior. *See, e.g.,* *SCM Corp. v. Xerox Corp.*, 645 F.2d 1195, 1203 (2d Cir. 1981) ("[T]he patent and antitrust laws necessarily clash."); 6 DONALD S. CHISUM, *CHISUM ON PATENTS* § 19.01 ("The third major defense [that can preclude patent enforcement] is misuse or violation of the antitrust laws."). More recently, courts and commentators have recognized that the two systems are actually focused on similar goals, which consist of "encouraging innovation, industry and competition." *Atari Games Corp. v. Nintendo of America, Inc.*, 897 F.2d 1572, 1576 (Fed. Cir. 1990). The law now recognizes that patents do not inherently provide monopolistic market power, but only give the holder the right to exclude others from the specific area covered by the patent. *See* Lemley & Shapiro, *supra* note 12; *see also* *Ill. Tool Works Inc. v. Indep. Ink, Inc.*, 126 S. Ct. 1281 (2006) (holding that a patent does not necessarily confer market power); Puneet V. Kakkar, Note, *Still Tied Up: Illinois Tool Works v. Independent Ink*, 22 *BERKELEY TECH. L.J.* 47 (2007).

32. *See* *U.S. v. Singer Mfg. Co.*, 374 U.S. 174, 196-97 (1963) ("[T]he possession of a valid patent . . . does not give the patentee any exemption from the provisions of the Sherman Act beyond the limits of the patent monopoly."). *See generally* David A. Balto, *Pharmaceutical Patent Settlements: The Antitrust Risks*, 55 *FOOD & DRUG L.J.* 321 (2000); Herbert Hovenkamp, Mark Janus & Mark A. Lemley, *Anticompetitive Settlement of Intellectual Property Disputes*, 87 *MINN. L. REV.* 1719 (2003).

33. *See* CHISUM, *supra* note 31, § 19.04.

34. *Id.*

35. *Id.*

36. *See id.* § 19.06; *see, e.g.,* *Conceptual Eng'g Assocs. Inc. v. Aelectronic Bonding Inc.*, 714 F. Supp. 1262, 1270 (D.R.I. 1989) ("[T]he plaintiff brought the patent suit in

B. The Hatch-Waxman Amendments

The goals of the Hatch-Waxman Amendments are two-fold: (1) strengthen the patent award for branded drug developers, and (2) make it easier to bring generic drugs to market, thereby benefiting consumers with cheaper drugs.³⁷ The first goal was met by extending patent duration for branded drugs to compensate for the inability to market the drug during the lengthy FDA approval process.³⁸ The second goal was accomplished by introducing an abbreviated FDA approval process for generic drugs.³⁹

Prior to passage of the Amendments, generic manufacturers were required to wait for the branded drug patent to expire before beginning development work on the patented product. Afterwards, the generic manufacturer was required to undertake full clinical trials to prove safety and efficacy. The reward for undertaking this lengthy and expensive approval process was an unpatented product facing entrenched competition from the branded drug. These barriers effectively extended the branded manufacturers' monopolies for years, sustaining high drug costs. When the Hatch-Waxman provisions were passed in 1984, 150 branded drugs whose patent protection had expired lacked a generic equivalent.⁴⁰

The Hatch-Waxman Amendments introduced the Abbreviated New Drug Application (ANDA). Under an ANDA, the generic manufacturer can rely on the safety and efficacy data used for FDA approval of the branded drug, and need only show that the generic and brand drugs are bioequivalent.⁴¹ The Hatch-Waxman provisions further created an exemp-

bad faith, knowing that the patent was invalid because he had concealed the fact that there was a co-inventor; that the plaintiff intended to monopolize the relevant market, and pursued a campaign to do just that, . . . ; and that the attempt to monopolize the market had a dangerous probability of success.”).

37. See H.R. REP. NO. 98-857, pt. 2, at 5-6 (1984).

38. See 35 U.S.C. § 156.

39. See 21 U.S.C. § 355(j) (2004).

40. Kristen E. Behrendt, *The Hatch-Waxman Act: Balancing Competing Interests or Survival of the Fittest?*, 57 FOOD & DRUG L.J. 247, 249 (2002).

41. See 21 U.S.C. § 355(j); 21 C.F.R. § 320.1(e) (2006) (defining bioequivalence as “the absence of a significant difference in the rate and extent to which the active ingredient or active moiety in pharmaceutical equivalents or pharmaceutical alternatives becomes available at the site of drug action when administered at the same molar dose under similar conditions in an appropriately designed study”). Note that the Hatch-Waxman Amendments address pharmaceutical but not biological therapeutics. Representative Waxman, joined by Senators Charles E. Schumer and Hillary Rodham Clinton and others, recently introduced a bill to establish an ANDA process for biologics. Access to Life-Saving Medicine Act, H.R. 6257, 109th Cong. (2d Sess. 2006); S. 4016, 109th Cong. (2d Sess. 2006). At the end of the 109th U.S. Congress, the bill was assigned to committee in both the House and the Senate.

tion so that development of drugs for FDA approval does not infringe.⁴² Thus, a generic manufacturer may begin drug development before the drug patent expires.

When filing an ANDA, a generic manufacturer must certify to the FDA that the generic drug will not infringe any patent rights on the branded drug. This certification must attest to one of the following: no patent rights exist (Paragraph I); patent rights have expired (Paragraph II); the generic will not be marketed until patent rights expire (Paragraph III); or that the generic does not infringe or that any applicable patents are invalid or unenforceable (Paragraph IV).⁴³ A party filing a Paragraph IV Certification must notify any affected patent holders of the filing.⁴⁴ The patent holders then have forty-five days to sue for infringement.⁴⁵ If no timely infringement suits are filed, the FDA may immediately approve the ANDA.⁴⁶ If a patent holder does sue for infringement, FDA approval of the generic drug is stayed for thirty months or until a district court declares the patent invalid or not infringed.⁴⁷ As an incentive for generic drug manufacturers to file a Paragraph IV Certification, the first manufacturer to file an ANDA is granted 180 days of exclusivity after the “first commercial marketing” of the generic product.⁴⁸

Congress recently amended the ANDA process to end certain abuses that were inadvertently allowed under the 1984 Hatch-Waxman Amendments. These enactments had the unintended consequences of allowing drug manufacturer to game the 30 month stay and 180-day exclusivity periods to delay the marketing of generic drugs. For example, a branded manufacturer could pay the first generic challenger to stay off the market while avoiding trigger of its 180-day exclusivity period, thereby barring other generic manufacturers from entering the market. Alternately, the

42. See 35 U.S.C. § 271(e).

43. 21 U.S.C. § 355(j)(2)(A)(vii). The regulations state [T]he applicant shall provide the patent number and certify, in its opinion and to the best of its knowledge, . . . that the patent is invalid, unenforceable, or will not be infringed by the manufacture, use, or sale of the drug product for which the abbreviated application is submitted. The applicant shall entitle such a certification ‘Paragraph IV Certification’.

21 C.F.R. § 314.94(a)(12)(i)(A)(4)

44. 21 U.S.C. § 355(j)(2)(B)(ii).

45. *Id.* § 355(j)(5)(B)(iii).

46. *Id.*

47. *Id.* If the 30 month stay expires before the district court makes a ruling, the FDA may approve the ANDA. However, the generic manufacturer faces potential infringement penalties if the patent is ultimately upheld.

48. 21 U.S.C. § 355(j)(5)(B)(iv)(I)-(II).

branded manufacturer could pay generic challengers to settle near the end of the 30 month stay, and each future challenge would trigger another 30 month stay. Congress addressed these issues in 2003 with the Greater Access to Affordable Pharmaceuticals Act (GAAP).⁴⁹ GAAP only allows one 30 month stay and requires forfeiture of the 180-day exclusivity period under certain conditions, such as delayed market entry or decertifying a Paragraph IV challenge.⁵⁰ The 2003 amendments also charged the FTC and DOJ with reviewing settlement agreements between parties engaged in Paragraph IV litigation.⁵¹

C. Reverse Payment Settlements of ANDA Infringement Suits

Parties often settle patent litigation through an agreement for the accused infringer to make payments to the patent holder and/or license the patent in suit.⁵² However, several settlement agreements have arisen in the context of a Paragraph IV Certification that reverse the norm and feature the branded drug manufacturer making payments to the generic competitor. Such payments are called reverse payments because money is flowing from the patentee to the alleged infringer.⁵³ Reverse payment settlements in the Hatch-Waxman context appeared in the years following passage of the Amendments, several of which resulted in lawsuits alleging antitrust violations.⁵⁴ Two 2003 appellate cases grapple with these alleged violations. In *In re Cardizem CD Antitrust Litigation*, the Sixth Circuit held that a reverse payment agreement was unlawful *per se* because it was a horizontal restraint of trade.⁵⁵ On similar facts in *Valley Drug Co. v. Geneva Pharmaceuticals*, the Eleventh Circuit explicitly declined to follow the *per se* analysis of *In re Cardizem*, instead focusing on whether the set-

49. GAAP was enacted under Title XI of the Medicare Prescription Drug, Improvement and Modernization Act of 2003 and modified portions of the Federal Food, Drug, and Cosmetic Act, 21 U.S.C. § 355.

50. For further discussion of these issues, see generally Larissa Burford, *In re Cardizem & Valley Drug Co.: The Hatch-Waxman Act, Anticompetitive Actions, and Regulatory Reform*, 19 BERKELEY TECH. L.J. 365 (2004) and Natalie M. Derzko, *The Impact of Recent Reforms of the Hatch-Waxman Scheme on Orange Book Strategic Behavior and Pharmaceutical Innovation*, 45 IDEA 165 (2005).

51. See Medicare Prescription Drug, Improvement, and Modernization Act of 2003, Pub. L. No. 108-173, §§ 1111-1118 (2003).

52. See generally Hovenkamp et al., *supra* note 32.

53. Reverse payments are alternately referred to as exclusionary payments, exit payments, or branded payments.

54. For discussion of a number of such cases, see M. Elaine Johnston and Matthew J. Galvin, *Antitrust Aspects of Settling Intellectual Property Litigation*, 867 PLI/PAT 159 (2006).

55. *In re Cardizem CD Antitrust Litig.*, 332 F.3d 896, 908 (6th Cir. 2003).

tlement agreement extended the patentee's realm of exclusivity beyond the scope of the patent.⁵⁶

1. *In re Cardizem CD Antitrust Litigation*

In re Cardizem involved a settlement agreement between Hoechst Marion Roussel, Inc. ("HMR") and Andrx Pharmaceuticals, Inc. ("Andrx") over HMR's Cardizem, a prescription drug used to treat angina and hypertension.⁵⁷ Andrx was the first manufacturer to seek approval for a generic version of the drug.⁵⁸ At the time, HMR's original patent on Cardizem had expired but the company had a patent on a time-release drug formulation.⁵⁹ Andrx filed an ANDA with Paragraph IV Certification, asserting that its generic drug would not infringe HMR's formulation patent.⁶⁰ In response, HMR sued for infringement.⁶¹ HMR and Andrx reached an agreement nine days after the FDA tentatively approved Andrx's ANDA, dependent on the outcome of the pending litigation.⁶² The settlement agreement specified that HMR pay Andrx \$40 million each year that Andrx stayed off the market.⁶³ And because Andrx retained control of Hatch-Waxman's 180-day exclusivity period, its failure to market generic Cardizem also prevented other generic manufacturers from competing with Cardizem.⁶⁴

Purchasers of Cardizem filed a class action lawsuit, alleging that HMR and Andrx's agreement violated state and federal antitrust laws.⁶⁵ The district court granted the plaintiffs' motion for summary judgment, holding that the agreement constituted a horizontal restraint of trade and a *per se* antitrust violation.⁶⁶ The court noted that the settlement agreement precluded Andrx from marketing any version of Cardizem, even those not at issue in the patent litigation, and required Andrx to block other generics by maintaining the 180-day exclusivity period.⁶⁷ The Sixth Circuit af-

56. *Valley Drug Co. v. Geneva Pharms.*, 344 F.3d 1294, 1310 (11th Cir. 2003).

57. *In re Cardizem*, 332 F.3d at 901.

58. *Id.* at 902.

59. *Id.*

60. *Id.*

61. *Id.*

62. *Id.*

63. *Id.*

64. *Id.* Note that Andrx would have been forced to relinquish the exclusivity period for failure to market its product under the GAAP Amendments of 2003. *See supra* Section I.B.

65. *Id.* at 900.

66. *In re Cardizem CD Antitrust Litig.*, 105 F. Supp. 2d 682, 685 (E.D. Mich. 2000).

67. *Id.* at 699.

firmed,⁶⁸ finding that the agreement was not a mere attempt at enforcing patent rights or settling litigation, but that the agreement “was, at its core, a horizontal agreement to eliminate competition in the market for Cardizem CD throughout the entire United States, a classic example of a *per se* illegal restraint of trade.”⁶⁹

2. *Valley Drug Co. v. Geneva Pharmaceuticals, Inc.*

Abbott Laboratories (“Abbott”) held a number of patents for tabular and capsular terazosin hydrochloride, a prescription drug used to treat hypertension and enlarged prostate.⁷⁰ During the mid-1990s, two generic manufacturers, Geneva Pharmaceuticals (“Geneva”) and Zenith Goldline Pharmaceuticals (“Zenith”), filed ANDAs with Paragraph IV certification to produce generic versions of the drug and Abbott sued for infringement.⁷¹ Geneva conceded that its tabular formulation infringed but asserted patent invalidity.⁷² Abbott overlooked to file a suit against Geneva for the capsular version, but began efforts to amend its complaint against Geneva when the FDA approved Geneva’s ANDA for the capsular form in 1998.⁷³ Zenith sought a declaratory judgment that its proposed generics did not infringe two Abbott patents that issued after Zenith’s ANDA filing.⁷⁴ Abbott counterclaimed for infringement.⁷⁵

In 1998, while litigation was underway, Abbott reached agreements with both generic competitors.⁷⁶ In exchange for dropping its ANDA challenge, Abbott paid Zenith \$3 million up front, \$3 million after three months, and \$6 million every three months thereafter.⁷⁷ Unlike Zenith, Geneva did not disclaim its ANDA challenge, but agreed not to market any version of the drug and not to transfer any rights under its ANDA filings, including the 180-day exclusivity periods.⁷⁸ In return, Abbott paid

68. *In re Cardizem CD Antitrust Litig.*, 332 F.3d 896, 896, 915 (6th Cir. 2003).

69. *Id.* at 908.

70. *Valley Drug Co. v. Geneva Pharms., Inc.*, 344 F.3d 1294, 1298 (11th Cir. 2003).

71. *Id.* at 1298-99.

72. *Id.* at 1299.

73. *Id.*

74. *Id.*

75. *Id.*

76. *Id.* at 1300.

77. *Id.* The payments were to continue for two years.

78. *Id.* Under the terms of the settlement agreement, Geneva agreed not to market any form of the drug—recall that the FDA approved its capsular terazosin hydrochloride—until the underlying patent litigation was resolved with a final judgment from which no appeal could be taken, including petition for certiorari to the Supreme Court.

Geneva \$4.5 million each month pending resolution of the ongoing patent litigation.⁷⁹

Valley Drug Co. and others sued Abbott, Geneva and Zenith alleging that the settlements were unlawful restraints on trade.⁸⁰ The district court granted plaintiff's motion for summary judgment, holding that the agreements were *per se* antitrust violations of the Sherman Act.⁸¹ The Eleventh Circuit reversed and remanded. It disagreed with the Sixth Circuit's reasoning in *In re Cardizem* to the extent that the Sixth Circuit appeared to find a *per se* antitrust violation "merely" because of delayed market entry by the accused infringer during ongoing patent litigation in exchange for payments.⁸² Rather, the Eleventh Circuit held that reverse payments are not unlawful *per se* but that a proper analysis must consider whether the exclusionary effect of the settlement extends beyond the scope of the patent.⁸³

On remand, the district court examined the patent's likelihood of validity under a process similar to that used in deciding a motion for a preliminary injunction.⁸⁴ The court again found a *per se* antitrust violation on the grounds that Abbott's patent was likely invalid at the time of settlement.⁸⁵ The court noted that, prior to the settlement agreement, Abbott had admitted in ongoing patent litigation that it sold the claimed product more than one year before it applied for the patent, in violation of the on-sale bar.⁸⁶

II. RECENT CASES

Two recent cases at the circuit court level further addressed the legality of reverse payment settlement agreements in the context of Hatch-Waxman. In both cases, the courts followed the approach of *Valley Drug*.

79. *Id.*

80. *See id.* at 1295-96.

81. *Id.* at 1301.

82. *Id.* at 1311 n.26. The Eleventh Circuit recognized that the Sixth Circuit had other grounds for utilizing a *per se* analysis in *In re Cardizem*, including Andrx's agreements to game the 180-day exclusivity period and refrain from selling non-infringing products.

83. *Id.*

84. *In re Terazosin Hydrochloride Antitrust Litig.*, 352 F. Supp. 2d 1279, 1306-07 (S.D. Fla. 2005).

85. *Id.* Abbott's patent was indeed invalidated after the settlement agreements were reached under the on-sale bar, 35 U.S.C. § 102(b). *Abbott Labs. v. Geneva Pharms.*, 182 F.3d 1315 (Fed. Cir. 1999).

86. *Terazosin*, 352 F. Supp. 2d at 1289-90.

A. *Schering-Plough Corp. v. FTC*

Potassium chloride is a supplement taken with prescription drugs that treat high blood pressure or congestive heart disease.⁸⁷ Schering-Plough Corp. (“Schering”) manufactures and markets K-Dur 20, a time-release microencapsulated form of potassium chloride.⁸⁸ Although potassium chloride is a common substance and is not patentable, Schering held a patent for the time-released coating used to encapsulate K-Dur 20.⁸⁹

Upsher-Smith Laboratories (“Upsher”) filed an ANDA with Paragraph IV Certification for its time-released version of potassium chloride in 1995.⁹⁰ Schering timely sued, alleging that Upsher’s product infringed the patent covering K-Dur 20.⁹¹ While awaiting trial, Schering and Upsher entered settlement talks.⁹² Refusing to pay Upsher to simply withhold marketing its product, Schering proposed a compromise wherein Upsher could enter the market five years before Schering’s patent expired.⁹³ Schering also agreed to license several products from Upsher, including a time-released form of niacin, a product which Schering had previously sought to license from another competitor and valued at about \$250 million.⁹⁴ The final settlement called for Schering to pay to Upsher an upfront licensing fee of \$60 million, \$10 million in milestone payments, and royalty payments for the licensed products.⁹⁵ Ultimately, the market for time-release niacin proved disappointing and Schering never sold any of the licensed products.⁹⁶

ESI Lederle, Inc. (“ESI”) filed an ANDA with Paragraph IV Certification for generic time-release potassium chloride in 1995.⁹⁷ Schering sued ESI for infringement and the trial judge directed the parties to enter mediation.⁹⁸ Schering agreed to allow ESI to enter the market almost three years before the patent on K-Dur 20 expired, but ESI also demanded payment to

87. *Schering-Plough Corp. v. FTC*, 402 F.3d 1056, 1058 (11th Cir. 2005), *cert. denied*, 126 S. Ct. 2929 (2006).

88. *Id.*

89. *Id.* at 1058. The patent, U.S. Patent No. 4,863,743 (February 19, 1986), expired on September 5, 2006.

90. *Schering-Plough*, 402 F.3d at 1058.

91. *Id.* at 1059.

92. *Id.*

93. *Id.*

94. *Id.* at 1059-60. Niacin is used to lower cholesterol but has unwanted side effects including elevation and flushing of liver enzymes.

95. *Id.* at 1060.

96. *Id.*

97. *Id.*

98. *Id.*

settle the case.⁹⁹ At the suggestion of the magistrate judge presiding over the mediation, Schering agreed to pay ESI \$5 million for attorney's fees and another \$10 million if ESI's ANDA was approved by a specified date.¹⁰⁰ Schering further agreed to license two products from ESI for \$15 million.¹⁰¹

The FTC filed an administrative complaint against Schering, Upsher and ESI alleging that the settlement agreements were unlawful restraints of trade and that Schering conspired to monopolize the market for potassium chloride supplements.¹⁰² An Administrative Law Judge (ALJ) dismissed the complaint.¹⁰³ The ALJ rejected a *per se* analysis of Schering's payments to Upsher or ESI, instead performing a rule of reason analysis that considered the scope of Schering's patent.¹⁰⁴ The FTC had shown neither that the patent was likely invalid at the time of the settlement agreements nor that Upsher or ESI would not infringe, and therefore the FTC failed to establish that generics would have been marketed sooner absent the reverse payments.¹⁰⁵ The ALJ distinguished the settlement under consideration from those in *In re Cardizem* or *Valley Drug*, on the grounds that those settlements did not settle the ongoing patent litigation or allow the generics to enter the market before patent expiration.¹⁰⁶

On appeal, the full Commission of the FTC reversed.¹⁰⁷ The Commission also applied a rule of reason standard, but, unlike the ALJ, it did not consider the possibility that the patent might be held valid.¹⁰⁸ Rather, the Commission concluded that the licenses were insufficient consideration for the payments from Schering to Upsher or ESI,¹⁰⁹ and that the payments therefore bought delayed marketing of the generics to the ultimate detriment of consumers.¹¹⁰ The Commission further prohibited exchange of any item of value from the patentee to the alleged infringer, with the ex-

99. *Id.*

100. *Id.* at 1060-61 & n.8.

101. *Id.* at 1061 n.8.

102. *Id.* at 1061.

103. *Id.*

104. *Id.*

105. *Id.*

106. Schering-Plough Corp., 2002 WL 1488085 (F.T.C. No. 9297) (June 27, 2002) (not reported).

107. Schering-Plough Corp. v. FTC, 402 F.3d 1056, 1062 (11th Cir. 2005), *cert. denied*, 126 S. Ct. 2929 (2006).

108. *See id.* at 1064-65.

109. *Id.* at 1062.

110. *Id.*

ception of legal fees not to exceed \$2 million.¹¹¹ Schering and Upsher appealed the Commission's findings to the Eleventh Circuit.¹¹²

The Eleventh Circuit framed the issue on appeal as whether the Commission's findings were legally sufficient to establish that the agreements between Schering and Upsher/ESI amounted to an "unreasonable" restraint of trade.¹¹³ The Commission allowed the FTC to show a detrimental market effect and then required the settling parties to rebut by demonstrating procompetitive benefit.¹¹⁴ The Commission declined to address the exclusionary power of the patent, but focused only on whether Upsher or ESI would have entered the market earlier in the absence of payments from Schering.¹¹⁵ The Eleventh Circuit was clearly unimpressed with the "contradictory nature of the Commission's opinion,"¹¹⁶ stating that "the Commission grounds its decision in the untenable supposition that without a payment there would have been different settlements"¹¹⁷ and that "[i]t would seem as though the Commission clearly made its decision before it considered any contrary conclusion."¹¹⁸

Unlike the ALJ or the Commission, the Eleventh Circuit stated that it would adopt neither a *per se* nor rule of reason analysis, but reiterated the reasoning set forth in *Valley Drug*.¹¹⁹ The court stated that agreements to allocate markets are "clearly anticompetitive" unless one of the parties holds a patent, in which case the proper inquiry focuses on: "(1) the scope of the exclusionary potential of the patent; (2) the extent to which the agreements exceed that scope; and (3) the resulting anticompetitive effects."¹²⁰

The court first analyzed the exclusionary power of Schering's patent on the K-Dur 20 formulation.¹²¹ The court stated that a patent is presumed valid and its holder is lawfully permitted to exclude others from practicing

111. *Id.*

112. *Id.* A plaintiff can appeal a cease and desist order from the Commission in any federal circuit court where the questioned behavior is practiced or the plaintiff resides or does business. 15 U.S.C. § 45(c) (2000).

113. *Schering-Plough Corp. v. FTC*, 402 F.3d 1056, 1063 (11th Cir. 2005), *cert. denied*, 126 S. Ct. 2929 (2006).

114. *Id.*

115. *Id.* at 1066 n.15.

116. *Id.* at 1062 n.10.

117. *Id.*

118. *Id.* at 1065.

119. *Id.* at 1063-64.

120. *Id.* at 1066.

121. *Id.* at 1066-67.

the patented subject matter.¹²² No one had shown that Schering's patent was invalid, and Schering was thus within its rights to exclude infringers.¹²³ Indeed, the FTC could not prove that Upsher or ESI could have entered the market prior to the patent's expiration.¹²⁴ The Eleventh Circuit next considered the scope of the settlement agreements.¹²⁵ The court strongly disagreed with the Commission's assertion that Schering's \$60 million payment to Upsher was not made as consideration for the licensed products but rather as payment for Upsher to delay marketing generic K-Dur 20.¹²⁶ In support, the court noted that Schering estimated the net present value of just one of the licensed products at \$254 million at the time of agreement.¹²⁷ The court was no more persuaded by the Commission's deliberations over Schering's settlement with ESI,¹²⁸ noting that the FTC failed to rebut Schering's evidence that it would have won in litigation, and that the potential \$10 million payment was suggested by the federal magistrate during mediation and ended what promised to be bitter patent litigation.¹²⁹ The Eleventh Circuit concluded that "the agreements fell well within the protections of [Schering's] patent, and were therefore not illegal."¹³⁰

The FTC petitioned for certiorari. The FTC asked the Court to decide "[w]hether an agreement between a pharmaceutical patent holder and a would-be generic competitor, in which the patent holder makes a substantial payment to the challenger for the purpose of delaying the challenger's entry into the market, is an unreasonable restraint of trade."¹³¹ As characterized by the FTC, the Eleventh Circuit in *Schering-Plough* "essentially imposes a rule that a patentee is presumptively entitled to buy protection from all competition for the full patent term, even if such payments effectively augment the patent's actual exclusionary power."¹³² The Solicitor

122. *Id.* at 1066 (citing 35 U.S.C. § 282).

123. *Id.* at 1067.

124. *Id.* at 1068.

125. *Id.*

126. *Id.* at 1071 ("[W]e think [the Commission's] conclusion that [time-release niacin] was not worth \$ 60 million, and that settlement payment was to keep Upsher off the market is 'not supported by law or logic.'").

127. *Id.* at 1070.

128. *Id.* at 1071-72 ("We do not pretend to understand the Commission's profound concern with this settlement . . .").

129. *Id.* at 1072.

130. *Id.* at 1076.

131. Petition for a Writ of Certiorari at i, *FTC v. Schering-Plough Corp.*, 126 S. Ct. 2929 (2006) (No. 05-273), 2005 WL 2105243.

132. *Id.* at 12.

General and DOJ recommended that certiorari be denied.¹³³ Noting the FTC's disdain for reverse payments,¹³⁴ these parties stated that "competing considerations suggest that the mere presence of a reverse payment in the Hatch-Waxman context is not sufficient to establish that the settlement is unlawful."¹³⁵ The Supreme Court denied certiorari.¹³⁶

B. *In re Tamoxifen Citrate Antitrust Litigation*

Tamoxifen is the most widely prescribed drug to treat breast cancer.¹³⁷ In 1985, Imperial Chemical Industries, PLC ("ICI") received a patent on tamoxifen¹³⁸ and Barr Laboratories, Inc. ("Barr") filed an ANDA including a Paragraph IV Certification to produce a generic version of the drug.¹³⁹ ICI filed a timely suit for infringement.¹⁴⁰ At trial, the district court found that the patent was unenforceable for inequitable conduct.¹⁴¹ While the trial was ongoing, AstraZeneca Pharmaceuticals LP and Zeneca, Inc. ("Zeneca") acquired the tamoxifen patent.¹⁴²

In 1993, while the case was on appeal before the Federal Circuit, Zeneca and Barr entered into a settlement agreement.¹⁴³ Zeneca paid Barr \$21 million to withdraw its claims against the tamoxifen patent and agree not to market generic tamoxifen until the patent expired or was invalidated by another challenger.¹⁴⁴ The settlement also licensed Barr to sell Zeneca-manufactured tamoxifen in the U.S.¹⁴⁵ In response to the settlement agreement, the Federal Circuit agreed to vacate the district court's ruling.¹⁴⁶ As a result, Zeneca's tamoxifen patent remained valid, and Barr began selling Zeneca-manufactured tamoxifen for about five percent be-

133. Brief for the United States as Amicus Curiae at 1, *FTC v. Schering-Plough Corp.*, 126 S. Ct. 2929 (2006) (No. 05-273), 2006 WL 1358441.

134. *Id.* at 12.

135. *Id.* at 11.

136. *FTC v. Schering-Plough Corp.*, 126 S. Ct. 2929 (2006).

137. *In re Tamoxifen Citrate Antitrust Litig.*, 466 F.3d 187, 193 (2006).

138. *Id.*

139. *Id.*

140. *Id.*

141. *Imperial Chem. Indus., PLC v. Barr Labs., Inc.*, 795 F. Supp. 619 (S.D.N.Y. 1992).

142. *In re Tamoxifen*, 466 F.3d at 193.

143. *Id.*

144. *Id.*

145. *Id.*

146. *Imperial Chem. Indus., PLC v. Heumann Pharma GmbH & Co.*, 1993 WL 118931, 991 F.2d 811, **1 (Fed. Cir. 1993) (unpublished).

low the price of the Zeneca-branded drug.¹⁴⁷ Zeneca later successfully defended the tamoxifen patent against three other generic competitors.¹⁴⁸

Thirty lawsuits were brought in response to the settlement agreement between Zeneca and Barr.¹⁴⁹ The consolidated class action lawsuit alleged that the settlement allowed Zeneca and Barr to: (1) revive the tamoxifen patent from the finding of unenforceability, (2) confine all manufacture of tamoxifen to a single party (Zeneca), (3) share monopoly profits, (4) avoid competition, and (5) exclude other generic manufacturers.¹⁵⁰ Plaintiffs further alleged that the Federal Circuit would have affirmed the original finding of inequitable conduct in *ICI v. Barr Labs*, which would have allowed generic tamoxifen to enter the market years earlier.

The district court granted defendants' motion to dismiss pursuant to Rule 12(b)(6).¹⁵¹ First considering whether the settlement of the patent litigation could violate antitrust law, the court noted that patents provide a legal monopoly, and only bad faith settlements that extend the monopoly beyond the bounds of the patent run afoul of the Sherman Act.¹⁵² The court held that plaintiffs had not presented facts showing that the settlement was in bad faith.¹⁵³ In contrast, Zeneca acted to protect the validity of its patent, and Barr received a license to market tamoxifen in return.¹⁵⁴ By settling their litigation, Zeneca and Barr "cleared the field" for other generic drug manufacturers to file ANDAs and challenge the patent.¹⁵⁵ The court distinguished the settlement agreement from those in *In re Car-dizem* or *Valley Drug* because those settlements prolonged litigation and thus extended the patentee's monopoly period.¹⁵⁶ In addition, Barr was required to relinquish the 180-day exclusivity period under the FDA regulations in place at the time.¹⁵⁷

147. *In re Tamoxifen*, 466 F.3d at 195 n.9.

148. *See Zeneca Ltd. v. Novopharm, Ltd.*, 1997 WL 168318, 111 F.3d 144, **1 (Fed. Cir. 1997) (unpublished); *Zeneca Ltd. v. Pharmachemie B.V.*, No. 96-12413, 2000 WL 34335805, at *15 (D. Mass. 2000) (unreported). A third generic challenger, Mylan Pharmaceuticals, agreed to be bound by the *Pharmachemie* decision. *See Tamoxifen*, 466 F.3d at 196 n.11.

149. *In re Tamoxifen Citrate Antitrust Litig.*, 277 F. Supp. 2d 121, 127 (E.D.N.Y. 2003).

150. *Id.* at 128.

151. *Id.* at 140.

152. *Id.* at 129-130.

153. *Id.* at 136.

154. *Id.* at 133.

155. *Id.*

156. *Id.*

157. Plaintiff's alleged that Barr agreed to petition the FDA for the 180-day exclusivity period as the first to file a Paragraph IV ANDA if another challenger attempted to

The plaintiffs further argued that the agreement effectively revived an unenforceable patent to consumer detriment because generic drug manufacturers could have relied on the initial ruling to collaterally estop Zeneca from asserting its patent rights.¹⁵⁸ The court dismissed this argument on the grounds that at the time of settlement not even Barr could rely on the invalidity ruling because of the ongoing appeal.¹⁵⁹ The court also noted that the Federal Circuit may not have affirmed the finding of inequitable conduct.¹⁶⁰ Indeed, the Federal Circuit later upheld the tamoxifen patent, agreeing with a finding of no inequitable conduct.¹⁶¹

The Second Circuit affirmed the dismissal.¹⁶² The first ground for appeal was that the tamoxifen patent should have been presumed invalid when considering the complaint, based on the invalidity finding in Barr's initial lawsuit.¹⁶³ The court responded by noting that patent cases are often settled and that the court system encourages settlement.¹⁶⁴ The court worried that presuming the patent invalid would disregard the agreement between Zeneca and Barr, and thus reduce the incentive for litigating parties to settle.¹⁶⁵ The plaintiffs tried to bolster their argument by maintaining that the Federal Circuit would have upheld the initial district court's finding of inequitable conduct.¹⁶⁶ The Second Circuit was not persuaded but rather declined to guess the outcome of an untried appeal, and held that

market generic tamoxifen. *See id.* at 125. However, at the time of the Zeneca-Barr settlement in 1993, the FDA granted the 180-day exclusivity period to the first generic challenger to successfully defend a Paragraph IV certification in court. Thus, Barr lost its right to the exclusivity period by settling with Zeneca. *See id.* at 134. In 1997, the FDA's "successful defense" requirement was invalidated as conflicting with the plain language of the Hatch-Waxman Amendments. *See Mova Pharm. Corp. v. Shalala*, 140 F.3d 1060, 1070-73 (D.C. Cir. 1998). In contrast, the settlements in *In re Cardizem* and *Valley Drug* were reached after 1997 and stipulated that the generics hold their 180-day exclusivity periods to block other challengers. *See supra* Section I.C. The GAAP Amendments of 2003 addressed these abuses. *See supra* Section I.B.

158. *In re Tamoxifen*, 277 F. Supp. 2d at 138.

159. *Id.* ("A complainant has not any vested right in the decree of the district court while it is subject to review.") (citing *Asselta v. 149 Madison Ave. Corp.*, 79 F. Supp. 413, 415 (S.D.N.Y. 1948)).

160. *Id.*

161. *Zeneca Ltd. v. Novopharm, Ltd.*, 1997 WL 168318, 111 F.3d 144, **1 (Fed. Cir. 1997) (unpublished).

162. *In re Tamoxifen Citrate Antitrust Litig.*, 466 F.3d 187, 190 (2d Cir. 2006).

163. *Id.* at 202.

164. *Id.* at 202-03.

165. *Id.* at 203.

166. *Id.* at 204.

that the plaintiffs must allege more than just settlement of an ongoing patent litigation to state a valid claim of an antitrust violation.¹⁶⁷

The plaintiffs further alleged that the reverse payment from Zeneca to Barr was “excessive,” thus demonstrating the anticompetitive nature of the settlement agreement.¹⁶⁸ Citing *Schering-Plough*, the court noted that the environment created by the Hatch-Waxman Amendments “encourages” reverse payments because the branded manufacturer faces the potential loss of its patent, whereas the generic has yet to sell any product and thus is free from paying damages.¹⁶⁹ Given this setting, the court stated that reverse payments themselves are not necessarily anticompetitive.¹⁷⁰ Rather, the court reasoned that the payments, regardless of size, are not unlawful unless they extend monopoly power beyond the scope of the patent.¹⁷¹ For example, sham payments that keep an almost certainly invalid patent alive might illegally extend the scope of the patent.¹⁷² In the present case, Zeneca was willing to litigate the patent and successfully defended it in later infringement proceedings, suggesting that the company’s belief in the validity of the tamoxifen patent was not misplaced.¹⁷³

Like the district court, the Second Circuit distinguished the Zeneca-Barr settlement agreement from those in *In re Cardizem* or *Valley Drug*. First, the settlement did not preclude the marketing of unrelated or non-infringing products.¹⁷⁴ Second, other generic drug manufacturers were free to challenge the tamoxifen patent after Barr agreed to vacate the trial court decision.¹⁷⁵ Finally, Zeneca’s licensing of tamoxifen to Barr did in fact reduce the price of tamoxifen by a few percent.¹⁷⁶

Despite a vigorous dissent from the panel opinion,¹⁷⁷ the Second Circuit denied rehearing and rehearing *en banc*.¹⁷⁸ On December 13, 2006, the class action plaintiffs filed a brief to the Supreme Court requesting cer-

167. *Id.* at 203.

168. *Id.* at 208.

169. *Id.* at 206-07.

170. *Id.* at 207.

171. *Id.* at 212-13.

172. *Id.* at 208-09.

173. *Id.* at 210-11.

174. *Id.* at 213-14.

175. *Id.* at 214-15.

176. *Id.* at 215-16.

177. Judge Pooler disagreed with the legal standard announced by the majority and believed that the case should not have been dismissed without discovery. *Id.* at 232 (Pooler, J., dissenting).

178. *In re Tamoxifen Citrate Antitrust Litig.*, No. 03-7641-cv (2d Cir. Sept. 14, 2006) (unreported).

tiorari.¹⁷⁹ The question presented to the Court asked “[u]nder what circumstances is an agreement by a brand pharmaceutical manufacturer (and patent holder) to share a portion of its future profits with a generic market entrant (and alleged patent infringer), in exchange for the generic’s agreement not to market its product, a violation of the antitrust laws?”¹⁸⁰ Although the Second Circuit derived its legal standard in large part from *Valley Drug* and *Schering-Plough*,¹⁸¹ the petitioners characterized the Second Circuit’s rule as “markedly different” from those announced by both the Sixth Circuit in *In re Cardizem* and the Eleventh Circuit in *Valley Drug*, and urged the Court to resolve the alleged circuit split.¹⁸² Petitioners’ arguments are analyzed below in Section III.D.

III. ANALYSIS

A. The Hatch-Waxman Provisions Induce Reverse Payment Settlements

1. *The Hatch-Waxman Balance: Cheaper Drugs Versus Incentives for Pharmaceutical Innovation*

In the *Schering-Plough* certiorari petition, the FTC’s attack on reverse payments relied heavily on the consumer benefits of reduced drug pricing.¹⁸³ The FTC noted that eleven of the twenty top-selling prescription drugs, with annual sales close to \$25 billion, faced challenges from vari-

179. Petition for a Writ of Certiorari, *In re Tamoxifen Citrate Antitrust Litig.*, No. 06-830 (Dec. 13, 2006).

180. *Id.* at i.

181. See, e.g., *In re Tamoxifen Citrate Antitrust Litig.*, 466 F.3d 187, 213 (2d Cir. 2006) (“[W]e think that the question is whether the ‘exclusionary effects of the agreement’ exceed the ‘scope of the patent’s protection.’” (quoting *Schering-Plough Corp. v. FTC*, 402 F.3d 1056, 1076 (11th Cir. 2005), *cert. denied*, 126 S. Ct. 2929 (2006))).

182. Petition for a Writ of Certiorari at 8, *In re Tamoxifen Citrate Antitrust Litig.*, No. 06-830 (Dec. 13, 2006).

183. See Petition for a Writ of Certiorari at 1 n.1, *FTC v. Schering-Plough Corp.*, 126 S. Ct. 2929 (2006) (No. 05-273), 2005 WL 2105243. The FTC argued:

The Commission has exercised its authority to represent itself before this Court only twice previously, in the 30 years that it has had that authority. . . . The Commission takes this step now not only to seek correction of a ruling that conflicts with fundamental antitrust and administrative law principles, but because of the great urgency of the matter, in light of the billions of dollars of consumer savings on prescription drugs that the ruling below jeopardizes.

Id.; *id.* at 1 (“In light of the large number of leading drugs that are the subject of patent challenges, the economic stakes for the American consumer in this issue are staggering.”).

ous generic competitors.¹⁸⁴ Likewise, the *In re Tamoxifen* petitioners urged that “delays in generic entry, result[] in billions of dollars in overpayments for pharmaceuticals or, sadly, some consumers’ inability to afford needed medication.”¹⁸⁵ Given the importance of pharmaceutical products to consumer welfare combined with the high cost of health care, there is a strong policy argument that consumers should not be burdened by monopoly rents for drugs that are covered by invalid patents.¹⁸⁶ As an incentive for generic drug manufacturers to challenge drug patents and thereby reduce consumer drug pricing, the Hatch-Waxman Amendments have been highly successful.¹⁸⁷

However, reduced drug prices are not the only relevant policy considerations: profits realized by the branded pharmaceutical industry are used to fund the development of new drugs.¹⁸⁸ Drug development is enormously risky and expensive. Some estimate that only one in 10,000 screened compounds will receive FDA approval, and the cost of bringing a new compound to market may exceed \$1 billion.¹⁸⁹ According to Representative Waxman, “[i]t would be fine to say the consumer could get the same drug at a lower price if there were generics of the new drug. But there would not be a new drug to copy if the first company did not put in the money to develop it.”¹⁹⁰ The Hatch-Waxman Amendments attempt to maintain incentives for pharmaceutical innovation by extending the term of drug patents up to five years to compensate patent holders for the lengthy drug development and approval process.¹⁹¹

2. *The Hatch-Waxman Process Invites Reverse Payments*

In a typical patent infringement suit, the alleged infringer faces substantial risk in the form of damages.¹⁹² A court can further treble damages

184. *Id.* at 3.

185. Petition for a Writ of Certiorari at 6, *In re Tamoxifen Citrate Antitrust Litig.*, No. 06-830 (Dec. 13, 2006).

186. *Cf. Lear, Inc. v. Adkins*, 395 U.S. 653, 663-64 (1969) (“It is as important to the public that competition should not be repressed by worthless patents, as that the patentee of a really valuable invention should be protected in his monopoly.”) (quoting *Pope Mfg. Co. v. Gormully*, 144 U.S. 224, 234 (1892)).

187. FTC GENERIC DRUG STUDY, *supra* note 6, at i.

188. *See generally* Kent S. Bernard & Willard K. Tom, *Antitrust Treatment of Pharmaceutical Patent Settlements: The Need for Context and Fidelity to First Principles*, 15 FED. CIR. B.J. 617 (2006).

189. *Id.* at 623.

190. 130 CONG. REC. H9124 (daily ed. Sept 6, 1984).

191. 35 U.S.C. § 156.

192. 35 U.S.C. § 284. Lost profit damages could be enormous in the case of a drug with annual sales in the hundreds of millions or billions of dollars.

for willful infringement.¹⁹³ This risk provides a barrier to entry that deters many would-be infringers. Facing possible infringement, the patent holder must also decide whether to bring an action for litigation and risk losing its patent rights. Given the uncertainties of patent litigation,¹⁹⁴ both parties have strong incentive to settle. Settlements agreements commonly stipulate the terms of a licensing arrangement.¹⁹⁵

The Hatch-Waxman context alters this scenario because the Amendments create an artificial act of infringement when a generic manufacturer files an ANDA with Paragraph IV Certification.¹⁹⁶ At the time of filing, the generic has not sold or offered to sell any product and is not liable for lost profits. Thus, the generic challenger risks losing the costs of litigation, but might gain a 180-day exclusivity period and concomitant first mover advantage in the generic market.¹⁹⁷ On the other hand, the branded manufacturer faces litigation costs and the loss of enormously valuable patent rights, without the upside possibility of obtaining damages for lost profits. Because this scenario “redistributes the relative risk assessments” of the parties involved in this litigation, courts have noted that “reverse payments are a natural by-product of the Hatch-Waxman process.”¹⁹⁸

B. Legal Standard for Judging Reverse Payment Settlements

Although recognizing that there is something “suspicious” about reverse payments,¹⁹⁹ the Second and Eleventh Circuits declined to apply a

193. *Id.*

194. See generally John R. Allison & Mark A. Lemley, *Empirical Evidence on the Validity of Litigated Patents*, 26 AIPLA Q.J. 185 (1998).

195. See Hovenkamp et al., *supra* note 32, at 1721.

196. 21 U.S.C. § 355(j)(5)(B)(iii); 35 U.S.C. § 271(e)(2).

197. *In re Tamoxifen Citrate Antitrust Litig.*, 466 F.3d 187, 207 n.19 (2d Cir. 2006) (noting a strong first mover advantage in the generic drug market).

198. *In re Ciprofloxacin Antitrust Litig.*, 261 F. Supp. 2d 188, 252 (E.D.N.Y. 2003); accord *Schering-Plough Corp. v. FTC*, 402 F.3d 1056, 1074 (11th Cir. 2005) (quoting *In re Ciprofloxacin*), *cert. denied*, 126 S. Ct. 2929 (2006); *In re Tamoxifen*, 466 F.3d at 206 (quoting same). The pressure on branded drug manufacturers to keep generics off the market is further heightened by market constraints that are unique to the heavily regulated drug industry. See generally Bernard & Tom, *supra* note 188. For example, pharmacists are allowed to substitute generic drugs when filling prescriptions unless the doctor specifies otherwise. See *id.* at 624. In some settings, substitution of generic drugs is mandated by law. See *id.* It should come as no surprise that the pharmaceutical industry relies on patent protection more than any other industry. See *id.* at 623 (citing 1 FED. TRADE COMM’N, STAFF REPORT, ANTICIPATING THE 21ST CENTURY: COMPETITION IN THE NEW HIGH-TECH, GLOBAL MARKETPLACE CH 6, 6-8 (1996), http://www.ftc.gov/opp/global/report/gc_v1.pdf).

199. *In re Tamoxifen*, 466 F.3d at 208.

per se rule or rule of reason analysis.²⁰⁰ Rather, the courts asked whether the exclusionary effects of the settlements, taken as a whole, exceed the exclusionary power of the patent.²⁰¹ This legal standard accords with the traditional approach taken when a patentee is alleged to have violated the antitrust laws. As noted in Section I.A.2, *supra*, a similar query is made to determine whether a party found guilty of patent misuse or bad faith patent enforcement has thereby violated the antitrust laws.

The legal standard announced by the Eleventh Circuit first asks whether one of the parties owns a patent, and, if so, considers “(1) the scope of the exclusionary potential of the patent; (2) the extent to which the agreements exceed that scope; and (3) the resulting anticompetitive effects.”²⁰² The Second Circuit added that if the settlement was not found to exclude beyond the scope of the patent, the court should inquire “whether the underlying infringement lawsuit was ‘objectively baseless in the sense that no reasonable litigant could realistically expect success on the merits.’”²⁰³ This query accounts for “sham” litigation, in which the patent holder almost certainly knows that its patent would not survive judicial scrutiny and thus pays off potential infringers to avoid litigation.²⁰⁴ If a reverse payment settlement agreement is found to extend the patentee’s exclusivity beyond the patent’s scope, presumably the agreement constitutes a *per se* antitrust violation.²⁰⁵

200. *Schering-Plough*, 402 F.3d at 1063-64; *In re Tamoxifen*, 466 F.3d at 206, 212 n.26.

201. *Schering-Plough*, 402 F.3d at 1073-75; *In re Tamoxifen*, 466 F.3d at 212-13.

202. *Schering-Plough*, 402 F.3d at 1066.

203. *In re Tamoxifen*, 466 F.3d at 213 (quoting *Prof'l Real Estate Investors, Inc. v. Columbia Pictures Indus., Inc.*, 508 U.S. 49, 60 (1993)). In practice, this does not appear to add a new element to the standard announced in *Schering-Plough*, because that opinion explicitly noted that enforcing an almost certainly invalid patent would violate the antitrust laws, albeit by extension of exclusivity beyond the scope of the patent.

Suppose a seller obtains a patent that it knows is almost certainly invalid (that is, almost certain not to survive a judicial challenge), sues its competitors, and settles the suit by licensing them to use its patent in exchange for their agreeing not to sell the patented product for less than the price specified in the license. In such a case, the patent, the suit, and the settlement would be devices—masks—for fixing prices, in violation of antitrust law.

Schering-Plough, 402 F.3d at 1067 (quoting *Asahi Glass Co. v. Pentech Pharms., Inc.*, 289 F. Supp. 2d 986, 991 (N.D. Ill. 2003) (Posner, J., sitting by designation)).

204. *In re Tamoxifen*, 466 F.3d at 208.

205. Note that precise implementation of the legal standards announced the Eleventh and Second Circuits remains uncertain because the only district court to apply the standard as of this writing is the remand in *Valley Drug*. See *infra* Section III.C.6.

C. Reverse Payments Are Not Inherently Unlawful

Drawing on the reasoning of the Second and Eleventh Circuits, several grounds exist for determining the lawfulness of a reverse payment settlement by considering whether the agreement extends the patentee's exclusivity beyond the scope of the patent.

1. A Patent is Presumed Valid

Alden F. Abbott and Suzanne T. Michel, two FTC employees writing on their own behalf, argue that the patent holder is relying on payment, not the patent, to exclude competition when reverse payments are made before the patentee has proven infringement.²⁰⁶ The authors argue that the terms of a settlement agreement reflect each party's estimated probability of the patent will be upheld, thereby demonstrating the true exclusionary power of the patent at the time of settlement.²⁰⁷ Reverse payments then shift the settlement terms in favor of the patentee—for example, by delaying the generic's market entry beyond that which the parties would agree to without reverse payments—and thus extend exclusionary power beyond the scope of the patent in violation of the antitrust laws.²⁰⁸

The Commission in *Schering-Plough* similarly reasoned that because the validity of a patent is uncertain before judicial determination, the exclusionary power of the patent is likewise unknown when considering the antitrust issues surrounding reverse payment settlements.²⁰⁹ Instead, the Commission opined that if the generic manufacturers would enter the market at an earlier date but for the reverse payments, the payments are presumptively anticompetitive.²¹⁰

In contrast, the Eleventh Circuit relied on the statutory rule that patents are presumed valid and a patentee therefore enjoys a presumptive right to exclude.²¹¹ The Second Circuit adopted similar reasoning in *In re Tamox-*

206. Alden F. Abbott & Suzanne T. Michel, *The Right Balance of Competition Policy and Intellectual Property Law: A Perspective on Settlements of Pharmaceutical Patent Litigation*, 867 PLI/PAT 387, 397-98 (2006) ("Exclusion achieved through payment rather than through the strength of the asserted patent is not within the scope of the patent.").

207. *Id.* at 402-04.

208. *Id.* at 404.

209. Petition for a Writ of Certiorari at 9, *FTC v. Schering-Plough Corp.*, 126 S. Ct. 2929 (2006) (No. 05-273), 2005 WL 2105243.

210. *Schering-Plough Corp. v. FTC*, 402 F.3d 1056, 1062 (11th Cir. 2005), *cert. denied*, 126 S. Ct. 2929 (2006). The Commission allowed a single exception for reverse payments: \$2 million to cover legal fees. *Id.*

211. *Id.* at 1066.

ifen.²¹² Accordingly, the patentee may presumptively exclude during the term of the patent unless it is found invalid or unenforceable during litigation.

Courts applying this presumption should be careful to distinguish cases in which a Paragraph IV challenger certifies that the patent is invalid from cases from those in which the generic challenger certifies that it does not infringe.²¹³ When a generic manufacturer declares that its product does not infringe, the patent's validity may be irrelevant because the patent laws do not give one the right to exclude that which does not infringe. Indeed, the burden is on the patent holder to prove infringement. A settlement that excludes competitors from practicing non-infringing subject matter, regardless of the presence of reverse payments, is likely to constitute a *per se* violation of the antitrust laws by extending the patentee's exclusivity beyond the scope of the patent.²¹⁴ Thus, when the generic challenger certified that its product does not infringe, courts should perform an initial assessment of the grounds for infringement when determining whether the settlement agreement violates the antitrust laws.

2. *Reverse Payments Do Not Necessarily Connote Fears of Patent Invalidity*

The artificial Hatch-Waxman litigation environment undercuts the implication that a patentee willing to make a reverse payment fears its patent is invalid,²¹⁵ as illustrated by *In re Tamoxifen* and *In re Ciprofloxacin*. In

212. *In re Tamoxifen Citrate Antitrust Litig.*, 466 F.3d 187, 208-09 (2d Cir. 2006) (“[T]he patent holder is seeking to arrive at a settlement in order to protect that to which it is presumably entitled: a lawful monopoly over the manufacture and distribution of the patented product.”).

213. The generic manufacturer might assert that its product does not infringe a formulation patent. For example, the generic's active compound could be identical to the branded drug, while the coating or inactive filler differ in ways that do not read on the patent claims. The *In re Tamoxifen* court noted that the patents covering a drug's active compound necessarily exclude all generic versions of the drug, whereas a formulation patent does not necessarily exclude all generic substitutes. *In re Tamoxifen*, 466 F.3d at 214; accord *In re Ciprofloxacin Antitrust Litig.*, 261 F. Supp. 2d 188, 249 (E.D.N.Y. 2003).

214. The Eleventh Circuit in *In re Tamoxifen* noted that because the tamoxifen patent covered the active drug compound, Zeneca could presumptively exclude all forms of generic tamoxifen. The court thus distinguished Zeneca's patent from the formulation patents in *In re Cardizem* and *Valley Drug*—two cases which found a *per se* antitrust violation. *In re Tamoxifen*, 466 F.3d at 214; accord *In re Ciprofloxacin*, 261 F. Supp. 2d at 249.

215. See, e.g., *Valley Drug Co. v. Geneva Pharms.*, 344 F.3d 1294, 1310 (11th Cir. 2003) (“Given the asymmetries of risk and large profits at stake, even a patentee confident in the validity of its patent might pay a potential infringer a substantial sum in set-

In re Tamoxifen, Zeneca entered into a reverse payment settlement with Barr after the district court held the patent unenforceable.²¹⁶ However, Zeneca subsequently litigated its patent against three other generic challengers.²¹⁷ The Second Circuit noted that if Zeneca settled with Barr for lack of faith in its patent rights, it seems unlikely Zeneca would have been willing to litigate the patent further.²¹⁸ Likewise, the branded drug manufacturer in *In re Ciprofloxacin* entered a reverse payment settlement with the first generic challenger and put \$398 million into an escrow account payable to the generic competitor should the patent in question be subsequently invalidated.²¹⁹ But the patent was later upheld on voluntary reexamination before the United States Patent & Trademark Office (USPTO), and the patentee was subsequently successful at litigation against four other generic challengers.²²⁰ Again, the patentee's willingness to enter a reverse payment settlement did not necessarily correlate with strong doubts about the patent's validity.

Moreover, the Second Circuit in *In re Tamoxifen* noted that even if reverse payments betray doubts as to a patent's strength, "we doubt the wisdom of deeming a patent effectively invalid on the basis of a patent holder's fear of losing it."²²¹ Judge Posner of the Seventh Circuit, sitting by designation in *Asahi Glass Co. v. Pentech Pharmaceuticals, Inc.*, pointed out that, "the private thoughts of a patentee, or of the alleged infringer who settles with him, about whether the patent is valid or whether it has been infringed is not the issue in an antitrust case."²²² He further noted that to hold a patentee liable for antitrust issues because of doubts about prevailing at litigation could chill almost any patent holder's willingness to bring suit to enforce the patent, because "[n]o one can be *certain* that he will prevail in a patent suit."²²³

tlement."); *In re Tamoxifen*, 466 F.3d at 210 ("Whatever the degree of the patent holder's certainty, there is always some risk of loss that the patent holder might wish to insure against by settling.").

216. *In re Tamoxifen*, 466 F.3d at 193.

217. *Id.* at 194-95.

218. *Id.* at 210-11.

219. *In re Ciprofloxacin*, 261 F. Supp. 2d at 196.

220. *Id.* at 197.

221. *In re Tamoxifen*, 466 F.3d at 210.

222. *Asahi Glass Co. v. Pentech Pharms., Inc.*, 289 F. Supp. 2d 986, 992 (N.D. Ill. 2003) (Posner, J., sitting by designation); accord *In re Tamoxifen*, 466 F.3d at 210 (quoting *Asahi Glass*).

223. *Asahi Glass*, 289 F. Supp. 2d at 993; accord *In re Tamoxifen*, 466 F.3d at 210 (quoting *Asahi Glass*).

3. *Patent Settlements Implicitly Involve Consideration Flowing to the Alleged Infringer*

Some courts have emphasized that reverse payments constitute consideration flowing from the patentee to the infringer, but that such “reverse” consideration is actually commonplace.²²⁴ A patentee’s willingness to extend a naked license is a type of reverse payment if the patentee would not have extended the license without the risk of invalidity. Indeed, reverse consideration flows anytime the patentee settles for less than the likely damages gained from successful litigation.

A rule that condemns reverse payments solely because the defendant realizes a gain would call into question any patent litigation settlement agreement, and thus “discourage any rational party from settling a patent case because it would be an invitation to antitrust litigation.”²²⁵ Judge Posner stated:

[A]ny settlement agreement can be characterized as involving ‘compensation’ to the defendant, who would not settle unless he had something to show for the settlement. If any settlement agreement is thus classified as involving a forbidden ‘reverse payment,’ we shall have no more patent settlements.²²⁶

Because reverse payments are a form of reverse consideration, it may not always be clear when a reverse payment has been made. For example, in *Schering-Plough*, Schering was unwilling to make direct payments to Upsher to settle the litigation but Upsher demanded a cash infusion.²²⁷ The parties compromised by Schering licensing several products from Upsher.²²⁸ Although Schering provided evidence that the \$60 million payment to Upsher was valid consideration for the licensed products, the FTC Commission discounted Schering’s business judgment and held that the license fee arrangement was a sham attempt to keep generics off the market.²²⁹ The Eleventh Circuit disagreed, stating “[t]o borrow from the

224. See *In re Ciprofloxacin*, 261 F. Supp. 2d at 252 (“[E]ven in the traditional context, implicit consideration flows from the patent holder to the alleged infringer.”); accord *Schering-Plough Corp. v. FTC*, 402 F.3d 1056, 1074 (11th Cir. 2005) (quoting *In re Ciprofloxacin*), cert. denied, 126 S. Ct. 2929 (2006); *In re Tamoxifen*, 466 F.3d at 207 n.20 (quoting same).

225. *Schering-Plough*, 402 F.3d at 1074 (quoting *In re Ciprofloxacin*, 261 F. Supp. 2d at 252).

226. *Asahi Glass*, 289 F. Supp. 2d at 994; accord *Schering-Plough*, 402 F.3d at 1074 (quoting *Asahi Glass*); *In re Tamoxifen*, 466 F.3d at 207 n.20 (quoting same).

227. *Schering-Plough*, 402 F.3d at 1059.

228. *Id.*

229. *Id.* at 1070.

Commission's own words, we think its conclusion that [one of the licensed products] was not worth \$60 million, and that settlement payment was to keep Upsher off the market is 'not supported by law or logic.'"²³⁰

4. *Reverse Payments Can Facilitate the Settlement of Patent Litigation*

The courts in *Schering-Plough* and *In re Tamoxifen* also recognized a strong public policy towards settling litigation and noted that reverse payments can facilitate settlement.²³¹ Patent litigation is costly, time-consuming and expends both public and private resources.²³² Restricting the type of settlements that patent litigants could enter could potentially increase the number of lawsuits, thereby increasing uncertainty in the patent system and undermining the patent system's incentives to innovate.²³³ Although the Second Circuit recognized that any settlement may strengthen an otherwise "weak" patent whose validity is dubious, the court recognized that this "troubling dynamic" is always present and that settlement of patent litigation is nevertheless allowed and encouraged by the legal system.²³⁴

5. *Reverse Payments Are Neither Necessarily Exclusionary nor Anticompetitive*

Abbott and Michel refer to reverse payments as "exclusionary payments" because the patentee is paying to exclude competition. They further assert that such payments are outside the patentee's exclusionary rights and are therefore necessarily anticompetitive.²³⁵ However, Judge Posner noted that banning reverse payments could also have anticompetitive effects by reducing the options for settling patent litigation, and that a reverse payment settlement could not be more anticompetitive from a consumer viewpoint than if the patentee excludes the infringer after winning

230. *Id.*

231. See *In re Tamoxifen*, 466 F.3d at 203 (quoting *Asahi Glass*, 289 F. Supp. 2d at 991 (Posner, J., sitting by designation) ("The general policy of the law is to favor the settlement of litigation, and the policy extends to the settlement of patent infringement suits.")); accord *Schering-Plough Corp. v. FTC*, 402 F.3d 1056, 1072 (11th Cir. 2005), *cert. denied*, 126 S. Ct. 2929 (2006). On the other hand, the Hatch-Waxman Amendments favor validity challenges. See *supra* Section I.B.

232. See Daniel A. Crane, *Exit Payments in Settlement of Patent Infringement Lawsuits: Antitrust Rules and Economic Implications*, 54 FLA. L. REV. 747, 757-59 (2002).

233. *In re Tamoxifen*, 466 F.3d at 203 (citing *Valley Drug Co. v. Geneva Pharms.*, 344 F.3d 1294, 1308 (11th Cir. 2003)); Crane, *supra* note 232, at 749.

234. *In re Tamoxifen*, 466 F.3d at 211.

235. Abbott & Michel, *supra* note 206, at 391.

at patent litigation.²³⁶ Such pro-competitive and non-exclusionary effects of reverse payment settlements are not only theoretical. In *Schering-Plough*, the settlements involved the exchange of licenses from the generic manufacturers back to the patent holder, which could increase competition in the market for the licensed products.²³⁷ Moreover, the settlements allowed both generic competitors to enter the market years before the patent expired. If the generic competitors had lost at litigation and been excluded from the market, consumers would have lost several years savings from the decreased price of time-release potassium chloride. And in *In re Tamoxifen*, the court noted that the settlement resolved the litigation, requiring Barr to relinquish the 180-day exclusivity period, and thus “cleared the field for other generic manufacturers to challenge [Zeneca’s] patent.”²³⁸

Moreover, the Second Circuit noted that reverse payment settlements are self-limiting propositions.²³⁹ Each reverse payment reduces the patent holder’s profits derived from its patent.²⁴⁰ Therefore, the number of reverse payment settlements is limited to the point at which there are no more monopoly rents.²⁴¹ Eventually, it will make more economic sense for the patent holder to litigate the patent and take its chances in court. For example, Schering recently filed suit for patent infringement against 13 companies that filed Paragraph IV Certifications to produce generic versions of the allergy medication Clarinex.²⁴² Under these circumstances such as these, it is questionable how long a branded manufacturer will continue to profit by “paying off” each successive generic challenger.

236. *Asahi Glass*, 289 F. Supp. 2d at 994 (“[A] ban on reverse-payment settlements would reduce the incentive to challenge patents by reducing the challenger’s settlement options should he be sued for infringement, and so might well be thought anticompetitive.”); accord *Schering-Plough*, 402 F.3d at 1075 (11th Cir. 2005) (quoting *Asahi Glass*); *In re Tamoxifen*, 466 F.3d at 206 (quoting same).

237. *Schering-Plough Corp. v. FTC*, 402 F.3d 1056, 1075 (11th Cir. 2005), cert. denied, 126 S. Ct. 2929 (2006).

238. *In re Tamoxifen*, 466 F.3d at 197 (quoting *In re Tamoxifen Citrate Antitrust Litig.*, 277 F. Supp. 2d 121, 133 (E.D.N.Y. 2003)).

239. *Id.* at 211-12.

240. *Id.* at 212.

241. *Id.*

242. See *Schering Corp. v. Zydus Pharms., USA, Inc.*, No. 3:06-CV-04715 (D.N.J. filed September 29, 2006) (listing parties sued by Schering for patent infringement in response to Paragraph IV certification filings). For a compilation of Paragraph IV certifications, see FDA, Paragraph IV Patent Certifications, <http://www.fda.gov/cder/ogd/ppiv.htm>.

6. *The Standard Announced by the Eleventh and Second Circuits Does Not Give Patent Holders Free Reign to Pay Off Generic Competitors*

In its petition to the Supreme Court in *Schering Plough*, the FTC argued that the rule announced by the Eleventh Circuit would “vitiating” the Hatch-Waxman Amendments by allowing patent holders free reign to pay off generic manufacturers.²⁴³ However, there is strong evidence that such fears are unfounded. On remand in *Valley Drug*, the district court inquired whether the plaintiff was likely to succeed at proving the patent invalid on the merits to decide whether the settlement extended beyond the scope of the patent.²⁴⁴ Using this approach, the district court judge found that the agreements were *per se* unlawful on the grounds that the patent was almost certainly invalid.²⁴⁵ The Eleventh Circuit indicated its approval of this finding in *Schering-Plough* by distinguishing the settlement at issue in that case from the settlement in *Valley Drug*, noting that the agreement in *Valley Drug* “tended to prolong that dispute to Abbott’s advantage, delaying generic entry for a longer period of time than the patent or any reasonable interpretation of the patent’s protections would have provided.”²⁴⁶

D. *In re Tamoxifen* and the Petition for Certiorari

In December 2006, the *In re Tamoxifen* plaintiffs petitioned the Supreme Court for certiorari. The petitioners urge that “review by this Court is necessary to reconcile radically conflicting standards adopted by the Courts of Appeals relative to a matter of vital importance to all Americans, i.e., the escalating cost of prescription drugs.”²⁴⁷ According to the petitioners, the Second Circuit adopted a rule limiting antitrust review of reverse payments settlements to (1) whether the infringement claim is a sham or fraud, or (2) whether the settlement is limited to the facial scope

243. See Petition for a Writ of Certiorari at 21, *FTC v. Schering-Plough Corp.*, 126 S. Ct. 2929 (2006) (No. 05-273), 2005 WL 2105243 (“The court of appeals’ approach to antitrust analysis of patent settlements in the Hatch-Waxman context will vitiate these congressional enactments.”); *id.* at 14 (“The standard the court set down gives patentees free rein to ‘buy off’ potential competitors.”); *id.* at 15 (“[I]t appears that the court below would recognize only limited exceptions to its rule that settlements within the outer, nominal bounds of patent claims are presumed lawful.”).

244. See *In re Terazosin Hydrochloride Antitrust Litig.*, 352 F. Supp. 2d 1279, 1306-07 (S.D. Fla. 2005).

245. *Id.* at 1286.

246. *Schering-Plough Corp. v. FTC*, 402 F.3d 1056, 1066 n.14 (11th Cir. 2005) (quoting *In re Terazosin*, 352 F. Supp. 2d at 1309), *cert. denied*, 126 S. Ct. 2929 (2006).

247. Petition for a Writ of Certiorari at 6, *In re Tamoxifen Citrate Antitrust Litig.*, No. 06-830 (Dec. 13, 2006).

of the patent.²⁴⁸ The petitioners characterize this rule as “outside the mainstream of judicial and academic analysis” of such settlements, and “markedly different” from the rules adopted by the Sixth and Eleventh Circuits.²⁴⁹ They describe the Eleventh Circuit as having “its own test” that questions the validity of the patent at the time of the settlement before questioning the validity of the settlement itself.²⁵⁰ Finally, petitioners state that the Sixth Circuit considers reverse payment settlements *per se* illegal.²⁵¹

The petitioners fail to recognize that the Second Circuit essentially adopted the standard of the Eleventh Circuit. The Second Circuit purported to add that even if the agreement does not extend the realm of exclusivity beyond the scope of the patent, the court should inquire whether the litigation was baseless on the merits.²⁵² But this addition is largely a matter of semantics.²⁵³ The Eleventh Circuit also recognized that sham litigation violates the antitrust laws, but, in its view, such behavior extends beyond the scope of the patent.²⁵⁴ Nor is it clear whether the Sixth Circuit would consider all reverse payment settlements *per se* antitrust violations. In *In re Cardizem*, the agreement stipulated that the generic manufacturer refrain from marketing *any* generic version of Cardizem, whether alleged to infringe or not.²⁵⁵ Thus, the Sixth Circuit applied the *per se* rule in a traditional price-fixing setting wherein one party paid another to stay off the market regardless of patent rights.²⁵⁶

The practical extent of the alleged circuit split is uncertain because few cases have arisen under these standards. In *In re Cardizem* and *Valley Drug*, the settlements at issue stipulated that the generic challengers refrain from marketing any generic version of the drugs at issue, regardless of whether they were alleged to infringe.²⁵⁷ Because foreclosing the sale of

248. *Id.* at 8.

249. *Id.*

250. *Id.* The petitioners appear to overlook that the Eleventh Circuit adopted what is essentially a traditional rule used to determine whether a patentee has violated the antitrust laws. *See supra* Section III.B.

251. Petition for a Writ of Certiorari at 8, *In re Tamoxifen Citrate Antitrust Litig.*, No. 06-830 (Dec. 13, 2006).

252. *See supra* note 203.

253. *See id.*

254. *Id.*

255. *See supra* note 67 and accompanying text.

256. *See In re Cardizem CD Antitrust Litig.*, 332 F.3d 896, 908-09 & n.4 (6th Cir. 2003).

257. The *In re Tamoxifen* court further distinguished the *In re Cardizem* and *Valley Drug* settlements on other grounds. *See supra* notes 174-176 and accompanying text. In

non-infringing products blatantly extends beyond the scope of patent rights, it is likely that such agreements would be held *per se* unlawful under any circuit's legal standard. There are fewer grounds for speculating how the Sixth Circuit would have ruled in *Schering-Plough* or *In re Tamoxifen*. In *In re Cardizem*, the Sixth Circuit stated "the Agreement cannot be fairly characterized as merely an attempt to enforce patent rights or an interim settlement of the patent litigation."²⁵⁸ Because the *Schering-Plough* and *In re Tamoxifen* agreements *could be*—and were—characterized as attempts to enforce valid patent rights,²⁵⁹ it is plausible the Sixth Circuit might have ruled differently given the facts of these cases.

Although it is debatable whether the Second, Sixth and Eleventh Circuits adopted "radically conflicting standards" for examining reverse payment settlements, the issue would nonetheless benefit from the Supreme Court's guidance. Since the GAAP Amendments of 2003, the FTC is charged with reviewing agreements to settle Hatch-Waxman litigation, but antitrust defendants can forum shop the circuit courts in effort to obtain a favorable ruling on appeal. Thus, the FTC cannot be certain what legal standard to apply when assessing the legality of reverse payment settlements. A legal standard promulgated by the Court would guide the FTC in directing its resources toward settlements between branded manufacturers and their generic counterparts that are likely to violate the antitrust laws. In this regard, *In re Tamoxifen* may present an appealing case for certiorari because the petitioners simply asked the Court to promulgate the proper legal standard for determining the antitrust liability of reverse payment settlements in the Hatch-Waxman context.²⁶⁰ Furthermore, this issue

addition, the patentee in *Valley Drug* had admitted to violating the on-sale bar, 35 U.S.C. § 102(b), at the time of the settlement agreement. See Section III.C.6, *supra*.

258. *In re Cardizem*, 332 F.3d at 908.

259. See *Schering-Plough Corp. v. FTC*, 402 F.3d 1056, 1068 (11th Cir. 2005) ("FTC complaint counsel acknowledged that it could not prove that Upsher and ESI could have entered the market on their own prior to the '743 patent's expiration on September 5, 2006."), *cert. denied*, 126 S. Ct. 2929 (2006); *In re Tamoxifen Citrate Antitrust Litig.*, 466 F.3d 187, 215 (2d Cir. 2006) ("[T]he stated terms of the Settlement Agreement include nothing that would place it beyond the legitimate exclusionary scope of Zeneca's patent . . ."). *But see id.* at 224 (Pooler, J., dissenting) ("[T]he majority has, in my view, wrongly (1) accorded dispositive deference to Zeneca's patent rights when its patent had been declared invalid at the time of the settlement; (2) focused on subsequent litigation concerning patent validity rather than the litigation posture at the time of settlement . . .").

260. See *supra* note 180 and accompanying text. In contrast, the FTC presented a loaded question to the Court in *Schering-Plough*. See *supra* note 131 and accompanying text.

is likely to continue appearing before the Court because reverse payment settlements are on the rise after a several year hiatus that commenced when the FTC started reviewing Hatch-Waxman settlement agreements.²⁶¹

Alternately, Congress may address this issue through legislation. On February 15, 2007, the Senate Judiciary Committee approved the “Preserve Access to Affordable Generics Act” for consideration by the full Senate.²⁶² This bill aims to “enhance competition in the pharmaceutical market by prohibiting anticompetitive agreements and collusion between brand name and generic drug manufacturers intended to keep generic drugs off the market.”²⁶³ The bill would prohibit ANDA filers from “receiving anything of value” to delay marketing of generic product, with an exception allowing settlements if the consideration received by the generic manufacturer is market entry before the patent’s expiration date.²⁶⁴ Whether this bill provides optimal consumer benefit remains to be explored.²⁶⁵

IV. CONCLUSION

Due to unforeseen consequences of the originally enacted Hatch-Waxman Amendments, pharmaceutical patent holders had incentive to collude with generic challengers by paying the challengers to (1) stay off the market and (2) bar other generic competition by avoiding trigger of the 180-day exclusivity period. The 2003 GAAP amendments addressed the latter scheme—by forcing generic challengers to relinquish the exclusivity period if they fail to market their drug—but questions over reverse payments remain. Ire over reverse payment settlements is understandable giv-

261. See Prepared Statement of the Federal Trade Commission Before the Committee on the Judiciary of the United States Senate on Anticompetitive Patent Settlements in the Pharmaceutical Industry: the Benefits of a Legislative Solution, at 16 (January 17, 2007), http://www.ftc.gov/speeches/leibowitz/070117anticompetitivepatentsettlements_senate.pdf (noting that reverse payments had disappeared from Hatch-Waxman settlements in the five years before the *Schering-Plough* and *In re Tamoxifen* decisions, but that at least 17 such settlements have been entered into since those opinions were announced).

262. See S. 316, 110th Cong. (1st Sess. 2007).

263. See *id.*

264. See *id.*

265. Part of the consideration given to the generic manufacturer in *In re Tamoxifen* was a license to sell the patented drug at a discount. See *supra* note 145 and accompanying text. Although the “Preserve Access to Affordable Generics Act” would apparently disallow such consideration, in some circumstances this option could be more beneficial to consumers than the exception allowed by the Act. By restraining settlement options, the bill might also upset incentives to innovate within the pharmaceutical industry. See *supra* note 233 and accompanying text.

en unethical actions of branded and generic drug manufacturers in gaming the Hatch-Waxman system. Nevertheless, several courts have noted that reverse payments are neither inherently anticompetitive nor exclusionary and are simply an extension of commonplace reverse consideration that facilitates settlement. Rather than broadly condemning reverse payments, the Eleventh and Second Circuits adopted a fairly traditional legal standard that questions whether the overall settlement agreement extends the patentee's exclusionary rights beyond the scope of the patent. In one application of this rule, the remand in *Valley Drug*, the district court answered this question in the affirmative. Thus, rather than suggesting that the Eleventh and Second Circuit vitiated Hatch-Waxman by providing patent holders free reign to pay off all competition, the courts' holdings suggest that future antitrust plaintiffs should attack the patent, not the payment.

STILL TIED UP: *ILLINOIS TOOL WORKS V. INDEPENDENT INK*

By Puneet V. Kakkar

“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. Today, we reach the same conclusion.”¹

With his opinion in *Illinois Tool Works v. Independent Ink*, Justice Stevens, writing on behalf of a unanimous Court, intended to harmonize a century of antitrust and intellectual property jurisprudence.² On one hand, Justice Stevens succeeded by unequivocally removing the long-standing presumption that a patent confers market power sufficient for antitrust liability. On the other hand, Justice Stevens left unanswered the question of whether courts would employ a rule of reason or a *per se* analysis in future patent-tying arrangements, a question that fundamentally shapes the course of every case in antitrust litigation.

The presumption of market power of a patent and the application of the *per se* standard to patent-tying arrangements originated from an intermingling of the patent-misuse doctrine and antitrust law.³ In *Morton Salt v. G.S. Suppiger Co.*, the Supreme Court held that under the patent-misuse doctrine, a patentee lost her rights if she attempted to restrain competition by selling her patented product on the condition of the purchase of an unpatented product (a “patent-tying arrangement”).⁴ Five years later, the Court imported into antitrust law the belief that a patent-tying arrangement represented a “[monopolistic] tendency”⁵ and therefore pronounced that patent-tying arrangements were illegal *per se* under Sherman Act § 1.⁶ Eventually, the Court’s distrust of a patent-tying arrangement, which was never supported by an economic evaluation of the role of a patent in the market, led the Court not only to find patent-tying arrangements illegal *per se* but also to hold that “sufficiency of economic power [of a patent] is presumed.”⁷

© 2007 Puneet V. Kakkar

1. *Ill. Tool Works, Inc. v. Indep. Ink, Inc. (Illinois Tool)*, 126 S. Ct. 1281, 1293 (2006).

2. *Id.*

3. *See id.* at 1285-86.

4. *See Morton Salt v. G.S. Suppiger Co.*, 314 U.S. 488, 490 (1942).

5. *Int’l Salt Co. v. United States*, 332 U.S. 392, 396 (1947).

6. *See United States v. Columbia Steel Co.*, 334 U.S. 495, 522-23 (1948).

7. *United States v. Loew’s Inc.*, 371 U.S. 38, 45 n.4 (1962).

During the latter half of the twentieth century, the assumptions underlying the Court's presumption of market power of a patent and applicability of the *per se* standard to patent-tying arrangements began to disintegrate. First, the Court recognized potential procompetitive effects of tying arrangements (which shed doubt upon the applicability of the *per se* standard); and second, doctrinal shifts in patent law began to illustrate the tenuous foundation of the presumption that a patent categorically equates to market power. In light of these developments, *Illinois Tool* provided the Court an opportunity to re-evaluate its patent-tying arrangement jurisprudence.

Part I of this Note briefly reviews the practice of tying, its procompetitive and anticompetitive potential, and the *per se* and rule of reason standards under antitrust law. Part II describes the facts, procedural history, and ruling of *Illinois Tool*. Part III analyzes two aspects of the holding of *Illinois Tool*: first, the Court unequivocally removed the presumption that a patent confers market power and second, arguably removed the applicability of the *per se* analysis for patent-tying arrangements. Part III concludes that even if the Court's holding in *Illinois Tool* is unclear as to applicability of the *per se* standard, as a normative matter, the rule of reason should govern future cases challenging patent-tying arrangements.

I. TYING ARRANGEMENTS

This Part provides an overview of tying arrangements and discusses the seminal case on tying, *Jefferson Parish Hospital District No. 2 v. Hyde*.⁸

A. What is Tying?

Tying arrangements are subject to liability under Sherman Act § 1.⁹ A tying arrangement may include the conditioning of the sale of one product (the "tying product") on the sale of another (the "tied product"). Further, a tying arrangement may impose restrictions on the tied product, such as requiring the buyer to purchase the tied product exclusively from the seller

8. *Jefferson Parish Hosp. Dist. No. 2 v. Hyde*, 466 U.S. 2 (1984).

9. See 15 U.S.C. § 1 (2000) ("Every contract, combination in the form of trust or otherwise, or conspiracy, in restraint of trade or commerce among the several States, or with foreign nations, is hereby declared to be illegal."); *Illinois Tool*, 126 S. Ct. at 1286. Other causes of action against tying arrangements include the patent-misuse doctrine, Clayton Act § 3, and unfair methods of competition under the Federal Trade Commission Act. Each has similar standards to the Sherman Act § 1, which is the predominantly used standard.

(“exclusive dealing”). Although these tying arrangements manifest themselves in distinct forms, they are analyzed similarly.¹⁰

Tying arrangements can achieve procompetitive goals. For instance, tying arrangements that allow consumers to buy goods and services in one package, such as coats with buttons, a left shoe with a right shoe, or operating systems with computer processors, may be efficient and beneficial.¹¹ Specifically, patent-tying arrangements (arrangements in which the tying product is patented) may allow an emerging business to boost its competitive stature through line forcing, which occurs when a manufacturer requires her licensee or franchisee to sell the full line of her products.¹² Patent-tying arrangements may also help sellers achieve economies of joint production or scale,¹³ or facilitate the introduction of a new product into the market that has potential for economies of scale.¹⁴ Additionally, a patentee may efficiently price discriminate (within legal parameters) by using the tied product to gauge the use of the tying product and charging for the specific use of the tying product.¹⁵ This form of price discrimination may allow patentees who lease durable items to recover depreciation costs from selling the tied item at a higher price.¹⁶

Tying arrangements can also be anticompetitive and detrimental to social welfare. By conditioning the sale of the original product (the tying product) upon purchase of another item (the tied product), tying arrangements may force a buyer to purchase another item that “the buyer either did not want at all, or might have preferred to purchase elsewhere on different terms.”¹⁷ Additionally, tying arrangements may raise barriers to entry for sellers in the tied product market.¹⁸ If the only opportunity of competing in the tied-product market is to sell it in a tying arrangement, the potential entrant would then also need to develop the tying product to be a

10. HERBERT HOVENKAMP, FEDERAL ANTITRUST POLICY: THE LAW OF COMPETITION AND ITS PRACTICE § 10.9c (West 2005).

11. *See id.*, § 10.2.

12. *See* David Pester, *Antitrust Law: Removing the Confusion in Tying Arrangement Jurisprudence*, 1990 ANN. SURV. AM. L. 699, 738 (1992).

13. Ward S. Bowman, *Tying Arrangements and the Leverage Problem*, 67 YALE L. J. 19, 29 (1957).

14. HERBERT HOVENKAMP, MARK D. JANIS & MARK LEMLEY, IP AND ANTITRUST § 21.2f (2006) [hereinafter HOVENKAMP, JANIS & LEMLEY].

15. Bowman, *supra* note 13, at 23.

16. *Id.* at 24.

17. *Jefferson Parish Hosp. Dist. No. 2 v. Hyde*, 466 U.S. 2, 13 (1984).

18. *See* Louis Kaplow, *Extension of Monopoly Power Through Leverage*, 85 COLUM. L. REV. 515 (1985) (providing various challenges to the argument that patent-tying arrangements are procompetitive and are merely legal exercises of owning a patent).

viable competitor, and consequently would face higher initial capital investments.¹⁹ Particularly in the patent-tying context, when the tying item is patented, a seller in the tied market would face the additional hurdle of obtaining a similar patent in order to compete with the arrangement and enter the market.²⁰

B. Legal Standards for Analyzing Tying Arrangements

Plaintiffs bring antitrust suits against tying arrangements primarily under the Sherman Act. Courts employ one of two standards to determine whether a tying arrangement is illegal: *per se* or rule of reason.²¹

Under the *per se* standard, a plaintiff establishes that a tying arrangement is a *prima facie* violation of antitrust law by proving three elements: (1) the tying and tied items exist in separate markets; (2) the defendant has economic power in the tying market sufficient to restrain competition in the tied-item market; and (3) a “not insubstantial” amount of commerce in the tied-item market has been affected by the tying arrangement.²² Then, judges may at their discretion allow defendants to argue “business defenses” to justify their tying arrangements. For instance, a court may allow a defendant to continue practicing her tying arrangement if she can show that the tie facilitates the introduction of new products, enables economies of scale, or assures proper functioning of a product for consumer satisfaction.²³ Because the allowance of “business defenses” are solely within a

19. Richard N. Pearson, *Tying Arrangements and Antitrust Policy*, 60 NW. U. L. REV. 626, 638 (1966).

20. See HOVENKAMP, *supra* note 10, § 10.3c.

21. See Nat'l Soc'y of Prof'l Eng'rs v. United States, 435 U.S. 679, 686, 692 (1978); Sarah Knight, Note, *Patents & Antitrust: Does a Patent Confer Market Power? A Look at the Upcoming Supreme Court Case: Illinois Tool Works v. Independent Ink*, 11 J. TECH. L. & POL'Y 123, 124-25 (2006) (providing the history of the Sherman and Clayton Acts).

22. See Arthur I. Cantor, *Tying, Exclusive Dealing, and Franchising Issues*, in ANTI-TRUST LAW INSTITUTE (47TH ANNUAL) 399, 407 (PLI Corporate Law and Practice Course Handbook Series No. 8736, 2006) (providing substantial case references that demonstrate that the *per se* standard is the predominant mechanism for finding illegal tying arrangements). A *per se* standard is not officially a three-element analysis; however, those are the factors that best encapsulate the limited requirements (as compared to a rule of reason analysis). They are assumed to be the prevalent factors for the *per se* standard for purposes of this Note. See *Jefferson Parish*, 466 U.S. at 16-18 (establishing that to invalidate a tying arrangement, the seller must affect a substantial volume of commerce, have market power, and sell “two separate products that may be tied together”).

23. See Cantor, *supra* note 22.

court's discretion and may vary, tying arrangements under the *per se* rule are subject to inconsistent and unpredictable rules in a court.²⁴

A rule of reason analysis in an antitrust case, on the other hand, focuses on a tying arrangement's overall effects on the market. A rule of reason analysis is more comprehensive than the *per se* standard and places a higher burden on the plaintiff because it requires the plaintiff to demonstrate both that the seller has market power in the tying product and that the arrangement is anticompetitive. The defendant is permitted to introduce procompetitive arguments about the tying arrangement. The court, in turn, will balance the anticompetitive harms with the procompetitive benefits and determine whether the tying arrangement should prevail in the market.²⁵

C. Tying Jurisprudence: *Jefferson Parish Hospital v. Hyde*

In *Jefferson Parish Hospital v. Hyde*, the Supreme Court reversed the Federal Circuit, which had applied the *per se* standard to an agreement between a hospital and an independent firm offering anesthesiological services.²⁶ The plaintiff challenged a hospital's exclusive contract with a firm of anesthesiologists pertaining to all of the hospital's anesthesiological needs.²⁷ The plaintiff alleged that patients were forced to purchase anesthesiological services as part of their hospital care and that such an arrangement was anticompetitive.²⁸

The Court held that the type of tying arrangement at issue was not proper for a *per se* analysis.²⁹ Justice Stevens, writing for the majority, noted that a *per se* standard would be "appropriate [only] if the existence of forcing is probable."³⁰ In the arrangement at issue, the Court found that the hospital was not truly forcing its choice of anesthesiological services on patients because the hospital did not have a dominant market position and thus patients could have gone to competing hospitals in the area.³¹ The

24. See Jill Dickey Protos, Comment, *Kodak v. Image Technical Services: A Setback for the Chicago School of Antitrust Analysis*, 43 CASE W. RES. L. REV. 1199, 1207 (1993).

25. See, e.g., *Jefferson Parish Hosp. Dist. No. 2 v. Hyde*, 466 U.S. 2, 42 (1984) (O'Connor, J., concurring).

26. *Id.* at 4-5.

27. *Id.* at 5-6.

28. *Id.*

29. *Id.* at 31-32.

30. *Id.* at 15.

31. *Id.* at 28.

Court acknowledged that not all tying arrangements were anticompetitive and did not warrant a strict *per se* analysis.³²

The Court, in dicta, distinguished the arrangement at issue in *Jefferson Parish* from other tying arrangements that were likely to be anticompetitive, such as patent-tying arrangements.³³ The Court noted that “[it] is far too late in the history of our antitrust jurisprudence to question the proposition that certain tying arrangements [such as patent-tying arrangements] pose an unacceptable risk of stifling competition and therefore are unreasonable ‘*per se*.’”³⁴ Therefore, at least in 1984, the Court acknowledged that the presumption of market power of a patent and the *per se* analysis toward patent-tying arrangements were still necessary because the seller would likely use the tying product in an anticompetitive manner to sell more tied products.³⁵

Justice O’Connor, in a concurring opinion, wrote separately to disagree with the continued viability of the *per se* standard and the presumption that patents, on their own, conferred market power upon the patentee.³⁶ Justice O’Connor wrote that “[t]he time has therefore come to abandon the ‘*per se*’ label and refocus the inquiry on the adverse economic effects, and the potential economic benefits, that the tie may have.”³⁷ Justice O’Connor urged the adoption of the rule of reason analysis because of the dynamic “economic circumstances of [a] tie.”³⁸

The rule of reason, as elaborated in Justice O’Connor’s concurring opinion in *Jefferson Parish*, examines, at a minimum, the market power in the tying product, the threat of market power in the tied product, and the economic basis for treating the products as distinct.³⁹ Those factors are not exhaustive: “[t]he ultimate decision whether a tie-in is illegal . . . should depend on the demonstrated economic effects of the challenged agreement. . . . A tie-in should be condemned only when its anticompetitive impact outweighs its contribution to efficiency.”⁴⁰

32. *Id.* at 27-28.

33. *Id.* at 16.

34. *Id.*

35. *See id.*

36. *Id.* at 34-35, 37 n.7 (O’Connor, J., concurring).

37. *Id.* at 35.

38. *Id.* Justice O’Connor provided the example that “[a] seller with a monopoly on flour, for example, cannot increase the profit it can extract from flour consumers simply by forcing them to buy sugar along with their flour.” *Id.* at 36.

39. *Id.* at 41.

40. *Id.* at 41-42.

After *Jefferson Parish*, tying jurisprudence split into two camps. In the *per se* camp, patent-tying arrangements were subject to a *per se* standard, and courts presumed market power if the tying product was patented. In the rule of reason camp, ordinary tying arrangements not involving a patent were illegal only if they were found to unreasonably restrain competition under a comprehensive rule of reason analysis.

Almost twenty years after *Jefferson Parish*, *Illinois Tool* provided the Court the opportunity to reconcile these camps. Part II will show that the *Illinois Tool* Court overruled the dicta in *Jefferson Parish* by removing the presumption that patents confer market power in a tying-arrangement case, but failed to address adequately the proper standard by which to analyze patent-tying arrangements.

II. ILLINOIS TOOL WORKS V. INDEPENDENT INK

A. Facts and Procedural History

Illinois Tool Works Inc. and its subsidiary, Trident Inc. (collectively “Illinois Tool”), manufactured, marketed, and sold printing systems that included patented ink-jet printheads and specially engineered (but unpatented) ink.⁴¹ Illinois Tool licensed these printing systems to original equipment manufacturers, who used them for barcode production.⁴² As part of the licensing agreement, Illinois Tool required its licensees to purchase unpatented ink exclusively from Illinois Tool.⁴³

Independent Ink, Inc. (“Independent”) manufactured ink compatible with Illinois Tool’s printers.⁴⁴ Independent filed for a declaratory judgment of non-infringement and invalidity of Illinois Tool’s patents in the United States District Court for the Central District of California.⁴⁵ Independent later amended its complaint to allege that Illinois Tool violated Sherman Act § 1 by tying their patented items (printheads) to unpatented goods (ink) through licensing arrangements.⁴⁶ Independent also alleged that Illinois Tool violated Sherman Act § 2 for illegal monopolization.⁴⁷ Independent did not submit any affirmative evidence defining the relevant market or establishing Illinois Tool’s market power because at the time,

41. *Ill. Tool Works, Inc. v. Indep. Ink, Inc. (Illinois Tool)*, 126 S. Ct. 1281, 1284 (2006).

42. *Id.* at 1285.

43. *Id.*

44. *Id.*

45. *Id.*

46. *Id.*

47. *Id.*

controlling Supreme Court precedent held that market power for a patent was presumed in Sherman Act § 1 cases.⁴⁸ Nevertheless, the district court granted Illinois Tool's motion for summary judgment on both antitrust claims, holding that because Independent did not prove that Illinois Tool had market power in the tying market (the printheads), the tying arrangement was not illegal.⁴⁹

Independent appealed the rulings on both claims to the United States Court of Appeals for the Federal Circuit.⁵⁰ The Federal Circuit affirmed summary judgment for the § 2 claim, holding that Independent did not provide sufficient evidence for its monopolization claims.⁵¹ With respect to Independent's § 1 tying claim, the Federal Circuit acknowledged voluminous criticism of the presumption that patents confer market power in tying-arrangement cases.⁵² Nonetheless, the Federal Circuit upheld the market-power presumption because of its "duty . . . to follow the precedents of the Supreme Court until the Court itself chooses to expressly overrule them."⁵³ Accordingly, the Federal Circuit reversed and found in favor of Independent on the § 1 claim, holding that market power was presumed for a patent in a patent-tying arrangement and remanded the case.⁵⁴

The Federal Circuit emphasized the tension underlying this doctrine, imploring that "[t]he time may have come to abandon the doctrine, but it is up to the Congress or the Supreme Court to make this judgment."⁵⁵ Illinois Tool petitioned the tying claim to the Supreme Court, which granted certiorari to "undertake a fresh examination of the history of both the judicial and legislative appraisals of tying arrangements."⁵⁶

B. The Supreme Court's Holding and Rationale in *Illinois Tool*

In removing the presumption that a patent confers market power, the Supreme Court vacated the Federal Circuit's judgment in favor of Independent and remanded for further proceedings.⁵⁷

The question before the Court was "whether the presumption of market power in a patented product should survive as a matter of antitrust law

48. *See id.*

49. *Indep. Ink, Inc. v. Trident, Inc.*, 210 F. Supp. 2d 1155, 1177 (C.D. Cal. 2002).

50. *Illinois Tool*, 126 S. Ct. at 1285.

51. *Indep. Ink, Inc. v. Ill. Tool Works, Inc.*, 396 F.3d 1342, 1350 (Fed. Cir. 2005).

52. *Id.*

53. *Id.* at 1351.

54. *Id.* at 1351, 1353.

55. *Id.* at 1351.

56. *Illinois Tool*, 126 S. Ct. at 1285.

57. *Id.* at 1293.

despite its demise in patent law.”⁵⁸ The Supreme Court recognized that it historically exercised a general distrust toward patent-tying arrangements as the extensions of the “monopoly” of a patent.⁵⁹ However, the Court noted that throughout the twentieth century, their disapproval of tying arrangements “substantially diminished” as they recognized the procompetitive possibilities of tying, and in cases beginning with *Jefferson Parish*, started to require proof of power in the tying-product market.⁶⁰

Justice Stevens specifically referred to Justice O’Connor’s concurrence in *Jefferson Parish*, in which she proffered two arguments: first, that no tying arrangement should be a *per se* violation of the Sherman Act; and second, that the presumption that a patent categorically confers market power on the patentee should no longer be valid.⁶¹ The Court in *Illinois Tool* articulated that “[i]t is [the] presumption [that a patent confers market power] . . . that we squarely address today.”⁶² The Court was silent with respect to the second issue—the future applicability of the *per se* rule.

The Court admitted that the presumption of market power emerged from a general skepticism of tying arrangements.⁶³ The presumption originated from the patent-misuse doctrine, in which courts invalidated tying arrangements because they were perceived to be restraints on competition.⁶⁴ The Court applied that perception to antitrust law in *International Salt Co. v. United States*, holding, without an analysis of the market power of the patent at issue, that a patent-tying arrangement violated antitrust law.⁶⁵

In light of the historical presumption that a patent confers market power, the *Illinois Tool* Court identified two “subsequent events . . . [that] ultimately led to [the] reexamination of the presumption of *per se* illegality of a tying arrangement.”⁶⁶ First, the 1988 amendments to the Patent Act

58. *Id.* at 1284.

59. *Id.* at 1286.

60. *See id.*

61. *Id.* at 1288.

62. *See id.* at 1288.

63. *See id.* (“Without any analysis of actual market conditions, these patent misuse decisions assumed that, by tying the purchase of unpatented goods to the sale of the patented good, the patentee was ‘restraining competition.’” (quoting *Morton Salt Co. v. G.S. Suppiger Co.*, 314 U.S. 488, 490 (1942))).

64. *Id.* (referring to *Motion Picture Patents Co. v. Universal Film Mfg. Co.*, 243 U.S. 502 (1917)).

65. *Id.* at 1289 (referring to *Int’l Salt Co. v. United States*, 332 U.S. 392 (1947)).

66. *Id.* at 1289-90. Even though Justice Stevens mentioned that the Court addressed only one of Justice O’Connor’s arguments—that a patent does not categorically confer market power—this language makes it unclear whether the Court also sought to address

required that any patent-misuse claims based on a tying arrangement must also include proof of “market power in the relevant [patent] market.”⁶⁷ This requirement persuaded the Court that patents do not necessarily confer market power and, therefore, a presumption of market power for patents should no longer exist in antitrust law.⁶⁸ If patent law required market power in order to establish patent misuse, the same logic should apply to antitrust law, especially when considering the significant penalties of antitrust violations.⁶⁹

The Court also mentioned that “the vast majority of academic literature on the subject” recommended a re-examination of the market-power presumption.⁷⁰ The Court, however, merely footnoted this concern, and did not primarily rely upon the reasoning of those academics and scholars calling upon courts to abandon the presumption that a patent confers market power.⁷¹

Given these two events, the Court summarily held that “tying arrangements involving patented products should be evaluated under the standards applied in cases like . . . *Jefferson Parish* rather than under the *per se* rule.”⁷²

III. CONSEQUENCES AND UNANSWERED QUESTIONS OF *ILLINOIS TOOL*

This Part analyzes the holding in *Illinois Tool*. Section III.A argues that removing the market-power presumption of a patent accords with legal scholarship and makes future trials more complex but more precise. Section III.B contends that a fair interpretation of *Illinois Tool* supports the conclusion that the Court sought to eliminate the application of the *per se* analysis to patent-tying arrangements. Even if such a holding is uncertain, Section III.B.3 asserts that for normative reasons, the rule of reason should govern future cases challenging patent-tying arrangements.

the applicability of the *per se* standard to patent-tying arrangements under the Sherman Act. *See id.*

67. *Id.* at 1290.

68. *Id.*

69. *Id.* at 1291.

70. *Id.* at 1291 n.4.

71. The Court’s only reference to economic theory and academic scholarship is in the context of dismissing *Illinois Tool*’s suggestion that the Court adopt a rebuttable presumption that patents confer market power. Tying arrangements, the Court declared, are “fully consistent” with the free market. *Id.* at 1292.

72. *Id.* at 1291.

A. Patents as Property Rights, Not “True” Monopolies

Eliminating the presumption of market power of a patent in tying-arrangement cases signals the Court’s understanding that a patent is simply an intellectual property right, a view that the weight of legal scholarship supports. Although a patent is often referred to as a “statutorily granted monopoly,”⁷³ the Court recognized in *Illinois Tool* that the patent does not categorically grant market power sufficient to restrain competition. Leading treatises on intellectual property and antitrust law argue that the presence of a patent, like all intellectual property rights, does not have an “economic basis” that equates to market power of the product.⁷⁴ Landes and Posner reason that “[o]ne does not say that the owner of a parcel of land has a monopoly because he has the right to exclude others from using the land” because “[exclusion] does not have antitrust significance.”⁷⁵ Obtaining a patent, therefore, is functionally distinct from, and does not guarantee, the capture of market power.

To obtain a patent, a patent holder must prove that her invention fits within statutory patentable subject matter, is useful, novel, non-obvious based on prior inventions, and described sufficiently in detail for adequate public disclosure.⁷⁶ A patentee who has overcome these hurdles has not automatically achieved market power. Market power is defined by first identifying the “relevant market” for a product, which includes the relevant product market, a relevant geographic market, and the product owner’s percentage of output in the relevant market.⁷⁷ Then, market power is determined by the degree to which a seller can raise prices above the levels in the relevant market that would be charged in competitive conditions.⁷⁸ The analysis of a “relevant market” and market power is also guided by the availability of substitutes, ease of entry into the market, and barriers to new firms.⁷⁹ Having a patent does not guarantee market success or consumer desirability of the patented product.⁸⁰ For instance, low demand for patented items can lead to low output in a relevant market. In

73. See *United States v. Loew’s Inc.*, 371 U.S. 38, 46 (1962).

74. See 10 PHILIP AREEDA, EINER ELHAUGE & HERBERT HOVENKAMP, ANTITRUST LAW ¶¶ 1737a, c (2d ed. 2004); HOVENKAMP, JANIS & LEMLEY, *supra* note 14, § 4.2a; WILLIAM LANDES & RICHARD POSNER, THE ECONOMIC STRUCTURE OF INTELLECTUAL PROPERTY LAW 374 (2003).

75. LANDES & POSNER, *supra* note 74, at 374.

76. See 35 U.S.C. §§ 101-103, 112 (2000).

77. HOVENKAMP, *supra* note 10, § 3.1d.

78. *Jefferson Parish Hosp. Dist. No. 2 v. Hyde*, 466 U.S. 2, 27 n.46 (1984).

79. HOVENKAMP, JANIS & LEMLEY, *supra* note 14, § 4.1b.

80. See *id.*, § 4.2a.

addition, a patented product may have a number of readily available substitutes. For example, competing vendors in the printer industry have patents for their products, but indeed, a patent for one printer alone does not guarantee market power. In this case, the patent holder may not have the power to raise prices above a competitive level.

Additionally, the removal of the market-power presumption alters future antitrust litigation. Future plaintiffs challenging tying arrangements involving a patented product will need to proceed through a more complex trial to prove market power. Lawsuits challenging patent-tying arrangements will undoubtedly be more costly and burdensome because of the inherent complexity in defining the "relevant market," its geographic scope, market share, and power over other substitutes. This inquiry will necessarily lead to a battle of experts over defining markets and exploring whether competition has been suppressed.⁸¹

More unique to the patent context, a plaintiff's burden after *Illinois Tool* will be more onerous because proving market power of a patent must accommodate economic and legal considerations.⁸² A patent's market power encompasses not only the commercial terrain (whether there is a lack of economic substitutes), but also the legal terrain as defined by the doctrine of equivalents. Under the doctrine of equivalents, a patentee's rights extend beyond the literal elements of its claims to inventions that (1) perform substantially the same function in substantially the same way to obtain the same result;⁸³ or (2) have elements identical or equivalent to each claimed element of the patented invention.⁸⁴ These examinations, in turn, are determined in the context of the patent, prior art, and circumstances of every case. Therefore, a "legal" substitute is a product that competes with a patented item and does not infringe upon the patent under the doctrine of equivalents. An analysis of market power for a patent would therefore have to accommodate for legal substitutes, which necessitates an inquiry into the scope of the doctrine of equivalents, and consequently the scope of the patent, in the market. The Federal Circuit has developed an "appropriate rule" for determining such legal substitutes for the purposes

81. See Vincent Zhou, *Product Tying Involving Intellectual Property: Recent Developments*, 2004 UCLA J.L. & TECH. NOTES 16, http://www.lawtechjournal.com/notes/2004/16_040809_zhou.php ("Defining the market and proving the 'market power' possessed by a company utilizing a tying arrangement could be difficult.").

82. Kenneth J. Burchfiel, *Patent Misuse and Antitrust Reform: 'Blessed Be The Tie?'*, 4 HARV. J.L. & TECH. 1, 92-100 (1991).

83. *Graver Tank & Mfg. Co. v. Linde Air Prods. Co.*, 339 U.S. 605, 608 (1950).

84. *Warner-Jenkinson v. Hilton Davis Chem. Co.*, 520 U.S. 17 (1997).

of lost-profit damages, but it is unclear whether this rule would apply to antitrust suits.⁸⁵

B. *Per Se* or Rule of Reason?

Although the sole question before the Court in *Illinois Tool* was whether “the presumption of market power in a patented product should survive as a matter of antitrust law,” a fair reading of the Court’s ruling also implicates another issue: the standard that a court will use toward future patent-tying arrangements. The Court arguably eliminated the applicability of the *per se* test in future patent-tying arrangement cases.⁸⁶ Immediately after the holding of *Illinois Tool*, commentators were confused about whether the Court had completely abolished the rule.⁸⁷ This Section (1) details the consequences of no longer applying a *per se* analysis on litigation involving tying arrangements; (2) establishes that a reasonable interpretation of *Illinois Tool* is that the *per se* analysis is no longer applicable; and (3) recommends that as a normative matter, courts should use the rule of reason toward future tying arrangements.

1. *Consequences of Eliminating the Per Se Standard*

Eliminating the *per se* standard will shape future litigation in the courts.⁸⁸ As explained in Part II above, a plaintiff has a lower burden of establishing that an arrangement is illegal under a *per se* analysis than under a rule of reason analysis. A *per se* analysis for tying arrangements, as articulated in *Jefferson Parish*, requires proof of at least three elements: (1) the tying and tied products are separate items; (2) the seller has power in the tying product market; and has (3) a “not insubstantial” involvement in the interstate commerce of the tied product market.⁸⁹ The opportunity to discuss the procompetitive effects of the tying arrangement only enters as an affirmative defense, which is not guaranteed a full, thorough evaluation in every case.⁹⁰

85. See Burchfiel, *supra* note 82, at 100.

86. See *Ill. Tool Works, Inc. v. Indep. Ink, Inc. (Illinois Tool)*, 126 S. Ct. 1281, 1284 (2006).

87. See Aliza Reicher, Comment, *Off With Their Printheads! An End to the Per Se Presumption of Illegality for Patent Ties in Illinois Tool Works v. Independent Ink*, 24 CARDOZO ARTS & ENT. L.J. 297, 320, nn.175-77 (2006) (citing to web-log postings following *Illinois Tool* questioning whether the *per se* rule was still in effect).

88. See Protos, *supra* note 24, at 1203 (“[T]he initial characterization decision of which standard to apply is critical and perhaps outcome determinative.”).

89. See *supra* note 22.

90. See discussion *supra* Section II.B.

The rule of reason inquiry, however, examines the purpose and effect of the tying arrangement, relevant market conditions, and whether a tying arrangement promotes or suppresses competition. Under the rule of reason, a plaintiff would have to show not only the elements of a *per se* rule, but also demonstrate that “anticompetitive impact [of a tying arrangement] outweighs its contribution to efficiency.”⁹¹

2. Illinois Tool *Eliminated the Per Se Analysis*

Thus far, judges on one circuit have disagreed about whether *Illinois Tool* suggests a *per se* or rule of reason approach. Three months after *Illinois Tool*, the Seventh Circuit employed the rule of reason analysis toward a tying arrangement.⁹² Even though the case did not involve a patented product, the court noted in dicta that “the Supreme Court recently adopted Justice O’Connor’s reasoning in [*Jefferson Parish*] and held that tying arrangements involving patents should be evaluated based upon their market power ‘rather than under the *per se* rule.’”⁹³ That dictum struck sensitive nerves on the bench. Judge Diane Wood issued a concurring opinion, not to criticize that the circuit unnecessarily wrote about patent-tying arrangements, but rather to highlight that the majority misinterpreted *Illinois Tool*; she wrote that “despite the opportunity it had as recently as March 2006 to [jettison the *per se* rule in tying cases], the Court has refused to do so.”⁹⁴

One interpretation of *Illinois Tool* is that the Court held only that there is no presumption of market power from a patent involved in a tying arrangement. Because the Court stated that “in all cases involving a tying arrangement, the plaintiff must prove that the defendant has market power in the tying product,” it could be assumed that the Court intended to preserve the *per se* doctrine, as preserved in *Jefferson Parish*, for future patent-tying arrangement cases.⁹⁵ In addition, Justice Stevens championed his rationale in *Jefferson Parish*, a case in which the *per se* analysis was upheld, though not applied to the facts of that case.⁹⁶ Finally, the Court mentioned Justice O’Connor’s condemnation of both the *per se* analysis and patent-equals-market-power presumption in her concurring opinion of *Jefferson Parish* and adopted her view on the presumption of patents, but

91. *Jefferson Parish*, 466 U.S. at 41-42 (O’Connor, J., concurring); see also HOVENKAMP, *supra* note 10, § 10.1.

92. *Reifert v. So. Cent. Wisc. MLS Corp.*, 450 F.3d 312, 316-17 (7th Cir. 2006).

93. *Id.* at 317 n.2.

94. *Id.* at 322-23 (Wood, J., concurring).

95. See *Ill. Tool Works, Inc. v. Indep. Ink, Inc. (Illinois Tool)*, 126 S. Ct. 1281, 1293 (2006).

96. See *id.* at 1288.

did not explicitly address the viability of the *per se* rule.⁹⁷ If the Court intended to remove the *per se* analysis from patent-tying arrangements, it had an opportunity to do so and declined.

The more reasonable interpretation, however, is that the Court in *Illinois Tool* sought to eliminate the *per se* standard and subject all patent-tying arrangements to a rule of reason analysis. First, as a textual matter, the Court held that future tying arrangements should be evaluated under the “standards applied in cases like *Fortner II* and *Jefferson Parish* rather than under the *per se* rule” and referred to Justice O’Connor’s concurring opinion of *Jefferson Parish*, which advocated eliminating the *per se* rule entirely in favor of the rule of reason.⁹⁸ By mentioning “standards” and comparing them against the *per se* rule of illegality, it is reasonable to infer that Justice Stevens was referring to the multiple standards of defining relevant markets under the rule of reason. In addition, Justice Stevens wrote that tying arrangements should be evaluated under standards “rather than under the *per se* rule.”⁹⁹

Second, citing support from “the vast majority of academic literature,” the Court also mentioned that “[i]t is no doubt the virtual consensus among economists that has persuaded the enforcement agencies to reject the position that the Government took when it supported the *per se* rule that the Court adopted in the 1940s.”¹⁰⁰

Finally, the underlying rationale behind a *per se* rule against tying arrangements is to enjoin arrangements when “the existence of forcing is probable.”¹⁰¹ The Court in *Illinois Tool* acknowledged that “[m]any tying arrangements, even those involving patents and requirements ties, are fully consistent with a free, competitive market,” which negates the Court’s own rationale for use a *per se* rule when forcing is probable.¹⁰² It is only through the rule of reason, which examines the entirety of effects on the market, that a tying arrangement is guaranteed an examination for pro-competitive effects.¹⁰³

Therefore, at a minimum, the Court in *Illinois Tool* left an unclear and unarticulated standard for future tying cases involving patented items. In cases after *Illinois Tool*, plaintiffs challenging tying arrangements have

97. *See id.*

98. *See id.* at 1288, 1291.

99. *See id.* at 1288 (emphasis added).

100. *See id.* at 1292.

101. *See id.* at 1287.

102. *See id.* at 1292.

103. *See Reicher, supra* note 87, at 322 n.35.

pleaded under both the *per se* and rule of reason standards, making litigation inefficient, duplicative, and unpredictable.¹⁰⁴

3. Normative Justifications for Rule of Reason in Patent-Tying Cases

This Part has thus far established that a reasonable interpretation of *Illinois Tool* supports the conclusion that *per se* rulings are no longer relevant for patent-tying arrangements. As a normative matter, this Section encourages courts to adopt the rule of reason approach for tying arrangements involving patented products.

a) Efficiency and Equity

Although the analysis under the rule of reason is more expensive and complex for proving the anticompetitive effects (and to some extent, disproving the possibility of procompetitive effects) on the market, it is the more appropriate standard because “the efficiency of a legal regime must be measured not by administrative costs alone, but by its net effect on the efficiency of the economy as a whole.”¹⁰⁵ As it stands, proving market power in tying arrangement cases—even in the *per se* situations elaborated by *Jefferson Parish*—entails an examination of a defendant’s market share, pricing structure, and the market.¹⁰⁶ Consequently, as Justice O’Connor indicated in her concurring opinion in *Jefferson Parish*, “[the *per se* rule] incurs the costs of a rule of reason approach without achieving its benefits: the doctrine calls for the extensive and time-consuming economic analysis characteristic of the rule of reason, but then may be interpreted to prohibit arrangements that economic analysis would show to be beneficial.”¹⁰⁷

Application of the *per se* standard would be over-inclusive by rewarding antitrust damages to plaintiffs in courts that do not choose to balance or evaluate the procompetitive effects of a tying arrangement. The rule of reason standard may save procompetitive tying arrangements from anti-

104. See *Monsanto Co. v. Scruggs*, 459 F.3d 1328, 1339 (Fed. Cir. 2006); *Mediacom Commc’ns Corp. v. Sinclair Broad. Group, Inc.*, 2006 U.S. Dist. LEXIS 81577, *24 n.9 (S.D. Iowa Oct. 24, 2006) (“[I]n light of the recent Supreme Court decision, [*Illinois Tool Works*], the application of the *per se* doctrine . . . should be approached with caution.”); *Storage Tech. Corp. v. Custom Hardware Eng’g & Consulting, Ltd.*, 2006 U.S. Dist. LEXIS 43690, *64, 72 (D. Mass. June 28, 2006).

105. Willard K. Tom & Joshua A. Newberg, *Antitrust and Intellectual Property: From Separate Spheres to Unified Field*, 66 ANTITRUST L.J. 167, 196-97 (1997).

106. HOVENKAMP, JANIS & LEMLEY, *supra* note 14, § 21.5.

107. *Jefferson Parish Hosp. Dist. No. 2 v. Hyde*, 466 U.S. 2, 32 (1984) (O’Connor, J., concurring).

trust liability. Members of the Court have acknowledged the possibility of procompetitive benefits in tying cases.¹⁰⁸ The *per se* standard, however, “dispenses with [proving] anticompetitive effects,” and does not guarantee that evidence regarding anticompetitive or procompetitive effects of a tying arrangements will be heard during trial.¹⁰⁹

Furthermore, a rule of reason analysis may be more effective in identifying anticompetitive tying arrangements because a tying arrangement may be illegitimate and anticompetitive despite an *absence* of power in the tying product market.¹¹⁰ The benefit of applying the rule of reason far outweighs the marginal costs of the case-by-case factual examination, because the judicial system and economy would benefit by protecting efficient tying arrangements and invalidating anticompetitive tying arrangements with greater accuracy.

In addition, in the patent-tying context, the rule of reason analysis would be more efficient and effective at reaching the correct outcome. The D.C. Circuit struggled over the difficulty of applying the *per se* test to an intellectual property tie in *United States v. Microsoft Corp.*¹¹¹ The U.S. government claimed that Microsoft illegally tied its Windows operating system (the tying product) to its web browser (the tied product).¹¹² The D.C. Circuit held that generally, the rule of reason “should govern the legality of tying arrangements involving platform software products.”¹¹³ The D.C. Circuit was reluctant to apply the *per se* standard primarily because it was difficult to adapt to the technology at issue.¹¹⁴ Additionally, the court noted that ties in the technological industry also provide “efficiencies that courts have not previously encountered and thus the Supreme Court had not factored into the *per se* rule as originally conceived.”¹¹⁵ Nevertheless, the court indicated that it was bound by precedent and could not apply a rule of reason analysis simply because the court “identifie[d] an efficiency

108. *See* Eastman Kodak Co. v. Image Tech. Servs., Inc., 504 U.S. 451, 488-89 (1992) (Scalia, J., dissenting) (“[W]e have recognized that bundling arrangements not coerced by the heavy hand of market power can serve the procompetitive functions of facilitating new entry into certain markets . . . assuring quality control . . . and ‘reducing costs through economies of joint production and distribution.’”).

109. *See* Monument Builders v. Mich. Cemetery Assoc., 2006 U.S. Dist. LEXIS 78458, *15 n.3 (E.D. Mich. Oct. 27, 2006).

110. *See, e.g.,* Eastman Kodak, 504 U.S. at 486 (1992).

111. *United States v. Microsoft Corp.*, 253 F.3d 34 (D.C. Cir. 2001).

112. *Id.* at 84.

113. *Id.* (“[S]implistic application of *per se* tying rules carries a serious risk of harm.”).

114. *Id.* at 85.

115. *Id.* at 93.

justification for a tying arrangement.”¹¹⁶ An interpretation that *Illinois Tool* subjects future cases to the rule of reason would all efficient and welfare-enhancing tying in the computer software context and other technological industries viable, if not welcome.¹¹⁷

b) Consistent Jurisprudence

Requiring a plaintiff to prove the anticompetitive effects of a tying arrangement comports with antitrust jurisprudence.¹¹⁸ Consequences of antitrust litigation are grave—an antitrust plaintiff may win treble damages, attorney’s fees, and an injunction against the defendant’s practices. The Court noted in *Illinois Tool* that patent-tying arrangements may lead to federal criminal charges and up to ten years in prison.¹¹⁹ It is only fair to require a plaintiff seeking to challenge a tying arrangement to have the burden to show why the tying arrangement is anticompetitive.

As a doctrinal matter, eliminating the *per se* rule would also maintain consistent jurisprudence. A *per se* analysis—which entails a more narrow inquiry into the market—is intended for situations in which arrangements are almost always harmful.¹²⁰ The Supreme Court initially justified its usage of the *per se* rule because tying arrangements were perceived to “serve hardly any purpose beyond the suppression of competition.”¹²¹ The Court’s ruling in *Illinois Tool*, however, acknowledged that tying arrangements—particularly patent-tying arrangements—are consistent with competitive markets and that tying arrangements are procompetitive in certain market conditions.¹²² Had the Court indicated some skepticism that

116. *Id.* at 95.

117. See HOVENKAMP, JANIS & LEMLEY, *supra* note 14, § 21.8.

118. See *Associated Gen. Contractors, Inc. v. Cal. State Council of Carpenters*, 459 U.S. 519, 537-45 (1983).

119. See *Illinois Tool*, 126 S. Ct. at 1291.

120. See HOVENKAMP, *supra* note 10, § 10.3.

121. *Standard Oil Co. v. United States*, 337 U.S. 293, 305 (1949); see also *Cont’l T.V., Inc. v. GTE Sylvania, Inc.*, 433 U.S. 36, 50 n.16 (1977) (finding that an economic arrangement should be illegal *per se* when “the probability that anticompetitive consequences will result from a practice and the severity of those consequences [is] balanced against its procompetitive consequences. Cases that do not fit the generalization may arise, but a *per se* rule reflects the judgment that such cases are not sufficiently common or important to justify the time and expense necessary to identify them.”).

122. On December 7, 2006, the Supreme Court granted certiorari in *Leegin Creative Leather Prods. v. PSKS, Inc.* (No. 06-480), a case which challenges applying the *per se* rule to vertical minimum resale price violations under Sherman Act § 1. Because the *per se* rule in this context is nearly 100 years old, it is likely that the Court will also seek to reject the *per se* rule in favor of the rule of reason approach “consistent with the Court’s recent jurisprudence, [such as] *Illinois Tool*.” Darren Tucker & Adam Coates, *U.S. Supreme Court Accepts Two More Antitrust Cases*, O’Melveny & Myers LLP Anti-

patent-tying arrangements were anticompetitive, a *per se* analysis would have been more justified. Yet given this wisdom, applying a *per se* rule with a lighter market inquiry would defy the thrust of *Illinois Tool* and perpetuate an unfair presumption against patent-tying arrangements.

IV. CONCLUSION

Confronting a half-century of jurisprudence that conflated patent misuse with antitrust liability, the Supreme Court in *Illinois Tool* successfully removed the presumption that a patent confers sufficient market power in tying-arrangement cases under the Sherman Act. Nevertheless, the Court failed to clearly address which standard should be applied prospectively. Although there is ample language to suggest that the Court in *Illinois Tool* eliminated the *per se* analysis for cases involving patent-tying arrangements, lower courts are still in disagreement. Regardless of the ambiguities in *Illinois Tool*, this Note recommends adopting the rule of reason analysis in future cases. Employing the rule of reason embraces the full extent of the Court's recognition of the procompetitive possibilities of patent-tying arrangements. Until the Court decides to explicitly recognize this approach, the legal environment on tying arrangements will remain still tied up.

THE AFTERMATH OF *EBAY*: PREDICTING WHEN DISTRICT COURTS WILL GRANT PERMANENT INJUNCTIONS IN PATENT CASES

By *Jeremy Mulder*

When the Supreme Court agreed to hear *eBay Inc. v. MercExchange, LLC*,¹ patent practitioners braced themselves for a sea change: would district courts continue to issue injunctions as a matter of course once a court adjudged a patent valid and a defendant's actions infringing? For over twenty years, this had been the Federal Circuit's general rule,² and the patent community benefited from the predictability of this rule governing the grant of permanent injunctions. On May 15, 2006, the Court, overruling the Federal Circuit, held a district court must apply a four-factor test in determining whether to grant an injunction in patent cases.³

As the patent community adjusts to this shift in the law, the question becomes: how will district courts apply this test in practice—under what set of circumstances will district courts grant injunctions in patent cases? Furthermore, if a district court denies an injunction, what remedy can a patentee expect?

Part I of this Note sets out the Court's opinion in *eBay*,⁴ and pays special attention to the concurring opinions, which offer insights into the direction of patent injunction case law.⁵ Part II examines the concerns arising in the aftermath of *eBay* and introduces some post-*eBay* patent injunction decisions. These cases provide the first glimpse at how district courts decide, under the equitable four-factor test, whether to grant patent injunctions. Part III of this Note sketches a preliminary model for predicting when district courts will grant patent injunctions. Based on the available post-*eBay* case law, this model suggests that courts will grant an injunction when a defendant-infringer directly competes with a plaintiff-patentee, and will deny an injunction when a defendant-infringer merely indirectly competes with a plaintiff-patentee.

© 2007 Jeremy Mulder

1. *eBay Inc. v. MercExchange, LLC*, 126 S. Ct. 1837 (2006).

2. *See Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1247 (Fed. Cir. 1989), *cert. denied*, 493 U.S. 853 (1989).

3. *eBay*, 126 S. Ct. at 1838-39.

4. *Id.* at 1837.

5. *Id.* at 1841-43 (Roberts, C.J., concurring; Kennedy, J., concurring).

I. THE *EBAY V. MERCExchange* DECISION

For over twenty years, under Federal Circuit case law, a court issued a patent injunction as a matter of course once it adjudged the patent valid and the defendant's actions infringing.⁶ On May 15, 2006, in *eBay*,⁷ the Court reversed the Federal Circuit's longstanding rule by holding that under

well-established principles of equity, a plaintiff seeking a permanent injunction must satisfy a four-factor test before a court may grant such relief. A plaintiff must demonstrate: (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.⁸

In so holding, the Court stated that both lower courts were in error.⁹ Specifically, the district court articulated the four-factor test but then erroneously suggested a broad swath of situations in which an injunction should not issue—namely, cases involving business method claims and cases involving patentees who do not make or use their inventions but merely seek to license them.¹⁰ On appeal, the Federal Circuit, ignoring the four-factor test, applied its general rule: absent exceptional circumstances, a permanent injunction follows from a finding of validity plus infringement.¹¹ With clarity, the Supreme Court stated that the four-factor test applied to permanent injunctions in all cases, including patent cases.¹² All the justices agreed with this ruling.¹³

6. *Richardson*, 868 F.2d at 1247; see also *W.L. Gore & Assocs. v. Garlock, Inc.*, 842 F.2d 1275, 1281 (Fed. Cir. 1988).

7. Plaintiff MercExchange owned “a business-method patent for an electronic market designed to facilitate the sale of goods between private individuals by establishing a central authority to promote trust among market participants.” 13 JAMES WM. MOORE ET AL., *MOORE'S FEDERAL PRACTICE* § 65.03 (3d ed. 2006); U.S. Patent No. 5,845,265 (filed Nov. 7, 1995).

8. *eBay*, 126 S. Ct. at 1839 (citing *Weinberger v. Romero-Barcelo*, 456 U.S. 305, 311-13 (1982); *Amoco Prod. Co. v. Gambell*, 480 U.S. 531, 542 (1987)).

9. *Id.* at 1840-41.

10. *Id.* at 1840.

11. *Id.* at 1841.

12. *Id.*

13. *Id.* at 1841 (Roberts, C.J., concurring); *Id.* at 1842 (Kennedy, J., concurring).

A. The Concurring Opinions of Justice Roberts and Justice Kennedy

The Court was divided, however, about the practical implications of the majority's ruling. Justice Thomas, writing for the majority, stated,

we take no position on whether permanent injunctive relief should or should not issue in this particular case, or indeed in any number of other disputes arising under the Patent Act. We hold only that the decision whether to grant or deny injunctive relief rests within the equitable discretion of the district courts, and that such discretion must be exercised consistent with traditional principles of equity [i.e. the four-factor test]¹⁴

Notwithstanding Justice Thomas's claim, both Chief Justice Roberts's and Justice Kennedy's concurring opinions, which speak for a total of seven of the justices, *did* take positions on whether permanent injunctions should issue in any number of other patent disputes.¹⁵ Furthermore, the Roberts and Kennedy concurring opinions espouse contrasting views of the proper outcome of future patent injunction cases.

1. Chief Justice Roberts' Concurring Opinion: History is Instructive

Chief Justice Roberts' concurring opinion suggested tradition is outcome-determinative. He stated, quoting Justice Holmes, that "a page of history is worth a volume of logic."¹⁶ The Chief Justice noted that historically injunctions have almost always issued upon a finding of patent infringement.¹⁷ According to Chief Justice Roberts, this is because the right to exclude, once infringed, necessarily implicates at least the first two factors—irreparable harm and no adequate remedy at law—of the four-factor test.¹⁸ Chief Justice Roberts' statements insinuate that even under the four-factor test district courts should continue to grant injunctions in the vast majority of patent cases.

14. *Id.* at 1841.

15. *Id.* at 1841 (Roberts, C.J., concurring, joined by Scalia, J. and Ginsburg, J.); *Id.* at 1842 (Kennedy, J., concurring, joined by Stevens, J., Souter, J., and Breyer, J.). Justice O'Connor had resigned, and Justice Alito was not yet confirmed, when the Court decided *eBay*.

16. *Id.* at 1842 (Roberts, C.J., concurring) (quoting *New York Trust Co. v. Eisner*, 256 U.S. 345 (1921)).

17. *Id.* at 1841 (Roberts, C.J., concurring).

18. *Id.* at 1842 (Roberts, C.J., concurring).

2. *Justice Kennedy's Concurring Opinion: Contextually Situated*

In contrast to the Chief Justice's view, Justice Kennedy's concurring opinion stated that the appropriate remedy will not always follow history, but instead will depend on the context: historic or modern.¹⁹ Justice Kennedy stated the equitable four-factor test is well suited to deal both with cases that are similar to those that have come before, and cases which present new issues not historically seen.²⁰ Justice Kennedy implied that cases that resemble historic fact patterns will likely result in an injunction, whereas cases involving certain modern issues may result in district courts denying injunctions.²¹ Explaining the difference between modern and historical context, Justice Kennedy stated, "[i]n cases now arising[,] trial courts should bear in mind that in many instances the nature of the patent being enforced and the economic function of the patent holder present considerations quite unlike earlier cases."²² Specifically, Justice Kennedy mentioned two modern issues: (1) an emerging industry that uses patents primarily for obtaining license fees, rather than for producing and selling; and (2) business method patents.²³

Justice Kennedy cautioned that in modern cases involving patentees primarily concerned with licensing, such as when the patent covers only a small part of the infringing product and the patentee uses the threat of an injunction for negotiation leverage, that "legal damages may well be sufficient to compensate for the infringement and an injunction may not serve the public interest."²⁴ With respect to business method patents, Justice Kennedy stated that district courts should consider that the "potential vagueness and suspect validity of some of these [business method] patents may affect the calculus under the four-factor test."²⁵

To be sure, Justice Kennedy does not advocate for a blanket rule where courts should deny an injunction because a case falls into one of these modern categories.²⁶ Rather, in his view, courts should equitably examine these modern categories to determine whether to grant an injunction.

19. *Id.* (Kennedy, J., concurring).

20. *Id.*

21. *Id.* at 1842-43 (Kennedy, J., concurring).

22. *Id.* at 1842 (Kennedy, J., concurring).

23. *Id.*

24. *Id.*

25. *Id.*

26. *See id.*

3. *The Concurring Opinions Recapped: Agreement and Disagreement*

Chief Justice Roberts and Justice Kennedy agree that courts should issue injunctions in cases with traditional fact patterns—for example, an infringer who makes, uses, or sells in direct competition with a patentee.²⁷ They apparently disagree, however, about whether courts should consider emerging issues that were not historically present to determine whether granting an injunction is appropriate in evolving modern contexts.²⁸

With the majority refusing to advocate for a position, and the concurring opinions suggesting different approaches, the divided Court leaves district courts with the task of deciding how to apply the four-factor test and whether and under what circumstances to grant injunctions in future patent cases.

II. CONSEQUENCES OF THE *EBAY* DECISION

When the Court in *eBay* overturned the Federal Circuit's twenty-year old general rule that validity plus infringement gives rise to an injunction, the Court caused a shift in the law which left several concerns and uncertainties for inventors, businesses, investors, and practitioners. These uncertainties include whether district courts will grant injunctions in patent cases involving: (1) business method patents; (2) a patented invention that is a small component of the infringing product; and (3) a patentee that licenses but does not make or use his or her invention. When a court denies an injunction, further uncertainties include: (4) whether a patentee must commence multiple actions to obtain its legal remedy for a defendant's ongoing infringement, or whether courts will calculate a license fee going forward; and (5) how courts will fashion a deterrent remedy.

These uncertainties should concern inventors, businesses, investors, and practitioners. Inventors, businesses, and investors want to know whether they can enjoin infringing competitors and thereby help recoup their investments and secure positive returns. Practitioners want to know

27. *Id.* at 1841-42 (Roberts, C.J., concurring); *id.* at 1842 (Kennedy, J., concurring).

28. *Compare id.* at 1841-42 (Roberts, C.J., concurring), *with id.* at 1842 (Kennedy, J., concurring). One reason Chief Justice Roberts's and Justice Kennedy's opinions differ on whether a district court should grant a permanent injunction is because they view the right to exclude differently. Whereas Chief Justice Roberts believes the right to exclude, once infringed, necessarily implicates at least the first two factors—irreparable harm and no adequate remedy at law—of the four-factor test, Justice Kennedy separates the right to exclude from the remedy for a violation of that right. *Id.*

how to craft arguments and devote resources to secure permanent injunctions for their clients.

The Court's decision in *eBay* offered little guidance on how to apply the four-factor test and left the district courts to determine under what circumstances to grant patent injunctions. Importantly, because the district courts' opinions will be reviewed under the abuse of discretion standard,²⁹ their equitable decisions will likely be final in most instances; district courts will shape the future of patent injunction case law.

Part II of this Note surveys the post-*eBay* district court decisions involving permanent injunctions and presents the data used in Part III to sketch a preliminary predictive model of the post-*eBay* landscape.

A. The Post-*eBay* Cases

This Section presents five post-*eBay* cases and categorizes them into two groups: injunction granted and injunction denied.³⁰ The grouping illu-

29. *Id.* at 1839 ("The decision to grant or deny permanent injunctive relief is an act of equitable discretion by the district court, reviewable on appeal for abuse of discretion.").

30. As of Sept. 30, 2006, only eight post-*eBay* cases existed. *Compare* *z4 Techs., Inc. v. Microsoft Corp.*, 434 F. Supp. 2d 437 (E.D. Tex. 2006) (denying an injunction), *Paice LLC v. Toyota Motor Corp.*, No. 2:04-CV-211-DF, 2006 U.S. Dist. LEXIS 61600 (E.D. Tex. Aug. 16, 2006) (denying an injunction), and *Voda v. Cordis Corp.*, No. CIV-03-1512-L, 2006 U.S. Dist. LEXIS 63623 (W.D. Okla. Sept. 5, 2006) (denying an injunction), with *Litecubes, LLC v. N. Light Prods.*, No. 4:04-CV-00485 ERW, 2006 U.S. Dist. LEXIS 60575 (E.D. Mo. Aug. 25, 2006) (granting an injunction), and *Wald v. Mudhopper Oilfield Servs.*, No. CIV-04-1693-C, 2006 U.S. Dist. LEXIS 51669 (W.D. Okla. July 27, 2006) (granting an injunction).

Three additional cases, *Floe Int'l, Inc. v. Newmans' Mfg., Inc.*, No. 04-5120 (DWF/RLE), 2006 U.S. Dist. LEXIS 59872 (D. Minn. Aug. 23, 2006) (granting an injunction), *Am. Seating Co. v. USSC Group, Inc.*, No. 01-00578, 2006 U.S. Dist. LEXIS 59212 (E.D. Mich. Aug. 22, 2006) (granting an injunction), and *Telequip Corp. v. Change Exch.*, No. 5:01-CV-1748 (FJS/GJD), 2006 U.S. Dist. LEXIS 61469 (N.D.N.Y. Aug. 15, 2006) (granting an injunction), fail to adequately discuss the four-factor test and therefore this Note will not analyze them. In *American Seating*, without any mention of the four-factors, the court stated (1) in the circumstance of this case, direct competition in a two-party market, an injunction is in order, and (2) nothing in *eBay* was contrary to this decision. 2006 U.S. Dist. LEXIS 59212, at *1-2. In *Floe*, the defendant-infringer stipulated to a permanent injunction enjoining it from directly competing against plaintiff Floe in the manufacturing and selling of snowmobile trailers. 2006 U.S. Dist. LEXIS 59872, at *1-2, *25-27. In *Telequip*, the court granted an injunction because the defendant-infringer defaulted and therefore the court accepted the plaintiff's well-pleaded factual allegations as true. 2006 U.S. Dist. LEXIS 61469, at *2. *Telequip* teaches that a plaintiff-patentee seeking an injunction should include in the complaint factual allegations, which at a minimum state the following: plaintiff's reputation has been irreparably harmed by the de-

strates the shift from the old Federal Circuit rule, under which courts granted injunctions as a matter of course after a finding of validity and infringement, to the new four-factor *eBay* rule. Under the new rule, courts have already denied injunctions in three cases notwithstanding a jury's finding of validity and infringement.³¹

1. *Injunction Granted*

This Section examines two post-*eBay* decisions granting permanent injunctions.³² Both decisions are unpublished.³³

a) *Litecubes, LLC v. Northern Light Products, Inc.*³⁴

Plaintiff Litecube and defendant Northern Light Products were direct competitors in the market for illuminating novelty-devices that resemble ice cubes.³⁵ The jury returned a verdict stating that Northern Light Products had willfully infringed Litecubes' patent.³⁶ After reciting the four-factor test, the district court granted Litecubes' request for a permanent injunction against Northern Lights Products.³⁷

The court stated that Lightcubes demonstrated that each factor favored the entry of a permanent injunction.³⁸ It suffered irreparable injury because, "[p]otential customers in the United States were buying infringing devices sold and imported by Defendant, instead of purchasing the products sold by Plaintiffs."³⁹ Money damages were inadequate because, "[i]f the Court fail[ed] to grant equitable relief, Defendants [would] be able to continue to sell and import its products in violation of Plaintiffs' intellectual property rights unless Plaintiffs file[d] another lawsuit to enforce their rights."⁴⁰ The court noted that Northern Light Products' sales history, combined with its admission that it still had a warehouse full of infringing

defendant, no adequate remedy at law exists, the balance of the hardships tips in plaintiff's favor, and the public interest favors an injunction.

31. *Voda*, 2006 U.S. Dist. LEXIS 63623 (denying an injunction); *Paice*, 2006 U.S. Dist. LEXIS 61600 (denying an injunction); *z4 Techs. Inc.*, 434 F. Supp. 2d 437 (denying an injunction).

32. *Litecubes*, 2006 U.S. Dist. LEXIS 60575 (granting an injunction); *Wald*, 2006 U.S. Dist. LEXIS 51669 (granting an injunction).

33. *Litecubes*, 2006 U.S. Dist. LEXIS 60575; *Wald*, 2006 U.S. Dist. LEXIS 51669.

34. *Litecubes*, 2006 U.S. Dist. LEXIS 60575.

35. *Id.* at *3; U.S. Patent No. 6,416,198 (filed July 28, 2000).

36. *Litecubes*, 2006 U.S. Dist. LEXIS 60575, at *3.

37. *Id.* at *31-33.

38. *Id.*

39. *Id.* at *31.

40. *Id.* at *31-32.

inventory, meant that infringing products would likely find their way to the United States.⁴¹

The balance of hardships favored an injunction because Lightcubes had developed and obtained IP protection for its product whereas Northern Light Products had no such protection and sought to poach Lightcubes' customers while violating its rights.⁴² The court stated an injunction was necessary to stop the defendant from continuing to import and sell its infringing products. Finally, the court issued a blanket statement: "the public interest would not be disserved by a permanent injunction."⁴³

b) *Wald v. Mudhopper Oilfield Services*⁴⁴

In another direct competitor situation, this time involving the sale of an oil well treatment product, the district court granted plaintiff Wald a permanent injunction against defendant Mudhopper Oilfield Services, Inc. ("Mudhopper"), a willful infringer.⁴⁵

The court articulated the four factors and found each factor favored Wald's request for a permanent injunction.⁴⁶ Addressing the first factor, the court acknowledged that "irreparable harm evades easy definition" but that it "is often suffered when the injury can[not] be adequately atoned for in money . . . or when the district court cannot remedy [the injury] following a final determination on the merits."⁴⁷ The court, addressing the first two factors together, held Wald suffered irreparable harm, and money damages were inadequate compensation because Wald "lost market share and the opportunity to maintain [its] own polymer stick to [sic] as the industry standard and that their reputation for innovation was damaged as a result."⁴⁸ Thus, the court stated damages, awarded either by the jury or trebled, did not compensate Wald for these harms.⁴⁹

Under Federal Circuit law, several factors support a court's decision that the balance of hardships favors an injunction: a defendant's failure to provide a reason it stopped infringing, a defendant's failure to profess its intent not to infringe in the future, and a defendant's ability to resume pro-

41. *Id.* at *32.

42. *Id.*

43. *Id.* at *32-33.

44. *Wald*, 2006 U S Dist LEXIS 51669.

45. *Id.* at *17-18.

46. *Id.* at *14-17.

47. *Id.* at *15-16 (citing *Prairie Band of Potawatomi Indians v. Pierce*, 253 F.3d 1234, 1250 (10th Cir. 2001) (citations and quotations omitted).

48. *Wald*, 2006 U S Dist LEXIS 51669, at *15-16 (internal quotes omitted) (citing plaintiff's reply at 8-9).

49. *Id.*

duction.⁵⁰ The court in this case found the balance of hardships favored a permanent injunction, as Mudhopper merely stated an injunction was unnecessary, but failed to specifically identify any hardship it would suffer from an injunction.⁵¹ Here, notwithstanding Mudhopper's immediate cessation of selling its infringing product and its professed intention not to sell again, the court found that its willful infringement and its failure to indicate that it did not still possess an infringing inventory weighed in favor of granting an injunction.⁵²

The court found the public interest favored Wald, stating simply that Wald bore the risks of future infringement, while Mudhopper suffered no harm implicating the public interest.⁵³

Under Chief Justice Roberts's view, it should come as no surprise that the courts applying the four-factor test in *Litecubes* and *Wald* granted permanent injunctions. Historically, courts have almost always granted injunctions upon a finding of patent infringement.⁵⁴ This Note's focus shifts now to the cases where courts, applying the four-factor test, have denied injunctions despite a finding of validity and infringement.

2. Injunction Denied

Under the four-factor test, courts denied permanent injunctions in three post-*eBay* patent cases.⁵⁵ As the only published opinion of the post-*eBay* cases and a case where the court denied an injunction, *z4 Techs., Inc. v. Microsoft Corp.* is the most important decision from a precedential standpoint.⁵⁶

a) *z4 Technologies, Inc. v. Microsoft Corp.*⁵⁷

The district court denied z4's request for a permanent injunction despite a jury finding defendant Microsoft willfully infringed plaintiff z4's patent.⁵⁸ z4 and Microsoft are not direct competitors. z4's patent covers

50. *W.L. Gore & Assocs., Inc. v. Garlock, Inc.*, 842 F.2d 1275, 1281-82 (Fed. Cir. 1988).

51. *Wald*, 2006 U S Dist LEXIS 51669, at *16.

52. *Id.* at *17.

53. *Id.*

54. *eBay Inc. v. MercExchange, LLC*, 126 S. Ct. 1837, 1841 (2006) (Roberts, C.J., concurring).

55. *Voda*, 2006 U.S. Dist. LEXIS 63623 (denying an injunction); *Paice*, 2006 U.S. Dist. LEXIS 61600 (denying an injunction); *z4 Techs., Inc.*, 434 F. Supp. 2d 437 (denying an injunction).

56. *See z4 Techs., Inc.*, 434 F. Supp. 2d 437; *see supra* note 30.

57. *z4 Techs., Inc.*, 434 F. Supp. 2d 437.

58. *Id.* at 438.

methods for “product activation,” which limits the unauthorized use of computer software.⁵⁹ z4 produces, markets, sells, and licenses its product activation software. Microsoft does not produce product activation software, but instead uses product activation in its Windows operating system and Office software.⁶⁰

Addressing z4’s request for a permanent injunction, the district court laid out the applicable four-factor test from *eBay*, ultimately denying z4’s request for a permanent injunction. Under the irreparable harm factor, the court held that a finding of validity plus infringement does not raise a presumption of irreparable harm.⁶¹ In the court’s view, “in *eBay*, the Supreme Court indicated that an injunction may only issue ‘in accordance with the principles of equity[,]’” once a plaintiff satisfied the four-factor test.⁶² This language, combined with the Court’s warning that the traditional principles of equity counsel against applying categorical rules⁶³ led the district court to find that there was no presumption of irreparable harm.⁶⁴

Next, the court held z4 failed to show it would suffer irreparable injury absent a permanent injunction.⁶⁵ In the court’s view, irreparable injury included lost profits, loss of brand name recognition, and loss of market share.⁶⁶ The court stated z4 would not suffer irreparable injury for two reasons: (1) Microsoft did not produce product activation software for individual sale, distribution, or license to third parties and therefore was not a direct competitor, and (2) “Microsoft only use[d] the infringing technology as a small component of its own software, and it [was] not likely that any consumer of Microsoft’s Windows or Office software purchase[d] these products for their product activation functionality.”⁶⁷

The court found z4 failed to show monetary damages were inadequate compensation for Microsoft’s infringement.⁶⁸ The court noted that infringement of a patentee’s right to exclude did not automatically mean money damages were inadequate.⁶⁹ Instead, in dicta, the court gave examples where money damages would be inadequate: direct competition which saturated the market and damaged goodwill or brand name recogni-

59. *Id.* at 438-39.

60. *Id.* at 440.

61. *Id.*

62. *Id.* (citing *eBay*, 126 S. Ct. at 1840).

63. *eBay*, 126 S. Ct. at 1840-41.

64. *z4 Techs., Inc.*, 434 F. Supp. 2d at 440.

65. *Id.* at 441.

66. *Id.* at 440.

67. *Id.*

68. *Id.* at 442.

69. *Id.* at 441.

tion.⁷⁰ Here, citing Justice Kennedy's *eBay* concurrence, the court found money damages adequately compensated z4 because its product activation was only a small component, a non-core functional component, of Microsoft's software products.⁷¹ That is, the court found that a reasonable royalty compensated z4.⁷² To preserve z4's right to future monetary damages for Microsoft's post-verdict infringement, the court severed z4's continuing cause of action for money damages, and ordered Microsoft to file quarterly reports indicating the number of infringing units sold.⁷³

The court found the balance of hardships favored denying a permanent injunction.⁷⁴ Specifically, if the court granted an injunction, Microsoft would need to expend considerable time and money to reengineer and re-release its Windows and Office software.⁷⁵ Also, an injunction would shut down the product activation in Windows and Office and allow the market to be flooded with pirated software resulting in incalculable damage to Microsoft.⁷⁶ On the other hand, if the court denied an injunction, z4 only faced limited harm, which money damages could remedy.⁷⁷

Finally, the court found granting a permanent injunction would disserve the public interest.⁷⁸ An injunction which interrupted Microsoft's immensely popular Windows and Office software products would likely harm downstream third parties such as smaller computer manufacturers, retailers, and users.⁷⁹ The court could not think of a reason why denying an injunction would harm the public interest.⁸⁰ A potential harm outweighs no harm.

b) *Paice LLC v. Toyota Motor Corp.*⁸¹

The court in *Paice* held that defendant Toyota's hybrid transmission infringed plaintiff Paice's patent for an improved hybrid electric vehicle,⁸² yet the court declined to enter a permanent injunction against Toyota be-

70. *Id.* ("This is because it is impossible to determine the portions of the market the patent owner would have secured but for the infringer or how much damage was done to the patent owner's brand recognition or good will due to the infringement.").

71. *Id.*

72. *Id.* at 442.

73. *Id.* at 444.

74. *Id.* at 443.

75. *Id.* at 442.

76. *Id.* at 443.

77. *Id.*

78. *Id.* at 444.

79. *Id.* at 443-44.

80. *Id.* at 444.

81. No. 2:04-CV-211-DF, 2006 U.S. Dist. LEXIS 61600 (E.D. Tex. Aug. 16, 2006).

82. U.S. Patent No. 5,343,970 (filed Sept. 21, 1992).

cause Paice failed to establish that any of the four factors cut in favor of an injunction.⁸³

The court found Paice failed to show it had suffered an irreparable injury.⁸⁴ Paice argued Toyota's infringement prevented it from licensing its patented technology.⁸⁵ However, the court found that Paice failed to provide evidence that it was otherwise unable to license its patented technology.⁸⁶ Furthermore, Paice and Toyota were not direct competitors: Paice sought to license its patented hybrid technology, whereas Toyota manufactured and sold vehicles. The facts of the case did not implicate the benchmarks of irreparable harm—loss of market share and loss of brand name recognition—because the parties were not direct competitors.⁸⁷

The court found Paice failed to establish that money damages were inadequate.⁸⁸ The court stated that Paice failed to demonstrate “why other potential licensees would be less likely to take a license if this case end[ed] with monetary damages instead of equitable relief.”⁸⁹ Furthermore, Paice's willingness to extend offers to license its product, including to Toyota throughout litigation, illustrated the adequacy of money damages.⁹⁰ Finally, two of the jury's findings buttressed the court's conclusion that money damages would adequately compensate Paice: (1) Paice's product was only a small component of, and only contributed a small value to, Toyota's vehicles; and (2) a reasonable royalty—\$25 per sale of infringing vehicles, paid quarterly, and accompanied by an accounting of infringing sales—could be easily calculated based on future sales of Toyota's infringing devices.⁹¹

According to the court, neither the balance of hardships, nor the public interest, favored an injunction.⁹² Paice argued that without an injunction it would be unable to license and would therefore go out of business; the court dismissed the argument for lack of evidence of proximate causation.⁹³ Conversely, the court stated that enjoining Toyota might stifle re-

83. *Paice*, 2006 U.S. Dist. LEXIS 61600, at *18.

84. *Id.* at *12.

85. *Id.*

86. *Id.*

87. *Id.* at *14.

88. *Id.*

89. *Id.*

90. *Id.* at *16.

91. *Id.* at *15-16, *19-20; *see also id.* at *7-8 (setting forth basis for jury's computation of \$ 25 reasonable royalty payment rate).

92. *Id.* at *16-17.

93. *Id.*

search and development in the hybrid market, harm innocent downstream third parties like dealers and suppliers, and damage Toyota's reputation.⁹⁴

c) *Voda v. Cordis Corp.*⁹⁵

In *Voda*, the court denied plaintiff Voda's request for a permanent injunction, even though defendant Cordis Corp. ("Cordis"), through its sales activities, willfully infringed Voda's angioplasty guide catheter patents.⁹⁶ Voda exclusively licensed its patents to Scimed, a non-party to the suit.⁹⁷

In its analysis, the court addressed only the first two factors of the four-factor test, finding that Voda failed to demonstrate either irreparable injury or the inadequacy of money damages.⁹⁸ With respect to harm to itself, Voda argued only that a presumption of irreparable harm follows a finding of infringement and validity; the court dismissed this argument as running afoul of *eBay* which, "clearly held the right to exclude does not, standing alone, justify a general rule in favor of injunctive relief."⁹⁹ Voda also argued that Cordis' infringing activities harmed its exclusive licensee, Scimed.¹⁰⁰ The court held such arguments were irrelevant because Scimed elected not to sue to enforce its patent rights, and plaintiff Voda suffered no personal injury from Cordis' infringement of Scimed's rights.¹⁰¹

The court held that Voda failed to show monetary damages were inadequate to compensate it for Cordis' infringing sales.¹⁰² The court found unpersuasive Voda's argument that money damages were inadequate to compensate for Cordis' continuing infringement, which harmed Voda's relationship with its exclusive licensee.¹⁰³ The court commented that this argument was, "simply the other side of the right-to-exclude coin and [was] not sufficient to justify granting injunctive relief."¹⁰⁴

Having examined the post-*eBay* uncertainties, concerns, and case law, this Note now advances a model that attempts to predict when district courts will grant permanent injunctions in patent cases.

94. *Id.* at *16.

95. *Voda v. Cordis Corp.*, No. CIV-03-1512-L, 2006 U.S. Dist. LEXIS 63623 (W.D. Okla. Sept. 5, 2006).

96. *Id.* at *1-2; U.S. Patent No. 5,445,625 (filed June 14, 1994).

97. *Id.* at *20.

98. *See id.* at *18 (failing to address the balance of hardships and public interest factors).

99. *Id.* (citing *eBay*, 126 S. Ct. at 1840).

100. *Id.* at *18-19.

101. *Id.* at *19.

102. *Id.* at *20.

103. *Id.*

104. *Id.*

III. A PREDICTIVE MODEL

Based on the available post-*eBay* case law, the type of competition between the plaintiff-patentee and the defendant-infringer determines whether district courts grant permanent injunctions in patent cases. District courts will grant permanent injunctions when the patentee and the infringer compete directly. No injunction follows from indirect competition.

A. The Model's Origins: How District Courts View the Four Factors

This Section delineates the origins of the predictive model by discussing how courts view the four factors when ruling on motions for permanent injunctions. Based on the available data, courts view the first two factors as most crucial, and the outcome of those two factors depends upon the type of competition; direct competition favors an injunction, whereas indirect competition favors royalty payments. The latter two factors appear less crucial, either because they are less likely to be implicated or because when they are implicated, courts appear to stampede them with the first two factors.¹⁰⁵

1. *Factors One and Two: Irreparable Injury and No Adequate Remedy at Law*

The first two factors are the most crucial. In every post-*eBay* case, the court has ruled on the first two factors in lockstep and this ruling determined whether the court granted or denied the injunction. Inevitably, factors one and two both cut the same way.

Courts collapse the first two factors, apparently viewing irreparable harm, if an injunction is not granted, and inadequate remedy at law, in the form of damages, as opposite sides of the same coin. If the patentee suffers an irreparable injury then money damages will not make the patentee whole and the equitable relief of an injunction is necessary; if money damages will not right the defendant's wrong, then the plaintiff has been irreparably injured. One commentator describes the first two factors as follows: "[a]n *irreparable injury* is defined as a harm the court would be unable to remedy even if the [plaintiff-patentee] prevailed in the final adjudication[;]" the plaintiff may show the inadequacy of a remedy at law if

105. See Barton Beebe, An Empirical Study of the U.S. Copyright Fair Use Cases, 1978-2005 (A Report of Initial Findings for Boalt Hall's Intellectual Property Scholarship Seminar, Oct. 19, 2006), <http://www.law.berkeley.edu/institutes/bclt/students/Beebe.pdf> (discussing the term "stampeding," in context of Copyright's fair use factor test, and how if courts find that one factor favors an outcome, then the court will find that all the factors favor that outcome).

such remedy is unavailable or insufficiently compensatory.¹⁰⁶ For example, “[a]n adequate remedy at law may be deemed unavailable if a legal remedy may be obtained only by commencement of multiple actions, such as when the defendant repeatedly commits allegedly harmful acts.”¹⁰⁷ Also, injuries to a patentee’s “reputation, credibility, or ability to continue its business viably . . . are difficult to calculate, and, thus, money damages would be an inadequate remedy to compensate those injuries.”¹⁰⁸

This Note advances the hypothesis that courts collapse the first two factors into a single factor: type of competition. Courts view direct competition as the proxy for both irreparable harm and no adequate remedy at law. Establishing direct competition equates to victory for plaintiffs seeking an injunction. Indirect competition, on the other hand, is the proxy for reparable harm and adequate remedy at law. No injunction follows from indirect competition.

Here, courts are making a normative judgment and balancing the rights of patentees with the ultimate aim of the patent statute. Congress enacted the patent statute to “promote the Progress of Science and the useful Arts.”¹⁰⁹ As the means to accomplish this end, the patent statute granted patentees limited rights.¹¹⁰ The Supreme Court has described this situation as a delicate balance.¹¹¹ If the scope of the rights were too narrow, inventors would have no incentive to create or disclose their inventions. Consequently society would suffer from a stagnation of the pool of available scientific knowledge. If the patent statute granted patentees exclusionary rights that were too broad, then the patentees would assert their broad rights for personal gain in an expansive manner. Therefore, patents would impede other inventors from contributing to the further creation and would compromise dissemination of scientific knowledge.

The normative implications of how courts view the four factors are clear: post-*eBay* courts view the patentee as entitled to an injunction to protect its patented invention from *direct* competition. Allowing a direct competitor to violate a patentee’s right to exclude harms the bedrock view that patents provide incentives to invent and thereby promote the progress of science. If a patentee cannot control the market its patent competes in,

106. MOORE ET AL., *supra* note 7, § 10A.20.

107. *Id.* (citations omitted).

108. *Id.*

109. U.S. CONST. art. I, § 8, cl. 8.

110. *Id.* ; 35 U.S.C. § 100 et seq.

111. *See* *Bonito Boats, Inc. v. Thunder Craft Boats, Inc.*, 489 U.S. 141, 168 (1989) (“It is for Congress to determine if the present system of design and utility patents is ineffectual in promoting the useful arts in the context of industrial design.”).

then why should it create, disclose information, or pay the large sum of money needed to secure a patent in the first place?

The other side of this normative view leaves indirect competition beyond the reach of equitable remedy. If courts deny injunctions of indirect competitors, then a patentee cannot exclude other competitive entrants from innovating in the indirect market space, even if they infringe. Subsequent inventors can continue to invent and disseminate their inventions in the indirect markets, subject to paying the patentee money damages; limiting the patentee's right to exclude in this manner consequently allows build-on innovation to continue, which aids patent laws overall goal of promoting the progress of science.

2. *Factors Three and Four: Balance of Hardships and Public Interest*

Factors three and four appear less crucial to a court's decision of whether to grant an injunction. This is true for two reasons. First, the facts of the case do not always implicate either a balancing of hardships between the patentee and the infringer, or the public interest and the patentee. When discussing a preliminary injunction, one commentator has noted courts apply a sliding scale to balancing hardships: "the more likely that the plaintiff will succeed on the merits, the less the balance of harms need favor the plaintiff."¹¹² If this is the rule in the preliminary injunction context, then arguably, in the permanent injunction context, since the plaintiff has *already succeeded* on the merits, then the balance of hardships may be irrelevant. In effect, if a plaintiff shows irreparable injury and no adequate remedy at law, then the plaintiff has implicitly established its hardship relative to the defendant-infringer.

Second, even where the facts of the case do implicate one or both of the last two factors, courts appear to stampede¹¹³ factors three and four based upon the first two factors. That is, if the court finds irreparable injury and no adequate remedy at law, then it will find that the last two factors favor the court's granting an injunction, too. If the court finds reparable injury and an adequate remedy at law, then the court will find that the last two factors also favor denial of an injunction.

However, under the right set of facts, the last factor might favor a denial of an injunction even if factors one and two favor granting an injunction. Although post-*eBay* such a situation has yet to present itself, the

112. MOORE ET AL., *supra* note 7, § 10A.20 (citing *Eli Lilly & Co. v. Natural Answers, Inc.*, 2000 U.S. App. LEXIS 29547, at *6-7 (7th Cir. 2000)).

113. *See* Beebe *supra* note 105.

fourth factor might equitably trump a court's decision to otherwise grant an injunction if, for example, granting an injunction would harm public safety.

In summary, district courts applying the four-factor test will grant permanent injunctions in patent cases when the plaintiff-patentee and the defendant-infringer directly compete. District courts will deny injunctions when the patentee and infringer indirectly compete. The public interest is a wild-card, which, under certain yet to occur conditions, may trump direct competition.

B. The Effect of District Courts Viewing the Four Factors According to the Model

By viewing the four factors according to this model, courts are able to address certain patents, patent practices, and negative externalities of the patent laws, which arguably retard rather than promote the progress of science. This list includes business method patents, patent trolls,¹¹⁴ and the patent thicket.¹¹⁵ Additionally, when courts view the four factors in this manner and deny injunctions in certain cases, practical issues surface which courts will need to address. These issues include whether a patentee must commence multiple actions to obtain legal remedy or whether courts will calculate a license fee going forward, and whether courts can fashion remedies that will deter future infringement.

1. Increasing the Efficiency of the Innovation System

District court decisions that deny permanent injunctions in patent cases involving indirect competition increase the efficiency of the patent system. If a court defines indirect competition to include the situation where a plaintiff's patent covers only a small component part of a defendant's allegedly infringing product, then that theoretically provides the court with a tool to deny injunctions for business method patents. Although a court has yet to address this argument, a defendant could argue that the plaintiff's business method patent is merely a component part of the whole business. Unless the business method patent is the only, or the central, aspect of the defendant-infringer's business, then a business method patent would always be a component part of defendant's larger business. As such, courts could categorize the infringement of business method patents as indirect competition and deny requests for injunctions.

Categorizing a patentee that does not make or use its patent but merely seeks to license the patented technology as only having indirect competi-

114. See *infra* note 116 and accompanying text.

115. See *infra* note 117 and accompanying text.

tors allows courts to deny injunctions and therefore alleviate concerns regarding patent trolls and the patent thicket. Patent trolls are entities that own patents but do not make, use, or sell their inventions; rather, patent trolls seek only to license their patented technology.¹¹⁶ If courts find that a patentee who only seeks to license its patented technology competes indirectly with a defendant-infringer, then courts will deny injunctions in cases involving patent trolls. Disarming patent trolls of their business strategy of negotiating artificially high license fees under threat of an injunction alleviates the unproductive drag trolls place on the patent system's goal to promote the progress of science.

The patent thicket is "a dense web of overlapping intellectual property rights that a company must hack its way through in order to actually commercialize new technology."¹¹⁷ The patent thicket, a negative externality of the current patent laws, impedes innovation which builds upon former innovation. If courts find that a defendant-infringer's larger product competes indirectly with a patentee's component part, then courts will deny injunctions. Such decisions can work to thin out the patent thicket. Subsequent inventors can continue to invent and disseminate their inventions in the indirect markets, subject to paying the patentee money damages. Such a scheme aids patent law's overall goal of promoting the progress of science.

2. Remedial Issues at Law

Once a court denies an injunction, which is more likely under the *eBay* decision, two remedial issues surface: (1) must a patentee commence multiple actions to obtain legal remedy or will courts calculate a license fee going forward, and (2) how will courts fashion a deterrent remedy?

Even if the court denies an injunction, the patentee still has a remedy. Under these circumstances, the remedy at law for a defendant's infringement of a patentee's rights is money damages. Both *z4* and *Paice* denied injunctions and awarded the plaintiff money damages.¹¹⁸ The two decisions took slightly different approaches in determining how to award damages for the defendant's future infringement. In *z4*, the court severed

116. See Steve Seidenberg, *Troll Control*, 92 A.B.A. J. 50 (2006) (discussing the amorphous definition of patent trolls).

117. Carl Shapiro, *Navigating the Patent Thicket: Cross Licenses, Patent Pools, and Standard-Setting*, in 1 INNOVATION POLICY AND THE ECONOMY (Adam Jaffe, Joshua Lerner, & Scott Stern, eds., MIT Press, 2001).

118. *z4 Techs., Inc. v. Microsoft Corp.*, 434 F. Supp. 2d 437, 438 (E.D. Tex. 2006); *Paice LLC v. Toyota Motor Corp.*, No. 2:04-CV-211-DF, 2006 U.S. Dist. LEXIS 61600, at *18 (E.D. Tex. Aug. 16, 2006).

plaintiff's cause of action for future infringement and required the defendant to provide a quarterly accounting of its infringing sales activities.¹¹⁹ Under this method, the plaintiff will need to return to court and request the court grant it damages for the defendant's infringing activities between the last trial and the current action. This arguably requires the patentee to commence multiple suits to obtain a remedy at law, which some courts have held tantamount to no adequate remedy at law.¹²⁰ However, the court's requirement that the defendant-infringer file quarterly reports, when combined with issue and claim preclusion, makes it easy for the plaintiff-patentee to come back into court and obtain its remedy at law. When weighing the various interests—the constitutional goal of promoting the progress of science versus a plaintiff-patentee having to return to court to obtain an adequate remedy at law—requiring a plaintiff to commence multiple actions seems a slight burden.¹²¹

The court in *Paice* also denied an injunction, but ordered the defendant to keep a quarterly accounting of its infringing sales and pay the patentee a reasonable royalty for future infringement based on this accounting.¹²² One advantage of this method over that used in *z4 Techs.* is that the plaintiff-patentee does not need to come back into court to obtain its legal remedy.¹²³

Denying the injunction also raises the question: will money damages deter future infringement of a patentee's rights? If courts deny injunctions in indirect competition cases, perhaps defendant-infringers will refuse to license *ex ante*. Instead, defendants will take their chances at trial that either the court will invalidate the patent, find the defendant does not infringe the patent, or deny an injunction and award a reasonable royalty, *ex post*, at a relatively lower rate than the patentee's *ex ante* offer to license.

Faced with this possibility, a court which denies an injunction should find that a defendant's continued infringement is willful. As the remedy for willful infringement is treble damages, such a penalty, over time, will push the infringer to "move away from the infringing technology, accom-

119. *z4 Techs., Inc.*, 434 F. Supp. 2d at 444.

120. See *Lee v. Bickell*, 292 U.S. 415, 421, (1934); accord *MOORE ET AL.*, *supra* note 7, § 10A.20 (citations omitted).

121. Furthermore, severing future damages is an efficient way for courts to effectuate a just, speedy, and inexpensive trial pursuant to FED. R. CIV. P. 1.

122. *Paice*, 2006 U.S. Dist. LEXIS 61600, at *19-20.

123. At worst, if the defendant failed to pay, the patentee would return to the court to institute contempt proceedings, or the court on its own initiative could do so. The harsh sanctions for contempt would likely deter a defendant from failing to pay the initial court ordered forward-looking reasonable royalty.

plishing what an injunction would do without the disruption of a sudden stop. Meanwhile, the patent owner's legal rights are respected and the court reinforces to other would-be infringers the deterrent message Congress intended."¹²⁴

Having examined the benefits and consequences of courts viewing the four factors through the lens of the model, this Note now applies the model to the *eBay* case, which is still pending on remand.

C. Application of the Model to *eBay* on Remand

The model predicts that the district court should deny MercExchange's request for a permanent injunction on remand.

MercExchange and eBay compete indirectly. MercExchange seeks to license its "business-method patent for an electronic market designed to facilitate the sale of goods between private individuals by establishing a central authority to promote trust among participants."¹²⁵ eBay runs an internet marketplace, allowing private parties to sell items via auction or fixed price. The parties compete indirectly in different markets; thus, the district court should deny an injunction.

The court could craft its opinion within the framework of the four-factors as follows:

MercExchange has failed to prove it suffered irreparable injury. MercExchange has not proven eBay's failure to license harmed its ability to license its patented technology.¹²⁶ Furthermore, MercExchange's patent is a small component part of eBay's larger internet business, and MercExchange's patent is not primarily responsible for drawing customers to use eBay's internet market.¹²⁷

MercExchange has failed to prove it has no adequate remedy at law. As the parties compete indirectly, eBay's infringement does not cause harm to MercExchange's reputation or goodwill.¹²⁸ As MercExchange's

124. Mitchell G. Stockwell, *Implementing eBay: New Problems in Guiding Judicial Discretion and Enforcing Patent Rights*, 88 J. PAT. & TRADEMARK OFF. SOC'Y 747, 755, n.39 (2006); see also *Panduit Corp. v. Stahl Bros. Fibre Works, Inc.*, 575 F.2d 1152, 1158 (6th Cir. 1978) ("[T]he infringer would have nothing to lose, and everything to gain if he could count on paying only the normal, routine royalty non-infringers might have paid.").

125. *eBay Inc. v. MercExchange, LLC*, 126 S. Ct. 1837, 1839 (2006); U.S. Patent No. 5,845,265 (filed Nov. 7, 1995).

126. See *Paice LLC v. Toyota Motor Corp.*, 2006 U.S. Dist. LEXIS 61600, at *12 (E.D. Tex. 2006).

127. See *z4 Techs., Inc. v. Microsoft Corp.*, 434 F. Supp. 2d 437, 440 (E.D. Tex. 2006).

128. See *id.* at 441.

direct market is licensing its patented technology, money damages, in the form of a reasonable royalty, adequately compensate it for eBay's infringement.

MercExchange has failed to prove that the balance of hardships warrants a remedy in equity. If the court issued an injunction, eBay would have to spend considerable time and money to reengineer its internet marketplace.¹²⁹ Additionally, an injunction that shuts down the trusted component aspect of eBay's marketplace would expose its customers to a high risk of fraudulent transactions, which would harm eBay's goodwill and business reputation as a leader in the field of internet marketplaces.¹³⁰ On the other hand, if the court denied an injunction, MercExchange only faces limited harm to its market for licensing its patented technology; money damages will compensate MercExchange for such harm.¹³¹

MercExchange has failed to prove that the public interest would be served by a permanent injunction. An injunction which interrupts eBay's immensely popular internet marketplace would likely harm innocent downstream third parties, such as retailers and buyers.¹³²

As a practical matter, the court, in denying an injunction, should nevertheless find that eBay's continued infringement is willful. Such a remedy will entitle MercExchange to treble damages for eBay's continued infringement and deter eBay and others from future infringement.¹³³ Treble damages will also push eBay to design around the patent, thereby promoting innovation.

Because MercExchange and eBay compete indirectly, the model suggests that the court, applying the four-factor test on remand, should deny MercExchange's request for a permanent injunction.

IV. CONCLUSION

The patent community finds itself in the midst of a sea change: the Court struck down the Federal Circuit's general rule that validity plus infringement yields an injunction, which had been the norm for more than twenty years. Now the question becomes: under what circumstances will district courts, acting within the mandated four-factor framework, grant permanent patent injunctions? Based on the available post-*eBay* case law, the type of competition determines whether a court will grant a permanent

129. *See id.* at 442.

130. *See id.* at 443.

131. *See id.*

132. *See id.* at 443-44; *Paice*, 2006 U.S. Dist. LEXIS 61600, at *16.

133. *See supra* note 124 and accompanying text.

injunction in patent cases. Courts grant injunctions when the patentee and the defendant-infringer directly compete. No injunction follows from indirect competition. As courts decide future cases, hopefully, the patent community can use, refine, and build upon this preliminary predictive model. Ideally, in the not too distant future, inventors, businesses, investors, and practitioners can once again predict when district courts will grant permanent injunctions in patent cases.

PATENTABLE SUBJECT MATTER MATTERS: NEW USES FOR AN OLD DOCTRINE

By Jeffrey M. Kuhn

Controversy has swirled around the expansion of patentable subject matter throughout the history of patent law. In recent years, biotechnology and computer software have provided the most fuel for the fire, and through these areas, applicants have pushed the boundaries of patentable subject matter nearly to the point of non-existence.¹ Advances in biotechnology and computer software correspond almost, but not quite, with two traditionally unpatentable categories of subject matter: physical substances unchanged from their natural states and processes that do not alter physical substances. Both of these prohibitions seem to suggest a traditional, fundamental intuition of patent law: to merit a patent the inventor must *physically change* something in a new,² useful,³ and non-obvious⁴ way.

Of course, this traditional conception is no longer considered the *sine qua non* of patent law, and it may not reflect the subtle economics necessary to align incentive structures with rapidly changing technologies. Indeed, the industries that seek protection under an expanded subject matter doctrine, such as computer software, business, and biotechnology seem to be thriving, though widespread protection also creates significant costs. Decades of subject matter expansion by the United States Patent and Trademark Office (USPTO) and Federal Circuit with no restrictions imposed by Congress or the Supreme Court created the impression that subject matter was effectively a dead doctrine.

The subject matter discussion has been somewhat revitalized in the wake of renewed Supreme Court interest in patent law and, in particular,

© 2007 Jeffrey M. Kuhn

1. See, e.g., *Diamond v. Chakrabarty*, 447 U.S. 303, 309 (1980) (quoting S. REP. NO. 82-1979, at 5 (1952); H.R. REP. NO. 82-1923, at 6 (1952) for the proposition that patentable subject matter “include[s] anything under the sun that is made by man”); John R. Allison & Mark A. Lemley, *Empirical Evidence on the Validity of Litigated Patents*, 26 *AIPLA Q.J.* 185, 208 (1998) (showing that .07% of invalid patents surveyed were invalidated on subject matter grounds); Julie E. Cohen & Mark A. Lemley, *Patent Scope and Innovation in the Software Industry*, 89 *CALIF. L. REV.* 1, 4 (2001) (describing the question of software patentability as “a matter for the history books”); ROBERT P. MERGES, *SOFTWARE AND PATENT SCOPE: A REPORT FROM THE MIDDLE INNINGS*, <http://www.utexas.edu/law/conferences/ip/MergesPaper.pdf> (last visited Apr. 2, 2007).

2. See 35 U.S.C. § 102 (2000).

3. See 35 U.S.C. § 101 (2000).

4. See 35 U.S.C. § 103 (2000).

the Supreme Court's dismissal of certiorari as improvidently granted in *Laboratory Corporation of America Holdings v. Metabolite Laboratories, Inc.*⁵ *Lab. Corp.* concerned the validity of a claim for measuring a B vitamin deficiency in the body.⁶ The claimed invention required measuring the level of homocysteine in the body and "correlating" that level with the B vitamin level.⁷ Thus, a practitioner could indirectly measure the level of B vitamins, which are traditionally difficult to detect, by directly measuring homocysteine, tests for which exist in the prior art.⁸ The majority of the Court held for dismissing certiorari, ostensibly because the parties did not refer to § 101 in the lower courts.⁹ Justice Breyer, however, would have heard the case and invalidated the patent claim as covering a law of nature.¹⁰

This Note will use *Lab. Corp.* as a starting point to examine the development of subject matter and its role in a modern patent system. The debate about *Lab. Corp.*, and indeed the very question presented to the Supreme Court,¹¹ regarded whether claim 13 covered a law of nature. *Lab. Corp.* illustrates that the erosion of the principle of physical change in patent law makes it difficult, if not impossible, to police *any* line with respect to subject matter without running counter to established case law and risking the loss of significant incentives through restrictions on software or gene patents. However, traditionally unpatentable areas of subject matter were off limits for good reasons that cannot be ignored without incurring considerable costs. Patents that cross traditional subject matter lines compose some of the most important innovations in industries vital to the economy, but they can potentially block research and create high transaction costs if they are over-broad, somewhat obvious, or have little specific utility at the time of filing. This Note contends that subject matter has a role to play in the modern patent system, though not through traditional

5. *Lab. Corp. of Am. Holdings v. Metabolite Labs., Inc.*, 126 S. Ct. 2921, 2926-29 (2006) (Breyer, J., dissenting). Justice Stevens and Justice Souter joined in dissent. Chief Justice Roberts took no part in the decision.

6. *Id.* at 2923-24.

7. *Id.*

8. *Id.* The patent also covered improved tests for homocysteine, but these were not at issue since the prior art included inferior tests, and competitors had since developed superior tests. *Id.* at 2923.

9. *Id.* at 2922, 2925.

10. *Id.* at 2927.

11. Justice Breyer explained, "We granted certiorari in this case to determine whether the patent claim is invalid on the ground that it improperly seeks to 'claim a monopoly over a basic scientific relationship,' namely, the relationship between homocysteine and vitamin deficiency." *Id.* at 2922 (quoting Pet. for Cert. i).

bright line restrictions. Rather, courts should consider subject matter as a relevant factor in analyzing other requirements of patentability and should take care to apply those doctrines strictly for patents that cover traditionally unpatentable subject matter.

Part I of this Note illustrates the history of patentable subject matter as one of consistent backpedaling, with each Federal Circuit case redrawing the ostensibly bright line to encompass a bit more subject matter. Part II shows how the inability of patent law to settle on a definition for subject matter may derive from the fundamental difference between classical technology on which technology was based and the fast-paced, cutting-edge technology of the modern era. In effect, drawing a meaningful line with subject matter is likely impossible. Part III suggests ways in which patent law can adapt and remain current amidst rapidly changing technology.

I. HISTORY OF PATENTABLE SUBJECT MATTER DOCTRINE

Subject matter was a substantive requirement of patentability early in the development of U.S. patent law. Courts began to relax this restriction in the early 1980s when faced with developments in biotechnology and computer science that steadily pushed the boundaries of patentability. This process occurred without significant intervention by Congress or the Supreme Court. It seems reasonable to suggest that given the relative success of the biotechnology and computer industries, both institutions simply may have felt no need to correct the course and risk upsetting the delicate balance of patent law despite the costs and theoretical difficulties inherent in subject matter expansion.

A. Laws of Nature, Abstract Ideas, and Natural Phenomenon

Section 101 of the Patent Act outlines the basic requirements of patentability: "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."¹² Courts and scholars interpret the Patent Act as setting forth several major elements of patentability.¹³ Specifically,

12. 35 U.S.C. § 101 (2000).

13. See ROBERT P. MERGES & JOHN F. DUFFY, *PATENT LAW AND POLICY: CASES AND MATERIALS* 65 (3d ed. 2002).

an invention must be novel, useful, non-obvious, and adequately disclosed in the patent.¹⁴

An invention must also meet the patentable subject matter requirement.¹⁵ Though its statutory grounding stems from § 101, subject matter jurisprudence is primarily based on case law.¹⁶ Rather than affirmatively defining categories of inventions patentable, courts have generally chosen to set forth categories of unpatentable subject matter, though clarity and precision have never been hallmarks of the doctrine.¹⁷

Sometimes the Court has referred to the prohibited category as “[p]henomena of nature, . . . mental processes, and abstract intellectual concepts.” *Gottschalk v. Benson*, 409 U.S. 63, 67 (1972). In other cases, the Court has stressed that a “principle” or “fundamental truth” is unpatentable. *Parker v. Flook*, 437 U.S. 584, 589 (1978) (quoting *Le Roy v. Tatham*, 55 U.S. (14 How.) 156, 175 (1853)). Elsewhere, the Court has asserted simply and boldly that “[a]n idea of itself is not patentable.” *Rubber-Tip Pencil Co. v. Howard*, 87 U.S. (20 Wall.) 498, 507 (1874).¹⁸

Patent law exists to “promote the Progress of Science and the useful Arts,” an economic motivation extending to patentability requirements such as subject matter.¹⁹ The prohibition against patenting laws of nature reflects “both . . . the enormous potential for rent seeking that would be created if property rights could be obtained in [those basic principles] and . . . the enormous transaction costs that would be imposed on would-be users.”²⁰

Sections I.B and I.C will show that with the concurrent development of the computer and biotechnology industries in the early 1980’s, patentable subject matter began to wane as a substantive bar to patentability. Courts seemingly bent doctrine to account for perceived pragmatic necessity in both fields, creating two parallel strands of case law.

14. *Id.*

15. *Id.*

16. *Id.* at 66.

17. *Id.* at 77.

18. *Id.*

19. *See* U.S. CONST. art. I, § 8, cl. 8.

20. *Lab. Corp. of Am. Holdings v. Metabolite, Inc.* 126 S. Ct. 2921, 2923 (Breyer, J., dissenting) (citing W. LANDES & R. POSNER, *THE ECONOMIC STRUCTURE OF INTELLECTUAL PROPERTY LAW* 305-06 (2003)).

B. Pharmaceuticals and Biotechnology

1. Patenting Natural Substances Was Originally Not Allowed

Pharmaceutical and biotechnological inventions typically yield patents for compositions of matter or the processes used to produce those compositions. Patent law historically disallowed patenting of compositions of matter that were unchanged from their natural form.²¹ Of course, most of the products that industries and consumers use must be changed or refined from their natural form to be useful. The Supreme Court originally invalidated patents that claimed a “purified” form of a substance existing in nature in *American Wood-Paper Co. v. Fibre Disintegrating Co.*²² According to Justice Strong, a purification process may be patentable, but “the thing itself when obtained cannot be called a new manufacture.”²³ Although the Court invalidated the patent in *American Wood-Paper* on novelty grounds, later holdings by both lower courts and the USPTO reaffirmed the principle Justice Strong articulated.²⁴

2. Development and Acceptance of the “Purification Test”

Divergent rulings in lower courts precipitated the erosion of the principle that purification could merit a process claim but not a claim for the purified substance. A circuit split developed from a line of cases in the Seventh Circuit beginning with *Kuehmsted v. Farbenfabrikin of Elberfeld, Co.*, where the court upheld the plaintiff’s patent on purified acetyl salicylic acid, a drug sold under the brand name Aspirin, despite the defendant’s prior art production of an impure version of the compound.²⁵ At the time, the standard infringement test for composition of matter claims hinged on whether the two compounds were structurally similar.²⁶ The court declined to apply this test because the plaintiff’s patented invention was structurally similar to the defendant’s prior invention, only purified.²⁷ Instead, the

21. See *Am. Wood-Paper Co. v. Fibre Disintegrating Co.*, 90 U.S. (23 Wall.) 566, 593-94 (1874).

22. Linda J. Demaine & Aaron Xavier Fellmeth, *Reinventing the Double Helix: A Novel and Nonobvious Reconceptualization of the Biotechnology Patent*, 55 STAN. L. REV. 303, 332 (2002) (citing *Am. Wood-Paper*, 90 U.S. (23 Wall.) 566).

23. *Am. Wood-Paper*, 90 U.S. 23 (Wall.) at 593-94.

24. Demaine & Fellmeth, *supra* note 22, at 332-33 (citing *Cochrane v. Badische Anilin & Soda Fabrik*, 111 U.S. 293 (1884); *Ex parte Latimer*, 1889 Dec. Comm’r Pat. 123, 123, 125-27 (1889)).

25. *Id.* at 334-35 (citing *Kuehmsted v. Farbenfabrikin of Elberfeld Co.*, 179 F. 701 (7th Cir. 1910)).

26. *Id.*

27. *Id.*

court held that purification made the plaintiff's product "therapeutically different" from the prior art.²⁸ Judge Learned Hand in the Southern District of New York reached a similar conclusion in *Parke-Davis v. H.K. Mulford Co.* when he held that the prohibition on patenting natural phenomena did not preclude patenting natural substances, including an extract from animal supernal glands, in a purified form.²⁹

Throughout this period, the Third Circuit, the Court of Customs and Patent Appeals (CCPA), and the Board of Patent Appeals and Interferences (BPAI) each invalidated patents on similar facts.³⁰ After the passage of the 1952 Patent Act, however, the Fourth Circuit joined with the Seventh Circuit in *Merck & Co v. Olin Mathieson Chemical Corp.* and broadened the "therapeutic value" test, which allowed patenting a substance produced in nature if it was modified to have therapeutic value, to include anything with "commercial value."³¹ The CCPA, and later the Federal Circuit, also changed course and slowly adopted the purification reasoning.³² This move resolved the circuit split by recognizing purified natural products as subject matter eligible for patenting, which paved the way for DNA patents.

Even at this point, however, the Supreme Court took care to distinguish between patentable inventions and unpatentable discovered properties of pre-existing natural objects. In a precursor to modern biotechnology cases, the Court in *Funk Brothers Seed Co. v. Kalo Inoculant Co.* invalidated claims for a combination of six "mutually non-inhibitive" bacteria that together functioned as "[a]n inoculant for leguminous plants."³³ Although the inventors chose the specific claimed combination of different bacterial strains, they did not change the bacteria from their natural state.³⁴ According to the Court, the properties of the bacteria were "manifestations

28. *Id.*

29. *See Parke-Davis & Co. v. H. K. Mulford Co.*, 189 F. 95, 103 (S.D.N.Y. 1911). *But see Demaine & Fellmeth, supra* note 22, at 337 (suggesting that the defendant in the infringement suit did not argue for invalidity on subject matter grounds, possibly because it wished to obtain its own patent).

30. *Demaine & Fellmeth, supra* note 22, at 339-42 (citing *General Electric Co. v. De Forest Radio Co.*, 28 F.2d 641 (3d. Cir. 1928) (invalidating a patent on purified tungsten) and *In re Merz*, 97 F.2d 599 (C.C.P.A. 1938) (affirming a decision by the BPAI refusing to grant a patent for purified ultramarine dye)).

31. *Id.* at 349-51 (citing *Merck & Co. v. Olin Mathieson Chem. Corp.*, 253 F.2d 156 (4th Cir. 1958)).

32. *Id.* at 356-59 (citing *In re Bergstrom*, 427 F.2d 1394 (C.C.P.A. 1970), *Amgen, Inc. v. Chugai Pharm. Co.*, 927 F.2d 1200 (Fed. Cir.), *cert. denied sub nom*, *Genetics Inst. v. Amgen, Inc.*, 502 U.S. 856 (1991)).

33. *Funk Bros. Seed Co. v. Kalo Inoculant Co.*, 333 U.S. 127, 127-28 (1948).

34. *Id.* at 129-30.

of laws of nature, free to all men and reserved exclusively to none.”³⁵ Patentability could only derive from application of natural laws to a “new and useful end.”³⁶

3. *Biotechnology*

With the advent of modern biotechnology came new challenges for the application of the patentable subject matter doctrine. In *Diamond v. Chakrabarty*, the Supreme Court confronted a patent for a genetically-modified bacterium designed to break down components of crude oil via two hydrocarbon-degrading pathways.³⁷ The patentee modified a pre-existing bacterium by adding genetic components to achieve a new result.³⁸ In contrast, neither the patent in *Parke-Davis*, which covered a purified form of a pre-existing chemical, nor the patent in *Funk Brothers Seed Co.*, which covered a mixture of pre-existing bacteria, involved structural alteration of the underlying natural phenomenon.³⁹

The Court’s decision that a live, human-made microorganism was a patentable “manufacture or composition of matter” opened the door for patenting the products from new field of biotechnology.⁴⁰ According to the Court, “[t]he Committee Reports accompanying the 1952 Act inform us that Congress intended statutory subject matter to ‘include anything under the sun that is made by man.’”⁴¹ Following the decision, the USPTO granted patents for inventions such as genetically modified oysters⁴² and a genetically modified, cancer-prone “oncomouse,”⁴³ expanding the scope of patents on living organisms beyond the single-celled level.

The purification doctrine has generated significant controversy throughout its history and has faltered at times, specifically with the problems caused by patenting expressed sequence tags (ESTs).⁴⁴ ESTs are random base pair sequences used as probes to locate genes on DNA se-

35. *Id.* at 130.

36. *Id.*

37. *Diamond v. Chakrabarty*, 447 U.S. 303, 305 (1980).

38. *Id.*

39. *See Parke-Davis & Co. v. H. K. Mulford*, 189 F. 95, 102 (S.D.N.Y. 1911); *Funk Bros.*, 333 U.S. at 130.

40. *See Diamond*, 447 U.S. at 309-10.

41. *Id.* at 309 (citing S. REP. NO. 1979, 82d Cong., 2d Sess., at 5 (1952) and H.R. REP. NO. 1923, 82d Cong., 2d Sess., at 6 (1952)).

42. *Ex parte Allen*, 2 U.S.P.Q.2d (BNA) 1425, 1426 (B.P.A.I. 1987), *aff’d*, 846 F.2d 77 (Fed. Cir. 1988).

43. U.S. Patent No. 4,736,866 (filed June 22, 1984).

44. *Demaine & Fellmeth*, *supra* note 22, at 323-26.

quences.⁴⁵ In the early 1990's, the National Institute of Health [NIH], which was working on the Human Genome Project under Congressional funding, began submitting up to 4,000 patent applications per year for ESTs.⁴⁶ The USPTO responded to this flood by rejecting EST applications on utility grounds, a tactic which the Federal Circuit upheld.⁴⁷

The purification doctrine seemed a pragmatic, unplanned response to unpredictable, developing technology. The line of cases from which it arose seems contrary to both Supreme Court holdings⁴⁸ and Congressional intent.⁴⁹ Neither Congress nor the Supreme Court ever overturned this line of cases, however, and over time, the patent community accepted purified substances as patentable subject matter. The acquiescence of Congress and the Supreme Court to the flow of law in the lower courts and USPTO likely stemmed from the fact that, despite the cost and controversy regarding patent protection, the industry generally seems to have enjoyed rapid growth.⁵⁰ Thus, granting patents on certain products of nature presented few practical problems—only theoretical ones.

C. Computer Technology and Business Methods

Tensions regarding patenting of natural laws first arose in electronic communication technology, but early courts had little difficulty in drawing the line between inventions and laws of nature. The line began to blur with patents that covered not the electronic equipment itself, but rather the abstract instructions, or software, that drove the equipment. The advent of business method patents pushed upon the prohibition on patents covering

45. *Id.* at 323.

46. *Id.*

47. *See In re Fisher*, 421 F.3d 1365, 1367, 1379 (Fed. Cir. 2005).

48. *Demaine & Fellmeth*, *supra* note 22, at 357 (noting that the Supreme Court held products of nature were not patentable in *Parker v. Flook*, 437 U.S. 584 (1978) and *Diamond v. Chakrabarty*, 447 U.S. 303 (1980)).

49. *Id.* at 359-60 (citing H.R. REP. NO. 99-807, at 21-22 (1986) for the proposition that "removing impurities does not "materially change" a chemical produced by a patented process" and S. REP. NO. 100-83, at 49-50 (1987)).

50. *See, e.g.*, News Release, Ernst & Young, Double-Digit Growth Pushes Biotechnology Industry Revenues Over \$60 Billion, According to Ernst & Young's 2006 Global Biotechnology Report, (Apr. 4, 2006), available at http://www.ey.com/global/content.nsf/US/Media_-_Release_-_04-04-06DC (describing strong performance and rapid growth in the biotechnology industry worldwide as well as in the United States). A survey by the U.S. Department of Commerce found strong growth in the biotechnology industry. However, 35 percent of respondents identified third-party patent rights as a barrier to advancement, and 35 percent of respondents identified patent fees and the approval process as a barrier to advancement. *Survey: U.S. biotech industry poised for growth*, ITWORLD.COM, Nov. 13, 2003, <http://www.itworld.com/Tech/4535/031113usbiotech>.

abstract ideas, a trend that recently culminated in the BPAI's decision to eliminate the technological arts requirement.⁵¹

1. *Patenting Laws of Nature Was Originally Not Allowed*

One may find the legal roots of the prohibition on patenting laws of nature in the Supreme Court's response to patents covering early electronic communication equipment. In *O'Reilly v. Morse*, the Court invalidated a claim by the inventor of the telegraph covering any use of electromagnetism to communicate at a distance.⁵² The Court reasoned that such a claim was directed to "an effect produced by the use of electro-magnetism distinct from the process or machinery necessary to produce it."⁵³ The *Morse* Court distinguished the earlier English case of *Neilson v. Harford*, where the English court upheld a patent on a heating system that improved efficiency by injecting hot air rather than cold air into the furnace, on the ground that the Neilson patent "does not merely claim a principle, but a machine, embodying a principle . . ."⁵⁴ The Court developed the doctrine further in *The Telephone Cases* when it distinguished *O'Reilly v. Morse* and allowed a broad claim on Alexander Graham Bell's telephone because the claims were directed to an actual invention rather than the utilization of the principle of telephony.⁵⁵

In *Gottschalk v. Benson*, the Supreme Court applied the law of nature doctrine to invalidate claims for mathematical algorithms.⁵⁶ The patents claimed a general "method for converting binary-coded decimal (BCD) numerals into pure binary numerals" that "were not limited to any particular art or technology, to any particular apparatus or machinery, or to any particular end use."⁵⁷ The Court reasoned that to allow such a claim would be to allow patenting of an idea, which was forbidden under the law of nature doctrine.⁵⁸ Although patenting of computer programs was imper-

51. *Ex parte* Lundgren, Appeal No. 2003-2088 (B.P.A.I. 2004).

52. *O'Reilly v. Morse*, 56 U.S. 62, 120 (1854).

53. *Id.*

54. *Id.* at 114-16 (citing *Neilson v. Harford*, Web. Pat. Cases 295, 371 (1844)).

55. *The Telephone Cases*, 126 U.S. 1, 535-36 (1888).

56. *Gottschalk v. Benson*, 409 U.S. 63, 71-72 (1972).

57. *Id.* at 64.

58. It is conceded that one may not patent an idea. But in practical effect, that would be the result if the formula for converting BCD numerals to pure binary numerals were patented in this case. The mathematical formula involved here has no substantial practical application except in connection with a digital computer, which means that if the judgment below is affirmed, the patent would wholly preempt the mathematical formula and in practical effect would be a patent on the algorithm itself.

Id. at 71-72.

missible under statutory authority, the Court stated that Congress could allow the patenting of computer programs if it so chose.⁵⁹ However, the Court noted that the President's Commission on the Patent System expressly rejected patenting programs and stated that evading the existing prohibition by clever drafting should not be permitted.⁶⁰

The Court reiterated the invalidity of algorithm claims in *Parker v. Flook*.⁶¹ The patent at issue covered a new mathematical algorithm for updating alarm limits.⁶² Alarm limits were dynamically-determined numerical values that represented the safety margins of a manufacturing process.⁶³ An alarm might indicate unsafe conditions if a certain variable in the process, such as temperature or pressure, exceeds its alarm limit.⁶⁴ The Court held that even this useful post-solution activity was insufficient to allow patentability and that patentability may be denied on subject matter grounds even "if a process application implements a principle in some specific fashion."⁶⁵ The danger in allowing such abstract patent claims, the Court noted, was that it would "make the determination of patentable subject matter depend simply on the draftsman's art."⁶⁶ This latitude would allow patentees to skirt the prohibition against patenting ideas and phenomena of nature by claiming the application rather than the idea directly.⁶⁷

2. *Relaxing The Restrictions for Software Patents*

The Supreme Court reversed course in its restrictions on software patents with its 5-4 decision in *Diamond v. Diehr*.⁶⁸ There a machine used an

59. *Id.* at 72-73.

60. Direct attempts to patent programs have been rejected on the ground of nonstatutory subject matter. Indirect attempts to obtain patents and avoid the rejection, by drafting claims as a process, or a machine or components thereof programmed in a given manner, rather than as a program itself, have confused the issue further and should not be permitted.

Id. at 72 (quoting "To Promote the Progress of . . . Useful Arts," from Report of the President's Commission on the Patent System (1966)).

61. *Parker v. Flook*, 437 U.S. 584, 585-86 (1978).

62. *Id.*

63. *Id.*

64. *Id.*

65. *Id.* at 589-93.

66. *Id.* at 593.

67. *Id.* ("The rule that the discovery of a law of nature cannot be patented rests, not on the notion that natural phenomena are not processes, but rather on the more fundamental understanding that they are not the kind of 'discoveries' that the statute was enacted to protect.")

68. *Diamond v. Diehr*, 450 U.S. 175, 185-88 (1981) (comparing past software patent cases to *Diamond*).

algorithm as part of a rubber curing process.⁶⁹ Although the separate steps of the process may not have been individually patentable, this did not preclude the patentability of the machine as a whole.⁷⁰ According to the Court, post-solution activity provided a sufficient condition for patenting computer software.⁷¹ *Diamond v. Diehr* seemed to represent the narrow principle that an invention meeting all the other requirements of patentability was not unpatentable simply because it contained software.⁷²

The USPTO interpreted the decision broadly, however, and began “issuing patents for algorithms and a wide range of other software-related innovations.”⁷³ The Federal Circuit did likewise. In *In re Alappat*, the court ruled that software is patentable under § 101 when the claim is actually directed to a machine that uses the software.⁷⁴ Since every piece of software must run on a machine to function, this holding effectively allowed patenting all computer software algorithms. Unlike the Supreme Court in *Diamond v. Diehr*, the Federal Circuit did not demand post-solution activity or some tie to the physical world beyond it being used on a computer.⁷⁵

The Federal Circuit then expanded the scope of abstract patents even further to cover technology that is only non-obvious from a business perspective in *State Street Bank & Trust Co. v. Signature Financial Group, Inc.*⁷⁶ The “hub and spoke” data processing system at issue in *State Street Bank* allowed mutual funds (the spokes) to pool their assets into a common investment portfolio (the hub) to gain economies of scale in administration and tax advantages through partnership.⁷⁷ The court reasoned that an invention is patentable if it involves a practical application and “it pro-

69. *Id.* at 175, 181.

70. *Id.* at 187.

71. *Id.*

72. *See id.* at 192-93 (“[W]e do not view respondents’ claims as an attempt to patent a mathematical formula, but rather to be drawn to an industrial process for the molding of rubber products.”).

73. Pamela Samuelson, *Benson Revisited: The Case Against Patent Protection for Algorithms and Other Computer Program-Related Inventions*, 39 EMORY L.J. 1025, 1094 (1990).

74. *In re Alappat*, 33 F.3d 1526, 1542 (Fed. Cir. 1994); *see also In re Beauregard*, 53 F.3d 1583, 1584 (Fed. Cir. 1995) (remanding because the Commissioner of Patents and Trademarks stated “that computer programs embodied in a tangible medium, such as floppy diskettes, are patentable subject matter under 35 U.S.C. § 101 . . .”).

75. *See Diamond*, 450 U.S. at 191-92.

76. *State St. Bank & Trust Co. v. Signature Fin. Group, Inc.*, 149 F.3d 1368, 1373 (Fed. Cir. 1998).

77. *Id.* at 1370.

duces a useful, concrete and tangible result.”⁷⁸ According to the court, the data processing system met this test, so the patent was valid.⁷⁹ Congress entrenched the Federal Circuit’s decision by passing 35 U.S.C. § 273, which mandated prior user rights for patented methods.⁸⁰ A year later, the Federal Circuit ruled that computer algorithms standing alone were patentable.⁸¹

Even after *State Street Bank*, USPTO rules confined business method patents to subjects within the “technological arts,” namely those tied to a computer or electronic device.⁸² The USPTO used that rule to reject patent applications that treated innovations outside the technological arts on section 101 grounds.⁸³ The BPAI eliminated this test in *Ex parte Lundgren*, a precedential opinion issued in 2005, on the ground that such a test has never been judicially recognized.⁸⁴ This decision both expanded the scope of business method patents and “widens the gap between the U.S. and many other countries who are still debating patentability of software.”⁸⁵ While the Federal Circuit could overrule the *Lundgren* decision, this would mark a significant change of course in a long trend of liberalizing restrictions on subject matter.

Like the purification test, patentability for software seemed a pragmatic response to developing technology that initially generated significant debate.⁸⁶ As with purification patents, it seems likely that neither Congress

78. *Id.* at 1373.

79. *Id.*

80. See 35 U.S.C. § 273 (2000).

81. *AT&T Corp. v. Excel Commc’ns, Inc.*, 172 F.3d 1352, 1356-57 (Fed. Cir. 1999).

82. *Ex parte Bowman*, 61 U.S.P.Q.2d 1669, 1669-71 (B.P.A.I. 2001).

83. Travis Thomas, *Responding To “Unpatentable Subject Matter” Rejections Of Algorithm Patent Claims Citing Ex parte Bowman*, INTELLECTUAL PROPERTY REPORT, http://www.bakerbotts.com/file_upload/TravisThomasArticle.htm (last visited Dec. 10, 2006).

84. *Ex parte Lundgren*, Appeal No. 2003-2088 (B.P.A.I. 2004).

85. Patent Board Eliminates “Technological Arts” Requirement For Business Method Patents, http://www.patentlyo.com/patent/2005/10/patent_board_el.html (Oct 17, 2005).

86. See, e.g., Donald S. Chisum, *The Patentability of Algorithms*, 47 U. PITT. L. REV. 959 (1986); Lee A. Hollaar, *Justice Douglas Was Right: The Need for Congressional Action on Software Patents*, 24 AIPLA Q.J. 283 (1996); Allen Newell, *Response: The Models are Broken, The Models are Broken!*, 47 U. PITT. L. REV. 1023 (1986); Pamela Samuelson, *Benson Revisited: The Case Against Patent Protection for Algorithms and Other Computer Program-Related Inventions*, 39 EMORY L.J. 1025, 1093 (1990); Pamela Samuelson et al., *A Manifesto Concerning the Legal Protection of Computer Programs*, 94 COLUM. L. REV. 2308 (1994); Merges, *supra* note 1, at 3-4 (quoting MIT Communications Forum, “Software Patents: A Horrible Mistake,” Mar. 23, 1989, Semi-

nor the Supreme Court overturned these developments because the software industry has thrived rather than faltered. Now most commentators believe that the decision, for better or worse, has already been made.⁸⁷ While this may be true for software, patent applicants are still pushing the boundaries of patentable subject matter in other areas.⁸⁸

D. *Lab. Corp.* and Other Recent Developments

Metabolite owns U.S. Patent No. 4,940,658 (“the ’658 patent”), which claims methods for detecting deficiencies in the body of B vitamins cobalamin or folate, biochemicals known respectively as B[12] and folic acid.⁸⁹ Levels of cobalamin and folate are difficult to measure directly.⁹⁰ However, they are inversely correlated with the total level of another chemical, homocysteine, because in normal metabolic function they break down homocysteine into smaller constituent parts.⁹¹ Thus, a higher than normal level of homocysteine implies a lower level of B vitamins.⁹² Claim 13 of the ’658 patent teaches a method that utilizes this discovery to derive the level of B vitamin deficiency:

13. A method for detecting a deficiency of cobalamin or folate in warm-blooded animals comprising the steps of: assaying a body fluid for an elevated level of total homocysteine; and correlating an elevated level of total homocysteine in said body fluid with a deficiency of cobalamin or folate.⁹³

Although it originally granted certiorari to decide whether the subject matter of claim 13 was patentable, the Court later dismissed certiorari as improvidently granted.⁹⁴ According to Justice Breyer, dismissal was likely predicated on the fact that the parties did not raise patentable subject mat-

nar Notes (citing statement of Daniel Bricklin, President of Software Garden, Inc.); Gordon Irlam and Ross Williams, League for Programming Freedom, *Software Patents: An Industry at Risk*, 1994, <http://lpf.ai.mit.edu/Patents/industry-at-risk.html>.

87. See, e.g., Julie E. Cohen & Mark A. Lemley, *Patent Scope and Innovation in the Software Industry*, 89 CALIF. L. REV. 1, 3 (2001); Merges, *supra* note 1.

88. See, e.g., Patent Board Eliminates “Technological Arts” Requirement For Business Method Patents (Oct 17, 2005), http://www.patentlyo.com/patent/2005/10/patent_board_el.html; *Ex parte* Lundgren, Appeal No. 2003-2088 (B.P.A.I. 2004).

89. *Lab. Corp. of Am. Holdings v. Metabolite Labs., Inc.*, 126 S. Ct. 2921, 2923-24 (2006) (Breyer, J., dissenting); U.S. Patent No. 4,940,658 (filed Nov. 20, 1986).

90. *Lab. Corp.*, 126 S. Ct. at 2923-24.

91. *Id.*

92. *Id.*

93. The ’658 patent, col. 41, ll. 58-65.

94. *Lab. Corp.*, 126 S. Ct. at 2922.

ter as a validity issue in the lower courts.⁹⁵ However, he opined that this was not a serious concern because the parties had argued the issue through other doctrines.⁹⁶ Moreover, industry and lower courts evinced a pressing need for clarification in this area.⁹⁷ The lack of appropriate pleading may have been dispositive, however, in an area where any ruling would likely present a drastic alteration of the patent landscape. Such potentially sweeping effects would militate against resolving a case where the issue was not properly framed.

Writing for Justices Stevens, Souter, and himself in dissent, Justice Breyer said that he would decide the case and would invalidate the patent because it claimed a law of nature.⁹⁸ Distinguishing between patentable and unpatentable subject matter is a difficult endeavor.⁹⁹ After all, many a patentable invention rests upon its inventor's knowledge of natural phenomena; many "process" patents seek to make abstract intellectual concepts workably concrete; and all conscious human action involves a mental process.¹⁰⁰ According to Justice Breyer, however, claim 13 was invalid "no matter how narrowly one reasonably interprets that doctrine."¹⁰¹ Metabolite argued that the claim recited a valid process because it physically transformed matter and produced a "useful, concrete, and tangible result."¹⁰² Justice Breyer responded that the fact that the homocysteine test involved an unpatented transformation of blood was irrelevant to the claim as a whole.¹⁰³ Furthermore, he stated that the "useful, concrete, and tangible result" test from *State Street Bank*, if interpreted to validate the claim at issue, "would cover instances where the Court has held the contrary."¹⁰⁴ Claim 13 failed because it "simply described the natural law at issue in the abstract patent language of a 'process.'"¹⁰⁵ Justice Breyer reasoned that because the correlation itself was unpatentable as a law of nature, a process claim whose first step was to obtain data and whose second step

95. *Id.* at 2925.

96. *Id.* at 2925-26.

97. *Id.*

98. *Id.* at 2925-27. Chief Justice Roberts took no part in the consideration or decision of the case.

99. *Id.* at 2926.

100. *Id.*

101. *Id.* at 2927.

102. *Id.*

103. *Id.*

104. *Id.* at 2928 (citing *State St. Bank & Trust Co. v. Signature Fin. Group, Inc.*, 149 F.3d 1368, 1373 (Fed. Cir. 1998); *O'Reilly v. Morse*, 15 How. 62, 14 L.Ed. 601 (1854); *Parker v. Flook*, 437 U.S. 584 (1978); *Gottschalk v. Benson*, 409 U.S. 63 (1972)).

105. *Id.*

was to apply the correlation effectively covered a law of nature and was thus unpatentable.¹⁰⁶

II. HIGH STAKES, BUT AN IMPOSSIBLE LINE TO DRAW

The hasty retreat from subject matter enforcement discussed in Part I may reveal more than adaptation to new technology. Theoretically consistent and judicially administrable subject matter rules may be impossible to draw in a way that would not be over-inclusive or nearly non-existent. The difficulty in restricting subject matter “just a bit” without treading on too many useful patents might be the true reason for the Supreme Court’s dismissal of certiorari as improvidently granted in *Lab. Corp.* Indeed, *Lab. Corp.* presents a useful vehicle for examining subject matter because it illustrates the problem of capturing laws of nature, particularly in biotechnology, as well as the difficulties inherent to abstract claims. Section II.A discusses subject matter as it relates to the biotechnological industry, while Section II.B deals with problems created by abstract patent claims, particularly in software and business methods.

A. Compositions of Matter

Biotechnological and pharmaceutical patents typically concern compounds rather than processes because it is more difficult to produce a different biochemical or drug with the same effect as a patented biochemical or drug than it is to discover an alternative to a patented production method. *Lab. Corp.* is interesting because it does not concern a patent on a physical substance, but rather a method of diagnosis. However, an analysis of patents for physical substances serves to ground the analysis of the policy concerns underlying process patents. Section II.A.1 discusses a way of determining the theoretical gray area for patents on physical substances. Section II.A.2 discusses the costs and benefits associated with patenting pre-existing substances.

1. *Natural Substances—The Substantial Transformation Test*

Professors Demaine and Fellmeth suggest that a careful analysis of the theory and history of § 101 reveals the existence of a subject matter re-

106. *Id.* While describing claim 13 as abstract seems contrary to the trend of case law established in Sections II.B and II.C, it demonstrates the absence of a firm theoretical grounding for that trend. After all, claim 13 is analogous to claiming a process for measuring the radius of a circle and “correlating” the square of that value with pi to determine the circle’s area. Surely the act of measuring is insufficient physical instantiation of the abstract concept to merit a patent.

quirement that parallels novelty, utility, and nonobviousness.¹⁰⁷ Under their analysis, only subject matter that is sufficiently “inventive” and “new” is patentable.¹⁰⁸ Inventiveness stands apart from obviousness because inventiveness hinges upon the degree of inventor contribution, not the difficulty of the discovery.¹⁰⁹ Thus, a newly discovered law of nature would not be patentable subject matter because the inventor neither created it nor contributed to its formation in any way.¹¹⁰ Newness stands apart from novelty because newness hinges upon whether the invention previously existed, not whether one can find it in the prior art.¹¹¹ Thus, a newly discovered gene would not be new in the patentable subject matter context, despite its apparent novelty, because it previously existed in nature.

Focusing in the inventive step, according to Demaine and Fellmeth, would allow a patent on a composition of matter if it has undergone a “substantial transformation,” a test used to distinguish two products in customs and trade laws.¹¹² The primary factors in determining a substantial transformation are the new character and use of the resulting product—factors that courts must determine on a case-by-case basis.¹¹³ Relevant characteristics of a substance that indicate a new character and use include such factors as whether it is a consumer good or industrial input, whether it has an “independent identity” or has been incorporated into a larger product, and whether it has a different use or function.¹¹⁴

The substantial transformation test would disallow several types of patents currently issued by the USPTO and upheld by the courts.¹¹⁵ It would require that applicants do more than simply create a complimentary DNA (“cDNA”) replica of a DNA strand, since creating cDNA is part of the standard sequencing process and does not change the character and use of the substance.¹¹⁶ Instead, applying the test would require that the se-

107. See Demaine & Fellmeth, *supra* note 22, at 360-88.

108. *Id.* at 461-65.

109. See *id.* at 365-84.

110. See *id.* at 370 (“It is important to draw the distinction, when speaking of patentable subject matter, between discoveries of things not previously known and discoveries of things not previously existing.”).

111. See *id.* at 384-88.

112. *Id.* at 393-94.

113. *Id.* at 394.

114. *Id.* at 397-99.

115. *Id.* at 406-07.

116. *Id.* at 408. cDNA is “DNA that is synthesized to be complementary to a mRNA molecule. By definition a cDNA represents a portion of the DNA that specifies a protein (is translated). If the sequence of the cDNA is known, by complementarity, the sequence

quenced DNA be transformed “into a vaccine, pharmaceutical, diagnostic, or therapy.”¹¹⁷ This seems like a substantially higher bar than the specific utility principle set forth in *In re Fisher*, but it is actually different in kind.¹¹⁸ A substantial transformation test would not focus on whether use of the transformed substance was sufficient to meet a utility bar, only on the degree to which it differed from the natural substance.

Professors Demaine and Fellmeth provide the example of an avocado tree genetically altered to produce avocados in a different climate.¹¹⁹ Under the substantial transformation test, an applicant could obtain a patent on the genes used to transform the tree if she substantially altered those genes, but she could not obtain a patent on the tree as a whole because its character and use was not substantially altered.¹²⁰ It still produces avocados.¹²¹ If, on the other hand, the molecular biologist spliced the tree’s genome with a hormone-producing gene so that the tree produced avocados that had a therapeutic effect once eaten, she would have substantially altered the function of a tree as a whole, which would merit a patent of equivalent scope.¹²² Rather than producing normal avocados, the tree would produce a therapeutic product.¹²³

2. *Cost-Benefit Analysis*

Patenting substances that exist in nature may represent a net decrease in incentives by moving the point of patenting too early in the research process.¹²⁴ Early in the history of biotechnology, sequencing genes and DNA was difficult and time consuming, and rewarding basic research seems to have yielded incentive benefits with relatively acceptable

of the DNA is known.” Glossary, <http://ucbiotech.org/glossary> (last visited Feb. 10, 2007).

117. *Id.* at 407.

118. See *In re Fisher*, 421 F.3d 1365, 1370-72 (Fed. Cir. 2005) (explaining the specific utility requirement).

119. Demaine & Fellmeth, *supra* note 22, at 410.

120. *Id.*

121. *Id.*

122. *Id.*

123. *Id.*

124. See Rebecca S. Eisenberg, *Patents and the Progress of Science: Exclusive Rights and Experimental Use*, 56 U. CHI. L. REV. 1017, 1078 (1989) (discussing the optimal scope of the experimental use exemption); Arti K. Rai, *Regulating Scientific Research: Intellectual Property Rights and the Norms of Science*, 94 NW. U. L. REV. 77, 136-50 (1999) (discussing how to reconcile the norms of basic research with the needs of industry).

costs.¹²⁵ After all, some of the first purified chemicals, such as insulin, had immediate therapeutic use. However, recent developments in sequencing technology have made sequencing genes and DNA relatively easy, and patents on basic research make later, more directed research quite costly.¹²⁶ First, researchers incur significant, sometimes prohibitive, costs to conduct research involving patented, naturally occurring molecules or organic tissue.¹²⁷ Second, researchers face the prospect of conflicting or blocking patents that arise later in the research process.¹²⁸ Blocking patents may be stifling truly innovative patents through licensing and transaction costs.¹²⁹ Further, high pendency at the USPTO increases examination time and may decrease quality for more significant patents.¹³⁰ Third, patents are costly to acquire. Companies generally cannot choose to avoid the costs because patents may profit companies relative to each other without a net gain by the industry or society as a whole.¹³¹ These costs may even cause researchers to avoid work in certain areas of biotechnology.¹³² Allowing patents on natural genes may situate patenting too early in the research process. It may be more profitable to patent early research and strategically wait for others to use it than to continue more directed research, suggesting that patents create an inefficiently high level of incentives.

However, one may reasonably argue that eliminating patents on sequenced genes or purified substances may result in the loss of significant incentives for basic research. Once a gene is identified and its use is discovered, the argument goes, others could free ride on this work and reap the rewards without paying the costs. Thus, scientists would have fewer incentives to research the function of genes because others could freely exploit any discovery of knowledge related to gene function. The decrease of incentives for innovation would result in a decrease in innovation in

125. See, e.g., Demaine & Fellmeth, *supra* note 22, at 392 (arguing that “the PTO remains mystified by recombinant DNA technology” despite significant advances in the field that made DNA sequencing mechanical where it was once quite difficult.”).

126. *Id.* at 391-92. “Dr. James Watson—co-discoverer of the double helical structure of DNA—observed in 1991 that ‘virtually any monkey’ can run an automated sequencing machine.” *Id.* at 391-92 (citing Leslie Roberts, *Genome Patent Fight Erupts*, 254 SCI. 184, 184 (1991) (quoting Dr. James Watson)).

127. *Id.* at 415.

128. *Id.*

129. *Id.*

130. *Id.* at 414.

131. See *id.* at 416 (citing “high costs associated with the issuance of patents on discovered phenomena”).

132. See *id.*

biotechnology. In biotechnology, determining a use for a gene is quite difficult and paves the way for invention and commercialization.

The tension in biotechnology patents lies in the fact that allowing patents on “a gene and a use” both protects the groundbreaking new discoveries with potential to move the field forward and gives the potential for widespread abuse. Thus, employing the substantial transformation test may be somewhat costly and inefficient, since basic research would be insufficiently rewarded, but allowing patents on such innovation opens the industry to considerable costs. Though *Lab. Corp.* did not concern a patent on a physical substance, the controversy regarding the patent at issue may be best illuminated by the motivation behind the substantial transformation test—identifying the theoretical and practical “gray area” of subject matter.

B. The Problem with Abstraction

The controversy in *Lab. Corp.* regarded whether the patent effectively claimed a law of nature.¹³³ As Justice Breyer noted, many patents rely on the inventor’s knowledge of natural substances and natural laws.¹³⁴ However, determining whether a particular patent came too close to capturing a natural law is a particularly difficult inquiry, and not one that seems to lend itself to bright-line rules.¹³⁵ One could think of patent claims for physical objects as falling on a spectrum from objects already existing in nature to objects thoroughly different from any that had previously existed. Similarly, patent claims for processes can be thought of on a spectrum from concrete processes that effect a significant physical transformation to processes that are entirely abstract. *Lab. Corp.* may have spurred particular discomfort in the patent community not only because it dealt with a patent that covered a law of nature, but because the claim at issue was unusually abstract for an art area typified by composition of matter claims.

1. Abstract Patent Claims

An abstract process may be defined as one in which both the input and the output of the process is information, and any physical steps are essen-

133. *Lab. Corp. of Am. Holdings v. Metabolite Labs., Inc.*, 126 S. Ct. 2921, 2926-27 (2006) (Breyer, J., dissenting).

134. *Id.*

135. *See id.* at 2926 (“[T]he category of non-patentable ‘phenomena of nature,’ like the categories of ‘mental processes,’ and ‘abstract intellectual concepts,’ is not easy to define.”).

tially generic.¹³⁶ For example, if a patent claims an algorithm implemented on a machine, such as a computer, there nothing unique about the computer. Further, the computer is not physically doing anything not present in the prior art other than executing the series of steps defined by the algorithm. The innovation lies in the informational realm, not the physical realm. Of course, there is no bright line between the two. Thus, concrete-abstract is not a binary bifurcation, but rather a spectrum on which inventions may lie.

Analogizing from the substantial transformation test for substances, an abstract process could be thought of as one that does not substantially transform physical materials. In *Lab. Corp.*, claim 13 did not specify any particular method of determining homocysteine levels.¹³⁷ Indeed, many such tests exist in the prior art.¹³⁸ Step 2 could conceivably be entirely mental. In effect, claim 13 covers the correlation itself, or at least its use in one direction.¹³⁹ *Lab. Corp.* is interesting, and perhaps controversial, because it involves an abstract claim that falls under neither the software nor the business method category. Instead, it is a method of medical diagnosis. However, the problems and issues associated with the *Lab. Corp.* patent mirror those associated with abstract patents more closely than those associated with other patents in pharmaceuticals or biotechnology. Abstract claims are more common in software and business methods. Technically, computer software is implemented in a way that physically changes bits in hardware, yet the actual computer employed is irrelevant and, moreover, unchanged after completion of the process.

Natural laws are inherently abstract because they describe principles that govern the natural world. Natural laws are not things, or even, strictly speaking, processes. Instead, they are ideas, correlations, and causative relationships. Thus, applicants must draft abstract claims in order to approach patenting natural laws. As with “gene and a use” patents in biotechnology, abstract patents may represent the best and worst of the patent system.

136. See, e.g., David S. Olson, *Patentable Subject Matter: The Problem of the Absent Gatekeeper* 27-29 (Sept. 27, 2006), http://papers.ssrn.com/sol3/papers.cfm?abstract_id=933167 (describing the Supreme Court’s approach to abstraction in *Cochrane v. Deener*, 94 U.S. 780 (1876)).

137. *Lab. Corp.*, 126 S. Ct. at 2921, 2924 (Breyer, J., dissenting).

138. See *id.* at 2923-24.

139. See *id.* at 2924.

2. *Problems with Abstraction*

Patents with fundamentally abstract claims include the latest developments in computer science and business, yet as *Lab. Corp.* demonstrates, the patent community is not yet fully comfortable with them. This discomfort may stem from the fact that allowing abstract patent claims is like opening Pandora's box—once patents are allowed for some abstract claims, such as software, courts may find it difficult (i.e. theoretically inconsistent and practically impossible) to limit the scope to a single art area.¹⁴⁰ Further, as with gene patents in biotechnology, patents on software and business methods often seem both an aid to businesses and a significant source of industry problems.

As in *Lab. Corp.*, applicants may craft abstract claims to cover laws of nature. Patents on laws of nature yield significant enforcement problems. For example, suppose in *Lab. Corp.* that homocysteine was also correlated with the presence of a deficiency in a different vitamin, such as C. Then a doctor who ordered a noninfringing homocysteine test to check for a C vitamin deficiency and thereupon discovered and diagnosed a B vitamin deficiency would automatically infringe claim 13.¹⁴¹ This hypothetical illustrates how the physical transformation test to highlight abstraction overlaps with another judicial method of determining unpatentable subject matter, the mental steps doctrine.¹⁴²

Further, it is difficult to identify prior art for abstract claims because the claims rely on ideas rather than physical objects. In business and software, practitioners create tools to accommodate the practical exigencies of particular goals and often do not record them in a way that would make them searchable by applicants or the patent office. Business and software are broad and fast-paced, contrary to the more stolid, cumulative progress of traditional industry. The dearth of prior art makes determining novelty and nonobvious difficult. The difficulty inherent in the nonobviousness inquiry is compounded by the fact that business and software developments proceed primarily by common sense and general understanding ra-

140. See generally Nari Lee, *Patent Eligible Subject Matter Reconfiguration and The Emergence of Proprietary Norms—The Patent Eligibility of Business Methods* (Oct. 14, 2002), http://papers.ssrn.com/sol3/papers.cfm?abstract_id=400100 (discussing the worldwide reconfiguration of subject matter restrictions that has resulted from allowing patents on abstract methods).

141. While 35 U.S.C. § 271(c) significantly limits the remedies available for infringement of claims covering medical procedures and thus would likely protect doctors who infringed claim 13, such protection is unavailable for most abstract process claims. See, e.g., *MERGES & DUFFY*, *supra* note 13, at 183-84.

142. See *id.* at 30-31 (citing *In re Heritage*, 150 F.2d 554, 556-58 (Pat. 1945)).

ther than specific combination of previous elements in a technically non-obvious way. In effect, the traditional tests and definitions for nonobviousness may be less applicable to abstract innovations. Particularly in software, the question is not whether the precise series of claimed steps was obvious, but rather whether the abstract principle on which they were based was obvious. Business methods also present a particular difficulty because they do not hinge on technological innovation. Thus, it becomes difficult to define a person of ordinary skill in the art or determine the appropriate amount of innovation necessary to meet the nonobviousness bar.

Software has several properties which make it ill-suited to the traditional patent system. In particular, it is easy to claim software that captures laws of mathematics in the same way that the patent in *Lab. Corp.* captures the correlation between homocysteine and B-vitamins. However, this can be difficult for a person unskilled in the art to see for several reasons. Innovation in software often involves mathematical, rather than experimental, research. Computer software is expressed in a language where symbols represent abstract mathematical ideas rather than chemicals that exist in nature. This makes software concepts more difficult to analogize to things persons unskilled in the art can understand. Put simply, a chemist could explain the properties of chemicals and what she does with them in a basic way, but a mathematician may be hard-pressed to offer a similar explanation. Chemistry is limited by the physical constraints of matter, while mathematics has no such boundaries, thus allowing software that is arbitrarily complex.

Indeed, applicants for many software inventions *must* seek to patent a mathematical principle or a would-be infringer might easily achieve the same result using the principle revealed by the patent in a different way. The claiming system for U.S. patents is peripheral and thus ill-suited to claiming a central principle. Computer science, like mathematics, is best explained in pseudo-code and formulae, not in English, and the correctness of a description hinges not on whether it encapsulates every application of an idea, but rather on whether it fully convinces the reader of the validity of the principle. Fully extrapolating from the idea is neither necessary nor possible. Thus, a nonobviousness inquiry that centers on peripheral claims does not reflect the nature of the underlying technology. The nonobviousness mismatch often results in claims whose scope extends far beyond the inventive step or claims that those skilled in the art can easily invent around.

III. TOWARD A MORE SOPHISTICATED PATENT SYSTEM

Part I showed how the history of patentable subject matter has been one of consistent backpedaling, with each new case moving an ostensibly bright line one bit further to respond to the needs of industry. Yet the final answer, in which nearly anything that meets the utility, nonobviousness, and novelty bars is patentable, is hardly satisfying. Biotechnology, computer science, and their progeny, such as nanotechnology and bioinformatics, promise to revolutionize the human experience in unforeseen ways. Part II discussed how these new industries may be different in kind from the classical technology for which patent law was designed. Like the industries it seeks to assist, patent law must evolve and adapt. The tensions illustrated by changes in patentable subject matter cannot be resolved by tweaking the bright-line rules by which patent law usually operates. Rather, Congress, the courts, and scholars should mold these rules in new ways to account for new innovation.

A. Policy Levers & Equity

Judicial understanding and recognition of the different features of industries will allow courts to apply patent law with the necessary flexibility. Already the Supreme Court has returned patent injunctions to their equitable roots.¹⁴³ While splitting patent law according to art area may be inadvisable and practically impossible, the specific doctrines of patent law may be molded to accommodate the needs of different industries.¹⁴⁴ It is too late to return to a time when the subject matter in the gray areas discussed in Part II was entirely unpatentable, and given the importance of these areas of innovation to the economy, it would likely be detrimental as well. However, judges could use these traditional tests not to invalidate

143. See *eBay Inc. v. MercExchange, L.L.C.*, 126 S. Ct. 1837, 1839-40 (2006). For a discussion of post-*eBay* patent injunction cases, see Jeremy Mulder, Note, *The Aftermath of eBay: Predicting When District Courts Will Grant Permanent Injunctions in Patent Cases*, 22 BERKELEY TECH. L.J. 67 (2007).

144. Commentators are currently debating the types of contours an industry-specific patent law would exhibit. See Dan L. Burk & Mark A. Lemley, *Is Patent Law Technology-Specific?*, 17 BERKELEY TECH. L.J. 1155 (2002); R. Polk Wagner, *Of Patents and Path Dependency: A Comment on Burk and Lemley*, 18 BERKELEY TECH. L.J. 1341 (2003); R. Polk Wagner, *Comment: Exactly Backwards: Exceptionalism and the Federal Circuit*, 54 CASE W. RES. L. REV. 749 (2004); see also Cohen & Lemley, *supra* note 1, at 53-56 (discussing ways courts might apply doctrine of equivalents analysis specifically to the software industry); Dan L. Burk & Mark A. Lemley, *Designing Optimal Software Patents* 81-82, 91-100 (Stanford Law School Pub. Law & Theory Working Paper Series, Working Paper No. 108, 2005; University of Minnesota Law School Legal Studies Research Paper Series, Research Paper No. 05-11, March 2005) (suggesting ways that software patents could be changed to suit the software industry).

patents, but rather to distinguish patents that may merit extra scrutiny and particularly strict application of other patent law bars. A curious feature of the U.S. patent system is that each requirement of patentability stands mostly alone.¹⁴⁵ The final goal is to uphold patents in a way that creates meaningful incentives while minimizing costs, and this could be best achieved by understanding and embracing subject matter as an important issue, even if not as one that serves as a bar to patentability.

B. Innovative New Systems

Commentators have suggested offering different grades of patents based on examination intensity and money invested.¹⁴⁶ The resulting patents might carry different burdens of proof and presumptions of validity. Adding subject matter guidelines to such patents seems like a reasonable way to better align patent law with the needs of industry. Forcing patents with abstract claims into a lower grade of patent might deter many of the current costs associated with abstract patent claims.

One possibility for handling patents in the gray areas would be to grant them shorter terms, perhaps five or ten years instead of twenty. This would alleviate the negative affects of blocking patents on research and business development, but would keep the incentives for innovation. In particular, a shortened time limit may be sufficient for a scientist to research a biochemical innovation based on substantial transformation that would meet the full-fledged patent requirements. Software and business, on the other hand, develop quickly enough that the traditional twenty-year term may not be necessary. Development of new technology in software and business methods does not entail the kind of painstaking research traditionally present in invention, thus lowering the capital and operational expenditures relative to physical inventions. The incentive structure of the patent system was set up with the costs of physical innovation in mind. It is easy to see that if the costs of innovation are substantially lower for abstract

145. In Japan, for instance, the requirements of patentability are not as distinct as in the United States. Statutory subject matter is a substantive bar under which an invention must involve a technical idea that utilizes a law of nature and must have industrial applicability. See Patent Law, No. 121 (1959) ch. 1, § 2(1), available at http://www.wipo.int/clea/docs_new/pdf/en/jp/jp006en.pdf (“‘Invention’ in this Law means the highly advanced creation of technical ideas by which a law of nature is utilized.”).

146. Mark Lemley, Doug Lichtman & Bhaven Sampat, *What to Do about Bad Patents?*, 28 REG. 10 (Winter 2005-06), available at <http://www.cato.org/pubs/regulation/regv28n4/v28n4-noted.pdf>; see also *What is a Patent?*, http://www.ipaustralia.gov.au/patents/what_index.shtml (last visited Feb. 16, 2007) (discussing the two-tier Australian patent system).

patents, then the concomitant rewards from the patent system should be lower.¹⁴⁷

Another possibility is creating a different form of patent protection for business methods. Professors Duffy and Abramowitz suggest that protection should be granted for business methods that are commercially, rather than technically, non-obvious.¹⁴⁸ This would better align incentives with the beneficial effects to society.¹⁴⁹ Although their particular solution may not be optimal, it illustrates the kind of significant alterations that may be necessary to ensure that patent law performs its proper function. Indeed, such innovations may be as novel and non-obvious as the inventions they protect.

IV. CONCLUSION

Abstract methods and natural substances were traditionally unpatentable, but those barriers have eroded to the point of nonexistence. Patents that cover traditionally unpatentable subject matter include some of the most technologically advanced and important scientific advancements, such as cutting-edge work in biotechnology and computer software. However, other patents in this category, including patents on technologically obvious business methods and sequenced genes of questionable utility, also exhibit great potential for inefficiently high awards and significant costs to industry.

Subject matter may no longer be a substantive bar to patentability, but it can potentially play two important functions in modern patent law. First, it can highlight patents that should be subject to heightened scrutiny, both judicially and academically, due to the higher costs and benefits associated with such patents. Second, it can highlight subsets of patent law that are ripe for innovation. The patent system should certainly adapt the application of existing rule according to subject matter and should leave open the possibility of large-scale changes or *sui generis* protection to deal with subject matter traditionally outside the scope of patent protection.

While none of these suggestions provide a definite method of reaching a satisfying result in *Lab. Corp.*, they do suggest an alternate approach. Deciding validity under an eroded and perhaps unworkable subject matter

147. See, e.g., Peter S. Menell, *Tailoring Legal Protection for Computer Software*, 39 STAN. L. REV. 1329 (arguing for *sui generis* intellectual property protection for computer software).

148. John F. Duffy & Michael Abramowitz, *Intellectual Property for Market Innovation* 45-51 (Univ. of California Berkeley Law & Econ. Workshop, Paper No. 10, 2006).

149. *Id.*

doctrine risks the creation of confusing and theoretically unsound precedent. Instead, courts should have analyzed validity aggressively under other patent doctrines because the patent covering traditionally unpatentable subject matter.

MONSANTO V. SCRUGGS:
THE NEGATIVE IMPACT OF PATENT EXHAUSTION
ON SELF-REPLICATING TECHNOLOGY

By Jason Savich

The rise of patented seed technology has sparked heated debate over who—patentee or purchaser—may control the seed generated by the original patented seed. For the farmer, purchasing patented seed implies using subsequent generations of seed regardless of whether the initial seed contained patented technology. Seeds grow and create more seeds just like the seed purchased. For the inventor of seed technology, however, subsequent generations of seed are completely different entities from the original seed. Regardless of the source and means of production, the inventor believes that she retains control over new seeds, which the farmer has not purchased rights to use.

While both parties have viable arguments, economic concerns require protecting an inventor's right to subsequent generations of seed. Patentees face a unique challenge when trying to make a return on their investments on technologies that are self-replicating because every consumer turns into a potential producer. Thus, an inventor must have sufficient legal and/or technological protections to allow her to make a return on her initial investment in research and development ("R & D") before competing against those who have not made that investment. The incentive to invest, however, must be balanced with the diffusion of current innovations and promotion of future innovations to allow the greatest amount of innovation for the benefit of society.

The impact of self-replicating technologies has been particularly significant in the agricultural-biotech industry where companies like Monsanto face the problem of protecting their self-replicating technology while trying to make a return on their investment in R & D. Numerous farmers purchase Monsanto's Roundup Ready® seeds containing genetically engineered herbicide- and insect-resistant traits.¹ In addition to protections provided by patent law, Monsanto requires purchasers to sign licensing

© 2007 Jason Savich

1. See MONSANTO CO., FINAL YEAR-END REPORTING: MONSANTO BIOTECHNOLOGY TRAIT ACREAGE: FISCAL YEARS 1996 TO 2006 1-2 (2006), available at <http://www.monsanto.com/monsanto/content/investor/financial/reports/2006/Q42006Acreage.pdf>.

agreements restricting the use of seeds to one generation.² Some farmers, however, have used generation after generation of seed in violation of these licensing agreements.³ To enforce their patent rights, Monsanto began investigating farmers and suing alleged infringers.⁴

In *Monsanto Co. v. Scruggs*, the United States Court of Appeals for the Federal Circuit affirmed a grant of Monsanto's motion for summary judgment against an alleged infringer, Scruggs.⁵ Rejecting Scruggs' first sale doctrine defense among others,⁶ the court followed its decision in *Monsanto Co. v. McFarling* by holding that subsequent generations of seed fall within the scope of Monsanto's patents.⁷ The *Scruggs* court noted that, "[a]pplying the first sale doctrine to subsequent generations of self-replicating technology would eviscerate the rights of the patent holder."⁸

These rulings provide inventors of self-replicating technology the legal protection necessary to make a return on their costs of invention while enabling the diffusion of current innovations and promoting future innovation. Eliminating Monsanto's patent rights through the first sale doctrine would have significantly diminished incentives for investing in self-replicating technology and likely encouraged innovation in genetic use restriction technologies that prevent seed from self-replicating. A comparative look at the history of contract licensing and the rise of technological protection measures in copyright reveals the possible negative impacts of denying patent protection for next-generation seed.

This Note focuses on economic rationales underlying the Federal Circuit's decisions in *Scruggs* and *McFarling*. Part I provides pertinent background information on Monsanto's patented seed technology, relevant economic theory, and a historical account of the first-sale doctrine. Part II provides background information about the parties involved in these cases

2. *Monsanto Co. v. McFarling (McFarling II)*, 363 F.3d 1336, 1339 (Fed. Cir. 2004).

3. *Id.*; *Monsanto Co. v. Scruggs*, 459 F.3d 1328, 1333 (Fed. Cir. 2006).

4. *Scruggs*, 459 F.3d at 1333; see also THE CENTER FOR FOOD SAFETY, *Seizing Control: Monsanto's Path to Domination of Biotech Crops and U.S. Agriculture*, in *MONSANTO V. U.S. FARMERS 23-24* (2005), available at <http://www.centerforfoodsafety.org/pubs/CFSMonsantovsFarmerReport1.13.05.pdf>.

5. *Scruggs*, 459 F.3d at 1332.

6. *Id.* at 1332-36. Scruggs also argued that Monsanto's patent claims did not read on its plants, that Monsanto's test results showing that Scruggs' soybean and cotton crops contained Monsanto's Roundup Ready® and Bollgard technology should be disregarded, and that Scruggs had an implied license. *Id.* at 1335.

7. See *id.* at 1336 (citing *Monsanto Co. v. McFarling (McFarling I)*, 302 F.3d 1291, 1299 (Fed. Cir. 2002)).

8. *Scruggs*, 459 F.3d at 1336.

and discusses the Federal Circuit's holdings. Lastly, Part III proposes that the Federal Circuit's refusal to apply the first sale doctrine was appropriate and explains how economic rationales support this holding. The Note concludes with a cautionary look at the possible ramifications if the court had not extended patent protection to self-replicating technology in the agriculture industry.

I. SELF-REPLICATING TECHNOLOGY: THE SCIENCE AND THE LAW

Monsanto's herb- and insect-resistant seed technology raises a number of issues that lie at the nexus of economics and law. How much patent protection is necessary to enable the inventor to make a return on his investment? Will overly broad patent protection discourage the diffusion of current innovations and development of future innovation? Should patent law protect subsequent generations of self-replicating technology to the same degree that it protects the first generation? Each of these questions requires a deeper understanding of the technology at issue, the economics involved, and the role of the first sale/patent exhaustion doctrine in sales of patented products.

A. Monsanto and Seed Technology

One of Monsanto's best selling products is the Roundup® line of herbicides.⁹ Roundup® herbicides contain an active chemical ingredient glyphosate, which indiscriminately kills vegetation by inhibiting the metabolic activity of 5-enolpyruvylshikimate-3-phosphate synthase ("EPSPS"), an enzyme necessary for plant growth.¹⁰ EPSPS plays a critical role in the conversion of sugars into amino acids needed for growth in many plants and weeds.¹¹ Although highly effective at eliminating most weeds, glyphosate is non-selective and can cause severe crop damage if sprayed "over-the-top" of crops.¹² To increase the use of Roundup® herbicide in the agricultural market without damaging crops, Monsanto developed recombinant-DNA technology to protect crops from glyphosate.¹³

9. Brief of Appellee Monsanto Company at 2, *Monsanto Co. v. Scruggs*, 459 F.3d 1328 (Fed. Cir. 2006) (No. 04-1532) [hereinafter Brief of Appellee Monsanto in *Scruggs*].

10. *Id.*

11. *McFarling II*, 363 F.3d 1336, 1338 (Fed. Cir. 2004).

12. Brief of Appellee Monsanto in *Scruggs*, *supra* note 9, at 2.

13. *Id.* at 3.

These advances involve inserting a modified EPSPS gene into crop seeds to confer glyphosate-resistance to plants grown using the seed.¹⁴ Monsanto's U.S. Patent Nos. 5,633,435 ("the '435 patent") and 5,352,605 ("the '605 patent") cover this technology.¹⁵ The '435 patent relates to the gene encoding the modified EPSPS enzyme and the "isolated DNA molecule" encoding it, "[a] glyphosate-tolerant plant cell comprising" that DNA molecule, "[a] glyphosate-tolerant plant comprising" that plant cell, "[a] seed of a glyphosate-tolerant plant," a particular "transgenic soybean plant," and "[a] method of producing genetically transformed plants which are tolerant toward glyphosate herbicide."¹⁶ The '605 patent covers insertion of a synthetic gene consisting of a 35s cauliflower mosaic virus ("CaMV") promoter, a protein sequence of interest, and a stop signal, into plant DNA to create herbicide resistance.¹⁷ Monsanto used the technology in the '435 and '605 patents to develop glyphosate herbicide-resistant soybeans and cotton, sold as Roundup Ready® soybeans and cotton.¹⁸ Farmers can spray fields planted with Roundup Ready® seed with Roundup® and other glyphosate-based herbicides to kill weeds without harming the crop plants.¹⁹

Monsanto also developed seed technology to protect cotton plants from pests like bollworms and moth larvae.²⁰ This technology falls under three of Monsanto's patents, U.S. Patent Nos. 5,164,316, 5,196,525, and 5,322,938 (collectively "the McPherson Patents").²¹ Similar to the glyphosate-resistant technology, this technology includes the insertion of a foreign gene into the plant DNA.²² This gene, derived from the bacterium *Bacillus thuringiensis* (the "Bt gene"), causes a plant to produce an enzyme toxic to insects, thus allowing farmers to protect cotton plants from pests while reducing or eliminating the need for pesticides.²³ Monsanto markets seed containing the Bt gene as Bollgard® Cotton.²⁴ In addition, it

14. *Id.* The modified EPSPS gene codes for a variant EPSPS that is not affected by glyphosate but still performs the sugar-conversion function required for plant growth. *McFarling II*, 363 F.3d at 1338. Thus, while the seed produce both the "natural" and variant forms of EPSPS, glyphosate only inactivates the "natural" EPSPS enzyme, allowing the variant EPSPS to continue to enable normal plant growth. *Id.*

15. *McFarling II*, 363 F.3d at 1338-39.

16. U.S. Patent No. 5,633,435 (filed Sept. 13, 1994).

17. *Monsanto Co. v. Scruggs*, 459 F.3d 1328, 1332 (Fed. Cir. 2006).

18. *See id.*; *McFarling II*, 363 F.3d at 1339.

19. Brief of Appellee Monsanto in *Scruggs*, *supra* note 9, at 3.

20. *Id.*

21. *Id.* at 3-4.

22. *Id.* at 4.

23. *Id.* at 3.

24. *Id.*

markets seeds containing both Roundup Ready® and Bollgard traits (known as “stacked trait” cotton).²⁵

While Monsanto owns several subsidiaries that produce seeds, it also provides competing producers with access to its technology.²⁶ Monsanto began licensing its Roundup Ready® technology to seed companies in 1996, followed by the Bollgard/Roundup Ready® cotton technology in 1998.²⁷ Through a two-tiered licensing scheme, Monsanto licenses the patented genes to seed companies that manufacture glyphosate-tolerant seeds and requires that those seed companies execute licenses, rather than conduct unconditional sales, with their customers.²⁸ Under the first licensing tier, Monsanto licenses more than 200 seed companies to incorporate the patented traits into their own germplasm²⁹ to produce glyphosate-tolerant and insect-resistant cotton and soybean seeds.³⁰ In return, Monsanto receives a royalty, or “technology fee,” of \$6.50 for every 50-pound bag of applicable seed sold by the seed company.³¹ Under the second licensing tier, Monsanto places several conditions on the end users’—the farmers’—use of licensed seed. For the right to use the Roundup Ready® technology, the farmer signs a “Technology Agreement” and agrees “[t]o use the seed containing Monsanto gene technologies for planting a commercial crop only in a single season,” and “to not save any crop produced from this seed for replanting, or supply saved seed to anyone for replanting.”³²

B. Limitations on Patent Rights: Economic Theory and The First Sale & Patent Exhaustion Doctrine

The purpose of patent law is “to promote the Progress of Science and useful Arts.”³³ Among the several economic theories developed to explain how patents promote technological progress,³⁴ the incentive-to-invent

25. *Id.*

26. *Id.* at 5.

27. *Monsanto Co. v. Scruggs*, 459 F.3d 1328, 1333 (Fed. Cir. 2006).

28. *See Monsanto Co. v. McFarling (McFarling I)*, 363 F.3d 1336, 1339 (Fed. Cir. 2004).

29. The germplasm can differ among seed companies

30. Brief of Appellee Monsanto in *Scruggs*, *supra* note 9, at 5.

31. *McFarling II*, 363 F.3d at 1339.

32. *Id.*

33. U.S. CONST. art. I, § 8, cl. 8.

34. Those economic theories include: the Incentive-to-Disclose Theory, which states that without patent protection, inventors would conceal their inventions in order to prevent exploitation by competitors; the Incentive-to-Innovate/Schumpeterian Theory, which states that patent monopoly promotes innovation and growth more effectively than pure competition; and the Prospect Theory, which holds that patents promote efficient development of patented inventions by allowing patent owners to coordinate further research

theory recognizes that an inventor requires compensation for investing in R & D.³⁵ This theory proposes that the inventor earns compensation for his invention through patent protection, which provides him with the exclusive right to make, use, and sell his invention for a limited period of time.³⁶ Absent such protection, free-riders who do not bear the costs of R & D, could quickly copy the invention and capitalize on the inventor's work. Competition between the inventor and subsequent free-riders would cause the price of the invention to fall to marginal costs at which the inventor could only recover manufacturing costs and not his original investment. Faced with such outcomes, inventors would have little incentive to invest in future R & D, thus delaying the release of socially beneficial inventions and perhaps preventing them entirely.

Overly broad patent protection, however, hinders the diffusion of current innovations and the development of future innovation.³⁷ Intellectual property recognizes two primary types of innovation, stand-alone and cumulative.³⁸ Stand-alone innovation comprises a very narrow class of inventions, which do not ultimately generate follow-on innovation.³⁹ In contrast, cumulative innovation includes a broader class of inventions where each invention lays a foundation for future innovations.⁴⁰ Since secondary inventions, including essential design improvements, refinements, and adaptations to various uses, often play as great a role in providing social benefits as the initial discovery,⁴¹ patent law must protect the diffusion of current innovations and the development of future innovation by enabling follow-on inventors to secure rights on improvements and build upon innovations in their entirety within a relatively short period of time.⁴²

While the length of patent protection affects the overall level of profit, the statutory duration of protection may be irrelevant.⁴³ Market incumben-

and development efforts. *See generally* Yusing Ko, *An Economic Analysis of Biotechnology Patent Protection*, 102 YALE L.J. 777 (1992).

35. *See id.* at 791-92.

36. 35 U.S.C. § 154 (1988); *see* 35 U.S.C. § 271(a) (2003).

37. Peter Menell & Suzanne Scotchmer, *Intellectual Property*, in HANDBOOK OF LAW AND ECONOMICS (A. Mitchell Polinsky & Steven Shavell, eds.) (forthcoming 2007) (manuscript at 4-5, on file with author).

38. *Id.* at 7.

39. *Id.* at 8. Stand-alone innovation includes the safety razor, ballpoint pen, and pharmaceutical innovation for which the scientific mechanism is poorly understood. *Id.*

40. *Id.* at 7. Cumulative innovation includes automobiles, computers, and innovation in the biotechnology field. *Id.* at 24.

41. *Id.* at 23-24.

42. *Id.* at 6, 23-24.

43. *Id.* at 26.

cy only lasts until innovations are supplanted by improvements.⁴⁴ Therefore, “the effective life of the patent may be determined by the breadth of the right, rather than its statutory length” because the “breadth determines how long it will take before the product is supplanted.”⁴⁵ In the patent context, a patent’s claims, which define the boundaries of the property right, determine the breadth.⁴⁶ Broader claims preempt more innovation and thus provide greater economic returns than narrow ones.⁴⁷ A patentee, however, can only prohibit competitors if the patents claims remain enforceable. Intellectual property law recognizes a number of means for eliminating an inventor’s rights to exclusivity, including the first sale/patent exhaustion doctrine.⁴⁸

The first sale/patent exhaustion doctrine provides that the unrestricted first sale by a patentee of his patented product exhausts patent rights to that specific product.⁴⁹ As a result, the initial purchaser of a product may use or resell the product free of control or conditions imposed by the patent owner.⁵⁰ However, if a purchaser only acquires a limited interest from the patent holder, the purchaser risks infringement by exceeding this limitation.⁵¹

In *Adams v. Burke*, the Supreme Court held that “when the patentee, or the person having his rights, sells a machine or instrument whose sole val-

44. *Id.*

45. *Id.* at 26-28.

46. *Id.* at 15.

47. See *Ko*, *supra* note 34, at 2, 8.

48. See *Menell & Scotchmer*, *supra* note 37, at 19-20.

49. See *LG Elecs., Inc. v. Bizcom Elecs., Inc.*, 453 F.3d 1364, 1369-70 (Fed. Cir. 2006); see also *Mallinckrodt, Inc. v. Medipart, Inc.*, 976 F.2d 700, 706 (Fed. Cir. 1992).

50. See, e.g., *Intel Corp. v. ULSI Sys. Tech. Corp.*, 995 F.2d 1566, 1568 (Fed. Cir. 1993) (“The law is well settled that an authorized sale of a patented product places that product beyond the reach of the patent [.]”); see also *Brandt Consol. Inc. v. Agrimar Corp.*, 801 F. Supp. 164, 173 (C.D. Ill. 1992). The *Brandt* court stated that

An incident to the purchase of any article, whether patented or unpatented, is the right to use and sell it. The purpose of the patent law is thus fulfilled with respect to any particular article once the patentee has received the reward for the use of his invention by selling the article. Once that purpose is realized, the patent law affords no basis for restraining the use and enjoyment of the thing sold.

801 F. Supp. at 173.; see also *Duplan Corp. v. Deering Milliken, Inc.*, 444 F. Supp. 648, 757 (D.S.C. 1977) (“[A] patentee who manufactures and sells a patented product without an express reservation of use rights impliedly conveys to the purchaser the right to full and unrestricted use of the product.”), *aff’d*, 594 F.2d 979 (4th Cir. 1979).

51. *Kendall Co. v. Progressive Med. Tech., Inc.*, 85 F.3d 1570, 1576 (Fed. Cir. 1996) (“[B]reach of an enforceable condition of sale or license may leave the breaching party open to a claim for patent infringement.”).

ue is in its use, he receives the consideration for its use and he parts with the right to restrict that use. The article . . . passes without the limit of the monopoly."⁵² While the purchaser's right to use or sell the product includes a right to make repairs, it does not include the right to make or reconstruct a new product.⁵³

A patentee, however, may limit exhaustion and restrict resale by imposing express conditions on sales of the patented product. In *General Talking Pictures Corp. v. Western Electric Co.*,⁵⁴ the patent owner issued a license "expressly confined to the right to manufacture and sell the patented amplifiers for radio amateur reception, radio experimental reception, and home broadcast reception."⁵⁵ A licensee, however, knowingly sold patented amplifiers for use in a field prohibited by the license.⁵⁶ The Court held that a defendant who purchased amplifiers from the licensee infringed the patent because he made purchases with actual knowledge of the original license restrictions at the time of purchase.⁵⁷ Therefore, where a patent owner licenses a manufacturer to make his patented invention, the patent owner may restrict that manufacturing licensee's use of the invention and enforce the restriction under the patent laws.⁵⁸

Subsequently, the Federal Circuit reaffirmed the limitations of the exhaustion doctrine in *Mallinckrodt Inc. v. Medipart*.⁵⁹ The court overturned the district court, which had held that a "restriction on reuse was, as a matter of law, unenforceable under the patent law."⁶⁰ The Federal Circuit found that the district court incorrectly relied on the basic principle that a first unconditional sale of a patented device exhausts the patentee's right to control subsequent use of the device.⁶¹ The Federal Circuit clarified that "[t]he principle of exhaustion of the patent right [does] not turn a conditional sale into an unconditional one."⁶² Reviewing *Adams* and its progeny, the court noted that in early cases the Supreme Court "simply applied, to a variety of factual situations, the rule of contract law that sale may be

52. *Adams v. Burke*, 84 U.S. 453, 456 (1873).

53. *See generally* *Aro Mfg. Co. v. Convertible Top Replacement Co.*, 365 U.S. 336, 346 (1961).

54. *Gen. Talking Pictures Corp. v. W. Elec. Co.*, 304 U.S. 175, 180, *aff'd on reh'g*, 305 U.S. 124 (1938).

55. *Id.* at 180.

56. *Id.* at 179-80.

57. *Id.* at 180-82.

58. *See* *Mallinckrodt, Inc. v. Medipart, Inc.*, 976 F.2d 700, 706-08 (Fed. Cir. 1992).

59. *Id.* at 706-08.

60. *Id.* at 703-04.

61. *Id.* at 706.

62. *Id.*

conditioned.”⁶³ As a result, the cases “do not stand for the proposition that no restriction or condition may be placed upon the sale of a patented article. . . . Unless the condition violates some other law or policy (in the patent field, notably the misuse or antitrust law).”⁶⁴ The court held that private parties retain the freedom to contract concerning conditions of sale.⁶⁵

More recently, in *B. Braun Medical, Inc. v. Abbott Laboratories*, the Federal Circuit followed *Mallinckrodt* but noted that patent misuse places limitations on restrictive licenses.⁶⁶ The Federal Circuit held that the patent exhaustion doctrine does not apply to an expressly conditional sale or license and that in such a transaction, “it is more reasonable to infer that the parties negotiated a price that reflects only the value of the ‘use’ rights conferred by the patentee.”⁶⁷ However, a patentee may not impose the condition to impermissibly broaden the physical or temporal scope of the patent grant with anticompetitive effect.⁶⁸ Such a broadening constitutes patent misuse.⁶⁹

These principles of patent exhaustion have played a significant role in the plant breeding industry, notably in “seed bag tags,” a form of “shrink-wrap” license under which the purchaser agrees to specific provisions written on the bag upon opening the product.⁷⁰ Recently, however, a more difficult issue of whether or not patent exhaustion applies to the second generation of seeds purchased by consumers arose before the Federal Circuit in two cases, *Monsanto Co. v. McFarling* and the subsequent case *Monsanto Co. v. Scruggs*.

II. MONSANTO, SCRUGGS, AND MCFARLING

The plaintiff in both lawsuits, Monsanto, is one of the largest agricultural/chemical companies in the United States, with revenues approaching

63. *Id.* at 708.

64. *Id.*

65. *Id.*

66. 124 F.3d 1419, 1426 (Fed. Cir. 1997).

67. *Id.* at 1426.

68. *Id.* at 1427.

69. *Id.* at 1426.

70. In *Pioneer Hi-Bred International, Inc. v. Ottawa Plant Food, Inc.*, 283 F. Supp. 2d 1018, 1031-33 (N.D. Iowa 2003), Ottawa sought to invoke patent restrictions that were inconsistent with Ottawa’s claim of exhaustion. The court held that the seed bag tag provisions operated as conditions on the sale of seed that overrode the general principal of exhaustion. *Id.* at 1033-34.

\$6.5 billion in 2005.⁷¹ Monsanto develops, manufactures, licenses, and sells a variety of agricultural biochemistry and agricultural chemical products, including the world's best-selling herbicide Roundup®. Monsanto also develops, manufactures, licenses, and sells genetically modified seed technology.⁷²

The defendants in both *McFarling* and *Scruggs* are farmers. The defendant in *McFarling*, Honan McFarling, operates a 5,000-acre farm in Pontotoc, Mississippi.⁷³ Defendants Mitchell Scruggs, Eddie Scruggs, Scruggs Farm & Supplies, LLC, Scruggs Farm Joint Venture, HES Farms, Inc., MES Farms, Inc., and MHS Farms, Inc. (collectively "Scruggs"), run farms and a farm supply company in Mississippi, selling a variety of agricultural related products.⁷⁴

In 1997 and 1998, McFarling purchased Roundup Ready® soybean seed, signed the Technology Agreement, and paid the license fee for each purchase.⁷⁵ In violation of the agreement, McFarling saved 1,500 bushels of the patented soybean from his harvest during one season and planted them as seed in the next season.⁷⁶ The following year, McFarling saved 3,075 bags of soybean from his crop and subsequently planted them.⁷⁷ In January 2000, Monsanto sued McFarling for patent infringement and breach of contract.⁷⁸

As one of several defenses, McFarling argued that Monsanto's contractual prohibition against replanting the patented seeds violated the first sale doctrine.⁷⁹ The district court, however, rejected McFarling's defenses, and granted Monsanto's motions for summary judgment on the infringement of the '605 patent and the breach of the Technology Agreement claim.⁸⁰ McFarling appealed to the Federal Circuit.⁸¹ The Federal Circuit,

71. Headquartered in St. Louis, Missouri, Monsanto ranks 336 out of 500 on the Fortune 500 list of America's largest corporations and the twelfth largest chemical company on the same list. See *Fortune 500 2006: Monsanto*, CNNMONEY.COM, Apr. 17, 2006, <http://money.cnn.com/magazines/fortune/fortune500/snapshots/3779.html>.

72. See *id.*; Monsanto, Who We Are, http://www.monsanto.com/monsanto/layout/about_us/default.asp (last visited Mar. 5, 2007).

73. *Monsanto Co. v. McFarling (McFarling II)*, 363 F.3d 1336, 1339 (Fed. Cir. 2004).

74. *Monsanto Co. v. Scruggs*, 459 F.3d 1328, 1332 (Fed. Cir. 2006).

75. *Monsanto Co. v. McFarling (McFarling I)*, 302 F.3d 1291, 1293 (Fed. Cir. 2002).

76. *Id.*

77. *McFarling II*, 363 F.3d at 1339.

78. *McFarling I*, 302 F.3d at 1294.

79. *Id.* at 1297. McFarling's other defenses included antitrust violation, patent misuse, and violation of the Plant Variety Protection Act. *Id.* at 1294

80. *McFarling II*, 363 F.3d at 1341.

however, rejected McFarling's patent exhaustion and other defenses, holding that "[t]he 'first sale' doctrine of exhaustion of the patent right is not implicated, as the new seeds grown from the original batch had never been sold."⁸² In addition, the court held that not only did Monsanto's '435 patent read on the first generation seeds, "it also read[] on the second generation seeds."⁸³

On September 7, 2000—less than a year after filing suit against McFarling—Monsanto sued Scruggs in the United States District Court for the Northern District of Mississippi for the infringement of the Roundup Ready® patents.⁸⁴ Scruggs had purchased both Roundup Ready® soybean seed and Bollgard/Roundup Ready® cotton seed.⁸⁵ Like McFarling, Scruggs planted the patented seed, retained the new generation of seed, and planted them.⁸⁶

Unlike McFarling, however, Scruggs never signed a licensing agreement.⁸⁷ Although the '605 patent, which relates to the use of genetically modified plant cells, was at issue in both cases, the '435 patent was only at issue in *McFarling*.⁸⁸ Additionally, *Scruggs* pertained to a family patents, the McPherson patents, which claim methods for conferring insect-resistance.⁸⁹ In the district court, Scruggs raised several affirmative defenses including patent exhaustion.⁹⁰ Following discovery, however, the court granted Monsanto's motions for summary judgment.⁹¹ The district court held that Scruggs had indeed infringed Monsanto's patents, rejecting Scruggs' patent exhaustion defense because Monsanto had never made an unrestricted sale of its patented biotechnology despite the fact Scruggs had never signed a licensing agreement.⁹²

Scruggs' appealed the grant of summary judgment to the Federal Circuit.⁹³ The Federal Circuit affirmed, agreeing that the doctrine of patent exhaustion was inapplicable because there was no unrestricted first sale.⁹⁴

81. *Id.*

82. *McFarling I*, 302 F.3d at 1299.

83. *McFarling II*, 363 F.3d at 1343.

84. Brief of Appellee Monsanto in *Scruggs*, *supra* note 9, at 1.

85. *Monsanto Co. v. Scruggs*, 459 F.3d 1328, 1333 (Fed. Cir. 2006).

86. *Id.*

87. *Id.*

88. *Id.*; *McFarling II*, 363 F.3d at 1340.

89. *Scruggs*, 459 F.3d at 1333.

90. *Id.* at 1333-34.

91. *Id.* at 1333.

92. *Id.* at 1334.

93. *Id.* at 1332.

94. *Id.* at 1336.

The sale was restricted because the use of seeds by seed growers was conditioned on obtaining a license from Monsanto. Additionally, the court took the position that the next generation of seed produced by the initial purchased seed were entirely new seed.⁹⁵ Thus, the court repeated that the “‘first sale’ doctrine of exhaustion of the patent right is not implicated, as the new seeds grown from the original batch had never been sold.”⁹⁶ Most importantly, “[t]he fact that a patented technology can replicate itself does not give a purchaser the right to use replicated copies of the technology.”⁹⁷ The court recognized that “[a]pplying the first sale doctrine to subsequent generations of self-replicating technology would eviscerate the rights of the patent holder.”⁹⁸ The court’s decision in *Scruggs* reiterated the Federal Circuit’s ruling on self-replicating technology previously established in *McFarling*.⁹⁹

III. NEGATIVE IMPLICATIONS FOR PATENT EXHAUSTION AND SELF-REPLICATING TECHNOLOGY

In *McFarling* and *Scruggs*, the Federal Circuit held that Monsanto’s patents covered future generations of seed along with the initial seed.¹⁰⁰ Alternatively, the court could have held that either the first sale doctrine eliminated Monsanto’s rights to the next generation seed produced, or that *Scruggs* and *McFarling* had violated Monsanto’s licensing provisions even if the patent did not cover the second generation seed. Of the three possibilities, however, the court’s decision provides the optimal protection necessary for economic incentives to motivate investment in R & D while balancing the diffusion of current innovations and the development of future innovation. A Federal Circuit holding that patent exhaustion eliminated Monsanto’s rights to future generations of seed would have significantly harmed incentives for investment in self-replicating technology and likely encouraged the use of genetic restriction technologies, thus shifting control of intellectual property rights out of the hands of the public and into the hands of private entities.

95. *Id.*

96. *Id.* (quoting *Monsanto Co. v. McFarling (McFarling I)*, 302 F.3d 1291, 1299 (Fed. Cir. 2002)).

97. *Scruggs*, 459 F.3d at 1336.

98. *Id.*

99. *Id.*

100. *See id.*; *McFarling I*, 302 F.3d at 1298-99.

A. Patent Exhaustion Could Impede the Innovation in Self-Replicating Technology

A Federal Circuit ruling that the first sale doctrine exhausted Monsanto's rights in subsequent generations of seeds would have negatively impacted incentives for investment in self-replicating technology. Without some control over the invention after the sale, selling genetically engineered seed would "amount to handing over the keys to the factory."¹⁰¹ Every purchaser could immediately go into direct competition with the inventor.¹⁰² As a result, the inventor would risk the patent monopoly at the first and each subsequent sale. He would be left without a reasonable patent term to recoup his costs of creation and could not earn a profit to compensate for the risk of investment.¹⁰³ No longer being able to recover the immense development costs accrued during the production of the technology incrementally through sales to a large number of small enterprises, the inventor would have to recoup the development costs in one or a few large sales, thereby greatly reducing the potential market.¹⁰⁴ As a result, the small farmer, unable to pay the higher costs, could not obtain the improved varieties of seed and would have to compete from a technologically inferior position.¹⁰⁵

Additionally, in the instant cases there are more players involved in the transaction than just the farmers and the inventor. Monsanto licenses its technology to numerous seed producers who combine Monsanto's genetic technology with seed having traits obtained through their own breeding programs.¹⁰⁶ These seed companies spend substantial amounts of money annually in the development and testing of improved soybean and cotton varieties.¹⁰⁷ Cotton varieties, specifically, are bred to have a combination of desirable traits such as increased yield, stress resistance, and improved

101. See Scott A. Chambers, *Exhaustion Doctrine in Biotechnology*, 35 IDEA 289, 319 (1995).

102. See *id.*

103. *Id.*

104. *Id.*

105. *Id.*

106. Brief of Appellee Monsanto in *Scruggs*, *supra* note 9, at 5.

107. See Brief for Delta & Pine Land Company as Amicus Curiae, at 2, *Monsanto Co. v. Scruggs*, 459 F.3d 1328 (Fed. Cir. 2006) (No. 04-1532). In the United States, commercial planting seed may be certified according to Standard Seed Certification Program as outlined by the Association of State Certifying Agencies (AOSCA) and as regulated by the Federal Seed Regulations. Producing certified seed requires specific land conditions, the use of planting eligible seed stock, and meeting standards based on laboratory analysis. All of these elements encompass the investments seed producers must make. *Id.* at 12.

fiber quality.¹⁰⁸ Seed growers protect their investments by obtaining Plant Variety Protection certificates and, more recently, utility patents for those newly developed varieties.¹⁰⁹

Removing protection from the next generation of seed would diminish the incentives for seed growers to incorporate Monsanto's technology into their products. If a purchaser of self-replicating technology immediately becomes a producer, he avoids costs associated with initially incorporating Monsanto's technology into the seeds and producing the new varieties. As a result, fewer seed companies would be willing to devote the resources for incorporating Monsanto's technologies, thereby increasing the transaction costs for Monsanto to license its seed technology to independent seed producers. Monsanto would have to incur the additional costs of production.

Despite these economic arguments against broadening the first sale doctrine, McFarling and others argued that prohibiting farmers from saving and replanting their own seed destroys a "secondary market," which would cause an artificially high price for Roundup Ready® seed.¹¹⁰ McFarling noted that a farmer who buys a new bag of Roundup Ready® seed pays both a \$6.50 per bag technology fee for Monsanto's technology and approximately \$18.00¹¹¹ per fifty-pound bag for a total approximate price of \$24.00.¹¹² On the other hand, if a farmer could save his seed, he would only invest about \$7.00 per bag.¹¹³ Citing an agricultural economist, McFarling argued that "[p]rohibiting a farmer from saving and replanting his own seed causes the market to be inefficient and results in higher prices for new seed."¹¹⁴

While it is true that limiting the doctrine of patent exhaustion and prohibiting seed saving leads to higher prices, this economic argument focuses exclusively on the economic position of the farmer and completely ignores the larger economic framework in which many other parties play a role. While it may be beneficial in the short-term for the farmer to exact the most profits from his crops by means of saving seed, Monsanto and similar companies need the broader scope of rights to profit from their investment. Otherwise, they will not make these types of investments in the

108. *Id.* at 2.

109. *Id.* at 3.

110. Corrected Brief of Appellant at 7, *Monsanto Co. v. McFarling*, 363 F.3d 1336 (Fed. Cir. 2004) (No. 03-1177).

111. This amount can vary as much as \$2.00 per bag. *Id.* at 6.

112. *Id.* at 5-6.

113. *Id.* at 6.

114. *Id.* at 7.

first place and farmers will be unable to profit from the long-term benefits being offered by these new technologies.

In addition, if the prohibition on saving seed was as economically inefficient as McFarling claimed, farmers would not purchase Roundup Ready® seed. Farmers do, however, purchase the seed and abide by the licensing agreements.¹¹⁵ While the initial costs of Roundup Ready® seed are higher for farmers, farmers make other economic gains in the form of reduced labor for pest and weed control as well as improved crop yields. The use of Roundup Ready® seed allows fewer herbicide applications and the use of fewer types of herbicide, leading to reduced time in the field and lower labor costs, and affords more flexibility to rotate crops grown depending on market conditions.¹¹⁶ Some farmers note cleaner fields and greater and higher quality yields because of decreased crop damage from weeds and/or certain herbicides when using Roundup Ready® seeds.¹¹⁷ Therefore, McFarling's arguments about inefficiency are not so much about the system as a whole being economically inefficient as they are about individual farmers achieving the greatest short-term gains that they can at the expense of others.

Finally, without effective patent laws protecting self-replicating technologies, innovators will be pushed towards pursuing innovations that eliminate the self-replicating characteristics of this technology. As a result, inventors will have sole control of the technologies and the resulting innovation will be outside the regulation of patent laws. This scenario marks the second possible negative outcome had the Federal Circuit failed to protect subsequent generations of Monsanto's seed technology.

B. Technological Protections for Seed Innovation

The history of content licensing for digital media may offer a glimpse into what the future may hold for self-replicating technologies if the technologies are not adequately protected. Similar to the self-replicating technology at issue, ideas, books, music, and other valuable creative or expressive works may be costly to create, but nearly costless to duplicate and disperse. Just as innovators in the digital media industry worked to maintain a return on their investment through technological "lock out" measures, innovators working with self-replicating biotechnology may adopt similar measures if faced with inadequate legal protection.

115. See, e.g., Corrected Brief of Shea Leatherman d/b/a Riverfield Farms as Amicus Curiae in Support of Plaintiff-Appellee at 1-2, *Monsanto Co. v. Scruggs*, 459 F.3d 1328 (Fed. Cir. 2006) (No. 04-1532).

116. *Id.* at 5-6.

117. *Id.* at 5.

Recent technological innovations have facilitated the infringement of copyrighted works, such as software, music, pictures and movies, by providing simple, fast, and inexpensive ways to duplicate these works.¹¹⁸ Initially, the enormous informational magnitude of music, film, and complex software coupled with limited microprocessor power, low fidelity of computer peripherals, and limitations of memory storage capacity prevented these works from being stored, perceived, and reproduced efficiently on computer devices.¹¹⁹ By the late 1980s and early 1990s, technological advances improved the capability and reduced the cost of computing.¹²⁰ Quickly, computers became an attractive platform for videogames, multimedia content, and music.¹²¹ These included developments in hardware and network technology, data compression technologies, a new wave of consumer electronics, the development of broadband access for internet home users, and the development of peer-to-peer file sharing networks.¹²²

One such development, the peer-to-peer file sharing network, offers an example of how modern technological inventions immediately increased unlawful duplication and distribution of copyrighted works. From their inception, peer-to-peer technology enabled sharing audio and video files converted or extracted from copyrighted media.¹²³ While this initially led to a limited number of problems when few used the networks, piracy became rampant as the number of peer-to-peer end-users and the number of technological options for file-sharing increased.¹²⁴ Today, the Recording Industry Association of America estimates that computer users illegally download more than 2.6 billion copyrighted files, mostly songs, every month.¹²⁵ Despite efforts to counteract such illegal downloading, the music industry loses millions of dollars in sales to online piracy.¹²⁶

In response to growing piracy, a number of content industries such as the music industry began resisting the introduction of digital technologies

118. Peter S. Menell, *Envisioning Copyright Law's Digital Future*, 46 N.Y.L. SCH. L. REV. 63, 66, 98-99, 103, 107, 114 (2002-03).

119. *Id.* at 66, 99, 110.

120. *Id.* at 66, 99.

121. *Id.*

122. *Id.* at 66, 110.

123. See Robert A. Heverly, *The Information Semicommons*, 18 BERKELEY TECH. L.J. 1127, 1135 (2003).

124. *Id.* at 1136.

125. See Recording Industry Association of America (RIAA), *Some Facts About Music Piracy*, June 5, 2003, http://www.riaa.com/news/newsletter/062503_c.asp.

126. See *Illegal Downloads Grow Despite Lawsuits*, CNNMONEY.COM, Feb. 8, 2007, http://money.cnn.com/2007/02/08/technology/personaltech/piracy_lawsuit.reut/index.htm?postversion=2007020812.

through litigation.¹²⁷ Meanwhile, the software industry's response was to adopt "shrink-wrap" and "click-wrap" licenses to limit consumers' uses of a product including duplication and distribution.¹²⁸ "Shrink-wrap" and "click-wrap" licenses take their names from the practice of a purchaser accepting licensing terms by breaking the shrink-wrap cellophane on the product package or using a computer mouse to click on a graphic labeled "I agree."¹²⁹ Despite the increased prevalence of lawsuits to enforce these licenses, content industries experienced extreme difficulties in policing such agreements.¹³⁰

As a result, content industries turned to encryption and digital rights management (DRM) as an essential means of protecting content in the on-line marketplace.¹³¹ These sophisticated lock-out systems allow owners to dictate the terms of access to digitized content.¹³² In addition, they govern a wide range of user behavior, such as the number of times a work may be accessed, the duration of access, the ability to reproduce or transmit the work, and the payment schedule for additional access.¹³³

In the agricultural industry, Monsanto faces an analogous problem to that of copyright holders in protecting its intellectual property. Just as modern technological advancements in computer technology enable the inexpensive duplication of copyrighted media, the self-replicating nature of seed provides farmers with an inexpensive means of duplicating Monsanto's patented technology. To protect its intellectual property and thus recoup its development costs, Monsanto initially used "seed bag tag" licenses similar to the "shrink-wrap" and "click-wrap" licenses used by the software industry. Shortly thereafter, Monsanto began suing infringing farmers like McFarling and Scruggs, just as the music industry had done with file sharers on peer-to-peer networks.¹³⁴ Unlike copyright holders, however, Monsanto has yet to utilize technological constraints akin to DRM to limit the use of its seeds. While such technological controls may

127. See RIAA, Issues: What the RIAA is Doing About Piracy, <http://www.riaa.com/issues/piracy/riaa.asp> (last visited Feb. 27, 2007) [hereinafter RIAA Issues]. The RIAA has gone beyond suing the peer-to-peer networks themselves to suing individual downloaders. See *id.*

128. See Dan L. Burk, *DNA Rules: Legal and Conceptual Implications of Biological "Lock-Out" Systems*, 92 CALIF. L. REV. 1553, 1561 (2004).

129. *Id.*

130. See *id.* at 1563.

131. Menell, *supra* note 118, at 129-38.

132. See Burk, *supra* note 128, at 1563.

133. *Id.*

134. See RIAA Issues, *supra* note 127.

not have been available to Monsanto a number of years ago, recent advances could soon make these protection measures a reality.¹³⁵

Biotechnology, like software, now permits technological constraints to be purposefully programmed into genetic code. The recent development of transgenic technologies called genetic use restriction technologies (GURTs) allows for self-policing seeds.¹³⁶ These technologies function by introducing genetic elements into the plants which produce a toxin late in seed maturation.¹³⁷ The toxin kills the seed after the plant has matured, producing a safe but sterile crop for the farmer, forcing him to purchase new seeds each year because the seeds produced in growing the crop are not viable for replanting.¹³⁸ Like software, a genetically altered seed carries within its own make-up a “lock out” prohibition on unlicensed use.

The recent appearance of GURTs bears a striking resemblance to the history of content licensing in digital media.¹³⁹ Recognizing that DRM technologies were vulnerable to hacking, content industries sought to expand copyright protection to include limits on the decryption or circumvention of technological protection systems and the trafficking in tools to achieve these means.¹⁴⁰ The passage of the Digital Millennium Copyright Act (DMCA) provided this heightened level of protection.¹⁴¹

Various interest groups, including internet service providers, consumer electronic manufacturers, library associations, and copyright professors expressed concern about the expansion of copyright law upon those who transmit content and wish to make “fair use” of copyrighted works.¹⁴² This concern arose because the DMCA “effectively provides content owners with a new right of technological access, independent of any intellectual property right.”¹⁴³ One example is that the copyright owner may decide that the technological controls will not permit copying of the controlled content, whether or not the copying would be permissible under a statutory exemption such as “fair use.”¹⁴⁴ Since the integrity of the controls in the

135. See Burk, *supra* note 128, at 1553.

136. See *id.*

137. See U.S. Patent No. 5,723,765 (filed June 7, 1995); see also Martha L. Crouch, How the Terminator Terminates: An Explanation for the Non-scientist of a Remarkable Patent for Killing Second Generation Seeds of Crop Plants (1998), <http://www.edmonds-institute.org/crouch.html>.

138. See CROUCH, *supra* note 136.

139. See Burk, *supra* note 128, at 1560.

140. Menell, *supra* note 119, at 134.

141. See Burk, *supra* note 128, at 1564.

142. Menell, *supra* note 119, at 134-38.

143. See Burk, *supra* note 128, at 1564.

144. *Id.*

DMCA is supported by the state, “the result is to shift enforcement of the rights-holder’s interest from penalties for unauthorized infringement to penalties for unauthorized access, deterring otherwise legitimate uses of the protected content.”¹⁴⁵

Although anti-circumvention statutes similar to the DMCA for self-replicating technologies have yet to be adopted, the development of GURTs may have an equally dramatic impact on the balance of ownership and control in biological technologies. This is the case because GURTs contain designs that limit the ability of consumers to exercise choice regarding the use of those products.¹⁴⁶ While GURTs will provide inventors with the economic incentives to invest in R & D by protecting the unlimited use of future generations of seeds and reducing the current costs of policing the use of such technology, they may do so at a cost to the diffusion of current innovations and the development of future innovation. This would occur because the control of intellectual property rights will shift out of the hands of the public and into the hands of private entities that have less concern for maintaining the careful balance within patent law. The enactment of laws akin to the DMCA would support this shift in patent law in a similar manner to the DMCA’s role in copyright law.

Currently, the Plant Variety Protection Act (PVPA) includes a “farmer’s exemption” which allows farmers to save seed from a proprietary crop, and a research exemption which permits agricultural research involving the plant.¹⁴⁷ These exemptions provide exceptions to a seed developer’s control.¹⁴⁸ While plant variety owners have attempted to eliminate such exceptions through licensing regimes that place conditions on access to their seeds, policing the use of the seeds and enforcing the terms of the licenses has proven difficult.¹⁴⁹ GURTs, however, offer plant variety owners the technological means for controlling the use of their products outside of the privileges afforded by the law. Just as copyright holders may employ DRM technologies to limit the transmission or duplication of copyrighted materials in situations where “fair use” permits such actions, GURTs may limit seed-saving exemptions and research exemptions under the PVPA.

The PVPA differs from utility patent protection in its length and scope of coverage, however, both systems are intended to maintain the balance within patent law between incentives to invest in R & D and diffusion of

145. *Id.*

146. *See id.* at 1567.

147. *See id.* at 1557.

148. *Id.*

149. *Id.* at 1158.

current and future innovation. Aspects of patent law, such as the experimental use doctrine, encourage the diffusion of innovation by allowing a person who makes and uses a patented product or process to do so without infringing the patent—if the use is for the purposes of research or experimentation and not for profit.¹⁵⁰ Through making and using a patented product, the researcher can gain a better understanding of how the technology works and may build upon the technology. Technological controls, such as GURTs, however, limit consumer choice regarding the use of those products. As a result, uses that would fall under the experimental use doctrine are no longer available, to the detriment of the patent system and the incentives it establishes.

The development of technological means to control use substitute private technological rules for the public statutes enacted by Congress raises concerns for the public. Producers who utilize “lock out” technologies may in essence become private legislatures, imposing rules of usage without regard to the broader public interest that informs democratic rule-making.¹⁵¹ Without proper legal protection, companies like Monsanto may be forced down a road similar to that taken by copyright holders. GURTs, like DRM technologies, may impede the desires of public legislation and impair the diffusion of current innovation and promotion of future innovation.

IV. CONCLUSION:

The Federal Circuit’s holdings in *Monsanto v. McFarling* and *Monsanto v. Scruggs* provide inventors of self-replicating seed technology with the greatest economic incentives for investing in R & D while balancing the diffusion of current innovation and promoting future innovation. Eliminating patent protection altogether through the first sale doctrine would significantly impair incentives for investment in self-replicating technology. To maintain a return on their investment in R & D, inventors would have to charge high prices through a small number of sales. This would negatively affect small farmers unable to pay the high costs. Additionally, patent exhaustion of next generation seeds would harm seed producers responsible for incorporating Monsanto’s technology into their own products. Finally, the similarities between the history of content licensing and

150. See, e.g., *De Graffenried v. United States*, 20 Cl. Ct. 458, 488 (1990) (stating in dictum that “experimental use may not constitute infringement”); *Chesterfield v. United States*, 159 F. Supp. 371, 375-76 (Ct. Cl. 1958); *Ruth v. Stearns-Rogers Mfg. Co.*, 13 F. Supp. 697, 703 (D. Colo. 1935), *rev’d on other grounds*, 87 F.2d 35 (10th Cir. 1936).

151. See *Burk*, *supra* note 128, at 1567.

DRM technology in digital media and the protection of seed technology in the agricultural industry suggest that the development of GURTs may negatively affect the patent system's efforts to encourage the diffusion of innovations and the development of future innovation by shifting the control of intellectual property rights out of the hands of the public and into the hands of private entities.

BERKELEY TECHNOLOGY LAW JOURNAL

LG ELECTRONICS, INC. v. BIZCOM ELECTRONICS, INC.: SOLVING THE FOUNDRY PROBLEM IN THE SEMICONDUCTOR INDUSTRY

By Mehdi Ansari

Smaller chip designers cannot afford to operate manufacturing plants. Instead, they hire manufacturers to build their designs and sell back chips made to the designer's specifications. In an effort to secure "patent peace" and focus on innovation, leading semiconductor manufacturers entered blanket cross-licensing agreements in the 1980s and 1990s. The combination of contract manufacturing and these broad licensing agreements creates "the foundry problem," in which a third-party competitor can free-ride on the licensing agreements between patentees and foundries to gain access to technologies without negotiating their own license.¹ A recent case, *LG Electronics, Inc. v. Bizcom Electronics, Inc.*,² demonstrated how carefully defined licensing agreements can overcome the foundry problem. This Note analyzes the foundry problem and the solution employed by LG Electronics as compared to other approaches. It also recommends further devices a patent licensor can use to avoid the foundry problem.

Section I.A provides a background on the semiconductor industry. Section I.B explains the doctrine of patent exhaustion, which prevents a patentee from suing its licensee's customers for patent infringement. Section I.C then explores the roots of the foundry problem in the semiconductor industry. Part II discusses *LG Electronics* and how the court resolved the foundry problem. Part III examines other potential solutions to the foundry problem and analyzes *LG Electronics* in light of these solutions.

I. BACKGROUND

A. Licensing Practices in the Semiconductor Industry

For forty years, the semiconductor industry has been characterized by its rapid product innovation.³ For example, the number of transistors that

© 2007 Mehdi Ansari

1. The term "foundry" refers to a company that is equipped with a fabrication plant and manufactures devices based on designs of other companies

2. *LG Elecs., Inc. v. Bizcom Elecs., Inc. (Bizcom)*, 453 F.3d 1364 (Fed. Cir. 2006).

3. INTERNATIONAL TECHNOLOGY ROADMAP FOR SEMICONDUCTORS, INTERNATIONAL TECHNOLOGY ROADMAP FOR SEMICONDUCTORS: EXECUTIVE SUMMARY 1 (2005),

can fit on a chip has doubled every year, a sign of the progress of semiconductor technology.⁴ This trend has been accompanied by exponential reductions in the cost of transistors.⁵ These significant improvements in productivity have in turn contributed to a higher quality of life through popularization of personal computers and consumer electronics.⁶

Rapid growth and high demand have made the semiconductor industry extremely competitive. Cutting-edge technology is essential to success, and firms make large investments in research and development.⁷ The growing cost of research has motivated companies to collaborate and form partnerships and cooperative ventures.⁸ Despite all of this collaboration, every company still runs a high risk of infringing another's patents because companies accidentally develop similar technology. To overcome this problem, the semiconductor industry has chosen to share patents through broad cross-licensing transactions, even licensing entire patent portfolios.⁹ This practice provides companies with patent peace and allows development of parallel technology without worry of innocent infringement.

Broad cross-licensing creates problems, however, because of the manufacturing structure of the semiconductor industry. There are two kinds of semiconductor companies: those that are capable of both designing and fabricating (manufacturing) chips, and those that only design. A complete fabrication facility costs over one billion dollars, so only the largest and most profitable companies can afford to operate one.¹⁰ Smaller companies follow a different business model. These "fabless"¹¹ companies focus solely on designing and developing new technology, as opposed to manufacturing it. They then enter into agreements with companies that have fabri-

available at <http://www.itrs.net/Links/2005ITRS/ExecSum2005.pdf> [hereinafter ITRS REPORT].

4. George M. Scalise, Semiconductor Industry Association: President's 2005 Letter, http://www.sia-online.org/abt_president.cfm [hereinafter SIA Letter] (noting that Gordon Moore first noticed this trend about forty years ago, and it has since been called "Moore's law").

5. *Id.*

6. See ITRS REPORT, *supra* note 3, at 1.

7. See *id.*; SIA Letter, *supra* note 4.

8. ITRS REPORT, *supra* note 3, at 1.

9. See *Intel Corp. v. ULSI Sys. Tech., Inc. (ULSI)*, 995 F.2d 1566, 1571 (Fed. Cir. 1993).

10. Alfonso Velosa, *Semiconductor Manufacturing: Boom Busts, and Globalization*, 35-1 THE BRIDGE, Spring 2005, at 28.

11. "Fabless" is a term of art used to describe companies that do not have their own fabrication facility.

cation facilities to produce their designs. The term “foundry” refers to a company that is equipped with a fabrication plant and manufactures devices based on designs of other companies.

B. The Doctrine of Patent Exhaustion

A patentee’s right to exclude others from making, using, or selling its patented invention is limited by the doctrine of patent exhaustion. Section 154 of the Patent Act codifies the patentee’s exclusive rights and provides that the patentee may authorize third parties to exercise those exclusive rights.¹² The patent exhaustion doctrine limits the patentee’s right by permitting purchasers of patented goods to use and resell them without the consent of the patent owner.¹³ This limitation is justified because the patent owner surrendered his rights to control the patented article by selling it for a desired consideration.¹⁴ The purchaser has paid for the patented article and should have the same rights as owners of other goods, namely the rights to use and resell.

Adams v. Burke is the origin of the patent exhaustion doctrine.¹⁵ In *Adams*, the Supreme Court held that when a patentee sells a product whose sole value is in its use, “he receives the consideration for its use and he parts with the right to restrict that use. The article . . . passes without the limit of the monopoly.”¹⁶ Later, in *Keeler v. Standard Folding-Bed Co.*, the Supreme Court held that under the *Adams* doctrine, the purchaser of a patented article could freely resell it as well because the court found no distinction between the right to use and the right to resell.¹⁷

The patent exhaustion doctrine applies to sales by the patentee’s licensees as well.¹⁸ In *Intel Corp. v. ULSI Sys. Tech., Inc.*, the Federal Circuit held, “[the] longstanding principle [of patent exhaustion] applies similarly to sale of a patented product manufactured by a licensee acting within the scope of the license.”¹⁹ The rule is that an authorized sale of a patented product, whether by the patentee or its licensees, places that product

12. 35 U.S.C. § 154 (1988).

13. The patent exhaustion doctrine is also referred to as the first-sale doctrine. *Bizcom*, 453 F.3d at 1369.

14. *See id.*

15. *Adams v. Burke*, 84 U.S. 453 (1873).

16. *Id.* at 456.

17. *Keeler v. Standard Folding-Bed Co.*, 157 U.S. 659, 662, 666 (1895).

18. *Unidisco, Inc. v. Schattner*, 824 F.2d 965, 968 (Fed. Cir. 1987).

19. *ULSI*, 995 F.2d at 1568 (citing *Unidisco*, 824 F.2d at 968).

beyond the reach of the patent, and ends the patentee's rights with respect to the product.²⁰

The patent exhaustion doctrine only applies to unconditional sales. In a contract for sale, the parties are free to include conditions as long as those conditions do not violate law or policy.²¹ If a contract includes an enforceable condition, then insofar as that condition allows the patentee to retain certain rights, those rights are not exhausted.²² "The principle of exhaustion of the patent right [does] not turn a conditional sale into an unconditional one."²³ It is presumed that a patentee who sells the patented device subject to a restriction receives consideration only for the restricted use. The purchaser may only use the device without violating that restriction.²⁴ Nonetheless, in the absence of such restriction, patent exhaustion is the default rule.

C. The Foundry Problem in the Semiconductor Industry: The Intel Cases

The patent exhaustion doctrine, combined with broad cross-licensing, has created the "foundry problem." The foundry problem exists because many companies need to contract out the manufacturing of semiconductor devices. A typical scenario starts when company X grants a broad license to company Y. Such a license would include the rights to use, sell, and make the patented invention. A third company, Z, develops a new design for a semiconductor chip, but cannot make the chip itself, either because it has no manufacturing capability or because its design would infringe one of X's patents. Z contracts with Y to have the chip fabricated. Y can use its license with X to make products to Z's specifications that are covered by X's patents. This is a problem because Z could be X's competitor and X might have denied Z a license to use the technology. By going through

20. *Id.*

21. *Mallinckrodt, Inc. v. Mediport, Inc.*, 976 F.2d 700, 708 (Fed. Cir. 1992) (citing *United States v. Univis Lens Co.*, 316 U.S. 241 (1942)). Patent misuse and antitrust violations are examples of how a conditional sale may violate law or policy. *See id.*

22. *Id.* at 709-10.

23. *Id.* at 706.

24. *See generally* 5 DONALD S. CHISUM, CHISUM ON PATENTS § 16.03[2][a][iii] (2004) (discussing *Kendall Co. v. Progressive Medical Tech., Inc.*, 85 F.3d 1570 (Fed. Cir. 1996), and *Mallinckrodt, Inc. v. Mediport, Inc.*, 976 F.2d 700 (Fed. Cir. 1992), in which the Federal Circuit clarified that the breach of an enforceable condition may leave the breaching party open to infringement).

foundry Y, Z has gained protection through Y's licensing agreement without asking for X's consent.²⁵

Intel, the largest semiconductor company in the world, has been involved in a number of situations that resemble the above scenario. A trio of Intel cases introduced the foundry problem and illustrated its effects.

1. *Intel Corp. v. U.S. International Trade Commission*

Intel entered into a broad cross-licensing agreement with Sanyo, granting Sanyo the right to make, use and sell "any Sanyo . . . products" covered by Intel's patents.²⁶ Sanyo then manufactured products for various third-party companies incorporating Intel's patented technologies.²⁷ Intel brought suit against the third-party companies alleging patent infringement. One of the defendants, Atmel, argued that it did not infringe Intel's patents because Sanyo, an authorized licensee of Intel, sold the products.²⁸

The Federal Circuit stated that if the agreement permitted Sanyo to act as a foundry, the purchase of those licensed products exhausted Intel's rights and the purchaser would be free to use or resell the products.²⁹ Intel argued that, as the agreement put forth, Sanyo was only authorized to manufacture "Sanyo . . . products."³⁰ Intel argued that "Sanyo . . . products" included only products designed by Sanyo.³¹ The court examined the contract as a whole and held that the words "Sanyo . . . products" should be construed to cover only Sanyo-designed and manufactured products.³² The court pointed out that if the term were construed to include foundry rights, it would result in conflicts and ambiguities in the agreement.³³ Therefore, the court held that in the interest of the consistency of the agreement, the license here did not give Sanyo foundry rights and Sanyo was only authorized to sell Sanyo-designed products.³⁴ Hence, the unauthorized sales did not exhaust Intel's patents.³⁵

25. See *ULSI*, 995 F.2d at 1571 (Plager, J., dissenting).

26. *Intel Corp. v. U.S. Int'l Trade Comm'n (ITC)*, 946 F.2d 821, 826 (Fed. Cir. 1991) (quoting the Intel-Sanyo licensing agreement).

27. *Id.*

28. *Id.*

29. *Id.* (citing *United States v. Univis Lens Co.*, 316 U.S. 241, 250-52 (1942)).

30. *Id.*

31. *Id.*

32. *Id.* at 828.

33. *Id.*

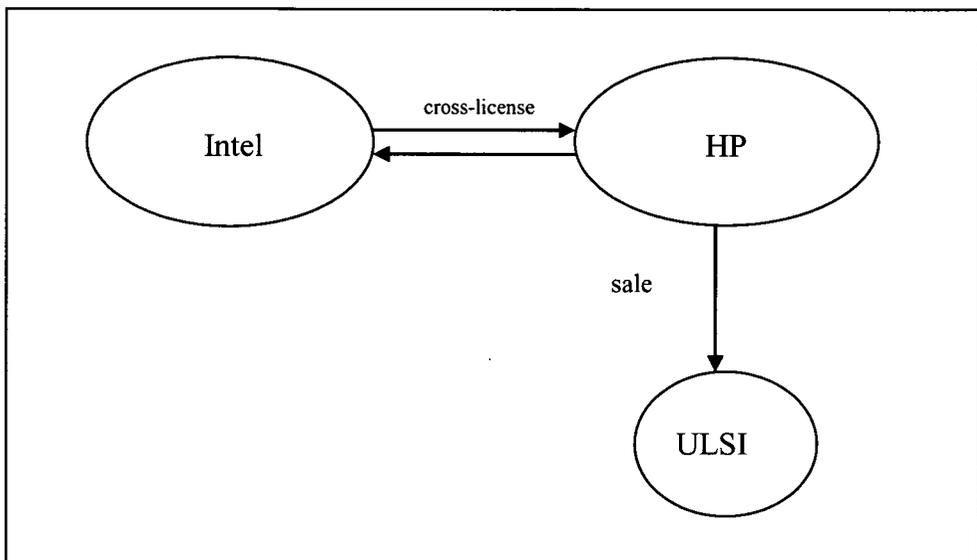
34. *Id.*

35. *Id.*

2. *Intel Corp. v. ULSI System Technology, Inc.*

The *ULSI* case involved a dispute over a patent for the design and operation of a floating-point math processor. Intel owned the patent and developed a line of math coprocessors using the patented technology.³⁶ Intel and Hewlett-Packard (“HP”) entered into a broad cross-licensing agreement, under which each company granted the other a broad license to all present and future patents.³⁷ The companies intended this broad license to increase the freedom of design.³⁸

ULSI sold a math coprocessor that directly competed with Intel’s coprocessors.³⁹ ULSI did not have the capability to manufacture its coprocessors, so it formed a foundry relationship with HP. In addition, an Intel patent covered the ULSI coprocessors.⁴⁰ Under the manufacturing agreement, ULSI purchased coprocessors made by HP to ULSI’s specifications.⁴¹



As in *ITC*, Intel sued the third-party chip designer for patent infringement. Unlike the license agreement with Sanyo in *ITC*, there was no lan-

36. *ULSI*, 995 F.2d at 1567.

37. *Id.*

38. *Id.* at 1573 (Plager, J., dissenting).

39. *Id.* at 1567.

40. *Id.*

41. *Id.*

guage in the Intel-HP agreement to limit the license to "HP products." Intel therefore argued that HP's sale constituted a *de facto* sublicense prohibited by the Intel-HP agreement.⁴² The Federal Circuit found this argument unpersuasive.⁴³ The court noted the difference between a sale and a sublicense; if HP had empowered ULSI to make the chips or to use or sell any such chips other than the ones purchased, then a sublicense would have been granted.⁴⁴ However, HP only sold completed products, and therefore, HP did not grant a sublicense to ULSI.⁴⁵

Intel further argued that HP did not sell a product to ULSI, but actually sold fabrication services.⁴⁶ The Federal Circuit rejected this argument as well, pointing out that the contract between HP and ULSI called for sale of semiconductor wafers that incorporated ULSI's coprocessor design.⁴⁷ The court stated that the fact that the design and the specifications came from ULSI had no bearing on whether there was a sale of coprocessors and concluded that HP sold the patented coprocessors.⁴⁸ Hence, the Federal Circuit accepted ULSI's argument that under the Intel-HP agreement, HP was authorized to manufacture coprocessors using third-party designs and act as a "foundry."⁴⁹ HP's sale of the coprocessors was an authorized sale and thus, patent exhaustion insulated ULSI from infringement of Intel's patent.⁵⁰

3. *Cyrix Corp. v. Intel Corp.*

The foundry problem continued to haunt Intel, culminating in 1996 in *Cyrix Corp. v. Intel Corp.*⁵¹ Cyrix designed and sold microprocessors.⁵² It provided the microprocessor designs to its foundries, International Business Machines ("IBM") and SGS-Thomson Microelectronics ("ST"), to manufacture chips containing those microprocessor designs.⁵³ Both foundries

42. *Id.*

43. *Id.* at 1569-70.

44. *Id.* at 1569.

45. *Id.* (citing *Lisle Corp. v. Edwards*, 777 F.2d 693, 695 (Fed. Cir. 1985)).

46. *Id.*

47. *Id.*

48. *Id.*

49. *Id.* at 1568. The court justified its finding by stating that HP's foundry right was a result of the broad license granted by Intel, and that Intel presumably received adequate consideration for it. *Id.* at 1569.

50. *Id.* at 1570.

51. *Cyrix Corp. v. Intel Corp.*, 77 F.3d 1381 (Fed. Cir. 1996).

52. *Id.* at 1383.

53. *Id.*

dries were Intel licensees and their agreements with Intel included the right to make semiconductors covered by the licensed patents.⁵⁴

The question presented to the Federal Circuit was whether the Intel-IBM agreement gave IBM the right to act as a foundry or whether the agreement was limited to products designed and made by IBM.⁵⁵ Intel argued that the inclusion of the word "IBM" in certain terms in the agreement (for example, "Intel . . . hereby grants to IBM . . . a license . . . to make, use, lease, sell and otherwise transfer *IBM* Licensed Products") created a limitation similar to the "Sanyo products" limitation in the *ITC* case, and hence, restricted the license to products designed by IBM.⁵⁶ Unlike *ITC*, this agreement specifically defined "IBM Licensed Products" so the Federal Circuit focused on this definition when evaluating Intel's argument.⁵⁷ The definition did not include any terms that limited the license's application to products designed by IBM.⁵⁸ The Federal Circuit found that absent any reason to limit the term, it should be construed broadly to cover any products manufactured by IBM, and that the mere existence of the word "IBM" in the term did not modify its meaning.⁵⁹ The Federal Circuit thus held that IBM had the right to make and sell the chips as a foundry.⁶⁰ The court also held that unlike the *ITC* case, inclusion of foundry rights did not create conflicts or ambiguities within the agreement.⁶¹ Therefore, in contrast to the language in the agreement with Sanyo in *ITC*, the agreement here gave IBM foundry rights and IBM was authorized to sell products to third parties that were covered under Intel's patents. Accordingly, IBM's manufacture of chips based on Cyrix's design and the subsequent sale of the chips to Cyrix were authorized under the IBM-Intel agreement and therefore, resulted in patent exhaustion.⁶²

54. *Id.* ST acquired its license by assignment from Mostek, who was the original licensee of Intel.

55. With respect to patent exhaustion and the foundry problem, the ST agreement was analogous to the IBM agreement; however, the ST agreement had other immaterial complications regarding ST's contracting out its manufacturing process. For this reason, this Note focuses only on the IBM agreement.

56. *Id.* at 1384-85. Intel relied on *ITC*, in which the court construed "Sanyo products" as limiting the grant of rights to Sanyo-designed and manufactured products.

57. *Id.* at 1385.

58. *Id.*

59. *Id.*

60. *Id.* at 1386.

61. *Id.*

62. *Id.* The court reached a similar result regarding the ST agreement. *Id.* at 1388-89.

II. *LG ELECTRONICS, INC. V. BIZCOM ELECTRONICS, INC.*

A. LGE's Foundry Problem and the District Court's Decision

LG Electronics, Inc. ("LGE") owned multiple patents relating to personal computer technology.⁶³ LGE entered into a licensing agreement with Intel, under which Intel acquired the right to manufacture products covered by LGE's patents.⁶⁴ The license expressly stated that Intel's customers were not allowed to combine the products covered by the license with non-Intel products.⁶⁵

Bizcom Electronics, Inc. ("Bizcom") manufactured computers using microprocessors and chipsets purchased from Intel.⁶⁶ The chips Intel manufactured for Bizcom were covered by the patents Intel licensed from LGE. Intel had informed Bizcom of the limitation on the LGE-Intel license in a letter Intel sent to all of its customers explaining that the license between LGE and Intel "does not extend, expressly or by implication[,] to any product that [Intel's customers] may make by combining an Intel product with any non-Intel product."⁶⁷ Nevertheless, Bizcom combined the chips with its own parts and pieces.

LGE brought suit in the Northern District of California against Bizcom and other Intel customers asserting that the combination of Intel-manufactured microprocessors or chipsets with other computer components infringed LGE's patents covering those combinations. LGE did not assert any rights to the microprocessors or chipsets themselves.⁶⁸

The district court held that Intel's sale of microprocessors and chipsets to the defendants constituted an unconditional sale, and therefore, exhausted LGE's patent rights.⁶⁹ In analyzing the issue of patent exhaustion, the district court stated that in order for the patent exhaustion doctrine to

63. *LG Elecs., Inc. v. Asustek Computer, Inc. (Asustek)*, 248 F. Supp. 2d 912, 914 (N.D. Cal. 2003), *rev'd in part sub nom.*, *LG Elecs., Inc. v. Bizcom Elecs., Inc. (Bizcom)*, 453 F.3d 1364, 1368 (Fed. Cir. 2006).

64. *Asustek*, 248 F. Supp. 2d at 914.

65. *Bizcom*, 453 F.3d at 1368.

66. *Asustek*, 248 F. Supp. 2d at 914.

67. *Id.*

68. Note that the microprocessors and chipsets were not themselves patented. LGE held patents on computer systems, which utilized the microprocessors. LGE's suit was for infringement of LGE's rights in the system. The defendants' argument was that the sales of the unpatented products, which were to be used in patented systems, exhausted the patentee's rights.

69. *Id.* at 917.

apply, an unconditional sale was required.⁷⁰ LGE argued that Intel's sale to defendants was not unconditional because Intel had informed all its customers of the limitation on the LGE-Intel license.⁷¹ While the court agreed that a patentee is free to impose limitations on the sale of its products, it disagreed that such limitations were imposed by the letter.⁷² The court held that the letters sent by Intel to its customers were not sufficient to transform the unconditional sale of microprocessors and chipsets into conditional ones.⁷³ The court concluded that defendants' purchase of Intel products were unconditional and exhausted LGE's patent rights.⁷⁴

B. The Federal Circuit's Analysis

LGE appealed the decision arguing that the district court erred in applying the patent exhaustion doctrine to the system claims. LGE argued that Intel's sales were conditional sales, and that patent exhaustion should not apply. The Federal Circuit reiterated that only an unconditional sale triggers patent exhaustion.⁷⁵ To determine whether the sale was conditional, the court examined the sale in two stages: LGE's license to Intel and Intel's sale to defendants.⁷⁶

70. *Id.* at 916 (citing *B. Braun Med., Inc. v. Abbott Labs.*, 124 F.3d 1419, 1426 (Fed. Cir. 1997)).

71. *Id.* at 916.

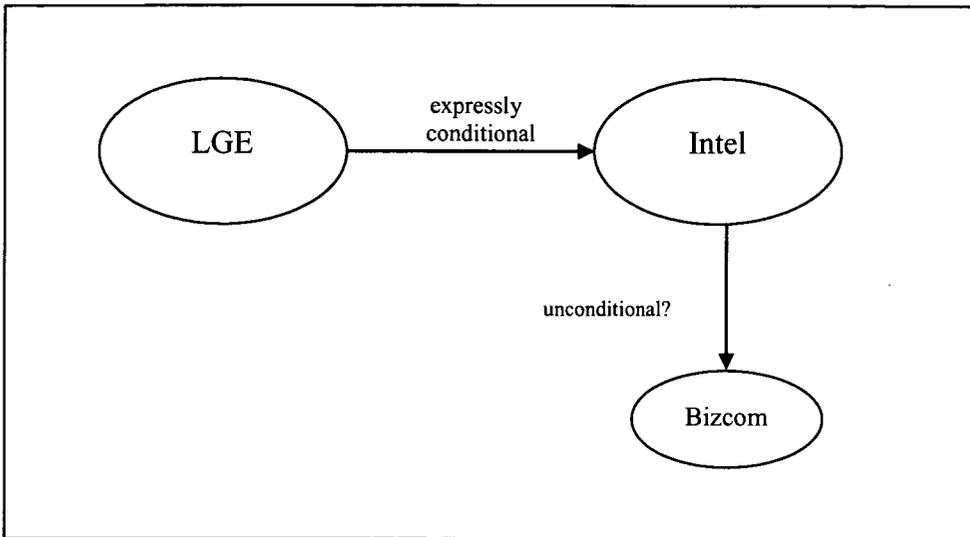
72. *Id.* (citing *Mallinckrodt, Inc. v. Mediport, Inc.*, 976 F.2d 700, 706-08 (Fed. Cir. 1992)).

73. *Id.* at 917.

74. *Id.* at 916. Since the court found the patents exhausted, it did not analyze the application of the implied license doctrine. Implied licensing would provide Defendants with another argument in case patent exhaustion failed. Since patent exhaustion was successful, the implied licensing argument was not necessary.

75. *Bizcom*, 453 F.3d at 1369 (citing *Mitchell v. Hawley*, 83 U.S. 544, 547 (1873)).

76. *Id.* at 1370.



The Federal Circuit held the LGE-Intel license conditioned later sales.⁷⁷ The license included a provision expressly disclaiming allowing Intel's customers to combine the licensed parts with non-Intel products.⁷⁸ This license was conditional, and thus, did not exhaust LGE's patent rights.

As to Intel's sale to the defendants, the Federal Circuit rejected the district court's holding regarding the ineffectiveness of the letters. The district court had held that the letters were not part of the defendants' contracts, and did not make the sale conditional.⁷⁹ The Federal Circuit rejected this argument, reasoning that consistent additional terms may supplement a contract unless the contract was intended to be complete and exclusive.⁸⁰ The Federal Circuit held that Intel's sale to the defendants was subject to the letters' restrictions, and thus was a conditional sale.⁸¹ Since both transactions in the chain from LGE to the defendants were conditional, the exhaustion doctrine did not apply, and LGE's rights in its patents were not exhausted.⁸²

77. *Id.*

78. *Id.* The LGE-Intel license required Intel to notify its customers of the existence of the limitation.

79. *Asustek*, 248 F. Supp. 2d at 917.

80. *Bizcom*, 453 F.3d at 1370 (citing as an example, N.Y. U.C.C. § 2-202).

81. *Id.*

82. *Id.* at 1370 (citing *B. Braun Med., Inc. v. Abbott Lab.*, 124 F.3d 1419, 1426 (Fed. Cir. 1997), for the principle that the exhaustion doctrine does not apply to an expressly conditional sale or license).

III. DISCUSSION

The *Cyrix* and *ULSI* cases exposed serious loopholes in broad licensing agreements between patent owners and foundries that allowed third party-competitors to gain access to patents at a significantly discounted price.⁸³ Because the semiconductor industry is highly innovative and highly competitive, these loopholes presented a threat to the licensing culture that pervaded the industry. Intel, and others in a similar position, quickly moved to remedy the problem.

Section III.A explores possible solutions for licensors in response to the foundry problem. Section III.B examines *LG Electronics, Inc. v. Bizcom Electronics, Inc.* in light of the solutions considered to understand how LGE solved the problem. Section III.B also analyzes the shortcomings in LGE's approach and how they may be improved.

A. How Licensors Can Avoid Inadvertent Grants of Foundry Rights

The foundry problem is an obstacle to the otherwise beneficial practice of forming foundry relationships that are integral to the semiconductor industry. The intense competition among semiconductor companies and the high cost of manufacturing creates a need for foundry relationships.⁸⁴ Companies are constantly trying to develop cutting edge technology and might find themselves approaching a problem that someone else has already solved and patented. Licensing the patent is the best way to legally use such technology. Foundry agreements provide an alternative way to gain a right to use the patented invention without requiring a license directly from the original inventor.⁸⁵ This allows companies to focus on new developments and advance the semiconductor technology. A solution to the foundry problem must account for the important role of foundry relationships in the semiconductor industry.

The source of the foundry problem has been broad cross-licensing of patent portfolios, so one potential solution would be for companies to avoid broad cross-licenses and negotiate on a patent-by-patent basis. This

83. Some scholars have criticized with the results of the foundry cases. See, e.g., R. Trevor Carter, *Legalizing Patent Infringement: Application of the Patent Exhaustion Doctrine to Foundry Agreements*, 28 IND. L. REV. 689 (1995) (arguing that *ULSI* was decided incorrectly); Mark Rozman, *Intel v. ULSI System Technology, Inc.*, 1 J. INTELL. PROP. L. 373, 383 (1994) (characterizing the *ULSI* decision as "flawed").

84. See Amber Hatfield, *Patent Exhaustion, Implied Licenses, and Have-Made Rights: Gold Mines or Mine Fields?*, 2000 COMPUTER L. REV. & TECH. J. 1, 1-2 (2000).

85. See *id.* at 2.

proposition eliminates the broad-licensing practice. However, there are strong incentives for companies to continue to engage in broad licensing deals. Fast changing and competitive markets often spawn parallel development, which creates the risk of innocent infringement.⁸⁶ Sharing patents saves companies time and the cost of monitoring competitors and litigating infringement suits.⁸⁷ It also lessens the risk that the patents will be invalidated during litigation.⁸⁸ The semiconductor industry derives a significant advantage from competitors granting each other broad licenses and attaining “patent peace,” allowing each company to sell its own product under a license from a competitor.⁸⁹ The importance of broad cross-licensing to the semiconductor industry suggests that ending the practice is not the best way to solve the foundry problem.⁹⁰

A better solution to the foundry problem is careful drafting of licensing agreements; however, determining what restraints to place on the agreements is difficult. The *ULSI* case suggests that contractually limiting a licensee’s ability to sublicense is not an effective solution by itself. In *ULSI*, Intel argued that the agreement forbade HP from producing ULSI’s chip designs using Intel’s patents because the Intel-HP agreement had expressly prevented HP from granting any sublicenses.⁹¹ Intel argued that because ULSI was able to design the product and provide the schematics to HP, ULSI was in effect using the patent and was, therefore, a sublicensee.⁹² The Federal Circuit rejected this argument focusing on the fact that the transaction between HP and ULSI was for sales of chips, not patent rights.⁹³ The court held that the source of the design was irrelevant to the

86. See Michael Lake, *Patent and Know-how (Technology) Licenses and Licensing Strategies*, in UNDERSTANDING THE INTELLECTUAL PROPERTY LICENSE 2003 45, 52 (PLI Patents, Copyrights, Trademarks, and Literary Property Course Handbook Series No. G0-01BF, 2003).

87. See *id.* In fast moving industries, by the time the litigation is over, the market and the technology may have moved past the issue, which provides yet another incentive not to litigate. See *id.*

88. See Hatfield, *supra* note 84, at 3. About half of all patents litigated are invalidated. See *id.*

89. See Lake, *supra* note 86, at 52; Hatfield, *supra* note 84, at 1 (citing Cyrix Corp. v. Intel Corp., 803 F. Supp. 1200, 1205 (E.D. Tex. 1992)).

90. See generally Hatfield, *supra* note 84.

91. *ULSI*, 995 F.2d at 1567.

92. See *id.*

93. *Id.* at 1569-70.

issue of patent exhaustion.⁹⁴ If HP, for example, had granted ULSI the right to manufacture, then Intel's argument would be valid. Hence, restrictions on sublicensing are not by themselves effective solutions to the foundry problem.

A different licensing-based solution is to directly deal with the foundry problem during negotiations and to contractually limit the grant of foundry rights.⁹⁵ In *ULSI* and *Cyrrix*, the Federal Circuit in essence held that broad licenses convey foundry rights. Intel had not accounted for foundry rights in the contracts and it thus gave up more rights than it desired. The lesson from the *Intel* cases is that licensors should foresee the problem and either contractually restrict foundry rights or adjust the consideration for the agreement accordingly.

One way of restricting foundry rights is by expressly prohibiting licensees from acting as foundries in the agreement.⁹⁶ Licensors are legally allowed to impose conditions on the contract,⁹⁷ and they can prohibit licensees from using the licensed patents to manufacture products for third parties. Licensors can also take away foundry rights indirectly by limiting the license to only those products designed and sold by the licensee. Whether or not foundry rights exist is determined by the construction of these terms of the contract.⁹⁸ In *ITC*, Intel successfully argued that the right to sell products based on Intel patents was restricted by the agreement between Intel and Sanyo to only those products designed by Sanyo itself. This case demonstrates that, as scholars have suggested, contractual limitations on the rights of the licensee can control the foundry problem.⁹⁹ Such control requires careful drafting of the license terms to limit the rights granted to

94. See William Martin Jr., *Intel Corp. v. ULSI System Technology, Inc.: Patent Exhaustion and Post-Sale Restrictions on the Use of a Component Made Under License*, 2 TEX. INTELL. PROP. L.J. 5, 16 (1993).

95. See David Barr, *Recent Federal Circuit Decisions on Interpretation of Agreements Relating to Patents*, in TECHNOLOGY LICENSING AND LITIGATION 1996 1085, 1099 (PLI Patents, Copyrights, Trademarks, and Literary Property Course Handbook Series No. G4-4001, 1996).

96. See *id.*

97. See *Mallinckrodt, Inc. v. Mediport, Inc.*, 976 F.2d 700, 706-08 (Fed. Cir. 1992).

98. See Ronald Yin, *Hardware and Software Licensing Issues for the 1990s*, 19 HASTINGS INT'L & COMP. L. REV. 691, 694-95 (1996).

99. See Lake, *supra* note 86, at 64; Bradford Lyerla, *Things to Think About When Drafting Patent Licenses*, in UNDERSTANDING THE INTELLECTUAL PROPERTY LICENSE 2001 353, 358 (PLI Patents, Copyrights, Trademarks, and Literary Property Course Handbook Series No. G0-00PW, 2001).

the licensee.¹⁰⁰ By limiting the rights to “Sanyo . . . products,” Intel successfully eliminated foundry rights.

The Federal Circuit followed the same analytical approach in *ULSI* and *Cyrrix*, but found that those agreements had not adequately limited the scope of the license. For example, in *ULSI*, the court focused on the fact that the agreement between HP and ULSI called for the sale of chips and wafers, not manufacturing services, to conclude that the license exhausted Intel’s patents.¹⁰¹ In *Cyrrix*, the court examined the definition of “IBM Licensed Products” and determined that it did not limit the contract to only those products designed by IBM.¹⁰² In all of these cases, the court focused its analysis on how the agreement was written and what limitations were placed on the rights.¹⁰³

While Intel was successful in *ITC*, its approach was risky. The language in the agreement was ambiguous. The court construed the limitation in light of the contract as a whole, and to preserve its consistency, ruled in favor of limiting foundry rights.¹⁰⁴ This is far from a safe strategy from the licensor’s perspective. If the inclusion of foundry rights would not have created conflicts and ambiguities within the agreement, the court could have come out the other way.¹⁰⁵ *ULSI* and *Cyrrix* illustrate that in ambiguous cases, the court will allow the licensee to act as a foundry. By incorporating terms that more forthrightly address the foundry problem, licensors can avoid ambiguity and prevent granting foundry rights.

B. The Solution Employed By LGE

LGE employed the contractual foundry limitation approach to somewhat successfully control the foundry problem. *ITC* showed that if the contract included limitations on foundry rights, courts would respect those limitations. LGE could have used Intel’s strategy in the *ITC* case by limiting the grant of rights to only those products designed and sold by the licensee. However, LGE had learned from the court’s analysis in *ITC* that

100. *See id.*

101. *See ULSI*, 995 F.2d at 1569; Paul Mendosa, *Patent Prosecution for Multimedia Products*, in MULTIMEDIA AND THE LAW 1996: PROTECTING YOUR CLIENTS’ INTERESTS 147, 160 (PLI Patents, Copyrights, Trademarks, and Literary Property Course Handbook Series No. G4-3955, 1996).

102. *See Cyrrix*, 77 F.3d at 1385.

103. Note that interpretation of a contract is a question of law, which the Federal Circuit reviews de novo. *See ULSI*, 995 F.2d at 1569 (citing *Interstate Gen. Gov’t Contractors, Inc. v. Stone*, 980 F.2d 1433, 1434 (Fed. Cir. 1992)).

104. *See ITC*, 946 F.2d at 828.

105. *See id.*

ambiguity could result in the inadvertent granting of foundry rights. Therefore, LGE implemented a clear contractual restriction by limiting the products made under the license to be used only with other Intel products.¹⁰⁶ In other words, a semiconductor device produced by Intel under LGE's patents could not be combined with any non-Intel pieces. This requirement accommodated the danger of the foundry problem, while allowing Intel complete freedom to use the patented technologies. Third-party companies that would use Intel as a foundry would do so in order to get a device from Intel, combine it with their own pieces, and sell it as their own product. LGE was aware that a third-party company could not sell a product composed of only Intel parts; it would have to either add parts of its own or parts from other companies. If a third-party company combined the Intel chip with other non-Intel parts, it would lose its license to use and sell the chip because LGE had expressly forbidden such a combination. Therefore, unlike the ambiguous "Sanyo products" limitation of the *ITC* case, LGE opted for a more practical solution with well-defined boundaries.

LGE's practical approach to limiting foundry rights was eventually validated by the Federal Circuit's decision. The Federal Circuit, unlike its analysis in *ITC*, did not have to look at the contract as a whole and search for conflicts or ambiguities; it stated that "[t]he LGE-Intel license expressly disclaims granting a license allowing [third parties] to combine Intel's licensed parts with non-Intel components."¹⁰⁷ This was sufficient for the court to call the license a "conditional agreement" and hold that LGE's patent rights were not exhausted.¹⁰⁸

One potential problem with this strategy that LGE foresaw and preempted was that defendants could argue that they were never informed of the restrictions of the LGE-Intel license. LGE addressed this by contractually obligating Intel to inform its customers of the limitation on combining the chip with non-Intel pieces.¹⁰⁹ This guaranteed that third parties received notice of the limitation and could not contend that they were unaware of the limitation of the license and were therefore unconditional purchasers.

Although LGE's strategy was significantly better than Intel's, one improvement can be implemented. Note that the district court ruled against

106. See *Bizcom*, 453 F.3d at 1368.

107. *Id.* at 1370.

108. See *id.*

109. See *id.*

LGE.¹¹⁰ It held that Intel's sale to the defendants was unconditional, and that the letters were insufficient to make the sale conditional.¹¹¹ The lower court thus held that the unconditional sale exhausted LGE's rights and protected the defendants against infringement.¹¹² Although the Federal Circuit later reversed the district court's decision, the conflict between the courts suggests that simply sending letters may be ineffective.

For patent exhaustion to apply, the licensor-licensee agreement and the licensee-third party sale must both be unconditional.¹¹³ LGE made the LGE-Intel license conditional. To make sure that it would not leave the door open to a possible argument of lack of knowledge by potential defendants, LGE required Intel to notify its customers of the restriction.¹¹⁴ But the broad requirement-to-inform allowed Intel to carry out the obligation however it chose. Intel decided to send stand-alone letters notifying its customers of the license restriction.¹¹⁵ Defendants argued, and the district court agreed, that the letters were outside the four corners of the manufacturing contract and did not bind the defendants. The Federal Circuit later rejected this argument by stating, without detail, that the letters were permissible modifications to the contract and thus, enforceable. The court did not explain its analysis on contract interpretation and enforceability of the modifications. Given the district court's decision and the Federal Circuit's lack of explanation regarding the letters, simply notifying customers by letter may not be a safe practice. Although LGE had foreseen that giving customers fair notice of the license limitations was a possible area for trouble, it did not craft an adequate solution.

A safer strategy would have been for LGE to require Intel to communicate the license restrictions in a particular way. For example, LGE could have obliged Intel to inform its customers of the limitation by including a clause in each of their manufacturing agreements. This would negate the district court's argument that the letters did not serve as conditions of sale, because the defendants would have read and signed the agreement including the limitation.

110. See *LG Elecs., Inc. v. Asustek Computer, Inc. (Asustek)*, 248 F. Supp. 2d 912, 917 (N.D. Cal. 2003).

111. See *id.*

112. See *id.* at 916.

113. See *Bizcom*, 453 F.3d at 1370.

114. See *id.*

115. *Asustek*, 248 F. Supp. 2d at 914.

IV. CONCLUSION

The semiconductor industry has experienced rapid growth over the past few decades. With thousands of semiconductors in every electronic device, the industry will continue to grow. To facilitate such growth, companies have found effective solutions to their problems, like broad cross-licensing to avoid patent litigation. The foundry problem is one more challenge for the semiconductor industry to overcome. It is important for the solution to account for the state of the industry today. Many valuable and innovative companies cannot afford fabrication facilities and have to use foundries to fabricate semiconductor devices. The foundry problem is a harmful consequence of this beneficial practice.

Contractual limits on the rights transferred in a licensing agreement present the best way to solve the foundry problem while not impeding the use of foundries. These agreements should also require that these limitations be adequately communicated to third parties who contract with the foundry. This way, third-party companies in need of fabrication who contract with a licensee-foundry know which patents are under what restrictions and do not have to run the risk of infringement. This practice would also make licensors safe from competitors gaining access to important technologies by going through licensee foundries that they would not have otherwise licensed.

BICON, INC. v. STRAUMANN CO.: THE FEDERAL CIRCUIT SPECIFICALLY EXCLUDED CLAIM VITIATION TO ILLUSTRATE A NEW LIMITING PRINCIPLE ON THE DOCTRINE OF EQUIVALENTS

By Blake B. Greene

If the Federal Circuit had its way, the doctrine of equivalents would be no more. Over the past few years, the court has literally thrown everything but the kitchen sink at the doctrine through its adoption of a number of rules restricting the doctrine's scope. Because the Supreme Court only reprimanded the Federal Circuit for those principles intending to eliminate or drastically change the doctrine of equivalents,¹ the Federal Circuit was free to implement rules which slightly but unquestionably impaired the application of the doctrine.² Without further intervention by the Supreme Court, the Federal Circuit's gradual reduction of the doctrine's scope has the potential to effectively destroy the doctrine of equivalents over time.

In its recent holding in *Bicon, Inc. v. Straumann Co.*,³ the Federal Circuit instituted another such principle limiting the application of the doctrine of equivalents. Because the court did not clearly define the rule, its scope and implications have yet to be determined. However, given the general contours of the new rule, it arguably fills a void left by other limiting principles. Accordingly, the new principle serves the Federal Circuit's goal of slowly but surely impairing the doctrine of equivalents.

This Note presents an overview of the recent efforts made by the Federal Circuit to limit the doctrine of equivalents and examines the new limiting principle adopted by the court in *Bicon*. Part I briefly recounts the evolution of the doctrine of equivalents and explores the major principles instituted by the Federal Circuit which limit the application of the doctrine. Part II summarizes the non-literal infringement holdings of both the district court and the Federal Circuit in *Bicon*. Finally, Part III discusses

© 2007 Blake B. Greene

1. See *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co. (Festo II)*, 535 U.S. 722, 739 (2002) (disagreeing with the Federal Circuit's holding that prosecution history estoppel is a complete bar, while noting that the responsibility for changing settled laws like the doctrine of equivalents and prosecution history estoppel rests with Congress and that "[f]undamental alterations in these rules risk destroying the legitimate expectations of inventors in their property").

2. For examples of some of these rules, see *infra* Section I.B.

3. *Bicon, Inc. v. Straumann Co. (Bicon II)*, 441 F.3d 945 (Fed. Cir. 2006).

the reasoning for the Federal Circuit's approach in its equivalence analysis in *Bicon* as well as the implications of its new limiting principle on the doctrine of equivalents.

I. BACKGROUND

A. The Doctrine of Equivalents

The doctrine of equivalents evolved in response to the concern that an "unscrupulous copyist" could avoid literal infringement of a patented invention by making insubstantial changes to that invention.⁴ The Supreme Court created the doctrine over 150 years ago in *Winans v. Denmead*.⁵ The Court was concerned that a patent right in a coal car having a circular form would be tenuous if the public could avoid infringement by freely varying the circular structure of the car.⁶ Accordingly, the Court held that the accused octagonal coal car would infringe the patentee's invention if the device embodied the substance of the patented invention.⁷ In such a case, the accused infringer could not avoid liability in asserting that her invention avoided the literal language of the patentee's claims by having a different form.⁸ Ultimately, the Court deferred the question of infringement under the newly created doctrine of equivalents to the jury.⁹

The doctrine of equivalents therefore serves to expand the scope of a patent beyond what the patentee has literally claimed.¹⁰ Requiring literal adherence to a claim for a finding of infringement significantly weakens the value of a patent.¹¹ Diminished patent rights, in turn, both weaken the incentive to innovate and reduce the disclosure of valuable inventions.¹² In contrast, enlarging the scope of a patent through the doctrine of equivalents enhances the patent's expected value,¹³ which, in turn, increases the

4. *Graver Tank & Mfg. Co. v. Linde Air Prods. Co.*, 339 U.S. 605, 607-08 (1950).

5. *Winans v. Denmead*, 56 U.S. 330 (1853).

6. *Id.* at 343-44.

7. *Id.*

8. *Id.* at 343.

9. *See id.* at 344.

10. Michael J. Meurer & Craig Allen Nard, *Invention, Refinement and Patent Claim Scope: A New Perspective on the Doctrine of Equivalents*, 93 GEO. L.J. 1947, 1961 (2005).

11. Donald S. Chisum, *The Scope of Protection for Patents after the Supreme Court's Warner-Jenkinson Decision: The Fair Protection—Certainty Conundrum*, 20 SANTA CLARA COMPUTER & HIGH TECH. L.J. 13, 19 (2003).

12. M. Scott Boone, *Defining and Redefining the Doctrine of Equivalents: Notice and Prior Art, Language and Fraud*, 43 IDEA 645, 662-63 (2003).

13. Meurer & Nard, *supra* note 10, at 1949 n.5.

incentive to innovate.¹⁴ This benefit of added incentives comes at a cost, however. By adding an element of uncertainty in discerning the scope of the patent claims, the doctrine of equivalents conflicts with the public-notice function of patents and threatens to prevent noninfringing and inventive acts because competitors cannot distinguish a permissible substitute from an infringing equivalent.¹⁵ Thus, failure to clearly define the scope of a patent right could hinder investment in innovation.¹⁶ Effective patent policy should therefore achieve a proper balance between these competing interests.¹⁷

Nearly one hundred years after its decision in *Winans*, the Supreme Court in *Graver Tank & Manufacturing Co. v. Linde Air Products Co.* again addressed the issue of non-literal infringement and established the modern contours of the doctrine of equivalents.¹⁸ The Court emphasized that prohibiting only literal copying “would place the inventor at the mercy of verbalism and would be subordinating substance to form. It would deprive him of the benefit of his invention and would foster concealment rather than disclosure of inventions”¹⁹ The essence of the doctrine of equivalents was therefore to prevent a person from “practic[ing] a fraud on a patent” by making minor variations to the claimed invention to avoid literal infringement.²⁰ The Court found that an accused device would infringe a patented invention under the doctrine of equivalents “if it performs substantially the same function in substantially the same way to ob-

14. See Ronald J. Gilson, *The Legal Infrastructure of High Technology Industrial Districts: Silicon Valley, Route 128, and Covenants Not to Compete*, 74 N.Y.U. L. REV. 575, 628 (1999) (“Patent law may encourage innovation through either of conflicting means—a broad patent scope rewards innovators with the full economic value of an invention, while a narrow patent scope encourages innovation by making it easier for subsequent investors to improve on existing patented technology.”).

15. *Freedman Seating Co. v. Am. Seating Co.*, 420 F.3d 1350, 1358 (Fed. Cir. 2005) (citing *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co. (Festo II)*, 535 U.S. 722, 727 (2002)); see also David J.F. Gross & Shawn T. Gordon, *The Growing Importance of the Claim Vitiating Defense in Patent Cases* (pt. 2), THE COMPUTER & INTERNET LAWYER, May 2006, at 19.

16. See *Festo II*, 535 U.S. at 730-31 (“The monopoly is a property right; and like any property right, its boundaries should be clear. This clarity is essential to promote progress, because it enables efficient investment in innovation.”).

17. See *Meurer & Nard*, *supra* note 10, at 1978 (“Good patent policy should balance the benefits created by expanded patent scope against the costs of expanded scope and fuzzy property rights.”).

18. See *Warner-Jenkinson Co. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 21 (1997); *Graver Tank & Mfg. Co. v. Linde Air Prods. Co.*, 339 U.S. 605 (1950).

19. See *Graver Tank*, 339 U.S. at 607.

20. *Id.* at 607-08.

tain the same result.”²¹ Regarding the application of the doctrine, the Court declared that equivalence “must be determined against the context of the patent, the prior art, and the particular circumstances of the case.”²²

Approximately fifty years after deciding *Graver Tank*, the Supreme Court attempted to clarify the doctrine’s proper scope in *Warner-Jenkinson Co. v. Hilton Davis Chemical Co.*²³ While the Court reaffirmed its adherence to the doctrine of equivalents, it expressed its concern with the broad application of the doctrine since *Graver Tank*: the doctrine of equivalents “has taken on a life of its own, unbounded by the patent claims. There can be no denying that the doctrine of equivalents, when applied broadly, conflicts with the definitional and public-notice function of the statutory claiming requirement.”²⁴

To avoid this conflict, the Court adopted the rule that the doctrine of equivalents must be applied to individual claim elements rather than to the invention as a whole.²⁵ The Court believed that an equivalence analysis on an element-by-element basis avoided enlarging a patent beyond the scope of its claims.²⁶ Thus, while overall equivalence may exist between a ball-point pen and a fountain pen, analyzing the individual elements of the devices unquestionably reveals a lack of equivalency.²⁷ Regarding the issue of what is the proper test for determining equivalence, the Court held that examining each element in the context of the patent claim will guide “the inquiry as to whether a substitute element matches the function, way, and result of the claimed element, or whether the substitute element plays a role substantially different²⁸ from the claimed element.”²⁹

21. *Id.* at 608 (quoting *Sanitary Refrigerator Co. v. Winters*, 280 U.S. 30, 42 (1929)). This test is known as the “function-way-result test” or the “tri-partite test.” Boone, *supra* note 12, at 651. Under the function-way-result test, a finding of equivalence requires that all three prongs be satisfied in the accused product. Cheri M. Taylor, *Claim Construction and Proving Infringement*, 875 PLI/PAT 9, 44 (2006).

22. *Graver Tank*, 339 U.S. at 609.

23. *Warner-Jenkinson*, 520 U.S. at 21.

24. *Id.* at 28-29, 40.

25. *Id.* at 29. This principle is known as the “all-elements rule.” Boone, *supra* note 12, at 650. For a detailed analysis of this rule, see *infra* Section I.B.3.

26. *Warner-Jenkinson*, 520 U.S. at 29 (quoting *Hilton Davis Chem. Co. v. Warner-Jenkinson Co.*, 62 F.3d 1512, 1573-74 (Fed. Cir. 1995) (Nies, J., dissenting)).

27. *Hilton Davis*, 62 F.3d at 1574 (Nies, J., dissenting).

28. This test for equivalence is known as the insubstantial differences test. Under this test, equivalence exists where the differences between the element in the accused product and the claim limitation are insubstantial. Kenneth D. Bassinger, *Unsettled Expectations in Patent Law: Festo and the Moving Target of Claim Equivalence*, 48 HOW. L.J. 685, 695 (2005).

29. *Warner-Jenkinson*, 520 U.S. at 40.

B. Limiting Principles of the Doctrine of Equivalents

Finding the proper scope of the doctrine of equivalents requires the courts to balance the benefits against the costs of an expanded patent scope.³⁰ On the one hand, if literal infringement were the sole means of determining infringement, it would severely limit the value of a patent by allowing others to avoid liability by making trivial changes to the claimed elements.³¹ On the other hand, depriving the public of clear notice of the scope of a patent hinders investment in technological products and services³² and offends competitors' reliance interests.³³ Recently, the Federal Circuit has shifted the balance increasingly in favor of public notice.³⁴ The court has developed various principles of law that limit the expansion of the doctrine of equivalents and the uncertainty created by its application.³⁵ Significant among these limiting doctrines are prosecution history estoppel, the public dedication rule, the all-elements rule, claim vitiation, and specific exclusion.

1. Prosecution History Estoppel

Prosecution history estoppel precludes a patent holder from using the doctrine of equivalents to reclaim subject matter relinquished during the prosecution of her patent by either an amendment or an argument.³⁶ Because the amendments and arguments made during prosecution of the patent also notify the public of the scope of the patent, prosecution history estoppel ensures that a patent holder may not undermine this public-notice function through an assertion of equivalence.³⁷ The most common application of prosecution history estoppel occurs where a patent applicant amends or cancels a claim which the patent examiner rejects as unpatentable in light of prior art.³⁸ Whether prosecution history estoppel applies in a

30. Meurer & Nard, *supra* note 10, at 1978.

31. *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co. (Festo II)*, 535 U.S. 722, 731 (2002).

32. Chisum, *supra* note 11, at 19.

33. John R. Thomas, *Claim Re-Construction: The Doctrine of Equivalents in the Post-Markman Era*, 87 J. PAT. & TRADEMARK OFF. SOC'Y 781, 782 (2005).

34. Meurer & Nard, *supra* note 10, at 1978-79.

35. *Id.*

36. *See Eagle Comtronics, Inc. v. Arrow Commc'n Labs., Inc.*, 305 F.3d 1303, 1315 (Fed. Cir. 2002); Boone, *supra* note 12, at 655.

37. *See* Boone, *supra* note 12, at 655 ("Prosecution history estoppel is strongly linked to the public-notice function of the patent. The arguments and amendments made during prosecution of the patent serve as sources of notice as to what the patent covers in addition to the notice provided by the issued patent and its claims.")

38. 5A DONALD S. CHISUM, CHISUM ON PATENTS § 18.05 (2005).

particular case is a question of law.³⁹ A court may therefore deny an assertion of infringement under the doctrine of equivalents without analyzing equivalence under the function-way-result or the insubstantial differences tests, as these are factual inquiries.⁴⁰

In *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*,⁴¹ the Federal Circuit sought to enhance the power of prosecution history estoppel to limit the application of the doctrine of equivalents. The Federal Circuit held that when a patentee made an amendment that narrowed a claim limitation during prosecution for any reason related to the statutory patent requirements, no equivalents were available for the amended claim element.⁴² The court concluded that this complete bar most effectively served the notice and definitional function of patent claims, noting that “[a]llowing some range of equivalents gives the patentee some benefit of the doubt as to what was disclaimed, a benefit that comes at the public’s expense.”⁴³ The court also emphasized that the complete bar provided certainty to the process of determining the scope of patent protection.⁴⁴

While sympathetic to the Federal Circuit’s concern that the doctrine of equivalents weakened the public-notice function,⁴⁵ the Supreme Court overruled the Federal Circuit’s complete bar approach to prosecution history estoppel and adopted a rebuttable presumption approach instead.⁴⁶ Under the Court’s approach, a narrowing amendment made during prosecution gave rise to a rebuttable presumption that prosecution history estoppel barred the application of the doctrine of equivalents to the amended claim.⁴⁷ The patentee could overcome the presumption by showing that the equivalent was unforeseeable at the time of the application, the rationale for the amendment was no more than tangentially related to the

39. *Panduit Corp. v. Hellermannntyton Corp.*, 451 F.3d 819, 826 (Fed. Cir. 2006).

40. The function-way-result test is a question of fact. *Anchor Wall Sys. v. Rockwood Retaining Walls, Inc.*, 340 F.3d 1298, 1313 (Fed. Cir. 2003). The insubstantial differences test is also a question of fact. *Insituform Techs., Inc. v. Cat Contracting, Inc.*, 99 F.3d 1098, 1107 (Fed. Cir. 1996).

41. *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co. (Festo I)*, 234 F.3d 558 (Fed. Cir. 2000).

42. *Id.* at 566, 569.

43. *Id.* at 576.

44. *Id.* at 577 (“With a complete bar, both the public and the patentee know that once an element of a claim is narrowed by amendment for a reason related to patentability, that element’s scope of coverage will not extend beyond its literal terms. There is no speculation or uncertainty as to the exact range of equivalents that might be available.”).

45. *Meurer & Nard*, *supra* note 10, at 1982.

46. *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co. (Festo II)*, 535 U.S. 722, 737-38 (2002).

47. *Id.* at 741.

equivalent at issue, or another reason that suggested that he could not reasonably be expected to have described the equivalent in question.⁴⁸

2. *The Public Dedication Rule*

In *Johnson & Johnston Associates Inc. v. R.E. Service Co.*,⁴⁹ the Federal Circuit held that by disclosing but not claiming subject matter in a patent, the patentee dedicated that unclaimed material to the public. Accordingly, the patent holder could not invoke the doctrine of equivalents to recapture the disclosed but unclaimed subject matter.⁵⁰ The Federal Circuit stated that to hold otherwise would “conflict with the primacy of the claims in defining the scope of the patentee’s exclusive right.”⁵¹

By precluding the patent holder from reclaiming subject matter disclosed but not claimed in the patent, the Federal Circuit once again favored the public-notice function over patentee protection.⁵² The idea underlying the public dedication rule is that once the public has identified subject matter disclosed but not claimed in the patent, it can freely practice that material, knowing that the subject matter is in the public domain.⁵³ Like prosecution history estoppel, the public dedication rule is a question of law.⁵⁴ Therefore, a court may avoid performing an equivalence test while deciding whether the public dedication rule applies.⁵⁵

3. *The All-Elements Rule*

The all-elements rule⁵⁶ provides that the test for equivalence under the doctrine of equivalents must be applied on an element-by-element basis.⁵⁷

48. *Id.* at 740-41.

49. *Johnson & Johnston Assocs. Inc. v. R.E. Serv. Co.*, 285 F.3d 1046 (Fed. Cir. 2002) (per curiam).

50. *Id.* at 1054. This principle is known as the public dedication rule. Boone, *supra* note 12, at 656. It is also known as the disclosure-dedication rule. *See Toro Co. v. White Consol. Indus.*, 383 F.3d 1326, 1330-31 (Fed. Cir. 2004).

51. *Johnson & Johnston*, 285 F.3d at 1054 (quoting *Sage Prods. Inc. v. Devon Indus.*, 126 F.3d 1420, 1424 (Fed. Cir. 1997)).

52. *See Boone, supra* note 12, at 656 (“Like prosecution history estoppel, the public dedication bar is strongly linked to the notice function of the patent.”).

53. *See id.* (“By reading the patent and the file history, a member of the public can identify subject matter that has been disclosed but not claimed, and can, therefore, practice that subject matter with the knowledge that it is outside the scope of the patent.”).

54. *Toro*, 383 F.3d at 1331.

55. *See supra* Section I.B.1 (noting that the function-way-result and insubstantial differences tests are factual inquiries).

56. The Federal Circuit stated that it is preferable to use “limitation” when referring to claim language and “element” when referring to the accused product. *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co. (Festo I)*, 234 F.3d 558, 563 n.1 (Fed. Cir. 2000). Along those lines, the “all-elements rule” is also known as the “all-limitations

A finding of infringement therefore requires that the accused product contain each claim limitation or its equivalent.⁵⁸ The motivation behind the all-elements rule, as with the other limiting doctrines, is to serve the public-notice function more effectively.⁵⁹ By requiring equivalence with regard to each claim limitation as opposed to the patented invention as a whole, the all-elements rule allows the public to more readily identify what constitutes infringement under the doctrine of equivalents.⁶⁰

The following example demonstrates the application of the all-elements rule.⁶¹ If a patent claims a desk comprising four legs, a flat surface, and a built-in pencil holder and an accused product contains four legs and a flat surface, the all-elements rule precludes a finding of infringement under the doctrine of equivalents because neither a built-in pencil holder nor its equivalent is present in the accused device. Normally, under the all-elements rule, the jury performs an equivalence analysis to determine whether each claim limitation exists in the accused product either literally or as an equivalent.⁶² However, because no reasonable jury could find an equivalent element to the built-in pencil holder limitation, the court can accordingly grant summary judgment of noninfringement.⁶³ In contrast, under the old equivalence rule, a comparison of the accused product with the patented invention as a whole may result in a finding of infringement

rule.” *Ethicon Endo-Surgery, Inc. v. U.S. Surgical Corp.*, 149 F.3d 1309, 1317 n.1 (Fed. Cir. 1998).

We have said that “[i]n the All Elements rule, ‘element’ is used in the sense of a *limitation* of a claim,” and “[i]t is the *limitation* of a claim that counts in determining both validity and infringement, and a limitation may include descriptive terms.” . . . Thus, the All Elements rule might better be called the All Limitations rule.

Id. (citations omitted).

57. Boone, *supra* note 12, at 650.

58. *Id.* at 650-51.

59. See Meurer & Nard, *supra* note 10, at 1980.

60. Boone, *supra* note 12, at 651.

61. See Meurer & Nard, *supra* note 10, at 1979 n.161 (providing another hypothetical example of the all-elements rule).

62. See *Cook Biotech Inc. v. ACell, Inc.*, 460 F.3d 1365, 1373 (Fed. Cir. 2006) (“Infringement, whether literal or under the doctrine of equivalents, is a question of fact.”); *Anchor Wall Sys. v. Rockwood Retaining Walls, Inc.*, 340 F.3d 1298, 1313 (Fed. Cir. 2003) (noting that the function-way-result test is a question of fact); *Insituform Techs., Inc. v. Cat Contracting, Inc.*, 99 F.3d 1098, 1107 (Fed. Cir. 1996) (noting that the insubstantial differences test is a question of fact).

63. See *Warner-Jenkinson Co. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 39 n.8 (1997) (“Where the evidence is such that no reasonable jury could determine two elements to be equivalent, district courts are obliged to grant partial or complete summary judgment.”).

under the doctrine of equivalents.⁶⁴ The example illustrates not only how the all-elements rule operates but also that the all-elements rule will likely result in fewer findings of infringement under the doctrine of equivalents than the old rule.

The Federal Circuit adopted the all-elements rule in *Pennwalt Corp. v. Durand-Wayland, Inc.*⁶⁵ Noting that each claim element was “material and essential,”⁶⁶ the Federal Circuit expressed its concern with ignoring claim limitations in determining infringement under the doctrine of equivalents.⁶⁷ Judge Nies emphasized in her concurring opinion that “[i]nfringement on the basis of judicial fiat or jury sympathies resolving the vague question of whether a ‘fraud’ has been committed on the ‘invention as a whole’ cannot be the law.”⁶⁸ She reasoned that supporting application of the all-elements rule ensured proper notice demanded by due process under the Fifth Amendment and satisfied the requirement of “particularly pointing out and distinctly claiming subject matter” under 35 U.S.C. § 112(2).⁶⁹ The Supreme Court later validated the Federal Circuit’s limitation on the doctrine of equivalents when it adopted the all-elements rule in *Warner-Jenkinson*.⁷⁰

4. Claim Vitiating

a) Background

The claim vitiating rule provides that a patent holder cannot invoke the doctrine of equivalents if its application vitiates (i.e., effectively eliminates) a claim limitation.⁷¹ The Federal Circuit created this limiting principle based on a guidance footnote in the Supreme Court’s *Warner-Jenkinson* opinion.⁷² Regarding the role of the judge and jury in applying the doctrine of equivalents, the Court stated: “if a theory of equivalence would entirely vitiate a particular claim element, partial or complete

64. Cf. *Meurer & Nard*, *supra* note 10, at 1979 n.161 (“Under the old rule, a finding of infringement under the DOE was possible when courts looked at the invention as a whole.”).

65. *Pennwalt Corp. v. Durand-Wayland, Inc.*, 833 F.2d 931 (Fed. Cir. 1987) (en banc).

66. *Id.* at 935 (quoting *Lemelson v. United States*, 752 F.2d 1538, 1551 (Fed. Cir. 1985)).

67. *Id.* at 935.

68. *Id.* at 954 (Nies, J., concurring) (emphasis in original).

69. *Id.*

70. See *Warner-Jenkinson Co. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 29 (1997).

71. *Gross & Gordon*, *supra* note 15, at 21.

72. Daniel H. Shulman & Donald W. Rupert, “Vitiating” the Doctrine of Equivalents: A New Patent Law Doctrine, 12 FED. CIR. B.J. 457, 462-64 (2003).

judgment should be rendered by the court, as there would be no further *material* issue for the jury to resolve.”⁷³ The Federal Circuit has also cited the Supreme Court’s earlier statement in *Warner-Jenkinson* that “[i]t is important to ensure that the application of the [all-elements] doctrine, even as to an individual element, is not allowed such broad play as to effectively eliminate that element in its entirety”⁷⁴ as support for the claim vitiation rule.⁷⁵

Since claim vitiation finds its origins in the Supreme Court’s discussion of the all-elements rule,⁷⁶ it is important to understand the relationship between the two doctrines.⁷⁷ As a matter of law, an element of an accused product is not an equivalent of a claim limitation if a finding of equivalence would vitiate that limitation.⁷⁸ Accordingly, without the embodiment of a literal claim limitation or its equivalent, the accused device violates the all-elements rule.⁷⁹ A finding of claim vitiation by the court therefore demands a ruling of noninfringement.⁸⁰ Consequently, because the judge alone decides whether claim vitiation applies as a matter of law, the claim vitiation rule removes the jury and effectively an equivalence test from the doctrine of equivalents inquiry.⁸¹

73. *Warner-Jenkinson*, 520 U.S. at 39 n.8.

74. *Id.* at 29.

75. See, e.g., *Freedman Seating Co. v. Am. Seating Co.*, 420 F.3d 1350, 1358 (Fed. Cir. 2005); *Searfoss v. Pioneer Consol. Corp.*, 374 F.3d 1142, 1151 (Fed. Cir. 2004); *Sage Prods. v. Devon Indus.*, 126 F.3d 1420, 1429 (Fed. Cir. 1997).

76. See Shulman & Rupert, *supra* note 72, at 462-64 (arguing that the claim vitiation doctrine originated from a misapplication of the all-elements rule).

77. The fact that the Federal Circuit has used claim vitiation to define the all-elements rule illustrates the difficulty in distinguishing these doctrines. See *Panduit Corp. v. Hellermanntyton Corp.*, 451 F.3d 819, 830 (Fed. Cir. 2006) (“Application of the doctrine of equivalents is limited by the ‘all elements rule,’ which provides that ‘the doctrine of equivalents does not apply if applying the doctrine would vitiate an entire claim limitation.” (quoting *Asyst Techs., Inc. v. Emtrak, Inc.*, 402 F.3d 1188, 1195 (Fed. Cir. 2005))).

78. *Freedman*, 420 F.3d at 1358.

79. See *supra* Section I.B.3; cf. *Freedman*, 420 F.3d at 1359 (“There is no set formula for determining whether a finding of equivalence would vitiate a claim limitation, and thereby violate the all limitations rule.”).

80. See *Warner-Jenkinson Co. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 39 n.8 (1997) (“Where the evidence is such that no reasonable jury could determine two elements to be equivalent, district courts are obliged to grant partial or complete summary judgment.”).

81. See Gross & Gordon, *supra* note 15, at 22 (“Without an equivalents analysis, the jury is removed from the decision regarding infringement under the doctrine of equivalents.”); see also Shulman & Rupert, *supra* note 72, at 483 (“[A]pplication of claim vitia-

The following example illustrates the application of the claim vitiation doctrine. Suppose that in the patented desk example above,⁸² the accused product contains four legs, a flat surface, and a built-in stapler holder. As a matter of law, the judge may decide that finding the built-in stapler holder equivalent to the built-in pencil holder would vitiate the pencil holder limitation. The judge does not perform either the function-way-result test or the insubstantial differences test to determine equivalency. The absence of an equivalent to the pencil-holder limitation in the accused product therefore violates the all-elements rule. Accordingly, the judge will rule that the accused product does not infringe the patented desk under the doctrine of equivalents.

Because every application of the doctrine of equivalents arguably reads a limitation out of the claim, an accused infringer may assert claim vitiation whenever the patent holder invokes the doctrine of equivalents.⁸³ Claim vitiation is therefore an incredibly significant defense to an assertion of non-literal infringement⁸⁴ and has the potential to severely threaten the application of the doctrine of equivalents.⁸⁵ Daniel Shulman and Donald Rupert recently illustrated the power of the claim vitiation rule in their survey of eighteen cases decided between 1994 and 2003 in which the Federal Circuit considered whether to apply the doctrine.⁸⁶ Their research showed that the court applied claim vitiation in fourteen of the cases.⁸⁷ The fact that the Federal Circuit found claim vitiation over seventy-five percent of the time in which it considered the doctrine's application attests to not only the court's continued resistance to a finding of infringement under the doctrine of equivalents but also the strength of the claim vitiation doctrine to preclude any such finding.

tion, as a matter of law, is geared to ignore all evidence of function/way/result and the insubstantiality of the differences.”).

82. *See supra* Section I.B.3.

83. Calvin P. Griffith, *The Law, Technology & the Arts Symposium: The Past, Present and Future of the Federal Circuit*, 54 CASE W. RES. L. REV. 851, 854 (2004).

84. *See id.* at 853-54 (arguing that the most significant limitations on the doctrine of equivalents since 1999 involved the all-elements rule and the claim vitiation doctrine).

85. *See Gross & Gordon, supra* note 15, at 21 (“Infringement under the doctrine of equivalents is relevant only when the accused device is not within the literal scope of the claims, so it would follow that any finding of equivalents would vitiate the limitation to some degree, and so claim vitiation could swallow the doctrine of equivalents.”).

86. *See Shulman & Rupert, supra* note 72, at 484-86.

87. *Id.*

b) The Federal Circuit's Inconsistent Application of Claim Vitiating

Given the significance of claim vitiating in a doctrine of equivalents inquiry, it is highly desirable for the Federal Circuit to clearly and consistently delineate what constitutes claim vitiating.⁸⁸ Nevertheless, while there is considerable support in the Federal Circuit's case law for finding claim vitiating,⁸⁹ the court has applied the claim vitiating rule in varying ways, leading to unpredictable results.⁹⁰ Shulman and Rupert have attempted to categorize the various applications of the claim vitiating doctrine into four rules: the Lourie Rule, the Michel Rule, the No Limitation Rule, and the Significant Limitation Rule.⁹¹ The authors suggest that while Judge Lourie and Judge Michel each have adopted a relatively predictable rule for applying the claim vitiating doctrine, other Federal Circuit judges have failed to apply claim vitiating in a consistent manner.⁹²

88. *Cf. id.* at 484 (suggesting that the Federal Circuit issue an en banc ruling regarding a rule of claim vitiating for the consistent application of the doctrine by the court and for the benefit of those who rely on the predictability of the patent law for their business decisions, advice, and cases).

89. *See, e.g.,* Freedman Seating Co. v. Am. Seating Co., 420 F.3d 1350, 1362 (Fed. Cir. 2005) ("The problem, however, is that taken to its logical conclusion, Freedman's argument would mean that any support member capable of allowing translational and rotational motion would be equivalent to a support member 'slidably mounted to said seatbase,' which reads 'slidably mounted' completely out of the claims."); *Asyst Techs., Inc. v. Emtrak, Inc.*, 402 F.3d 1188, 1195 (Fed. Cir. 2005) ("To hold that 'unmounted' is equivalent to 'mounted' would effectively read the 'mounted on' limitation out of the patent. As the district court noted, the 'all elements rule' provides that the doctrine of equivalents does not apply if applying the doctrine would vitiate an entire claim limitation."); *Moore U.S.A., Inc. v. Standard Register Co.*, 229 F.3d 1091, 1106 (Fed. Cir. 2000) ("[T]o allow what is undoubtedly a minority (i.e., 47.8%) to be equivalent to a majority would vitiate the requirement that the 'first and second longitudinal strips of adhesive . . . extend [sic] the majority of the lengths of said longitudinal marginal portions.' . . . If a minority could be equivalent to a majority, this limitation would hardly be necessary . . ."); *Tronzo v. Biomet, Inc.*, 156 F.3d 1154, 1160 (Fed. Cir. 1998) ("According to the expert testimony, any shape would be equivalent to the conical limitation of claims 2 and 10. Such a result is impermissible under the all-elements rule of *Warner-Jenkinson* because it would write the 'generally conical outer surface' limitation out of the claims."). *But see* *Wright Med. Tech., Inc. v. Osteonics Corp.*, 122 F.3d 1440, 1445-46 (Fed. Cir. 1997) (citing *Warner-Jenkinson Co. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 39 n.8 (1997)) ("Both the claimed invention and the STAT-IM device employ an intramedullary rod element, and Wright's argument is that the STAT-IM rods are equivalent to the claimed rod. Thus, summary judgment was not appropriate because Wright's theory of equivalence would not 'entirely vitiate a particular claim element.'").

90. Shulman & Rupert, *supra* note 72, at 464, 488.

91. *Id.* at 464-65, 479.

92. *Id.* at 464 n.48.

The Lourie Rule practically eliminates any application of the doctrine of equivalents by requiring that “every word in a claim is a limitation that must be met in an identical way” to find infringement.⁹³ The Lourie Rule has consistently precluded application of the doctrine of equivalents where the accused product rearranged structural or spatial claim elements because any other arrangement would vitiate the specific arrangement described in the claims.⁹⁴ Judge Linn has applied the Lourie Rule.⁹⁵ Under the Michel Rule, claim vitiation exists where the literal scope of the claim language excludes the equivalent.⁹⁶ The Michel Rule has resulted in a finding of no infringement under the doctrine of equivalents in situations both where the equivalent range or number is outside the literal scope of the claimed range or number and where a claimed material is substituted (e.g., wood for metal).⁹⁷ Because Judge Michel would find the doctrine of equivalents inapplicable as a matter of law if there is no literal infringement, his application of the claim vitiation doctrine seemingly eliminates the doctrine of equivalents.⁹⁸ Judges Rader and Bryson have applied the Michel Rule.⁹⁹ The No Limitation Rule finds claim vitiation to exist where an equivalent requires such a broad reading of a claim limitation that the limitation is meaningless.¹⁰⁰ Judges Archer, Gajarsa, and Prost have applied the No Limitation Rule.¹⁰¹ Finally, under the Significant Limitation Rule, claim vitiation occurs where an accused product contains changes from the literal scope of a significant claim limitation.¹⁰² Judge Plager has applied the Significant Limitation Rule.¹⁰³

In the recent case of *Depuy Spine, Inc. v. Medtronic Sofamor Danek, Inc.*,¹⁰⁴ Judge Linn attempted to reconcile the differences in the application

93. *Id.* at 465 (emphasis omitted).

94. *Id.* at 464-65.

95. *Id.* at 465.

96. *Id.* at 473. The Michel Rule appears to combine the doctrines of claim vitiation and specific exclusion. However, case law and academic literature seem to indicate that specific exclusion is a distinct principle from claim vitiation. *See infra* Section I.B.5.a.

97. Shulman & Rupert, *supra* note 72, at 465.

98. *Id.* at 477.

99. *Id.* at 465.

100. *Id.* at 479.

101. *Id.*

102. *Id.*

103. *Id.*

104. *Depuy Spine, Inc. v. Medtronic Sofamor Danek, Inc.*, Nos. 05-1311, 05-1335, 2006 WL 3346155 (Fed. Cir. Nov. 20, 2006).

of the claim vitiation rule by clearly defining when the doctrine should apply.¹⁰⁵ Judge Linn stated that:

It is important to note that when we have held that the doctrine of equivalents cannot be applied to an accused device because it “vitiates” a claim limitation, it was not to hold that the doctrine is always foreclosed whenever a claim limitation does not literally read on an element of an accused device; such an interpretation of the ‘all elements’ rule would swallow the doctrine of equivalents entirely. . . . A holding that the doctrine of equivalents cannot be applied to an accused device because it “vitiates” a claim limitation is nothing more than a conclusion that the evidence is such that no reasonable jury could conclude that an element of an accused device is equivalent to an element called for in the claim, or that the theory of equivalence to support the conclusion of infringement otherwise lacks legal sufficiency.¹⁰⁶

Because application of the claim vitiation rule not only is practically unpredictable but also appears to be judge-dependent to some extent,¹⁰⁷ it is debatable whether Judge Linn’s statement on the proper use of claim vitiation will influence other judges on the Federal Circuit.

5. *Specific Exclusion*

a) Background

The specific exclusion principle provides that a patent holder cannot assert an equivalent specifically excluded from the scope of the claims.¹⁰⁸ A patent may specifically exclude a proposed equivalent from the scope of the claimed invention either implicitly or explicitly.¹⁰⁹ Specific exclusion focuses on upholding the public-notice function by precluding a patent holder from using the doctrine of equivalents to reclaim subject matter

105. *Id.* at *8. Judge Linn does not appear to distinguish the claim vitiation rule from the all-elements rule. Instead, he notes that a requirement of the all-elements rule is that no limitation be vitiated. *See id.* at *7 (“[A]s a practical matter, the ‘all-elements’ rule informs a doctrine of equivalents analysis by requiring that equivalence be assessed on a limitation-by-limitation basis, rather than from the perspective of the invention as a whole, and that no limitation be read completely out of the claim.”).

106. *Id.* at *8 (citations omitted).

107. Shulman & Rupert, *supra* note 72, at 464 n.48.

108. *Dolly, Inc. v. Spalding & Evenflo Cos.*, 16 F.3d 394, 400 (Fed. Cir. 1994).

109. *SciMed Life Sys., Inc. v. Advanced Cardiovascular Sys., Inc.*, 242 F.3d 1337, 1347 (Fed. Cir. 2001) (“[T]he foreclosure of reliance on the doctrine of equivalents in such a case depends on whether the patent clearly excludes the asserted equivalent structure, either implicitly or explicitly.”).

which the patentee clearly excluded.¹¹⁰ Accordingly, the rule ensures that the public may rely on clear disclaimers in the patent to conclude that the patentee did not seek patent rights for this excluded subject matter.¹¹¹ The following example illustrates the application of the specific exclusion principle.¹¹² Suppose that in the patented desk example above,¹¹³ the claim also requires that the desk be “non-metallic.” If the accused device is metallic but otherwise contains a literal embodiment for each claim limitation, specific exclusion will prevent the patent holder from asserting that a metallic desk is equivalent to a non-metallic desk. The rationale behind the application of the principle is that the patent makes “a clear and binding statement to the public that metallic structures are excluded from the protection of the patent.”¹¹⁴

Because the Federal Circuit has labeled specific exclusion as a “corollary” to the all-elements rule,¹¹⁵ it is important to understand the relationship between the two doctrines. A finding of specific exclusion by the court as a matter of law¹¹⁶ has the effect of precluding the accused element from being an equivalent to the claimed limitation.¹¹⁷ The absence of a literal claim limitation or its equivalent in the accused device therefore violates the all-elements rule.¹¹⁸ Consequently, the court in such cases

110. *Id.* (“[T]he patentee cannot be allowed to recapture the excluded subject matter under the doctrine of equivalents without undermining the public-notice function of the patent.”).

111. *See id.* (noting that by drafting the patent to clearly exclude the proposed equivalent [catheters that used a dual lumen configuration], the patent holder allowed “competitors and the public to draw the reasonable conclusion that the patentee was not seeking patent protection for” the dual lumen configuration).

112. This example is guided by the one Judge Bryson provides in *SciMed*. *See id.*

113. *See supra* Section I.B.3.

114. *SciMed*, 242 F.3d at 1347.

115. *Asyst Techs., Inc. v. Emtrak, Inc.*, 402 F.3d 1188, 1195 (Fed. Cir. 2005).

116. *See Novartis Pharms. Corp. v. Abbott Labs.*, 375 F.3d 1328, 1337 (Fed. Cir. 2004) (“[T]he district court found that the specific exclusion principle precluded it, as a matter of law, from treating the surfactant [accused element] as an element forming the lipophilic component [claim limitation.]”); *Affymetrix, Inc. v. Multilyte Ltd.*, No. C 03-03779 WHA, 2005 WL 1513147, at *4 (N.D. Cal. June 23, 2005) (“Affymetrix correctly argues that the specific exclusion principle would preclude a jury’s finding of infringement under the doctrine of equivalents as a matter of law.”).

117. *See Dolly, Inc. v. Spalding & Evenflo Cos.*, 16 F.3d 394, 400 (Fed. Cir. 1994) (“[T]he concept of equivalency cannot embrace a structure that is specifically excluded from the scope of the claims.”); *see also Wiener v. NEC Elecs., Inc.*, 102 F.3d 534, 541 (Fed. Cir. 1996) (holding that the accused device does not contain an equivalent for each claim limitation because specific exclusion applied).

118. *Boone, supra* note 12, at 651; *cf. Cook Biotech Inc. v. ACell, Inc.*, 460 F.3d 1365, 1379 (Fed. Cir. 2006) (“A claim that specifically excludes an element cannot

must grant summary judgment of noninfringement under the doctrine of equivalents.¹¹⁹ Accordingly, an equivalence analysis under the function-way-result or the insubstantial differences tests may be entirely absent from this inquiry.¹²⁰

Similarly, there is a kinship between the specific exclusion principle and the claim vitiation rule.¹²¹ In instances where the court finds specific exclusion, claim vitiation applies with equal strength. Thus, in the hypothetical example involving the non-metallic desk and the accused metallic desk, the court may additionally or alternatively hold that a finding of equivalence would vitiate the “non-metallic” claim limitation.¹²²

Nevertheless, there exist subtle distinctions between the doctrines. Specific exclusion and claim vitiation differ with respect to the source of preclusion of the doctrine of equivalents. Specific exclusion bars the use of an equivalent specifically excluded from the scope of the claims.¹²³ Accordingly, the patentee eliminated the equivalent once she drafted the patent because she (purposefully or unintentionally) excluded the equivalent from the scope of the claims. Because of her specific drafting, the patentee likely knew or reasonably could have known that a court would preclude an assertion of equivalence.

In contrast, claim vitiation provides that it is the alleged equivalent which prevents a finding of infringement under the doctrine of equivalents because that alternative element effectively eliminates the claim limitation in question.¹²⁴ Accordingly, a patentee’s affirmative disclaimer of an alleged equivalent is not the source of preclusion of the doctrine of equivalents as is the case in prosecution history estoppel, the public dedication rule, and specific exclusion. In fact, claim vitiation bars application of the

through a theory of equivalence be used to capture a composition that contains that expressly excluded element without violating the ‘all limitations rule.’”).

119. *Warner-Jenkinson Co. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 39 n.8 (1997) (“Where the evidence is such that no reasonable jury could determine two elements to be equivalent, district courts are obliged to grant partial or complete summary judgment.”).

120. *See supra* Section I.B.1 (noting that the function-way-result and insubstantial differences tests are factual inquiries).

121. *SciMed Life Sys., Inc. v. Advanced Cardiovascular Sys., Inc.*, 242 F.3d 1337, 1347 (Fed. Cir. 2001) (“The [specific exclusion] principle articulated in these cases is akin to the familiar rule that the doctrine of equivalents cannot be employed in a manner that wholly vitiates a claim limitation.”).

122. *Id.* at 1347; *see also Asyst Techs., Inc. v. Emtrak, Inc.*, 402 F.3d 1188, 1195 (Fed. Cir. 2005) (holding that both specific exclusion and claim vitiation rationalize a finding of no infringement under the doctrine of equivalents).

123. *Dolly, Inc. v. Spalding & Evenflo Cos.*, 16 F.3d 394, 400 (Fed. Cir. 1994).

124. *See Gross & Gordon, supra* note 15, at 21.

doctrine of equivalents “without any evidence that the patentee intended, knew, or could have known that [doctrine of equivalents] infringement opportunities would be lost.”¹²⁵ Consequently, while there must be instances in which the patentee anticipates that certain alternative elements will vitiate his claim limitations, there also must exist situations in which the patentee cannot reasonably foresee that specific substitute elements will vitiate her claim limitations.

The effect of this discrepancy between the two doctrines is that the court performs its analysis retrospectively (by looking at the language the patentee chose to write) in specific exclusion cases and prospectively (by looking at the alleged equivalent) in claim vitiation cases. Accordingly, specific exclusion focuses more on the public-notice function¹²⁶ by ensuring that the public can rely on specific disclaimers of subject matter made in the patent.¹²⁷ In contrast, the public-notice function does not play as important of a role in claim vitiation because the public cannot confidently predict that a particular element will vitiate a claim limitation based on the claim language.¹²⁸

b) The Federal Circuit’s Application of Specific Exclusion

A review of the case law reveals fourteen cases in which the Federal Circuit has considered application of the specific exclusion rule in its doctrine of equivalents inquiry.¹²⁹ The fact that the Federal Circuit has applied the principle to preclude infringement under the doctrine of equivalents in thirteen of these fourteen cases attests to the strength of specific exclusion to severely limit the application of the doctrine of equivalents.¹³⁰ These cases illustrate that specific exclusion is applicable in two situations: where the patentee clearly disclaimed subject matter from the scope of the claimed invention in (1) the specification or (2) the claims.¹³¹

125. Shulman & Rupert, *supra* note 72, at 483.

126. Gross & Gordon, *supra* note 15, at 25.

127. *Cf. SciMed*, 242 F.3d at 1347 (“The unavailability of the doctrine of equivalents could be explained . . . as the product of a clear and binding statement to the public that metallic structures are excluded from the protection of the patent.”).

128. *Cf. supra* Section I.B.4.b (noting the Federal Circuit’s inconsistent application of the claim vitiation doctrine).

129. *See* Appendix A.1.

130. It should be noted that in the one case where the Federal Circuit found no specific exclusion, it still held that there was no infringement under the doctrine of equivalents because of a violation of the all-elements rule. *Ethicon Endo-Surgery, Inc. v. U.S. Surgical Corp.*, 149 F.3d 1309, 1319 (Fed. Cir. 1998).

131. *See* Appendix A.1.

Although the case law is deficient with regard to cases involving specific exclusion in the specification, application of the principle appears to focus on explicit disclaimers,¹³² such as where the patent holder criticizes the equivalent¹³³ or requires that the invention contain the claimed element.¹³⁴ Accordingly, application of the specific exclusion principle in these cases seems quite foreseeable.

In contrast, because a patentee generally does not explicitly disclaim subject matter in the patent claims,¹³⁵ the application of specific exclusion to the claims depends on whether the patentee implicitly disclaimed the proposed equivalent.¹³⁶ Since this inquiry involves a certain degree of in-

132. Even in the instance where there is an implicit exclusion in the specification, there is additionally some type of explicit disclaimer to justifiably preclude the application of the doctrine of equivalents. *See* *Novartis Pharms. Corp. v. Abbott Labs.*, 375 F.3d 1328, 1337 (Fed. Cir. 2004):

In light of the specification's implicit teaching that surfactants do not compose the entire portion of the lipophilic component, Novartis is foreclosed from arguing that Span 80, which the specification expressly acknowledges is a surfactant, is an equivalent to a pharmaceutically acceptable *non-surfactant* lipophilic excipient, as required by the lipophilic phase under our claim construction.

Id.

133. *See* *Gaus v. Conair Corp.*, 363 F.3d 1284, 1291 (Fed. Cir. 2004) (finding specific exclusion in the specification where "Dr. Gaus criticized prior art in which the protective device relied on the fluid coming in contact with the voltage-carrying portions of the system [which is one of the elements of the accused product], and indicated that his invention avoids the resulting problem . . ." (citations omitted)); *SciMed*, 242 F.3d at 1345 (applying specific exclusion based on disclaimer in the specification, one of its rationales being that "the common specification of SciMed's patents referred to prior art catheters, identified them as using the [proposed equivalent] dual lumen configuration, and criticized them . . .").

134. *See* *Gaus*, 363 F.3d at 1291 (finding specific exclusion in the specification of devices like the accused product in which the pair of probe networks were not separate from the voltage-carrying components because "Dr. Gaus thus made clear that it is essential to his invention that the pair of probe networks be separate from the voltage-carrying components of the appliance"); *SciMed*, 242 F.3d at 1345 (applying specific exclusion based on disclaimer in the specification, one of its rationales being that "[t]he disclaimer of [proposed equivalent] dual lumens was made even more explicit in the portion of the written description in which the patentee identified coaxial lumens as the configuration used in 'all embodiments of the present invention'").

135. *Cf.* Jay Dratler, Jr., *Alice in Wonderland Meets the U.S. Patent System*, 38 AKRON L. REV. 299, 320 (2005) ("[A] patentee has every incentive to draft claims as broadly as possible, since the claims determine the legal scope of the legal monopoly that the patent provides.").

136. *See* *SciMed*, 242 F.3d at 1346 ("[B]y defining the claim in a way that clearly excluded certain subject matter, the patent implicitly disclaimed the subject matter that

terpretation, there is inevitably less predictability in the application of specific exclusion in these cases than in instances involving specification disclaimers. Furthermore, if applied too broadly, specific exclusion has the potential to consume the doctrine of equivalents because each claim arguably can specifically exclude any alternative not literally claimed.¹³⁷ Recognizing this problem, the Federal Circuit in *Ethicon Endo-Surgery, Inc. v. U.S. Surgical Corp.*¹³⁸ expressly limited the application of specific exclusion, holding that “subject matter is not necessarily ‘specifically excluded’ from coverage under the doctrine unless its inclusion is somehow inconsistent with the language of the claim. Literal failure to meet a claim limitation does not necessarily amount to ‘specific exclusion.’”¹³⁹

An examination of the cases in which the Federal Circuit applied specific exclusion to the claims reveals that while there is some unpredictability in the application of the principle,¹⁴⁰ a general pattern seems to arise. Where the patentee claims one option in a binary choice setting, specific exclusion will preclude the patent holder’s assertion that the other option is equivalent.¹⁴¹ This application of the specific exclusion principle is particularly applicable for structural limitations.¹⁴² Note, however, that the

was excluded and thereby barred the patentee from asserting infringement under the doctrine of equivalents.”).

137. See Gerald Sobel, *Patent Scope and Competition: Is the Federal Circuit’s Approach Correct?*, 7 VA. J.L. & TECH. 3, 26 (2002) (“If each claim were to ‘specifically exclude’ all alternatives not literally within it, the doctrine of equivalents would disappear.”); see also Gerald Sobel, *The Impact of Major Changes by the Federal Circuit in the Law Affecting Claim Scope*, 54 CASE W. RES. L. REV. 857, 860 (2004) [hereinafter Sobel, *Impact of Major Changes*] (“The [specific exclusion] doctrine was hard to distinguish from the exclusion of everything not literally claimed—which would bar *all* equivalents.”).

138. 149 F.3d 1309 (Fed. Cir. 1998).

139. *Id.* at 1317.

140. See, e.g., *Athletic Alternatives, Inc. v. Prince Mfg., Inc.*, 73 F.3d 1573, 1581-82 (Fed. Cir. 1996) (finding that the claim limitation that the splay-creating string end offset distance take on at least three values specifically excluded the two-distance splayed string system in the accused device); *Dolly, Inc. v. Spalding & Evenflo Cos.*, 16 F.3d 394, 399 (Fed. Cir. 1994) (holding that claimed stable rigid frame formed of components other than the seat and back panels specifically excluded alleged equivalent, stable rigid frame assembled from the seat and back panels).

141. See *Senior Techs., Inc. v. R.F. Techs., Inc.*, 76 Fed. Appx. 318, 321 (Fed. Cir. 2003) (“[I]n a binary choice situation where there are only two structural options, the patentee’s claiming of one structural option implicitly and necessarily precludes the capture of the other structural option through the doctrine of equivalents.”); see also Gross & Gordon, *supra* note 15, at 26 (“If a word in a claim suggests an either/or or binary concept, then the claim excludes the unclaimed counterpart.”).

142. See, e.g., *Asyst Techs., Inc. v. Emtrak, Inc.*, 402 F.3d 1188, 1195 (Fed. Cir. 2005) (holding that claim limitation “mounted” specifically excluded objects that are

binary choice setting does not simply involve the negation of a claim limitation (i.e., “suede” v. “not suede” or “blue” v. “not blue”), but requires that the claim limitation be one of *only* two options.¹⁴³ For example, a process claim limitation that requires an inert gas atmosphere specifically excludes a process using reactive gases such as alleged equivalent heated air.¹⁴⁴

6. *Concluding Remarks*

Through its implementation of these limiting principles, the Federal Circuit has provided the accused infringer with an arsenal of defenses which, if utilized effectively, may practically render infringement under the doctrine of equivalents a Herculean task for the plaintiff to prove. Furthermore, because a court may apply many of these rules as matters of law, the jury is all but removed from the equivalence inquiry. Accordingly, the patent holder’s argument that the accused element performs substantially the same function-way-result as the claim limitation or that the differences between the two are insubstantial essentially becomes meaningless. In adopting these principles to limit the application of the doctrine of equivalents, the Federal Circuit has clearly demonstrated its interest in preserving the public-notice function at the expense of patentee protection.

Nevertheless, despite the potential for these limiting principles to effectively eliminate the doctrine of equivalents, the Supreme Court has as-

“unmounted.”); *Senior*, 76 Fed. Appx. at 322 (finding no infringement under the doctrine of equivalents because “the patentee’s decision to claim a ‘receiving circuit’ located in the ‘same housing’ necessarily and implicitly excluded from the scope of equivalents an embodiment of the ‘receiving circuit’ which is *not* located in the ‘same housing.’”). *But see Ethicon*, 149 F.3d at 1319 (finding claim limitation requiring a lockout “in the staple cartridge” did not specifically exclude alleged equivalent lockout not “in the staple cartridge.”). The *Ethicon* opinion seemingly contradicts the application of specific exclusion in binary choice settings because there are only two structural options for the location of the lockout: in the staple cartridge and not in the staple cartridge. However, *Ethicon* appeared to be an attempt by Judge Lourie to abandon the specific exclusion rule. *See Sobel, Impact of Major Changes, supra* note 137, at 860 (“The court explained in *Ethicon Endo-Surgery* that, looking back, the holdings in the ‘specific exclusion’ cases should be understood as situations where, on the facts, no reasonable jury could have found equivalence. In other words, the ‘specific exclusion’ principle was abandoned.” (citation omitted)). Nevertheless, because the specific exclusion principle has survived post *Ethicon*, the Federal Circuit will arguably reject this portion of its holding as precedent. In fact, no specific exclusion cases listed in Appendix A.1 and decided after *Ethicon* cite to this portion of *Ethicon*’s holding.

143. *See Senior*, 76 Fed. Appx. at 321.

144. *See Eastman Kodak Co. v. Goodyear Tire & Rubber Co.*, 114 F.3d 1547, 1551, 1561 (Fed. Cir. 1997).

sured patent holders that the doctrine will remain a protected patent right unless Congress decides otherwise.¹⁴⁵ Accordingly, the plaintiff in an infringement suit must continue to plead non-literal infringement and, in doing so, must frame its argument to account for the numerous defenses that the accused infringer will assuredly assert.

II. CASE SUMMARY

In *Bicon*, the Federal Circuit found that the accused product did not infringe either literally or under the doctrine of equivalents.¹⁴⁶ In its equivalence inquiry, the court applied the specific exclusion principle and, in doing so, appeared to deliberately exclude the equally applicable and, to a certain extent, more fitting claim vitiation rule. The reasoning behind the Federal Circuit's omission was arguably to allow the court to illustrate a new rule limiting application of the doctrine of equivalents.

A. Facts

U.S. Patent No. 5,749,731 ("the '731 patent") claims an emergence cuff apparatus designed to maintain a space around a dental implant prosthesis so that a dental crown can fit underneath a patient's gum line when positioned on the implant.¹⁴⁷ The dental implant described in the '731 patent is composed of two distinct parts: the root member (10),¹⁴⁸ which the surgeon inserts into the patient's jaw bone and which stabilizes the implant; and the abutment (14), which connects to the root member and protrudes above the patient's gum line to provide the means for fastening a dental crown.¹⁴⁹ The surgeon places the emergence cuff (30) claimed in the '731 patent on the abutment following surgical implantation of the root member and subsequent attachment of the abutment.¹⁵⁰ The cuff prevents the patient's gum tissue from closing around the abutment during the healing process.¹⁵¹ Once the patient's jaw and mouth have fully healed, removal of the cuff yields a space which allows the permanent crown to rest beneath the patient's gum line, thus cosmetically maintaining the patient's

145. See *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co. (Festo II)*, 535 U.S. 722, 733 (2002) (citing *Warner-Jenkinson Co. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 28 (1997)).

146. *Bicon, Inc. v. Straumann Co. (Bicon II)*, 441 F.3d 945, 956 (Fed. Cir. 2006).

147. *Id.* at 946.

148. See Figure 1. All subsequent parentheticals listing a number will refer to Figure 1.

149. *Bicon II*, 441 F.3d at 946-47.

150. *Id.* at 947.

151. *Id.*

natural gum line.¹⁵² The cuff also serves as a means for affixing a temporary crown while the permanent crown is made.¹⁵³

Diro, Inc., owner of the '731 patent, and licensee Bicon, Inc. (collectively "Diro"), jointly brought a patent infringement suit in the United States District Court for the District of Massachusetts against The Straumann Company and Institut Straumann AG (collectively "Straumann") alleging that two of Straumann's crown preparation products infringed at least claim 5 of the '731 patent.¹⁵⁴ The relevant sections of claim 5 are as follows:¹⁵⁵

An emergence cuff member for use in preserving the interdental papilla during the procedure of placing an abutment on a root member implanted in the alveolar bone of a patient in which

[a] the abutment has a frusto-spherical basal surface portion and

[b] a conical surface portion having a selected height extending therefrom comprising . . .

[c] the bore having a taper generally matching that of the conical surface portion of the abutment,

Straumann's first alleged infringing device, called an "impression cap," is a plastic structure that fits over the abutment and the shoulder of the root member while the surgeon prepares the crown mold.¹⁵⁶ Straumann's second accused device, called a "burnout coping," is a cone-shaped plastic device that is used to construct the permanent crown.¹⁵⁷ The burnout coping fits over a structure that possesses the same shape as the abutment and shoulder portion of the root member.¹⁵⁸

B. The District Court's Ruling

Prior to analyzing Diro's infringement claims, the district court held that the preamble—all of the claim language preceding the word "comprising" in claim 5—limited the claim.¹⁵⁹ The court based its conclusion on the fact that the preamble was an integral part of claim 5 and that reference to the structure recited in the preamble was necessary to completely

152. *Id.*

153. *Id.*

154. *Id.* at 946, 948.

155. The claim is reproduced in subdivided form as provided by the Federal Circuit. *See id.* at 948-49.

156. *Id.* at 948.

157. *Id.*

158. *Id.*

159. *Bicon, Inc. v. Straumann Co. (Bicon I)*, No. Civ.A. 01-10269-GAO, 2004 WL 2387277, at *3 (D. Mass. Sept. 29, 2004) (mem.).

understand certain terms recited in the limitations.¹⁶⁰ The district court concluded that the abutment listed in the preamble was a specific structure defined by the characteristics described in the claim and specification.¹⁶¹ Accordingly, the court found that the abutment was distinct from the root member and contained a frusto-spherical basal surface portion (28), meaning that the base of the abutment had a convex surface,¹⁶² as well as a conical surface portion (24) that extended away from the frusto-spherical basal surface to a selected height.¹⁶³

As a result of the court's construction of the preamble as a limitation of the claim, Diro conceded that the abutment in either accused Straumann device lacked a frusto-spherical basal surface.¹⁶⁴ Nevertheless, Diro asserted that the trumpet-shaped neck surface of the Straumann root member¹⁶⁵ contained the frusto-spherical basal surface or its equivalent.¹⁶⁶ Reiterating that the abutment described in claim 5 must contain a frusto-spherical basal surface, the court held that a device with a frusto-spherical basal surface on the root member rather than on the abutment was not equivalent to the structure recited in the claim.¹⁶⁷ The court concluded that to find otherwise would vitiate the claim limitation that the abutment had a frusto-spherical basal surface, noting that "[h]aving claimed within the scope of its patent a device having specific characteristics, including discrete implant and abutment structures and an abutment with a frusto-spherical basal surface, Diro cannot now rewrite the claim to eliminate these specific structural limitations."¹⁶⁸

Furthermore, the district court rejected Diro's argument that the concave, trumpet-shaped surface of the root member neck was equivalent to the convex, frusto-spherical basal surface of the abutment because such a theory would vitiate the claim limitation.¹⁶⁹ The court found that the "pa-

160. *Id.*

161. *Id.*

162. The district court construed "frusto-spherical" as follows:
"Frusto-spherical" rather obviously refers to a solid having the shape of a frustum of a sphere—that is, a sphere the upper portion of which has been "cut off" by a plane. The remaining portion of the sphere would have, just as a full sphere would have, a convex surface.

Bicon, Inc. v. Straumann Co., 271 F. Supp. 2d 368, 375 (D. Mass. 2003).

163. *Bicon I*, 2004 WL 2387277, at *3.

164. *Id.* at *4.

165. See Figure 2B.

166. *Bicon I*, 2004 WL 2387277, at *4.

167. *Id.* at *5.

168. *Id.*

169. *Id.* at *5-6.

tentee used clear language to impose a narrowing structural limitation in claim 5, and that language necessarily limit[ed] the scope of possible equivalents.”¹⁷⁰ Without defining the scope of equivalents, the court held that the scope could not include the concave, trumpet-shaped neck of the root member because a concave surface was the opposite of a convex surface¹⁷¹ and the trumpet-shaped neck did not satisfy the function-way-result test.¹⁷² Accordingly, the district court ruled that Straumann’s accused devices did not infringe claim 5 of the ’731 patent under the doctrine of equivalents and granted Straumann’s motion for summary judgment of noninfringement.¹⁷³

C. The Federal Circuit’s Ruling

Regarding the issue of whether the abutment described in the preamble limited claim 5, the Federal Circuit, in an opinion by Judge Bryson,¹⁷⁴ affirmed the district court’s finding that the preamble contained limitations relating to the abutment.¹⁷⁵ Having construed the preamble as a matter of law, the Federal Circuit addressed the district court’s infringement analysis.

The Federal Circuit affirmed the district court’s finding of noninfringement under the doctrine of equivalents.¹⁷⁶ The Federal Circuit held that finding the concave structure of the root member equivalent to the convex structure of the abutment would contradict the frusto-spherical claim limitation.¹⁷⁷ Noting that the preamble of claim 5 possessed a detailed description of the shape of the abutment, the Federal Circuit then ruled that “[a] claim that contains a detailed recitation of structure is properly accorded correspondingly limited recourse to the doctrine of equivalents.”¹⁷⁸ The court found this principle particularly applicable to claim 5 because the claim specified a structure for the basal portion of the abut-

170. *Id.* at *6.

171. While not explicitly mentioned by the district court, this reasoning is based on the specific exclusion principle. *See supra* Section I.B.5.

172. *Bicon I*, 2004 WL 2387277, at *6.

173. *Id.* The district court performed a complete infringement analysis both literally and under the doctrine of equivalents, which further supported a finding of noninfringement, and addressed Bicon’s lack of standing. The specifics of these findings are not relevant to the purposes of this Note.

174. *Bicon, Inc. v. Straumann Co. (Bicon II)*, 441 F.3d 945, 946 (Fed. Cir. 2006). The other judges on the panel were Judges Michel and Gajarsa. *Id.*

175. *Id.* at 953.

176. *Id.* at 955.

177. *Id.*

178. *Id.* (citing *Tanabe Seiyaku Co. v. Int’l Trade Comm’n*, 109 F.3d 726, 732 (Fed. Cir. 1997)).

ment that explicitly excluded distinctly different and opposite shapes.¹⁷⁹ The Federal Circuit further noted that in such cases “by defining the claim in a way that clearly excluded certain subject matter, the patent implicitly disclaimed the subject matter that was excluded and thereby barred the patentee from asserting infringement under the doctrine of equivalents.”¹⁸⁰ Because the shape of Straumann’s abutment was frusto-conical¹⁸¹ (not frusto-spherical) and the neck of Straumann’s root member was concave (not convex), these structures were distinctly contrary to that of the claimed abutment and were therefore excluded.¹⁸² Accordingly, the specific exclusion principle precluded a finding of equivalence of either the basal portion of the Straumann abutment or the neck of the Straumann root member to the convex, frusto-spherical basal surface portion of the abutment described in claim 5.¹⁸³

III. DISCUSSION

In applying specific exclusion in its equivalence inquiry, the Federal Circuit explicitly omitted claim vitiation despite its apparent relevance. Along with serving the court’s preference for the public-notice function, the omission arguably allowed the Federal Circuit to illustrate a new principle limiting application of the doctrine of equivalents. Section III.A discusses three parts of the court’s analysis where it failed to apply claim vitiation and examines the rationale behind the Federal Circuit’s equivalence analysis. Section III.B then explores the implications of the court’s new limiting principle.

A. Specifically Excluding Vitiating: Emphasis on Notice and a New Limiting Doctrine

1. Where’s Claim Vitiating?

As its first rationale for precluding infringement under the doctrine of equivalents, the district court held that to find an equivalent in a frusto-spherical basal surface not on the abutment but instead on the root member itself would vitiate the claim limitation describing that the abutment has a

179. *Bicon II*, 441 F.3d at 955.

180. *Id.* (quoting *SciMed Life Sys., Inc. v. Advanced Cardiovascular Sys., Inc.*, 242 F.3d 1337, 1346 (Fed. Cir. 2001)).

181. *See* Figure 2.A.

182. *Bicon II*, 441 F.3d at 955-56.

183. *Id.* The Federal Circuit further analyzed Diro’s claim of infringement both literally and under the doctrine of equivalents and addressed Bicon’s lack of standing. The specifics of these findings are not relevant to the purposes of this Note.

frusto-spherical basal surface.¹⁸⁴ Nevertheless, the Federal Circuit did not address this application of claim vitiation on appeal.¹⁸⁵ Such an omission is perplexing because claim vitiation appears particularly applicable in this situation using the principles of the Lourie Rule (because the frusto-spherical basal surface is structurally rearranged to be on the root member rather than on the abutment)¹⁸⁶ or the Significant Limitation Rule (because the frusto-spherical basal surface of the abutment is a significant limitation of the claim).¹⁸⁷ The fact the judges on the *Bicon* panel have not applied these particular claim vitiation principles¹⁸⁸ may explain the absence of claim vitiation from this part of the opinion. On the other hand, the Federal Circuit may have had a particular reason for this omission.

Similarly, while the district court applied both claim vitiation and specific exclusion to the concave/convex equivalence inquiry,¹⁸⁹ the Federal Circuit removed claim vitiation from the analysis and only applied specific exclusion.¹⁹⁰ The application of the specific exclusion principle was entirely proper in this instance because of the binary nature of the claim limitation: concave versus convex.¹⁹¹ The principle precludes a finding of equivalence because the patentee drafted claim 5 of the '731 patent to require one of only two options (convex) and to clearly exclude the other (concave). Nevertheless, application of claim vitiation is also appropriate in situations where the court finds specific exclusion.¹⁹² Judge Bryson was certainly aware of this fact because he held in *Asyst Technologies, Inc. v. Emtrak, Inc.*¹⁹³ that both claim vitiation and specific exclusion precluded an "unmounted" substitute from being equivalent to a "mounted" claim

184. *Bicon, Inc. v. Straumann Co. (Bicon I)*, No. Civ.A. 01-10269-GAO, 2004 WL 2387277, at *5 (D. Mass. Sept. 29, 2004) (mem.).

185. *See Bicon II*, 441 F.3d at 955-56.

186. The Lourie Rule has consistently precluded application of the doctrine of equivalents where the accused product has rearranged structural claim elements. *See supra* Section I.B.4.b.

187. The district court's emphasis that the abutment is a specific structure attests to the significance of the claim limitation. *See Bicon I*, 2004 WL 2387277, at *3. Under the Significant Limitation Rule, claim vitiation occurs where an accused product contains changes from the literal scope of a significant claim limitation. *See supra* Section I.B.4.b.

188. While Judges Bryson and Michel have applied the Michel Rule, Judge Gajarsa has applied the No Limitation Rule. *See supra* Section I.B.4.b.

189. *See Bicon I*, 2004 WL 2387277, at *6.

190. *See Bicon II*, 441 F.3d at 955-56.

191. *See supra* Section I.B.5.b (noting that specific exclusion applies where the patentee claims one option in a binary choice setting).

192. *See id.*

193. *Asyst Techs., Inc. v. Emtrak, Inc.*, 402 F.3d 1188 (Fed. Cir. 2005).

limitation.¹⁹⁴ In fact, there Judge Bryson principally based his finding of no non-literal infringement on claim vitiation; specific exclusion was merely a supplemental basis for his decision.¹⁹⁵ Accordingly, it would have been consistent and entirely appropriate for Judge Bryson to additionally or alternatively apply claim vitiation in the concave/convex equivalence inquiry, especially considering that the district court specifically alluded to claim vitiation in its analysis.¹⁹⁶ Again, the implication arises that the Federal Circuit had a specific purpose for its omission.

Finally, the Federal Circuit applied specific exclusion without mentioning claim vitiation in its determination of whether the frusto-conical basal portion of the accused Straumann abutment was equivalent to the frusto-spherical basal portion of the claimed abutment.¹⁹⁷ As a preliminary matter, this equivalence analysis is intriguing not only because the district court did not address this issue in its opinion,¹⁹⁸ but also because Diro did not appear to argue that the frusto-conical Straumann abutment was an equivalent.¹⁹⁹ Accordingly, this suggests that the Federal Circuit had specific intentions for including this equivalence inquiry.

On another note, the Federal Circuit's application of specific exclusion in this instance appears questionable because "frusto-spherical" is not a binary claim limitation. Specifically, the "frusto-spherical" limitation arguably does not require that the claim limitation be one of only two options. Accordingly, the recitation of this limitation does not clearly exclude a structure that is "frusto-conical." The specific exclusion principle therefore appears inapplicable in this situation. In contrast, one can appropriately argue that finding an abutment with a frusto-conical basal portion equivalent to an abutment having a frusto-spherical basal portion would vitiate that claim limitation. This assertion is particularly compelling using the principles of the Significant Limitation Rule because the frusto-spherical basal surface of the abutment is a significant limitation of the claim.²⁰⁰ Claim vitiation therefore seems better suited to preclude a finding of equivalence in this case. While it is possible that the Federal Circuit misapplied the specific exclusion rule here, it is also plausible that the

194. *See id.* at 1195.

195. *See id.*

196. *See Bicon, Inc. v. Straumann Co. (Bicon I)*, No. Civ.A. 01-10269-GAO, 2004 WL 2387277, at *6 (D. Mass. Sept. 29, 2004) (mem.).

197. *See Bicon, Inc. v. Straumann Co. (Bicon II)*, 441 F.3d 945, 955-56 (Fed. Cir. 2006).

198. *See Bicon I*, 2004 WL 2387277, at *5-7.

199. *See Brief of Petitioners-Appellants, Bicon, Inc. v. Straumann Co.*, No. 05-1168, 2005 WL 1308593 (Fed. Cir. Apr. 18, 2005).

200. *See supra* note 187.

Federal Circuit excluded claim vitiation from its equivalence analysis for a specific reason.

2. *The Federal Circuit's Purpose*

So, why did the Federal Circuit exclude the claim vitiation doctrine from its equivalence inquiry of the frusto-spherical claim limitation? While application of claim vitiation is highly unpredictable²⁰¹ and therefore demands reform, this omission was surely not an attempt by the Federal Circuit to vitiate the claim vitiation rule. In fact, Judge Bryson applied the doctrine later in his opinion while analyzing the equivalence of limitation [e] (the conical surface portion limitation).²⁰² Additionally, in at least one case following the *Bicon* opinion, the Federal Circuit applied claim vitiation.²⁰³ The motivation behind the Federal Circuit's equivalence holding appears to be the result of its effort to focus on the public-notice function and to illustrate a new limiting principle on the doctrine of equivalents.

a) Focusing on the Public-Notice Function

The public-notice function ensures that the public can readily discern the patent scope based on the language in the patent and, in doing so, rely on any of the patentee's disclaimers of subject matter.²⁰⁴ The essence of the specific exclusion principle is that the patentee made a clear statement to the public in her patent that she is not seeking patent protection for the substitute at issue.²⁰⁵ Accordingly, application of specific exclusion preserves the public-notice function by precluding the patent holder from reclaiming the clearly excluded subject matter to establish equivalence.

By only applying specific exclusion to preclude a finding of equivalence for the frusto-spherical limitation, the Federal Circuit emphasized its dedication to the public-notice function. Application of the specific exclusion principle allowed the Federal Circuit to effectively blame the patentee for the preclusion of the doctrine of equivalents. After all, the patentee drafted the patent in such a manner as to disclaim an abutment having a

201. See *supra* Section I.B.4.b.

202. See *Bicon II*, 441 F.3d at 956.

203. See *Panduit Corp. v. Hellermannntyton Corp.*, 451 F.3d 819, 830 (Fed. Cir. 2006).

204. Cf. *PSC Computer Prods., Inc. v. Foxconn Int'l, Inc.*, 355 F.3d 1353, 1360 (Fed. Cir. 2004) ("The ability to discern both what has been disclosed and what has been claimed is the essence of public notice. It tells the public which products or processes would infringe the patent and which would not.").

205. See *SciMed Life Sys., Inc. v. Advanced Cardiovascular Sys., Inc.*, 242 F.3d 1337, 1347 (Fed. Cir. 2001).

concave or frusto-conical basal surface portion. Accordingly, the public is entitled to rely on this specific disclaimer in determining the patent scope. Because the patentee had the opportunity to draft the claim to include these structural features,²⁰⁶ he, and not the relying public, should bear any loss of equivalence as a result of his specific drafting.²⁰⁷

In contrast, claim vitiation effectively weakens the emphasis on the public-notice function by looking prospectively at the source of invalidation of the doctrine of equivalents. This principle focuses on the accused substitute rather than on the actual language in the patent. Consequently, the claim vitiation rule shifts the reason for rendering the doctrine of equivalents inapplicable from the patentee himself to the alleged equivalent. Claim vitiation therefore causes the public-notice function to take a backseat in the equivalence analysis. Accordingly, by removing claim vitiation from its inquiry in *Bicon*, the Federal Circuit implicitly emphasized that preserving the public-notice function remained at the forefront in its equivalence analysis.²⁰⁸

b) Illustrating a New Limiting Principle

Additionally, and more importantly, the Federal Circuit structured its equivalence analysis to illustrate a new limiting principle on the doctrine of equivalents.²⁰⁹ Immediately preceding its application of specific exclu-

206. With respect to the frusto-spherical limitation, there is nothing in the file history of the '731 patent to suggest that the frusto-spherical limitation was added to avoid the prior art. See U.S. Patent No. 5,749,731 File History (filed Jan. 16, 1996). It therefore appears that the patent drafter could have claimed the structure of the abutment more broadly. It is difficult to determine why the patent drafter failed to do so. One plausible explanation is that the patent drafter presumed that the recitation of the structure of the abutment in the preamble would not limit the claim. This explanation is supported by the fact that *Diro* argued on appeal that the abutment does not limit the claim in any way. See *Bicon II*, 441 F.3d at 949. Another possible explanation is that the patent drafter did not anticipate any barriers to the application of the doctrine of equivalents to the abutment limitation.

207. See *Sage Prods., Inc. v. Devon Indus.*, 126 F.3d 1420, 1425 (Fed. Cir. 1997) (“[A]s between the patentee who had a clear opportunity to negotiate broader claims but did not do so, and the public at large, it is the patentee who must bear the cost of its failure to seek protection for this foreseeable alteration of its claimed structure.”).

208. Preserving the public-notice function has been an important objective of the Federal Circuit for some time. See *Meurer & Nard*, *supra* note 10, at 1978-79.

209. Cf. Posting of Thomas Fairhall to Patently-O Patent Law Blog, *Federal Circuit Further Limits Doctrine of Equivalents under “Specific Exclusion” Principle*, http://patentlaw.typepad.com/patent/2006/04/federal_circuit.html (Apr. 2, 2006) (“[T]he Court [sic] invoked a new exclusion principle essentially foreclosing coverage under the Doctrine [sic] [of Equivalents] in cases where a claim contains a detailed recitation of structure . . .”). The blog seems to focus more on the “specific exclusion principle” as a

sion, the Federal Circuit concluded that “[a] claim that contains a detailed recitation of structure is properly accorded correspondingly limited recourse to the doctrine of equivalents.”²¹⁰ Having instituted this new principle, which may be termed the “detailed structure rule,” the Federal Circuit intended to illustrate how it might work in practice. Specific exclusion rather than claim vitiation served as the proper means to do so. Because the detailed structure rule emphasizes that the claim language causes the limited application of the doctrine of equivalents, the principle is clearly related to specific exclusion. As further evidence of this connection, the detailed structure rule also focuses on the public-notice function since the recitation of a detailed structure in a patent claim notifies the public that the patentee sought a limited scope of patent protection. Accordingly, the court noted that the detailed structure rule had “special application in a case such as this one.”²¹¹ The claim reciting the frusto-spherical basal portion of the abutment that specifically excluded “distinctly different and even opposite shapes”²¹² was a detailed recitation of structure claim.²¹³ As such, the claim was accorded no recourse to the doctrine of equivalents because it disclaimed the excluded subject matter.²¹⁴ Arguably, the detailed structure rule applies whenever a structural claim limitation specifically excludes an element.

On the other hand, had the Federal Circuit applied claim vitiation in its equivalence analysis, it would not have been able to illustrate this new principle without obfuscating the application of the detailed structure rule. Because the application of claim vitiation depends on the alleged equivalent itself, whether the claim contains a detailed recitation of structure is not the focus of the analysis. Accordingly, if the detailed structure rule applies in a case involving claim vitiation, it is simply coincidental.

B. Implication of the Detailed Structure Rule

The detailed structure rule increases the Federal Circuit’s arsenal of principles limiting the doctrine of equivalents. Adhering to the rationales of the other limiting doctrines, this rule allows the Federal Circuit to shift the balance of the doctrine of equivalents policy debate further towards the public-notice function. Section III.B.1 examines whether the detailed

doctrine as opposed to the adoption of a “new exclusion principle” created where a claim contains a detailed recitation of structure.

210. *Bicon II*, 441 F.3d at 955.

211. *Id.*

212. *Id.*

213. *See id.*

214. *See id.*

structure rule changes anything. Section III.B.2 analyzes the application of the detailed structure rule. Sections III.B.3 and III.B.4 consider the effect that the principle will have on claim drafting and patent litigation respectively.

1. *Does the Detailed Structure Rule Actually Change Anything?*

According limited recourse to the doctrine of equivalents for a detailed structure claim is arguably a minor development of prior principles. The case law contains considerable support for rules that emphasize that a narrow claim limitation deserves a limited scope of equivalence.²¹⁵ The general contours of the detailed structure claim therefore existed in precedent. Nevertheless, the Federal Circuit had never explicitly limited the application of the doctrine of equivalents for specific claims; the restrictive principles only applied generally. Accordingly, this minor change over precedent may be significant because it fills a void in the equivalence inquiry by targeting detailed structure claims. Accused infringers now have a specific argument to make if faced with a patent holder asserting equivalence to a detailed structure claim. The availability of such a defense will be especially important when the other limiting principles would provide the defendant no recourse.

2. *Application of the Detailed Structure Rule*

Because of the ambiguous language of the detailed structure rule, it is difficult to predict how the Federal Circuit will apply the principle in later cases. The decision in *Bicon* shows that a claim reciting a particular shape that specifically excludes distinctly different and opposite shapes falls under the detailed structure rule.²¹⁶ However, this illustration provides little guidance for discerning the scope of the rule because it merely reiterates

215. See, e.g., *Moore U.S.A., Inc. v. Standard Register Co.*, 229 F.3d 1091, 1106 (Fed. Cir. 2000) (“Whether the result of the All Limitations Rule, prosecution history estoppel, or the inherent narrowness of the claim language, many limitations warrant little, if any, range of equivalents.” (citations omitted)); *Tanabe Seiyaku Co. v. Int’l Trade Comm’n*, 109 F.3d 726, 732 (Fed. Cir. 1997) (“The sharply restricted nature of the claims has much to do with the scope we accord to the doctrine of equivalents.”); *Sage Prods. Inc. v. Devon Indus.*, 126 F.3d 1420, 1424 (Fed. Cir. 1997):

[F]or a patentee who has claimed an invention narrowly, there may not be infringement under the doctrine of equivalents in many cases, even though the patentee might have been able to claim more broadly. If it were otherwise, then claims would be reduced to functional abstracts, devoid of meaningful structural limitations on which the public could rely.

Id.

216. *Bicon II*, 441 F.3d at 955.

an application of specific exclusion. Furthermore, a review of the post-*Bicon* case law reveals that the courts have yet to apply the detailed structure rule. Predicting the application of the detailed structure rule therefore requires that one address the following questions: what type of claim constitutes a “detailed recitation of structure” and what does “correspondingly limited recourse to the doctrine of equivalents” mean?

With respect to a “detailed recitation of structure,” a narrow reading implies that only claims having the most specific structural claim limitations (e.g., convex, frusto-spherical basal surface) will be those containing a “detailed recitation of structure.” On the other hand, a broad interpretation suggests that any recitation of structure is a detailed recitation of structure. Accordingly, any claim describing a shape (e.g., a circular device) or size (e.g., forty-five angstroms wide) constitutes a detailed structure claim. Because an expansive interpretation of the rule seems too drastic for even the Federal Circuit,²¹⁷ a narrow or intermediate reading of the rule is likely to apply.

Regarding the “correspondingly limited recourse to the doctrine of equivalents” condition, one interpretation implies that a detailed structure claim warrants no scope of equivalents at all. However, had the Federal Circuit intended this to be the case, the court arguably would have explicitly precluded any recourse to the doctrine of equivalents in its recitation of the rule. Another interpretation, which is likely the more correct reading, suggests that the scope of equivalents will be inversely proportional to the detail of the structural claim. One can represent this situation using a spectrum that corresponds to the amount of structural detail in a claim. Thus, on one boundary, there is a completely generic structural claim limitation (e.g., a box). Here, the broad claim deserves a large scope of equivalents. In contrast, the other boundary of the spectrum represents an extremely detailed structural claim limitation (e.g., convex, frusto-spherical basal surface portion). At this end, the narrowly written claim warrants very limited or no recourse under the doctrine of equivalents.

On another note, the *Bicon* court did not clarify whether the detailed structure rule is a question of law. Because each one of the court’s limiting principles, with the exception of the all-elements rule, is a matter of law, it is likely that the Federal Circuit will hold that the detailed structure rule is also a question to be determined by the court. As further support for this prediction, the court seems better suited than the jury to determine whether a claim contains a detailed recitation of structure, given its role in claim

217. *Cf. supra* note 1.

construction.²¹⁸ Consequently, in its application of the detailed structure rule as a matter of law, the court may perform its equivalence inquiry without referring to the function-way-result or the insubstantial differences tests.²¹⁹

3. *The Effect of the Detailed Structure Rule on Claim Drafting*

Because patent drafters seek to write claims as broadly as possible,²²⁰ the detailed structure rule arguably will have a miniscule effect on claim drafting. Nevertheless, because of the Federal Circuit's explicit assertion that a claim containing a detailed recitation of structure will receive limited recourse to the doctrine of equivalents, the detailed structure rule should be on a patent drafter's checklist. Dependent claiming²²¹ is likely the most effective means of drafting to avoid limiting the scope of equivalents allotted to a detailed structural limitation. Accordingly, the patent drafter should write a structural claim limitation as broadly as possible in an independent claim, ensuring that she reference the shape of a limitation as generically as possible if necessary to do so at all. The patent drafter may then subsequently narrow the structural limitations through dependent claims. While the broad claim limitation will likely preclude application of the detailed structure rule, the narrower claim limitations provide the patentee with alternative means to assert infringement should a court invalidate the generic claim.

4. *The Effect of the Detailed Structure Rule on Litigation*

Because the Federal Circuit has not yet outlined the scope of the detailed structure rule, either the patentee or the accused infringer can use the rule to her advantage with the proper argument. The patentee may make a strong textual case for interpreting the detailed structure rule such that it only applies to extremely detailed structural claim limitations and that "limited recourse" clearly implies some recourse. The fact that the

218. See *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 970-71 (Fed. Cir. 1995) (noting that claim construction is a matter of law exclusively for the court) (en banc), *aff'd*, 517 U.S. 370 (1996).

219. See *supra* Part I.B.1 (noting that the function-way-result and insubstantial differences tests are factual inquiries).

220. Cf. *Dratler, supra* note 135, at 320 ("Of course a patentee has every incentive to draft claims as broadly as possible, since the claims determine the scope of the legal monopoly that the patent provides.").

221. See 35 U.S.C. § 112 (2000) ("[A] claim in dependent form shall contain a reference to a claim previously set forth and then specify a further limitation of the subject matter claimed. A claim in dependent form shall be construed to incorporate by reference all the limitations of the claim to which it refers.").

Bicon court used specific exclusion to illustrate the detailed structure rule is good supporting evidence for the first part of this argument.

On the other hand, the accused infringer will want to assert that any recitation of structure is a detailed recitation of structure which warrants limited, if any, recourse to the doctrine of equivalents. To support a broad interpretation of what constitutes a detailed recitation of structure, the accused infringer should argue that the application of the detailed structure rule to specific exclusion cases as mentioned in *Bicon* was merely a convenient illustration of a detailed structure claim rather than a limitation of the rule. Furthermore, the accused infringer may assert that a detailed structural claim limitation specifically excludes an alleged equivalent independent of whether the limitation is binary. As support for this argument, the accused infringer can reference Judge Bryson's holding in *Bicon* that the frusto-spherical abutment limitation (non-binary) specifically excluded a frusto-conical abutment.²²²

IV. CONCLUSION

In its adoption of the detailed structure rule, the Federal Circuit is continuing its effort to steadily impair the doctrine of equivalents. While the court has yet to delineate the scope of the detailed structure rule, the general contours of the doctrine suggest that the principle will not have as drastic of an effect on the doctrine of equivalents as some of the other limiting principles. Nevertheless, an accused infringer will certainly want to include this new rule in her current arsenal of doctrine of equivalents defenses given its potential applicability against any structural claim. In the event that the district court rejects the defense, the defendant can take comfort knowing that the biggest critic of the doctrine of equivalents is only an appeal away.

222. See *Bicon, Inc. v. Straumann Co. (Bicon II)*, 441 F.3d 955-56 (Fed. Cir. 2006); *supra* Section III.A.1. In applying specific exclusion in this instance, Judge Bryson may have intended to broaden the principle by combining it with the detailed structure rule.

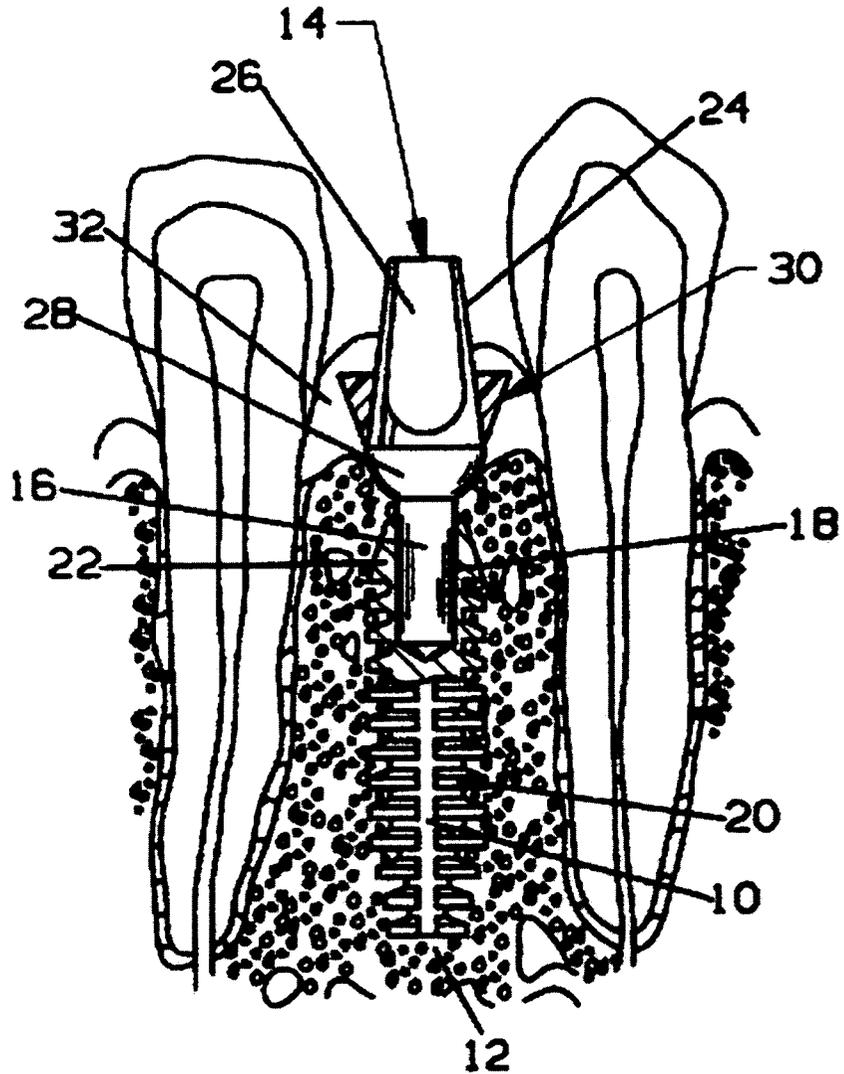


Figure 1: '731 Invention.²²³



Figure 2: Straumann Abutment (A), Straumann Root Member (B), and Straumann Abutment Attached to Straumann Root Member (C).²²⁴

223. U.S. Patent No. 5,749,731 fig.1 (filed Jan. 16, 1996).

224. *Bicon II*, 441 F.3d at 954.

Appendix A.1: Survey of Specific Exclusion Cases in the Federal Circuit.²²⁵

Case	Opinion Date	Opinion Author	Dissenting Opinion	Alleged Disclaimer in Specification or Claim?	Specific Exclusion Applied?
Dolly, Inc. v. Spalding & Evenflo Cos., 16 F.3d 394 (Fed. Cir. 1994).	2/8/94	Rader	N/A	Claim	Yes
Athletic Alternatives, Inc. v. Prince Mfg., Inc., 73 F.3d 1573 (Fed. Cir. 1996).	1/11/96	Michel	N/A	Claim	Yes
Wiener v. NEC Elecs., Inc., 102 F.3d 534 (Fed. Cir. 1996).	12/6/96	Rader	N/A	Claim	Yes
Eastman Kodak Co. v. Goodyear Tire & Rubber Co., 114 F.3d 1547 (Fed. Cir. 1997).	7/2/97	Rader	Lourie (in part)	Claim	Yes
Sage Prods., Inc. v. Devon Indus., 126 F.3d 1420 (Fed. Cir. 1997).	9/18/97	Rader	N/A	Claim	Yes
Ethicon Endo-Surgery, Inc. v. U.S. Surgical Corp., 149 F.3d 1309 (Fed. Cir. 1998).	6/30/98	Lourie	N/A	Claim	No

225. The table lists those cases in which the Federal Circuit has considered application of the specific exclusion rule. Where the court applied the doctrine, specific exclusion was the sole reason or one of the rationales for a finding of no infringement under the doctrine of equivalents. The survey involved some degree of subjectivity, as the Federal Circuit did not always note that it was applying specific exclusion even though its analysis resembled the rule. Cases in which the Federal Circuit considered specific exclusion after reversing the district court's claim construction were not considered.

Moore, U.S.A., Inc. v. Standard Register Co., 229 F.3d 1091 (Fed. Cir. 2000).	9/22/00	Michel	Newman (in part)	Claim	Yes
SciMed Life Sys. v. Advanced Cardiovascular Sys., 242 F.3d 1337 (Fed. Cir. 2001).	3/14/01	Bryson	N/A	Specification	Yes
Senior Techs., Inc. v. R.F. Techs., Inc., 76 Fed. Appx. 318 (Fed. Cir. 2003).	9/17/03	Clevenger	N/A	Claim	Yes
Gaus v. Conair Corp., 363 F.3d 1284 (Fed. Cir. 2004).	4/1/04	Bryson	N/A	Specification	Yes
Novartis Pharms. Corp. v. Abbott Labs., 375 F.3d 1328 (Fed. Cir. 2004).	7/8/04	Prost	Bryson	Specification	Yes
Asyst Techs. Inc. v. Emtrak, Inc., 402 F.3d 1188 (Fed. Cir. 2005).	3/22/05	Bryson	N/A	Claim	Yes
Bicon, Inc. v. Straumann Co., 441 F.3d 945 (Fed. Cir. 2006).	3/20/06	Bryson	N/A	Claim	Yes
Cook Biotech Inc. v. ACell, Inc., 460 F.3d 1365 (Fed. Cir. 2006).	8/18/06	Prost	N/A	Claim	Yes

BERKELEY TECHNOLOGY LAW JOURNAL

IS THE PTO AUTHORIZED TO PROMULGATE THE PROPOSED RULE CHANGE TO THE CONTINUATION PRACTICE?

By *Laxman Sahasrabuddhe*

In January 2006, the United States Patent and Trademark Office (PTO) proposed a controversial rule¹ that could significantly affect how applicants use patent applications to protect their inventions. Specifically, 35 U.S.C. § 120 enables an applicant to file a continuation application that claims the priority date of a previously filed patent application.² Under the present PTO rules, an applicant can potentially file as many continuation applications as the applicant wants without providing any reasons for filing the continuation applications.³ Under the proposed PTO rule, an applicant would be allowed to file one continuation application as a right. To file further continuation applications, the applicant would have to persuade the PTO that the content in the continuation application could not have been filed earlier.⁴

A number of organizations and individuals have criticized the proposed rule and some have questioned whether the PTO is authorized to promulgate the rule.⁵ This Note investigates whether the PTO is autho-

© 2007 Laxman Sahasrabuddhe

1. Changes to Practice for Continuing Applications, Requests for Continued Examination Practice, and Applications Containing Patentably Indistinct Claims, 71 Fed. Reg. 48 (Jan. 3, 2006) (to be codified at 37 C.F.R. pt. 1) [hereinafter Changes to Practice for Continuing Applications].

2. The term “continuation application” can refer to an application that is filed under 35 U.S.C. § 120, § 121, or § 132. The PTO has proposed rule changes that affect an applicant’s ability to file continuation applications under § 120 and § 132. Changes to Practice for Continuing Applications, 71 Fed. Reg. at 61. Although this Note focuses on the rule change that affects an applicant’s ability to file a continuation application under § 120, the Note is generally applicable to other types of continuation applications.

3. U.S. DEP’T OF COMMERCE, MANUAL OF PATENT EXAMINING PROCEDURES § 201.07 (8th ed. rev. 5, 2006) [hereinafter MPEP], *available at* <http://www.uspto.gov/web/offices/pac/mpep/mpep.htm>.

4. Changes to Practice for Continuing Applications, 71 Fed. Reg. at 48.

5. See Letter from Michael Kirk, Executive Dir., Am. Intellectual Prop. Law Ass’n (AIPLA), to Jon Dudas, Dir. U.S. Patent and Trademark Office (Apr. 24, 2006), *available at* http://www.uspto.gov/web/offices/pac/dapp/opla/comments/fpp_continuation/aipla.pdf (stating that in its view, the PTO is not authorized to promulgate the proposed rules); Letter from David E. Korn, Assistant Gen. Counsel, Pharm. Research & Mfrs. of Am. (PhRMA), to Jon Dudas, Dir. U.S. Patent and Trademark Office (May 2, 2006), *available at* http://www.uspto.gov/web/offices/pac/dapp/opla/comments/fpp_continuation/PhRMA.pdf.

rized to promulgate the proposed rule and discusses the standard of review that the United States Court of Appeals for the Federal Circuit (CAFC) should use to review the proposed rule if it is promulgated and if its validity is challenged. The Note concludes that, if the proposed rule is promulgated and its validity is challenged, the CAFC should review and invalidate the rule under the “hard look” standard of review.

Part I discusses the PTO’s authority to promulgate rules. Part II discusses how the CAFC reviews PTO actions under the Administrative Procedure Act (APA). Part III describes how applicants use and abuse continuation applications. Part IV discusses the proposed rule and explains why the PTO has proposed the controversial rule. Finally, Part V analyzes whether the PTO is authorized to promulgate the proposed rule.

I. THE PTO’S AUTHORITY TO PROMULGATE RULES

A. 35 U.S.C. § 2(b)(2) Authorizes the PTO to Promulgate Rules

Under 35 U.S.C. § 2(b)(2) the PTO “may establish regulations, not inconsistent with law, which shall govern the conduct of proceedings in the [Patent and Trademark] Office [and] shall facilitate and expedite the processing of patent applications.”⁶ Unfortunately, the statute does not provide clear limits on the PTO’s rulemaking authority because the phrase “not inconsistent with law” is the only phrase in the statute that imposes a limit on the PTO’s rulemaking authority. Hence, we must look to case law to determine the PTO’s rulemaking authority.

B. The PTO is Authorized to Promulgate Procedural, not Substantive Rules

Established case law holds that the PTO is authorized to promulgate procedural rules, but it is not authorized to promulgate substantive rules. Specifically, in *In re Bogese*,⁷ the CAFC stated that the “PTO has inherent authority to govern procedure before the PTO,”⁸ which indicates that the

uation/phrma_con.pdf (stating that the proposed rules would “significantly limit, and in some cases altogether preclude, the ability of PhRMA’s members to obtain and enforce legitimate patent rights”).

6. Prior to the enactment of the Intellectual Property and Communications Omnibus Reform Act of 1999, S. 1948, 106th Cong. (1999) (enacted), the PTO’s rulemaking authority was stated in 35 U.S.C. § 6 (1999), which had essentially the same wording as 35 U.S.C. § 2(b)(2) (2000), namely, that the PTO “may . . . establish regulations, not inconsistent with law, for the conduct of proceedings in the Patent and Trademark Office.”

7. *In re Bogese*, 303 F.3d 1362 (Fed. Cir. 2002).

8. *Id.* at 1368.

PTO has a broad authority to promulgate procedural rules. In *Merck & Co. v. Kessler*,⁹ the CAFC stated that

[t]he broadest of the Patent and Trademark Office's (PTO) rule-making powers, 35 U.S.C. § 6(a), authorizes the Commissioner of Patent and Trademarks (Commissioner) to promulgate regulations directed only to the conduct of proceedings in the PTO; it does not grant the Commissioner the authority to issue substantive rules. Congress has not vested the Commissioner with any general substantive rulemaking power.¹⁰

Similarly, in *Animal Legal Defense Fund v. Quigg*,¹¹ the same court stated that 35 U.S.C. § 2(b)(2)(A) authorizes the PTO to promulgate procedural rules, and that "[a] substantive declaration with regard to the Commissioner's interpretation of the patent statutes, whether it be sections 101, 102, 103, 112 or other sections, does not fall within the usual interpretation of such statutory language."¹²

Unfortunately, it is not always possible to categorize a rule as "only procedural" or "only substantive" because a rule may include aspects of both. Part V discusses different tests that courts use to determine whether a rule is procedural or substantive, and argues that under these tests, the proposed rule may be substantive.

II. COURTS REVIEW PTO DECISIONS UNDER THE APA

This Part describes the standard of review that courts use to review PTO decisions. Section II.A describes the Supreme Court's decision in *Dickinson v. Zurko* where the Court directed the CAFC to use the APA to review PTO decisions.¹³ Section II.B describes the different APA standards of review that courts use to review agency decisions. Specifically, the Section explains how courts use different standards of review depending on whether the agency's action involves factual findings, statutory interpretations, or policy determinations.

9. *Merck & Co. v. Kessler*, 80 F.3d 1543 (Fed. Cir. 1996).

10. *Id.* at 1549-50. Since this case was decided prior to the Intellectual Property and Communications Omnibus Reform Act of 1999, the decision states that § 6(a) gives the PTO authority to promulgate rules. *Id.* at 1549. However, the relevant text of § 6(a) is essentially the same as 35 U.S.C. § 2(b)(2)(A) (2000). *See supra* note 6.

11. *Animal Legal Def. Fund v. Quigg*, 932 F.2d 920 (Fed. Cir. 1991).

12. *Id.* at 930.

13. *Dickinson v. Zurko*, 527 U.S. 150 (1999).

A. *Dinkinson v. Zurko*

The PTO denied Mary Zurko and her colleagues' patent application because the PTO averred that it was obvious in view of the prior art.¹⁴ After the Board of Patent Appeals and Interferences (BPAI) affirmed the examiner's rejection, Zurko appealed to the CAFC, which reversed the BPAI's decision under the "clearly erroneous" standard of review.¹⁵ The "clearly erroneous" standard is less deferential to the PTO than the "arbitrary or capricious" standard, which the PTO claimed was the proper standard of review under the APA. To resolve the standard of review controversy, the CAFC granted the PTO's petition for a rehearing *en banc*.¹⁶ The court *en banc* unanimously affirmed the appellate panel's decision to use the less deferential "clearly erroneous" standard to review PTO decisions.¹⁷

On writ of certiorari, the Supreme Court, by a six to three vote, reversed the *en banc* decision and directed the CAFC to review the PTO's fact-findings using the APA's "arbitrary and capricious" standard.¹⁸ After *Zurko*, the CAFC has reviewed PTO decisions under the APA's review standards. The following Section describes the different APA review standards ("arbitrary and capricious" being one of them) that courts use to review PTO decisions.

B. Judicial Review Standards Under the APA

Like most administrative agencies, the PTO has both rulemaking and adjudicatory powers.¹⁹ The PTO's rulemaking powers enable the PTO to add substance to the patent statutes.²⁰ The PTO's adjudicatory powers, on the other hand, enable the PTO to enforce statutes and regulations on a case-by-case basis.²¹

The PTO's rulemaking powers and adjudicatory power are closely related.²² Courts view rulemaking during adjudicatory proceedings as a necessary corollary to an agency's rulemaking powers.²³ Specifically, in ad-

14. *In re Zurko*, 111 F.3d 887, 888 (Fed. Cir. 1997).

15. *Id.* at 889.

16. *In re Zurko*, 142 F.3d 1447 (Fed. Cir. 1998), *aff'g en banc*, 111 F.3d 887 (Fed. Cir. 1997).

17. *Id.* at 1459.

18. *Zurko*, 527 U.S. at 165.

19. See 3 JACOB STEIN, GLEN MITCHELL & BASIL MEZINES, ADMINISTRATIVE LAW § 14.01 (Matthew Bender 2006).

20. See *id.*

21. *Id.*

22. *Id.*

23. *Id.*

dition to using its rulemaking powers to promulgate rules, the PTO uses its adjudicatory powers to issue both retroactive and prospective orders, which for all intents and purposes are equivalent to rules.²⁴ Hence, when the CAFC reviews a PTO adjudication, its holding controls the CAFC's review of PTO rulemaking.

Under the APA, an agency's action can be reviewed by a court if the agency action is a "final" action.²⁵ An agency action cannot be considered "final" until the decision making process has reached a stage where "(1) judicial review will not disrupt the orderly process of adjudication and (2) rights or obligations have been determined or legal consequences will flow from the agency action."²⁶ When the PTO promulgates a rule, it counts as a final action, and hence is reviewable by the judiciary.²⁷

Sometimes the statute that authorizes an administrative agency to promulgate rules provides the standard of review that a court is supposed to use to review the agency action. However, if the statute does not specify a standard, the APA provides the applicable standard.²⁸ Indeed, one of the legislative intents behind the APA was to provide a consistent standard of review across all agencies.²⁹

Even though the CAFC uses the APA standards to review PTO decisions, some scholars have pointed out that it has often failed to apply the appropriate standard.³⁰ Agency actions are usually classified into three categories: fact, law, and policy.³¹ Each category has its own standard of review under the APA.³² *Zurko* involved a fact issue, and hence the Supreme Court held that the CAFC should set aside PTO's fact findings if they are "arbitrary, capricious, [or] an abuse of discretion."³³ However, the

24. See, e.g., *In re Borgese*, 303 F.3d 1362, 1369 (Fed. Cir. 2002) (affirming the PTO's authority to deny the defendant's patent based on prosecution laches).

25. 5 STEIN ET AL., *supra* note 19, § 48.03.

26. *Id.*

27. *See id.*

28. See Stuart Minor Benjamin & Arti K. Rai, *Who's Afraid of the APA? What the Patent System Can Learn from Administrative Law*, 95 GEO. L.J. 10 (2006).

29. *See id.* at 10-11.

30. *See id.* at 22 (stating that the CAFC's decision in *In re Lee*, 277 F.3d 1338 (Fed. Cir. 2002) is squarely inconsistent with standard administrative law).

31. *Id.* at 15.

32. *Id.* at 16.

33. Under 5 U.S.C. § 706(2)(A) (2007), courts set aside agency fact findings that are determined in informal proceedings if they are "arbitrary, capricious, [or] an abuse of discretion . . ." On the other hand, for agency fact findings that are determined in formal proceedings, § 706 requires courts to set aside the fact findings if they are "unsupported by substantial evidence." *Id.* § 706(2)(E). Since all PTO adjudications are informal (except for 35 U.S.C. § 32 cases, which deal with disciplining patent agents and patent attor-

APA specifies a different standard of review when the agency decision involves a matter of law or a matter of policy.³⁴ The proposed PTO continuation rule is most likely a policy-based determination, but it may be viewed as a legal determination. Legal and policy-based determinations are reviewed using two different standards.

Unless Congress specifically provides otherwise,³⁵ an agency's legal determinations are reviewed under a set of standards that the Supreme Court put forward in *Chevron U.S.A., Inc. v. Natural Resources Defense Council, Inc.*³⁶ and later modified in *United States v. Mead Corp.*³⁷ *Chevron* outlined a two-step process for reviewing an agency decision when it involves statutory interpretation.³⁸ Specifically, if the statute is clear, courts are supposed to give effect to the Congressional intent instead of deferring to the agency's interpretation.³⁹ If the statute is unclear, *Chevron* requires courts to defer to the agency's interpretation if it is reasonable, which affords a high level of deference to the agency's interpretation.⁴⁰ In its 2001 decision in *Mead*, the Court weakened the *Chevron* deference by restricting it to situations where Congress has delegated authority to the agency to generally make rules. When Congress has not delegated authority, the Court stated that the sliding scale deference of *Skidmore v. Swift & Co.* must be used.⁴¹ The *Mead* Court then stated that informal rulemaking would trigger the *Chevron* deference.⁴² Note that the *Chevron* deference only applies if the agency has substantive rulemaking authority.⁴³ As discussed *infra* in Section V.B, notwithstanding the CAFC's assertions to the contrary, the PTO may have substantive rulemaking authority. If so, CAFC will be required to afford *Chevron* deference to the PTO's legal determinations.

neys), the "arbitrary, capricious, [or] an abuse of discretion" standard is the appropriate standard for reviewing the PTO's fact findings.

34. Benjamin & Rai, *supra* note 28, at 15-16.

35. *Id.* at 25.

36. *Chevron U.S.A., Inc. v. Natural Res. Def. Council, Inc.*, 467 U.S. 837 (1984).

37. *United States v. Mead Corp.*, 533 U.S. 218 (2001).

38. *Chevron*, 467 U.S. at 842-43.

39. *Id.*

40. *See id.*

41. *Mead*, 533 U.S. at 228 (citing *Skidmore v. Swift & Co.*, 323 U.S. 134, 140 (1944)).

42. *Id.* at 230-31.

43. *Merck & Co. v. Kessler*, 80 F.3d 1543, 1546 (Fed. Cir. 1996) (stating that only statutory interpretations by agencies with rulemaking powers deserve substantial deference).

Further, as discussed *infra* in Part V, the proposed rule will most likely fall in the policy category. An agency's policy decisions are reviewed under the same statute that describes the standard of review for an agency's fact-findings.⁴⁴ However, under settled principles of administrative law, courts apply a "hard look" review standard to an agency's policy decisions,⁴⁵ which is less deferential than the "arbitrary, capricious, [or] an abuse of discretion" standard which is used for the agency's fact-findings. Under the "hard look" standard, a court sets aside an agency action if it determines that the agency failed to take a "hard look" at the significant considerations contrary to its position.⁴⁶ In fact, of the three review standards, the "hard look" standard is the least deferential to the agency.⁴⁷

III. THE USE AND ABUSE OF CONTINUATION APPLICATIONS

A. 35 U.S.C. § 120 Entitles Applicants to File Continuation Applications⁴⁸

The Manual of Patent Examining Procedure (MPEP) states that "[a] continuation application is a second application for the same invention claimed in a prior nonprovisional application and filed before the original prior application becomes abandoned or patented."⁴⁹ Further, "[t]he applicant in the continuation application must include at least one inventor named in the prior nonprovisional application."⁵⁰ Additionally, "[t]he disclosure⁵¹ presented in the continuation must be the same as that of the original application; i.e., the continuation should not include anything

44. Benjamin & Rai, *supra* note 28, at 34-35.

45. See *Motor Vehicle Mfrs. Ass'n v. State Farm Mut. Ins. Co.*, 463 U.S. 29, 43 (1983) (stating that the hard look review standard applies to agency policy determinations, and that "an agency rule would be arbitrary and capricious if the agency has relied on factors which Congress has not intended it to consider . . .").

46. *Id.*

47. Benjamin & Rai, *supra* note 28, at 36.

48. 35 U.S.C. § 120 states that "[a continuation] application for patent for an invention . . . shall have the same effect . . . as though filed on the date of the prior application."

49. MPEP, *supra* note 3, § 201.07.

50. *Id.*

51. The term "disclosure" refers to the description of the invention in a patent application which usually comprises text, figures, and claims. MPEP § 608 states that "[i]n return for a patent, the inventor gives as consideration a complete revelation or disclosure of the invention for which protection is sought."

which would constitute new matter if inserted in the original application.”⁵² Moreover, the MPEP states that

[a]t any time before the patenting or abandonment of or termination of proceedings on his or her earlier nonprovisional application, an applicant may have recourse to filing a continuation in order to introduce into the application a new set of claims and to establish a right to further examination by the primary examiner.⁵³

As long as the original disclosure supports the new set of claims, the claims can have a broader or narrower scope, or they can be directed to a different aspect or use of the invention.

B. Using Continuation Applications for Strategic Purposes

An applicant can claim an invention using different sets of claims that sound very different from one another.⁵⁴ Further, due to practical reasons, the prior art search that is performed when an applicant prosecutes an application is far from complete, so even if the examiner allows a claim, it is not clear whether the claim will survive a validity challenge during litigation. Hence, a prudent patent prosecutor tries to claim an invention using different sets of claims, thereby increasing the probability that at least one set of claims will survive the extensive prior art search that is typically performed during litigation. Applicants can use continuations to implement this prosecution strategy.⁵⁵

Further, applicants use continuation applications to ensure that they receive the broadest claim scope. Specifically, continuation applications are commonly used when the PTO allows narrow claims but rejects the broader claims of an application. In such situations, the applicant can ac-

52. MPEP, *supra* note 3, § 201.07.

53. *Id.*

54. *See Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 535 U.S. 722, 731 (2002) (“[T]he nature of language makes it impossible to capture the essence of a thing in a patent application.”); *see also*, Craig Allen Nard, *A Theory of Claim Interpretation*, 14 HARV. J.L. & TECH. 1 (2000) (discussing attempts by courts to deal with the inherent imprecision of claim drafting). The imprecision of claim drafting is further substantiated by the high rate of reversals of claim construction determinations. *See, e.g.*, Christian A. Chu, *Empirical Analysis of the Federal Circuit’s Claim Construction Trends*, 16 BERKELEY TECH. L.J. 1075, 1090 (2001) (finding that the Federal Circuit overturned district court claim constructions in 30%-39% of the cases).

55. Although continuations help an applicant to implement this prosecution strategy, they are unnecessary to implement this strategy. Specifically, an applicant can implement this prosecution strategy by ensuring that the original application contains sets of claims that are sufficiently diverse from one another.

cept the narrow claims (which are likely to survive a comprehensive prior art search) and use the resulting patent to prevent competitors from infringing on the applicant's product. Concurrently, the applicant can file the broad claims that were denied in the parent application in a continuation application to obtain more protection for the invention. In other words, continuations can help an applicant to quickly obtain a narrow patent that the applicant can assert against competitors, without foregoing the opportunity to ultimately obtain a broad patent.

Additionally, continuation applications allow individual inventors and start-up companies with limited funding to use a step-by-step approach to protect their inventions, especially when they do not have the resources to file multiple, simultaneous patent applications to claim every aspect of their inventions at once.⁵⁶

Continuation applications are also usually an important part of the patent prosecution strategy for pharmaceutical and biotech companies. This is because pharmaceutical and biotech companies often have to file patent applications early in the development stage to avoid the statutory bar under 35 U.S.C. § 102(b).⁵⁷ However, at the time of filing, these companies may not know which drug or biologic, if any, will ultimately succeed through the multi-year, multi-phase, drug development process. Hence, pharmaceutical and biotech companies may file relatively broad application disclosures initially, and then as the research and clinical trials progress, they may file continuation applications with narrower claim scopes that may cover a specific use of the drug or a specific delivery mechanism.⁵⁸

Individual inventors, who are often not sure whether there is a market for their inventions, also frequently use the continuation process. The inventor can file an initial application and determine whether there is a market while the application is pending at the PTO. Once the inventor has ascertained that there is a market for his or her invention, he or she can then determine whether it is cost effective to pursue broader claims in continuation applications.⁵⁹

A controversial use of a continuation application occurs when an applicant uses a continuation to "trap" a competitor who designs around the

56. Stephen T. Schreiner & Patrick A. Doody, *Patent Continuation Applications: How the PTO's Proposed New Rules Undermine an Important Part of the U.S. Patent System with Hundreds of Years of History*, 88 J. PAT. & TRADEMARK OFF. SOC'Y 556, 557 (2006).

57. *Id.*

58. *Id.*

59. *Id.*

original patent application. Even though using a continuation in this manner may seem hard to justify on policy grounds,⁶⁰ courts have held that such a use of a continuation application is legal.⁶¹

C. Abuse of Continuation Applications

A number of articles have criticized continuation applications for increasing the number of “bad patents.”⁶² Of these, the predominant article is the 2004 article by Mark A. Lemley and Kimberly A. Moore (hereinafter, L&M) entitled “Ending Abuse of Patent Continuations,”⁶³ in which the authors argue that continuation applications are more likely to result in “bad patents” and hence should be significantly restricted or abolished altogether.⁶⁴ Note that the PTO has used the L&M article to justify the proposed rule change.⁶⁵

The L&M article categorizes the harmful effects of continuation applications into five categories: (1) continuations delay in the prosecution process and create uncertainty for the patentee’s competitors, (2) continuations “wear down” the examiner, causing him or her to grant “bad patents,” (3) continuations allow patentees to change their claims to cover their competitor’s products, (4) continuations cause the “submarine patent” problem, where a patentee uses continuations to keep his or her patent “submerged” in the PTO and “resurfaces” the patent when his or her competitor has already developed multi-million dollar businesses using products that infringe on the “submarine patent,” and (5) continuations cause the “evergreening” problem, where a pharmaceutical company uses continuations to blatantly game the Hatch-Waxman Act.⁶⁶

60. Mark A. Lemley & Kimberly A. Moore, *Ending Abuse of Patent Continuations*, 84 B.U. L. REV. 63, 78 (2004) (arguing that allowing a patentee to write claims that read on a competitor’s invention is hard to justify on policy grounds).

61. *Kingsdown Med. Consultants, Ltd. v. Hollister, Inc.*, 863 F.2d 867, 874 (Fed. Cir. 1988).

62. See Lemley & Moore, *supra* note 60, at 75; Bruce A. Kaser, *Patent Application Recycling: How Continuations Impact Patent Quality & What The USPTO Is Doing About It*, 88 J. PAT. & TRADEMARK OFF. SOC’Y 426 (2006).

63. Lemley & Moore, *supra* note 60.

64. *Id.* at 65.

65. See *Changes to Practice for Continuing Applications*, 71 Fed. Reg. 48, 49 (Jan. 3, 2006).

66. Lemley & Moore, *supra* note 60, at 71-83. Under the Hatch-Waxman Act, a name-brand pharmaceutical company can sue a generic for patent infringement and obtain an automatic thirty-month stay to prevent the generic from entering the market. *Id.* at 82. However, pharmaceutical companies have used continuation applications to obtain multiple patents covering obvious variants of the same drug and using them to obtain not one, but multiple sequential thirty-month stays. For a discussion of the effects of the

The L&M article acknowledges that a combination of legislation and court decisions have largely solved the “submarine patent” and “ever-greening” problems.⁶⁷ Further, some practitioners don’t think continuations “wear down the [patent] examiner.”⁶⁸ Hence, although continuations can be abused, the residual harmful effects may not be serious enough to justify restricting the continuation practice significantly.

The PTO provides similar criticisms of the current continuation practice. It states that the “exchange between examiners and applicants becomes less beneficial and suffers from diminishing returns as each of the second and subsequent continuing applications or requests for continued examination in a series is filed.”⁶⁹ The PTO avers that the present continuation rules can cause multiple patents to issue for the same invention, which “tends to defeat the public notice function of patent claims in the initial application.”⁷⁰ Note that these harmful effects are covered by the first category of harmful effects in the L&M article. The PTO also avers that the present continuation rules are causing an alarming increase in the PTO’s backlog. However, as explained in Part IV, based on the present data it seems unclear whether the residual harmful effects of the continuation practice are sufficient to justify the proposed rule, and it also seems unclear whether the proposed rule will significantly reduce the PTO’s backlog.

IV. THE PTO’S PROPOSED RULE CHANGE

In the past, the PTO has unsuccessfully attempted to limit the ability of applicants to file continuation applications. In *In re Henriksen*,⁷¹ the PTO attempted to restrict the number of continuation applications in a chain of continuations to a maximum of three. Under the current proposed rule, an applicant will have a right to file a single continuation application, and if the applicant wants to file additional continuations, he or she will have to show by petition that the amendments, evidence or argument presented in the additional continuation application “could not have been previously submitted.”⁷²

Hatch-Waxman Act, see Jeff Thomas, Note, Schering-Plough and *In Re Tamoxifen: Lawful Reverse Payments In The Hatch-Waxman Context*, 22 BERKELEY TECH. L.J. 13 (2007).

67. See *id.* at 83-94.

68. Schreiner & Doody, *supra* note 56, at 562-63.

69. Changes to Practice for Continuing Applications, 71 Fed. Reg. at 48.

70. *Id.*

71. *In re Henriksen*, 399 F.2d 253 (C.C.P.A. 1968).

72. Changes to Practice for Continuing Applications, 71 Fed. Reg. at 48.

During the “comment” period, some organizations criticized the proposed rule while others submitted comments that supported it.⁷³ Branded drug manufacturers criticized the proposed rule, whereas software and electronics companies generally supported it.⁷⁴ This is not surprising. A blockbuster drug can be worth billions, and the present continuation rule helps pharmaceutical companies to fully exploit the commercial potential of the drug. Hence, branded drug manufacturers are likely to oppose the proposed rule because it may reduce the profitability of their blockbuster drugs. In contrast, software and electronics companies that have large patent portfolios usually do not have a lot of money riding on any individual patent. For such companies, it is usually a numbers game. If the PTO promulgates the proposed rule, it may reduce the PTO’s backlog and enable these companies to obtain patents sooner, thereby increasing the number of issued patents in their portfolio. Hence, companies that derive substantial licensing revenues from their large patent portfolios are likely to support the proposed rule. The PTO may also benefit from the proposed rule. If the PTO’s backlog decreases, software and electronics companies may file more patents, thereby increasing the PTO’s revenues.

The PTO’s ever-increasing backlog appears to be the primary motivation for proposing the rule, but the proposed rule may not have a substantial impact on the PTO’s backlog.

A. The PTO’s Backlog

The PTO received 317,000 nonprovisional applications in 2005, of which 62,870 were continuations.⁷⁵ Further, the PTO received 52,750 requests for continued examination (RCEs)⁷⁶ in 2005. Based on this data, the PTO avers that approximately 30% of the PTO’s resources are being devoted to examining continuations or RCEs. In 2005, the PTO issued over 289,000 first office actions. In other words, the PTO sent out fewer

73. See Comments on Proposed Changes to Practice for Continuing Applications, Requests for Continued Examination Practice, and Applications Containing Patentably Indistinct Claims, Notice of proposed rulemaking, http://www.uspto.gov/web/offices/pac/dapp/opla/comments/fpp_continuation/continuation_comments.html (last visited Mar. 19, 2007).

74. See PhRMA’s comments, http://www.uspto.gov/web/offices/pac/dapp/opla/comments/fpp_continuation/phrma_con.pdf; IBM’s comments, http://www.uspto.gov/web/offices/pac/dapp/opla/comments/fpp_continuation/ibm_con.pdf (last visited Mar. 19, 2007).

75. Changes to Practice for Continuing Applications, 71 Fed. Reg. at 50.

76. *Id.* An RCE enables an applicant to request the PTO to continue examination of a patent application after it has been rejected. RCEs are authorized under 35 U.S.C. § 132.

(289,000) office actions than the number of nonprovisional applications that it received. Since the number of first office actions that the PTO sent out was less than the number of new applications that the PTO received, the PTO is concerned that it is facing an ever-increasing backlog. It appears that the primary reason the PTO wants to promulgate the proposed rule is to reduce this backlog.⁷⁷

In some technical arts, the workload has reached a crisis point. For example, based on recent PTO statistics, technical art unit 3626 (which deals with inventions related to health care insurance) has a backlog of 106 months.⁷⁸ In other words, if the backlog continues at the present rate, a patent application that is filed today will not be reviewed by an examiner for nine years. The PTO avers that it cannot reduce the backlog by hiring more examiners, so it must promulgate rule changes.⁷⁹

B. It is Unclear Whether the Proposed Rule Will Significantly Reduce the PTO's Backlog

If the applicant wants to file a second or subsequent continuation application under the proposed rule, he or she will have to show by petition that the amendments, evidence or argument presented in the continuation application "could not have been previously submitted."⁸⁰

The PTO has provided some examples that illustrate when a second or subsequent continuation application would be allowed. For instance, the applicant would be allowed to file a continuation if data necessary to support a showing of unexpected results becomes available to overcome a final rejection under 35 U.S.C. § 103, and the data is the result of a lengthy experimentation that was started after applicant received the first rejection.⁸¹ On the other hand, a continuation application will not be allowed if the applicant argues that an amendment after final rejection should have been entered in the prior application.⁸² However, these examples are very specific, and it is unclear how many continuations the PTO will deny under the proposed rule.

77. See John Doll, Complete slide set presented at the Chicago Town Hall Meeting, Feb. 1, 2006, at 28, http://www.uspto.gov/web/offices/pac/dapp/opla/presentation/chicagoslides_back.ppt.

78. See Application Backlog by Technology, U.S. Patent and Trademark Office, <http://www.uspto.gov/web/patents/opstats/appbacklog.htm>. (last visited Mar. 15, 2007).

79. Doll, *supra*, note 77, at 28.

80. Changes to Practice for Continuing Applications, 71 Fed. Reg. at 48.

81. See Doll, *supra* note 77, at 80.

82. *Id.* at 83.

Note that, since the PTO examines applications based on the effective priority date, continuations are examined by the PTO before new applications.⁸³ Hence, a heavy workload of continuations prevents the PTO from examining new patent applications. Restricting the number of continuations can move some of the workload to the appeals process, freeing up resources at the PTO to review new applications.⁸⁴ Although the PTO has taken steps to make the appeals process more efficient,⁸⁵ the proposed rule may overwhelm the appeals process because the applicants whose continuation is denied may appeal the decision.

Furthermore, although the PTO is spending approximately thirty percent of its resources on continuations and RCEs, only six percent of its resources are being spent on second or subsequent continuations.⁸⁶ In view of these facts, it is unclear if the proposed rule will substantially reduce the PTO's backlog.

V. IS THE PTO AUTHORIZED TO PROMULGATE THE PROPOSED RULE?

This Part analyzes whether the PTO is authorized to promulgate the proposed rule. Section V.A describes two CAFC decisions—*Henriksen*⁸⁷ and *Bogese*⁸⁸—that define the PTO's authority to limit an applicant's ability to file continuation applications. Under these two decisions, it is unclear whether the PTO is authorized to promulgate the proposed rule. Section V.B discusses the test that courts use to determine whether a rule is procedural or substantive, and argues that the PTO's proposed rule is substantive. This Section revisits *Bogese* and it argues that the PTO's decision in *Bogese* was substantive. Finally, Section V.C argues that the CAFC should invalidate the proposed rule under the "hard look" standard of review.

A. *Henriksen* and *Bogese*

1. In re *Henriksen*

In *Henriksen*, the United States Court of Customs and Patent Appeals (CCPA)—the precursor to the CAFC—held that the PTO does not have

83. MPEP, *supra* note 3, § 708 (stating that applications with the oldest effective filing date are given priority over newer applications).

84. See Changes to Practice for Continuing Applications, 71 Fed. Reg. at 49.

85. See *id.* at 51.

86. *Id.* at 57.

87. *In re Henriksen*, 399 F.2d 253 (C.C.P.A. 1968).

88. *In re Bogese*, 303 F.3d 1362 (Fed. Cir. 2002).

the authority to impose an arbitrary limit on the number of applications that are allowed in a chain of continuation applications.⁸⁹ The applicant in *Henriksen* filed a chain of continuation applications, wherein each application claimed priority to an earlier filed application.⁹⁰ The BPAI upheld the examiner's decision to reject Henriksen's last continuation application in a chain of four continuation applications on the grounds that 35 U.S.C. § 120 limited an applicant to a series of at most three applications that claimed priority to the previous application. In reversing the BPAI's decision, the CCPA held that § 120 does not place a limit on the number of continuation applications that an applicant can file. The court came to this decision by carefully examining the legislative history of the Patent Act of 1952, which enacted § 120.⁹¹ Although the court did not find congressional intent to limit the number of continuations to three, the court also did not find congressional intent to allow an applicant to file as many continuations applications as he or she desired. The court concluded that it is for the Congress to decide, with the usual opportunity for public hearing and debate, whether to impose a limit on the number of applications that are allowed in a chain of continuation applications.⁹²

2. In re *Bogese*

In *Bogese*, the CAFC affirmed the BPAI's decision to deny a patent application based on a theory of prosecution laches.⁹³ The applicant, *Bogese*, filed a chain of eleven file wrapper continuation applications between 1989 and 1994.⁹⁴ In none of the eleven continuation applications, did *Bogese* amend the claims, or offer any argument addressing the rejection of those claims.⁹⁵ The PTO warned the applicant that the record showed a plurality of continuations with no substantive amendments to advance prosecution. The PTO claimed this, in effect, was tantamount to using the PTO to submarine the patent application, thereby obtaining inequitable benefits from the patent system.⁹⁶ Subsequently, when *Bogese*

89. *Henriksen*, 399 F.2d at 253.

90. *Id.* at 255.

91. *Id.* at 256-58.

92. *Id.* at 262.

93. *Bogese*, 303 F.3d at 1362.

94. Under the PTO rules in effect at the time, applicants could file a "file wrapper continuation" application, which had the effect of abandoning the pending application and physically transferring the file history of the abandoned application into a new application for further prosecution. The new application contained the same claims and specification that existed in the abandoned application.

95. *See Bogese*, 303 F.3d at 1364-65.

96. *See id.* at 1364.

filed a continuation application without advancing prosecution, the PTO denied his patent application based on the theory of prosecution laches.

In *Bogese*, the CAFC followed the Supreme Court's decision in *Zurko* and applied the standard of review specified in the APA to the PTO's action. The CAFC held that under the APA, legal actions of the Board that were "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law" would be set aside.

In coming to this conclusion, the CAFC considered two issues: (1) whether the PTO was authorized to reject a patent application where the applicant failed to advance prosecution of his application for an unreasonably long period; and (2) if the PTO is so authorized, whether it acted arbitrarily in rejecting the applicant's patent application.

The CAFC relied on its decision in *Symbol Technologies, Inc. v. Lemelson Medical* where the court upheld the equitable doctrine of laches in an infringement context.⁹⁷ However, the *Bogese* court noted that the PTO's authority to sanction undue delay is even broader than the authority of a district court to hold a patent unenforceable for laches.⁹⁸ The *Bogese* court argued that, if a district court could bar enforcement of a patent based on prosecution laches, it necessarily followed that the PTO had the authority to reject patent applications for patents that would be unenforceable under the CAFC's holding in *Symbol Technologies*.⁹⁹

The court further noted that like other administrative agencies, the PTO may impose reasonable deadlines and requirements on parties that appear before it. The court stated that the PTO had inherent authority to govern procedure before the PTO, and that authority allowed it to set reasonable deadlines and requirements for the prosecution of applications.¹⁰⁰

The court distinguished *Bogese* from *Henriksen* by stating that nowhere did *Henriksen* suggest or imply that the PTO must allow dilatory tactics in the prosecution of applications, or that the PTO lacks inherent power to prohibit unreasonable delay in prosecution.¹⁰¹

The CAFC distinguished *Bogese* from cases that held it was permissible to maintain pendency of an application while competitors' products appear on the market in an effort to later draft and obtain the allowance of claims that read on the competitors' products. The court noted that an applicant's attempt to obtain new claims directed to inventions that he or she

97. *Symbol Techs., Inc. v. Lemelson Med.*, 277 F.3d 1361 (Fed. Cir. 2002).

98. *See Bogese*, 303 F.3d at 1367.

99. *Id.* at 1369.

100. *Id.* at 1368.

101. *Id.*

believed were fully disclosed and supported in an earlier application was easily distinguishable from a failure to further the prosecution of an application toward the issuance of any claims.¹⁰²

In her dissent, Judge Newman argued that the PTO is not authorized to reject a continuation application based on prosecution laches because, among other things, the PTO's decision did not involve an agency rule-making, public notice, or comment period.¹⁰³ However, this objection does not apply to the PTO's proposed rule because the PTO is promulgating the proposed rule using the notice-and-comment rulemaking procedure.

3. *The Proposed PTO Rule Falls in the Grey Area Between Henriksen and Bogese*

In *Henriksen*, the court held that the PTO cannot set an arbitrary upper limit on the number of continuation applications an applicant can file. However, the proposed rule does not set an upper limit. Under the proposed rule, an applicant can file as many continuation applications as the applicant desires as long as the applicant can persuade the PTO that the amendments, evidence, or argument presented in the continuation application could not have been previously submitted. Hence, the CCPA's decision in *Henriksen* most likely does not prevent the PTO from promulgating the proposed rule.

In *Bogese*, the CAFC held that § 120 did not give an applicant a right to file as many continuations as the applicant desires. The court held that PTO has authority to deny a continuation application under prosecution laches if the PTO determines that the applicant is unreasonably and inexplicably delaying prosecution. However, under the proposed rule, the PTO may deny an applicant's continuation application even if the applicant has not unreasonably or inexplicably delayed prosecution. Hence, the PTO is most likely not authorized under *Bogese* to promulgate the proposed rule.

Henriksen and *Bogese* do not conclusively determine whether the PTO is authorized to promulgate the proposed rules, so the next Section begins the process of determining what standard the PTO's rulemaking should be judged under.

B. The Proposed Rule is Most Likely Substantive, but the PTO May Be Authorized to Promulgate It

The distinction between substantive and procedural rules is an important one in administrative law because it determines the process that an

102. *Id.* at 1369.

103. *See id.* at 1370.

agency must follow to promulgate rules.¹⁰⁴ An agency can promulgate procedural rules without using the notice-and-comment process, but the agency is required to use the process to promulgate substantive rules.¹⁰⁵ Although the APA distinguishes the procedural requirements for substantive rules and procedural rules, the Act does not define the differences between the categories themselves.¹⁰⁶

When an agency promulgates a substantive rule, it creates new law.¹⁰⁷ A substantive rule affects an individual's rights and obligations.¹⁰⁸ In contrast, a procedural rule controls the process that is to be used in dealing with the agency.¹⁰⁹

The type of rulemaking process employed and the practical effects of the rule are indicative but inconclusive factors in determining the type of agency action taken.¹¹⁰ Hence, the proposed rule is not substantive simply because the PTO is using a notice-and-comment process. Further, even if the practical effects of the proposed rule may be substantive in nature, that does not invariably make the proposed rule substantive.¹¹¹

Courts determine whether a rule is substantive or not by using the substantial impact test (described *infra*) and by determining whether the rule affects an individual's rights. The following Section argues that under these tests, the proposed rule is substantive.

1. *The Proposed Rule May be Substantive*

Courts have held that if a rule creates new rights or obligations, thereby transforming procedure into substance, the rule has a substantial impact, and is substantive.¹¹² If a rule has substantial impact on an individual, and the individual can demonstrate that the agency did not promulgate the rule using APA's notice-and-comment procedure, the court will invalidate the rule.¹¹³ The proposed rule could have a substantial impact on an applicant by preventing the applicant from filing a continuation application to protect his or her invention. Hence, under the substantial impact test, the proposed rule may be substantive.

104. 3 STEIN ET AL., *supra* note 19, § 15.05.

105. *Id.*

106. *Id.* § 15.04.

107. *Id.* § 15.05.

108. *Id.* § 15.04.

109. *Id.*

110. *Id.*

111. *Id.*

112. *Id.*

113. *Id.*

In *Chrysler Corp. v. Brown* the Supreme Court stated that a substantive rule is one that affects individual rights and obligations.¹¹⁴ In *Bogese*, the CAFC stated that an applicant does not have a *right* to file as many continuations as the applicant desires. Hence, it can be argued that the proposed rule does not affect the applicant's rights. However, since the proposed rule requires the applicant to file a petition to persuade the PTO that the continuation application could not have been submitted earlier, it most likely affects the obligations of the applicant. It may, therefore, be substantive under *Chrysler*.

2. *Bogese Revisited*

In *Bogese*, the CAFC affirmed the BPAI's decision to deny a patent application based on prosecution laches. The majority in *Bogese* relied on its decision in *Symbol Technologies*, where the court applied prosecution laches in an infringement context. As Judge Newman noted in her dissent in *Symbol Technologies*, "[t]he Patent Act and implementing regulations authorize the filing of continuing applications provided that certain requirements are met."¹¹⁵ Specifically, § 120 does not specify that a continuation application will be denied if the applicant unreasonably or inexplicably delays prosecution. In other words, before *Bogese*, the patentee may not have been obligated to prevent unreasonable and inexplicable delays during prosecution of a continuation application.

By denying *Bogese*'s continuation application based on prosecution laches, it is possible that the PTO created a substantive rule that affects the obligations of an applicant who desires to file continuation applications. Further, by affirming the PTO's decision in *Bogese*, the CAFC may have implicitly authorized the PTO to promulgate substantive rules. Hence, although the proposed rule may be substantive, the PTO may be authorized to promulgate it.

C. The CAFC Should Review the Proposed Rule Under the "Hard Look" Standard

As noted earlier, courts usually classify agency actions into three categories: fact, law, and policy. Courts use the appropriate standard of review under the APA. Clearly, agency rulemaking does not belong in the "fact" category. Agency rulemaking can either belong to the "law" or "policy" categories. If the agency engages in statutory interpretation the rulemaking falls into the "law" category.¹¹⁶ In promulgating the proposed rule, the

114. *Chrysler Corp. v. Brown*, 441 U.S. 281 (1979).

115. *Symbol Techs., Inc. v. Lemelson Med.*, 277 F.3d 1361, 1368 (Fed. Cir. 2002).

116. See Benjamin & Rai, *supra* note 28, at 25.

PTO is not engaging in statutory interpretation.¹¹⁷ Instead, the PTO's primary rationale for promulgating the rule is to reduce the PTO's backlog. Hence, if the PTO promulgates the proposed rule, it should be categorized under the "policy" category.¹¹⁸

Under settled principles of administrative law, courts use a "hard look" review standard to review agency actions that fall under the "policy" category.¹¹⁹ Of the different standards of review, the "hard look" standard is the least deferential to the agency. Under this standard of review, a court will invalidate a rule "[i]f an agency fails to offer an adequate explanation for its rejection of such countervailing considerations, or promulgates a [rule] that fails to take into account relevant factors."¹²⁰ Further, the Supreme Court has held that a court should invalidate a rule "if the agency has relied on factors which Congress [did] not [intend] it to consider."¹²¹

It is unclear whether the PTO has adequately explained why it rejected countervailing considerations or whether the PTO has failed to take into account relevant factors. The PTO acknowledges that applicants use continuations for strategic purposes, such as for drafting claims that "encompass products or processes discovered in the marketplace."¹²² However, the PTO argues that such considerations should be rejected because "the practice of maintaining [continuing applications] for the purpose of adding claims after such discoveries is not calculated to advance prosecution before the [PTO]."¹²³ Further, the PTO has cited the L&M article in support of the proposed rule. Since the L&M article discusses the benefits and drawbacks of restricting the continuation practice, and since the PTO has provided its rationale for rejecting certain strategic uses of continuations, the PTO may have adequately explained why it has rejected countervailing considerations.

However, in proposing the new rule, the PTO may have relied on factors which Congress had not intended the PTO to consider. In *In re Fisher*, the CAFC specifically stated that the PTO should not disallow patenting of a particular subject matter even if it would cause resource and mana-

117. Although the statutory interpretations of 35 U.S.C. §§ 2(b)(2) and 120 are important to determine whether the PTO is authorized to promulgate the proposed rule, the PTO did not arrive at the proposed rule by engaging in a statutory interpretation of those statutes.

118. See Benjamin & Rai, *supra* note 28, at 32.

119. *Id.* at 35.

120. *Id.*

121. *Motor Vehicle Mfrs. Ass'n v. State Farm Mut. Ins. Co.*, 463 U.S. 29, 43 (1983).

122. Changes to Practice for Continuing Applications, 71 Fed. Reg. 48, 49 (Jan. 3, 2006).

123. *Id.*

gerial problems for the PTO.¹²⁴ In other words, Congress may not have intended the PTO to promulgate a rule that restricts an applicant's rights and obligations if the main motivation for the rule is to reduce the PTO's backlog. Hence, the PTO may not be able to satisfy the "hard look" standard if its main rationale for promulgating the rule is to reduce its backlog.

To summarize, if the PTO promulgates the proposed rule, and if the rule is challenged, the CAFC should invalidate the rule under the "hard look" standard because the PTO has relied on factors that Congress may not have intended it to consider.

VI. CONCLUSION

Continuations enable applicants to successfully protect their inventions because they give the applicant flexibility when prosecuting a patent. Continuations allow an applicant to decide when and how to protect various aspects of their inventions. However, since the current rules for filing continuations are very liberal, some applicants abuse the continuation rules.

Partly in response to its growing backlog, the PTO proposed a controversial rule change to the continuation practice that restricts the ability of an applicant to use continuations for strategic purposes. The proposed rule was roundly criticized by a number of organizations during the "comment" period of the notice-and-comment procedure for promulgating rules. Specifically, a number of organizations raised serious questions about the PTO's authority to propose such a rule.

This Note investigated the extent of the PTO's rulemaking authority and discussed the appropriate standard of review that the CAFC should use in reviewing the PTO's authority to promulgate the proposed rule. The Note concluded that, if the rule is promulgated and if its validity is challenged, the CAFC should invalidate the rule under the "hard look" standard of review.

124. *In re Fisher*, 421 F.3d 1365, 1378 (Fed. Cir. 2005) (stating that the PTO should not disallow patenting of a particular subject matter simply because it would cause resource and managerial problems for the PTO, because such issues are public policy considerations which are more appropriately directed to Congress as the legislative branch of government).

A SURVEY OF POST-*PHILLIPS* CLAIM CONSTRUCTION CASES

By Michael Saunders

The rehearing *en banc* of *Phillips v. AWH Corp.* was a highly anticipated decision: oral arguments were standing room only¹ and some commentators claimed that it would “likely change the face of patent litigation.”² The court’s order granting rehearing *en banc* and presenting seven questions for additional briefing likely provoked this reaction. These questions included the relative importance of dictionaries versus specifications in claim construction, as well as how much deference appeals courts should give to district court claim constructions.³ Given the anticipation, the resulting opinion was disappointing. The court refused to address the issue of *de novo* review of district court claim constructions.⁴ Furthermore, the court acknowledged that the decision did not resolve the major difficulties of claim construction in at least “some cases.”⁵ *Phillips* is best characterized as a surgical decision: it excises certain portions of disfavored case law⁶ while reaffirming the basic structure of claim construction in which the Federal Circuit decides.⁷

This Note analyzes *Phillips* and its effects. Specifically, Part I explains the history of claim construction cases leading up to *Phillips*. Part II explains the *Phillips* decision and its reasoning. Part III examines several subsequent cases to see how panels of the Federal Circuit and district courts have applied *Phillips*. Part IV presents an empirical analysis of

© 2007 Michael Saunders

1. Oscar J. Llorin, Note, *Phillips v. AWH Corp.: What’s a Word’s Worth?*, MD. INTELL. PROP. ELECTRONIC NEWSLETTER 1 (2005), available at http://www.law.umaryland.edu/studentorg/mipsa/documents/IP_Newsletter_Spring_2005.pdf.

2. De Novo Claim Construction, Posting of Dennis Crouch to Patently-O: Patent Law Blog, http://patentlaw.typepad.com/patent/2004/07/de_novo_claim_c.html (Jul. 22, 2004).

3. *Phillips v. AWH Corp. (Phillips I)*, 376 F.3d 1382 (Fed. Cir. 2004).

4. *Phillips v. AWH Corp. (Phillips II)*, 415 F.3d 1303, 1328 (Fed. Cir. 2005) (*en banc*).

5. *Id.* at 1323-24 (“In the end, there will still remain some cases in which it will be hard to determine whether a person of skill in the art would understand the embodiments to define the outer limits of the claim term or merely to be exemplary in nature.”).

6. See *id.* at 1319-24 (disapproving of the *Texas Digital* line of cases).

7. See *id.* at 1324, 1328 (reaffirming *Markman* and *Cybor* methodology and *de novo* review standard).

post-*Phillips* claim construction appeals in the Federal Circuit and builds an overall explanation of the effect of *Phillips* on claim construction.

I. CASES CREATE A FRACTURED CLAIM CONSTRUCTION SYSTEM

All United States patents must have a specification, which contains a written description of the invention and which “conclude[s] with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.”⁸ To determine if an accused device infringes a patent, the district court must first interpret the claims of the patent, in a process called claim construction, and then compare the construed claims to the characteristics of the accused device.⁹ The following Section details the major cases that have established the modern system of judicial claim construction.

A. *Markman v. Westview Instruments, Inc.* and Its Progeny: Claim Construction is a Matter of Law to be Decided by a Judge

The importance of the issues presented to the court in *Phillips* dramatically increased after a series of claim construction cases. In *Markman v. Westview Instruments, Inc.*, the Federal Circuit sitting *en banc* reviewed a line of conflicting authority on the submission of claim construction to the jury.¹⁰ The *Markman I* court held that, even though a judge may admit extrinsic evidence in the form of expert testimony “to assist” in interpreting the construction of claims, claim construction is a matter of law to be decided by a judge, through jury instructions or dispositive motions, and to be reviewed *de novo* by the court of appeals.¹¹

The Supreme Court affirmed the Federal Circuit’s holding against a Seventh Amendment challenge.¹² Although the Court approved of claim construction by judges, it introduced confusion on the issues of whether claim construction was a pure issue of law and the propriety of *de novo* review.¹³ The Court explicitly reserved the question of “the extent to which the Seventh Amendment can be said to have crystallized a law/fact

8. 35 U.S.C. § 112 (1975).

9. 5A DONALD S. CHISUM, CHISUM ON PATENTS § 18.03 (2006) [hereinafter CHISUM].

10. *Markman v. Westview Instruments, Inc.*, (*Markman I*), 52 F.3d 967 (Fed. Cir. 1995) (*en banc*).

11. *Id.* at 980-81.

12. *Markman v. Westview Instruments, Inc.*, (*Markman II*), 517 U.S. 370 (1996).

13. *Id.* at 384 n.10.

distinction.”¹⁴ It also did not explain if claim construction was a matter of law in some or all instances. Rather, the Court stated that claim construction was a “mongrel practice” which “falls somewhere between a pristine legal standard and a simple historical fact.”¹⁵ The Court acknowledged that claim construction involves at least some of the characteristics of fact-finding, such as assessing the credibility of witnesses,¹⁶ but it also quoted a great deal of authority that specifically stated that such interpretation was a legal issue.¹⁷ The Court concluded by touting the benefits of “treating interpretive issues as purely legal,” stating that the application of *stare decisis* to claim construction issues would “promote intrajurisdictional certainty” prior to Federal Circuit review.¹⁸

Subsequent to *Markman II*, panels of the Federal Circuit again split on the issue of claim construction, some following *Markman I*'s *de novo* standard while others followed a more deferential standard implied in *Markman II*.¹⁹ The Federal Circuit revisited this question in *Cybor Corp. v. FAS Technologies, Inc.* and reaffirmed the *de novo* standard, finding that *Markman II* supported, rather than undermined the holding that claim construction was a pure issue of law subject to *de novo* review, dismissing contradictory language as “prefatory” and acknowledging that the *Markman II* decision was, on its face, limited to the Seventh Amendment issue.²⁰

The *Markman* decisions have been described as a “revolution” in claim construction, indicating that they have fundamentally changed how

14. *Id.*

15. *Id.* at 378, 389 (quoting *Miller v. Fenton*, 474 U.S. 104, 114 (1985)).

16. *Id.* at 389.

17. *Id.* at 383 n.8, 388.

18. *Id.* at 391. The implication of this comment is that district court judges would follow each other's rulings in interpreting the same or similar patents in cases against different defendants. Such rulings would of course be subject to review of the “interjurisdictional” Court of Appeals for the Federal Circuit. See 28 U.S.C. § 1295(a)(1) (2000). It also indicates that the Supreme Court did not realize that the *Markman* decision would portend a system where the Federal Circuit would play such a prominent role in claim construction as to make “intrajurisdictional certainty” largely irrelevant in claim construction. *But see* *Kollmorgen Corp. v. Yaskawa Elec. Corp.*, 147 F. Supp. 2d 464, 468 (W.D. Va. 2001) (discussing *Markman*, the court noted that “[t]he [Supreme] Court appeared to value the role of the Federal Circuit as the final interpreter of patent claim construction.”).

19. *Cybor Corp. v. FAS Techs., Inc.*, 138 F.3d 1448, 1454-55 (Fed. Cir. 1998) (en banc).

20. *Id.* at 1455-56.

litigators and courts approach patent infringement cases.²¹ With the judge as the sole interpreter of claim language, *Markman* hearings, in which the litigants argue solely about the meaning of the claim terms, have become common.²² However, by holding claim construction to be a matter of law to be reviewed *de novo*, the Federal Circuit thrust itself into a dominant position in patent infringement suits, creating many of the problems discussed below.

B. *Vitronics* through *Texas Digital*: Claim Construction Methodology Diverges

Subsequent to *Markman I* and prior to the issuance of *Markman II*, the Federal Circuit in *Vitronics Corp. v. Conceptoronic, Inc.* clarified the process through which judges should exercise their newly strengthened role in claim construction. The court divided the evidence of claim construction into two categories: intrinsic evidence, which includes the claims, specification, and prosecution history; and extrinsic evidence, which primarily consisted of dictionaries, inventor testimony, expert testimony, and prior art that the parties introduce, such as technical treatises and articles.²³ The court then set forth the necessary analytical steps: first a court should determine the ordinary meaning of the word, which controls unless it is inconsistent with the specification.²⁴ However, because of the

21. See Craig Allen Nard, *A Theory of Claim Interpretation*, 14 HARV. J.L. & TECH. 2, 14-18 (2000) (“[T]he respective roles of the trial judge and the expert witness have been greatly marginalized, while the influence of the Federal Circuit, in turn, has been significantly augmented.”).

22. See David H. Binney & Toussaint L. Myricks, *Patent Claim Interpretation After Markman—How Have the Trial Courts Adapted?*, 38 IDEA 155, 163-66 (1997) (surveying the hearings in which courts have interpreted patent claims).

23. *Vitronics Corp. v. Conceptoronic, Inc.*, 90 F.3d 1576, 1582-84 (Fed. Cir. 1996). The distinction between extrinsic and intrinsic evidence has been contentious and ambiguous. See *Nystrom v. Trex (Nystrom I)*, 37 F.3d 1105, 1120 n.3 (Fed. Cir. 2004) (Gajarsa, J., dissenting). Although a patent has always been considered intrinsic evidence and expert testimony extrinsic, other evidence such as prosecution history and dictionaries are difficult to categorize. Compare *Johnson v. IVAC Corp.*, 885 F.2d 1574, 1579 (Fed. Cir. 1989) (“[T]he prosecution history or other extrinsic evidence.”), with *Vitronics*, 90 F.3d at 1582 (“[T]he court should look first to the intrinsic evidence of record [including] . . . the prosecution history.”). Compare *Markman I*, 52 F.3d at 980 (“Extrinsic evidence consists of all evidence external to the patent and prosecution history, including expert and inventor testimony, dictionaries, and learned treatises.”), with *Tex. Digital Sys. v. Telegenix, Inc.*, 308 F.3d 1193, 1203 (Fed. Cir. 2002) (“[C]ategorizing [dictionaries] as ‘extrinsic evidence’ or even a ‘special form of extrinsic evidence’ is misplaced and does not inform the analysis.”). To clarify this ambiguity, this Note uses the *Markman I* classification.

24. *Id.* at 1582. The court stated that:

clarity and completeness required of the disclosure in specifications, the specification was to be the “single best guide” to the meaning of a disputed term.²⁵ The court might use prosecution history, both for its prior art references and any disclaimer of claim scope.²⁶ The court should only use extrinsic evidence when the term was ambiguous in light of the intrinsic evidence.²⁷

For example,²⁸ if a patent’s sole claim was for “a board for use in constructing a flooring surface having a convex top surface which sheds water and at the same time is comfortable to walk on,” a court might be called to construe the term “board.” One party might advocate the term board to mean “a piece of sawed lumber of little thickness but a large surface area, usually being rectangular and longer than wide.” Another might advocate the term to be construed as “a flat piece of wood or similarly rigid material adapted for a special use.” Since the term board seems to be ambiguous with respect to these definitions, under *Vitronics*, the court would first have to look to the specification and prosecution history to determine if the inventor meant one or the other. If the inventor claimed in the specification or prosecution history that the invention, as a whole, had benefits over other “woodworking techniques,” the first definition would likely prevail. This is because such language would imply that the invention required woodworking techniques and thus the board must be material that can be manipulated by woodworking techniques, such as a sawed piece of lumber. If the inventor’s specification indicated that wood was only one

Although words in a claim are generally given their ordinary and customary meaning, a patentee may choose to be his own lexicographer and use terms in a manner other than their ordinary meaning, as long as the special definition of the term is clearly stated in the patent specification or file history . . . Thus . . . it is always necessary to review the specification to determine whether the inventor has used any terms in a manner inconsistent with their ordinary meaning.

Id.

25. It is not clear if the court in *Vitronics* realized the contradictory nature of the statements: “First, we look to the words of the claims themselves” and “the specification is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed term.” *Id.* It cannot “always” be relevant only on the grounds of an explicit lexicography because not all specifications contain such explicit lexicography. Likely the court envisioned either a broad role for the implicit definition of words or, possibly, that the selection effect in disputing terms would be such that primarily those ambiguous in light of the claims alone would be disputed.

26. *Id.* at 1583.

27. *Id.* at 1583-84.

28. This example is based on *Nystrom v. Trex Co.*, (*Nystrom I*), 374 F.3d 1105 (Fed. Cir. 2004).

embodiment of the invention, but plastic could also be used, the second definition would likely prevail because it would indicate that the type of material was not limited to only wood. In some cases, however, the inventor may have language that promotes wood as a feature of the embodiment of the invention, but specifically says that there are other unnamed embodiments of the invention. In such a case, a court, under *Vitronics* would likely have to turn to extrinsic evidence to settle the dispute.

The Federal Circuit in *Renishaw PLC v. Marposs Societa per Azioni* seemed to ignore the mandate in *Vitronics* that extrinsic evidence only be used when the meaning of a claim term was ambiguous in light of the intrinsic evidence.²⁹ Taking this notion even further, the court in *Texas Digital* emphasized that because dictionaries and like sources were created by unbiased third parties and available equally to the courts and the parties, they were superior forms of evidence for use in claim construction.³⁰ The court even held that rather than first looking to the specification, the judge should search such sources for “dictionary meanings” and then find the meaning or meanings most consistent with the intrinsic evidence.³¹

From these cases emerged two co-existing branches of claim construction jurisprudence, each employing a different methodology of claim construction largely dependent on the panel of judges selected at the Federal

29. See *Renishaw PLC v. Marposs Societa per Azioni*, 158 F.3d 1243, 1248 (Fed. Cir. 1998) (holding that both intrinsic evidence and, “in some cases,” extrinsic evidence can be used in claim construction “either by confirming the ordinary meaning of the claim terms or by providing special meaning for the claim terms”). The *Renishaw* court compared a variety of dictionary definitions for a generic word to the intrinsic evidence, the opposite of the *Vitronics* method. *Id.* at 1250-53. Later, in *Teleflex, Inc. v. Ficosa North America Corp.*, 299 F.3d 1313, 1324, 1326-27 (Fed. Cir. 2002), the Federal Circuit did not limit the use of dictionaries and similar sources.

30. *Tex. Digital Sys., Inc. v. Telegenix, Inc.*, 308 F.3d 1193, 1202-05 (Fed. Cir. 2002):

Dictionaries, encyclopedias and treatises . . . are objective resources that serve as reliable sources of information on the established meanings that would have been attributed to the terms of the claims by those of skill in the art. Such references are unbiased reflections of common understanding not influenced by . . . events subsequent to the fixing of the intrinsic record by the grant of the patent . . . Indeed, these materials may be the most meaningful sources of information to aid judges in better understanding both the technology and the terminology used by those skilled in the art to describe the technology.

Id.

31. *Id.* at 1203-05.

Circuit.³² The cases following *Texas Digital* have been called “procedural,” “hypertextualist,” and “formalistic.”³³ These cases are characterized by the application of formal rules and hierarchies of evidence in determining claim language, focusing heavily on the dictionary definitions of the terms at issue while eschewing reliance on contextual sources of evidence.³⁴ The other line of cases, called “holistic” and “pragmatic textualist,” eschew formal rules and embrace a variety of sources for claim construction, especially the specification and procedural history, to determine the meaning of the claim term in a broader context.³⁵ This division of methodologies led some observers to question whether claim construction should be an issue of law reviewed *de novo* and whether the Federal Circuit could bring uniformity to patent law.³⁶

II. THE PHILLIPS DECISION: TRYING TO SAVE CLAIM CONSTRUCTION

A. Facts & Procedural History

Edward Phillips (“Phillips”) invented “modular, steel-shell panels that can be welded together to form vandalism-resistant walls,” patented the technology, and entered into a marketing agreement with AWH Corporation (“AWH”).³⁷ The arrangement ended, but Phillips alleged that AWH continued to the patented technology.³⁸ Phillips sued in the United States District Court for the District of Colorado, alleging infringement of claim 1 and five other claims of U.S. Patent No. 4,677,798 (“the ’798 patent”).³⁹ The relevant limitation of claim 1, on which the district court focused, teaches a “further means disposed inside the shell for increasing its load

32. R. Polk Wagner & Lee Petherbridge, *Is the Federal Circuit Succeeding? An Empirical Assessment of Judicial Performance*, 152 U. PA. L. REV. 1105, 1112, 1130-36 (2004).

33. *See id.*; Ruoyu Roy Wang, Note, *Texas Digital Systems v. Telegenix, Inc.: Toward A More Formalistic Patent Claim Construction Model*, Note, 19 BERKELEY TECH. L.J. 153, 153 (2004); Nard, *supra* note 21, at 4.

34. *See* Wagner & Petherbridge, *supra* note 32, at 1133-36; Wang, *supra* note 33, at 162-67; Nard, *supra* note 21, at 4-5.

35. *See* Wagner & Petherbridge, *supra* note 32, at 1134-36; Nard, *supra* note 21, at 6.

36. *See, e.g.*, Wagner & Petherbridge, *supra* note 32, at 1108; Gregory D. Leibold, *In Juries We Do Not Trust: Appellate Review of Patent-Infringement Litigation*, 67 U. COLO. L. REV. 623 (1996).

37. *Phillips v. AWH Corp. (Phillips II)*, 415 F.3d 1303, 1309 (Fed. Cir. 2005) (en banc).

38. *Id.* at 1303.

39. *Id.*; U.S. Patent No. 4,677,798 (filed Apr. 14, 1986).

bearing capacity comprising internal steel baffles extending inwardly from the steel shell walls.”⁴⁰

The district court construed the critical term “baffles” in Phillips’ patent and held that it invoked the means-plus-function claim format and therefore was limited by the specification.⁴¹ Because the specification did not include any embodiments or descriptions of baffles at ninety-degree angles, the district court concluded that the means did not include baffles at ninety-degrees. Accordingly, the court issued summary judgment in AWH’s favor.⁴² The Federal Circuit affirmed the district court’s finding on separate grounds, holding that the baffles limitation of claim 1 was not in means-plus-function form.⁴³ The court held that the term baffles, as interpreted in light of the specification which emphasized the bullet-deflecting properties of the baffles, did not include those at ninety-degree angles.⁴⁴ Judge Dyk dissented, claiming that the decision improperly limited the claims by importing limitations from the preferred embodiment in the specification. Judge Dyk asserted that using a dictionary definition, which disclosed no relevance of the degree of the structures, would be the more appropriate method of analysis.⁴⁵

One might analogize this methodology to the “board” example from Section I.B, *supra*. Assume that the specification in the example simply listed many different embodiments, with diagrams, in each case made of wood, and the specification emphasized that the curvature of the top surface was calibrated so as to permit a user to apply wood stain to it. Following the methodology of the *Phillips* panel decision, a court would likely conclude that word board in the claim meant boards of wood, because all the diagrams showed wood and because one of the purported benefits of the invention could only be achieved if the board was made of wood.

B. Issues for Rehearing *En Banc*

The Federal Circuit granted rehearing *en banc*, requested additional briefing on several issues: (1) the use of dictionaries as opposed to the specification, including permissibility and order of importance; (2) if one is made more important than the other, how and when would the court use potential secondary sources in light of the primary sources; (3) if dictionaries are primary, which dictionaries should the court use and how should

40. *Phillips II*, 415 F.3d at 1303.

41. *Id.*

42. *Id.*

43. *Phillips v. AWH Corp. (Phillips I)*, 363 F.3d 1207, 1212 (Fed. Cir. 2004).

44. *Id.* at 1213-14.

45. *Id.* at 1216-18.

the court resolve the problem of multiple definitions; (4) if the specification is primary, to what extent should the specification limit the breadth of the claims; and (5) should claim construction be limited to the intersection of the dictionary-first and specification-first methods.⁴⁶ It also asked for briefing regarding to what extent should courts construe claims to avoid invalidity; how should a court use prosecution history and expert testimony; and what deference, if any, should trial court claim construction decisions merit.⁴⁷

C. Majority Opinion: No Perfect Method, but the Specification is Better Than a Dictionary

The court overruled the *Texas Digital* series of cases, holding that dictionaries were not intrinsic evidence and emphasizing the importance of the specification, claims, and prosecution history in determining the meaning of the words in the claims.⁴⁸ The court also specifically disavowed the *Texas Digital* holding that claims are presumptively entitled to the “full range” of compatible dictionary definitions.⁴⁹

Addressing the issue of how to avoid reading limitations from the specification into the claims, the court simply stated “it is important to keep in mind that the purposes of the specification are to teach and enable those of skill in the art to make and use the invention and to provide a best mode for doing so” and that “[m]uch of the time, upon reading the specification in that context it will become clear” whether or not the invention was limited to the embodiment in the specification.⁵⁰ The court specifically rejected a uniform rule limiting the claims to the specific embodiments described in the patent. The court reasoned that this flexibility would “increase the likelihood that a court will comprehend how a person of ordinary skill in the art would understand the claim terms.”⁵¹ To emphasize the difficulty of this solution, the court reiterated “that there is no magic formula or catechism for conducting claim construction.”⁵² Addressing the use of extrinsic evidence, the court reiterated the *Vitronics* approach of evaluating extrinsic evidence in light of the claims as long as it is weighed by “keep[ing] in mind the flaws inherent in” such evidence, such as the potential bias in the creation or selection of extrinsic evidence for use in

46. *Phillips v. AWH Corp. (Phillips II)*, 415 F.3d 1303, 1382-83 (Fed. Cir. 2005) (en banc).

47. *Id.* at 1383.

48. *Id.* at 1318, 1320-23.

49. *Id.* at 1320.

50. *Id.* at 1323.

51. *Id.* at 1323-24.

52. *Id.* at 1324.

litigation, the “virtually unbounded universe” of available extrinsic evidence, and the effect that the use of extrinsic evidence has in “undermining the public notice function of patents.”⁵³

The court also rejected the notion that claims should be construed to preserve validity, except as a last resort after applying “all the available tools of claim constructions” to the claims.⁵⁴ Lastly, the court specifically refused to revisit the issue of *de novo* review of claim construction.⁵⁵ However, after applying essentially the same methodology as the panel decision, it reversed and remanded.⁵⁶ The court used claim differentiation to point out that the dependent claims would be redundant if the term ‘baffles’ was given the construction provided by the panel decision and emphasizing that, since the restrictive language appeared in the embodiment, it was not dispositive in construing the claim.⁵⁷

Following the “board” example from above,⁵⁸ if the language about woodworking was in the embodiment portion of the specification, and there was second claim in the patent, dependent on the first claim, but only differing in that it claimed “said boards being made of wood,” a court mimicking *Phillips* would likely find those facts to be dispositive in interpreting the word “board” to not be limited to wood. This is because the woodworking language, being in the embodiment, should not limit claim scope and thus would not be dispositive in interpreting the word “board.” Resorting to claim differentiation, the court would not find “board” to be limited to wood, as that would make the second claim redundant to the first claim because the second claim’s only additional limitation is the board being made of wood.

III. EARLY POST-PHILLIPS DECISIONS SHOW LITTLE CHANGE

Although the heart of this Note is an empirical analysis of the Federal Circuit’s claim construction rulings after *Phillips* presented in Part IV, this

53. *Id.* at 1318-19, 1324.

54. *Id.* at 1327.

55. *Id.* at 1328.

56. *Id.* at 1324-28; *see id.* at 1328-30 (Lourie, J., concurring).

57. *See id.* at 1324-25; CHISUM, *supra* note 9, § 18.03; *see also* Comark Commc’ns v. Harris Corp., 156 F.3d 1182, 1187 (Fed. Cir. 1998) (holding that claim differentiation “create[s] a presumption that each claim in a patent has a different scope” to “preserve the distinction” between claims and to avoid making another claim “superfluous” and “redundant,” such as by interpreting claim language in one claim to include limitations which are made explicit in a claim dependent to it).

58. *See supra* Section I.B.

Part provides some subjective context to understand how specific courts have actually explained the significance of the *Phillips* decision soon after the decision was filed. The first case, *Nystrom v. Trex Co.*, is a Federal Circuit case that was granted rehearing in light of *Phillips*, reversing the panel's prior decision. The remaining opinions are district court claim construction decisions issued shortly after *Phillips*.

A. *Nystrom v. Trex Co.*: A Federal Circuit Panel Reverses Judgment, but With Substantially the Same Opinion

Since the *Phillips* decision discredited the *Texas Digital* line of cases, some recent decisions in that line were at risk for reversal upon rehearing, such as *Nystrom v. Trex Co.*, which the *Phillips* decision specifically cited in disapproving of its methodology.⁵⁹ In *Nystrom*, the Federal Circuit, used a non-technical dictionary to construe the term “board” in a patent on an improvement to the floor of exterior decks to include not only wooden boards sawn from logs, but also any “similarly-shaped item made of a rigid material.”⁶⁰

The dissent disagreed with the majority's reliance on the arbitrary choice of a broad dictionary definition when the specification repeatedly referred to wood flooring, woodworking techniques, and elements having been cut from a log.⁶¹ Additionally, the dissent cited to the prosecution history, where the applicant overcame an obviousness rejection on the ground that the invention was “a unique and significant advance in the art of exterior wood flooring” and that the prior art was not related to woodworking techniques.⁶² The dissent also disagreed with the majority on the proper line of authority to follow, implying that *Texas Digital* was an improper deviation from the precedent established in *Vitronics*.⁶³

Subsequent to the decision in *Phillips*, the court granted rehearing of *Nystrom*⁶⁴ and issued a revised opinion.⁶⁵ In this unanimous opinion, the court, following the dissent in *Nystrom I*, held that the proper construction of “board” was wood cut from a log as that was the “ordinary meaning” of board in the context of the specification and prosecution history.⁶⁶ Largely

59. See *Phillip II*, 415 F.3d at 1320.

60. *Nystrom v. Trex Co.*, (*Nystrom I*), 374 F.3d 1105, 1110-13 (Fed. Cir. 2004).

61. *Id.* at 1120-21 (Gajarsa, J., dissenting).

62. *Id.* at 1122.

63. *Id.* at 1120 n.3.

64. *Nystrom v. Trex Co.*, No. 03-1092, 2005 U.S. App. LEXIS 19749 (Fed. Cir. Sept. 14, 2005) (order granting rehearing in light of *Phillips*).

65. *Nystrom v. Trex Co.*, (*Nystrom II*), 424 F.3d 1136 (Fed. Cir. 2005).

66. *Id.* at 1145-46.

substituting *Phillips* for the *Texas Digital* line of authority,⁶⁷ the court interpreted *Phillips* as dictating that:

[I]n the absence of something in the written description and/or prosecution history to provide . . . notice to the [relevant] public . . . that the inventor intended a disputed term to cover more than the ordinary and customary meaning revealed by the context of the intrinsic record, it is improper to read the term to encompass a broader definition simply because it may be found in a dictionary, treatise, or other extrinsic source.⁶⁸

The court in *Nystrom II* distinguished the outcome from that in *Phillips*, because both parties agreed that the ordinary meaning of the term board was wood cut from a log and that *Nystrom* was simply trying to expand the term using an “obscure” definition.⁶⁹ The court contrasted that situation with *Phillips* where the court used the dictionary to construe the ordinary meaning of the term “baffle,” because both parties in *Phillips* stipulated to the ordinary meaning of “baffle” as defined by the dictionary and that meaning was consistent with the specification.⁷⁰ However, the *Nystrom II* court gave no insight to how to approach claim construction when the parties did not agree to the “ordinary meaning” of the term or a dictionary definition, or what definition counts as “obscure.”

B. Judge Whyte’s Claim Construction Decisions Have Big Changes in Form, Little Change in Substance⁷¹

To show the effect of the *Phillips* decision on district court judges, this Section contrasts a pre-*Phillips* claim construction decision by Judge Whyte of the United States District Court for the Northern District of California with one of his post-*Phillips* claim construction decisions. In *Hynix*

67. Compare *Nystrom II*, 424 F.3d at 1136-46, with *Nystrom I*, 374 F.3d at 1110-14.

68. *Nystrom II*, 424 F.3d at 1145.

69. *Id.* at 1145-46.

70. *Id.* at 1145.

71. Judge Whyte is a frequent speaker on patent law and has been mentioned as a possible nominee to the Federal Circuit. See J. Ronald M. Whyte, *Remarks on Patent Reform: Reaction from the Judiciary*, 19 BERKELEY TECH. L.J. 1049 (2004); The Hon. Kathleen M. O’Malley, The Hon. Patti Saris & The Hon. Ronald H. Whyte, *A Panel Discussion: Claim Construction from the Perspective of the District Judge*, 54 CASE W. RES. L. REV. 671 (2004); Choosing the Next Judicial Appointment for the Court of Appeals for the Federal Circuit, Posting of Dennis Crouch to Patently-O: Patent Law Blog, http://patentlaw.typepad.com/patent/2005/07/choosing_the_ne.html (July 6, 2005) (“In a preemptive move, the Federal Circuit Bar Association has put its weight behind District Court Judge Ronald Whyte of San Jose who, for his part, is reportedly not dead-set against the idea.”).

Semiconductor, Inc. v. Rambus Inc., the court cited *Texas Digital* for the proposition that it was improper to use the specification or prosecution history, instead of dictionaries, in determining the ordinary meaning of claim limitations.⁷² In applying that rule, the court construed more than half of the disputed terms based on dictionary definitions and similar extrinsic sources.⁷³ For example, in construing the term “synchronous” in the context of a “synchronous memory device,” the court cited to Webster’s Ninth New Collegiate Dictionary, the Oxford English Dictionary, and two different editions of the Authoritative Dictionary of the Institute of Electrical and Electronics Engineering before concluding that not all functions in a “synchronous memory device” need be synchronous.⁷⁴

In *Zoran Corp. v. Mediatek, Inc.*, a post-*Phillips* decision, Judge Whyte construed several claims in patents relating “to controllers for optical disk drives capable of playing both CDs and DVDs.”⁷⁵ The court cited *Phillips* for the proposition that determining ordinary meaning of a claim term requires a court to use “those sources available to the public that show what a person of skill in the art would have understood disputed claim language to mean.”⁷⁶ Those sources include the claims, specification, and prosecution history, as well as “extrinsic evidence concerning relevant scientific principles, the meaning of technical terms, and the state of the art.”⁷⁷ Facially, the claim construction methodology employed in *Zoran* differed significantly from that of *Hynix*. In *Zoran*, the court repeatedly used the specification and prosecution history to construe every term at issue, only invoking a dictionary to determine the ordinary meaning of one word in one term that was not mentioned in the specification or prosecution history.⁷⁸ However, Judge Whyte still heeded the Federal Circuit’s suggestion that, in handling the “fine line between reading a claim in light of the specification, and reading a limitation into the claim from the speci-

72. *Hynix Semiconductor, Inc. v. Rambus Inc.*, No. CV-00-20905 RMW, 2004 U.S. Dist. LEXIS 23230, at *14-15 (N.D. Cal. Nov. 15, 2004).

73. *See id.* at *16-66.

74. *Id.* at *26-29.

75. *Zoran Corp. v. Mediatek, Inc.*, No. C-04-02619 RMW, 2005 U.S. Dist. LEXIS 34454, at *4 (N.D. Cal. Sept. 9, 2005).

76. *Id.* at *9-10 (quoting *Phillips v. AWH Corp.*, (*Phillips II*), 415 F.3d 1303, 1314 (Fed. Cir. 2005) (en banc)).

77. *Zoran Corp.*, 2005 U.S. Dist. LEXIS 34454, at *10 (quoting *Phillips II*, 415 F.3d at 1314).

78. *Id.* at *15-58.

fication”⁷⁹ a court should “focus . . . on understanding how a person of ordinary skill in the art would understand the claim terms.”⁸⁰

For example, the court construed the term “data error detection and correction circuitry,” so as to reject limiting it to only “circuitry that first performs Reed-Solomon error correction, followed by error detection with a cyclic redundancy checker.”⁸¹ Although the intrinsic evidence supported the broader interpretation, Judge Whyte also found extrinsic evidence relevant in reaching this construction.⁸² Specifically, a text published prior to the patent’s filing date supported the conclusion that other error correction techniques were known at that time.⁸³ Similarly, rather than consulting a technical dictionary, the court used the specification and prosecution history to determine that the terms “sequentially” and “contiguous” refer to how a buffer stores data.⁸⁴

Therefore, there seemed to be a general shift in Judge Whyte’s methodology of claim construction. However, that difference was mainly superficial such as what sources are cited rather than reflecting a substantial change in how Judge Whyte construed terms. In both *Hynix* and *Zoran*, Judge Whyte relied in part on his knowledge and understanding of extrinsic evidence. For example, Judge Whyte could not base his construction of “synchronous memory device” in *Hynix* simply on the definitions used as a basis for the parties’ proposed constructions, as both parties cite similar sources for contradictory definitions.⁸⁵ Because the specification was not held to be probative, the only other relevant evidence was the claim language’s use of the open comprising transition and a witness’s declaration that similar devices during the relevant period which excluded any asynchronous functions were labeled “fully synchronous,” rather than synchronous.⁸⁶ In holding that the absence of a clear disclaimer of all asynchronous functions suggested limited synchronicity, Judge Whyte analogized to the Federal Circuit’s ruling in *Rambus Inc. v. Infineon Technologies AG*,⁸⁷ that “bus” in the patents at issue was not limited to a multip-

79. *Phillips*, 415 F.3d at 1323 (quoting *Comark Commc’ns, Inc. v. Harris Corp.*, 156 F.3d 1182, 1186-87 (Fed. Cir. 1998)).

80. *Id.* at 1323.

81. *Zoran Corp.*, 2005 U.S. Dist. LEXIS 34454, at *15-35.

82. *Id.* at *22-23.

83. *Id.*

84. *Id.* at *46-49.

85. *Hynix Semiconductor, Inc. v. Rambus Inc.*, No. CV-00-20905 RMW, 2004 U.S. Dist. LEXIS 23230, at *26-31 (N.D. Cal. Nov. 15, 2004).

86. *Id.* at *25-30.

87. 318 F.3d 1081, 1088 (Fed. Cir. 2003).

lexed bus.⁸⁸ Yet, the question Judge Whyte answered is more analogous to whether a claim for a “wooden board” would exclude boards that were predominantly made of wood but have some non-wood material. Judge Whyte had to balance the inferences from the comprising transition, which would allow asynchronous functions, the testimonial evidence, that indicated that the term synchronous does not exclude devices with some asynchronous functions, and the dictionary definitions, which imply that a synchronous device must have some essential functions that are synchronous. This is essentially a technology and fact specific threshold question, asking how many asynchronous operations could be preformed in a synchronous memory device before it became synchronous. Thus, Judge Whyte’s decision to accept Hynix’s construction that did not require any specific functions to be synchronous showed a willingness to employ a flexible system of claim construction, even before *Phillips*.

Similarly, in interpreting “Sequentially . . . Contiguous” in *Zoran*, Judge Whyte examined the claim language, the prosecution history, and the specification, but explicitly stated that the construction was “based primarily on the function of the controller.”⁸⁹ That was his understanding of how the device worked in light of the intrinsic and extrinsic evidence.⁹⁰ Therefore, even though there has been a large change in the language used and the sources cited in Judge Whyte’s claim construction rulings, the judge still employs a flexible claim construction methodology, relying on his understanding of the nature of the invention, the intrinsic and extrinsic evidence, and his own technical experience and knowledge.

C. Judge Ward’s Pre- and Post-*Phillips* Claim Construction Decisions Are Largely Unchanged⁹¹

In *Kamatani v. BenQ Corp.*, a pre-*Phillips* claim construction ruling, Judge Ward of the Eastern District of Texas, acknowledged both *Markman*’s command that the three primary sources for claim construction are the claims, the specification, and the prosecution history, as well as the *Texas Digital* proclamation that “dictionaries, encyclopedias and treatises are particularly useful resources . . . in determining the ordinary and cus-

88. *Hynix Semiconductor*, 2004 U.S. Dist. LEXIS 23230, at *30.

89. *Zoran Corp.*, 2005 U.S. Dist. LEXIS 34454, at *48-49.

90. *Id.*

91. Judge Ward is well known as a district judge who hears many patent cases in the “Rocket Docket” of the Eastern District of Texas. See Julie Creswell, *So Small a Town, So Many Patent Suits*, N.Y. TIMES, Sep. 24, 2006, <http://www.nytimes.com/2006/09/24/business/24ward.html?ex=1316750400&en=65001ada21beb03a&ei=5088&partner=rssnyt&emc=rss>.

tomary meaning of claim terms.”⁹² However, Judge Ward did not cite to the broader rule established in *Texas Digital* and its progeny: that the terms should encompass all dictionary definitions that are not clearly disclaimed by the intrinsic sources.⁹³

This reasoning is reflected in *Kamatani*, where Judge Ward frequently decided between different proposed constructions based primarily on different dictionary definitions.⁹⁴ For example, although the court acknowledged that the ordinary meaning of “collate” was “to compare and to merge two similarly-ordered sets,” the court construed “collate” to only include comparing because that interpretation was more compatible with the specification.⁹⁵ Even when intrinsic data were used, Judge Ward focused on the term as would be understood by one of ordinary skill in the art by focusing on the details of the technology. For example, when construing the term “processing,” the defendants advocated a construction that did not include processing the optical signal from the portion of the disk containing certain summary information about the disk.⁹⁶ Judge Ward rejected this construction because the invention would not actually read that summary information, but rather would use certain properties of the optical signal to deduce the summary information and it did not matter what part of the disk was used for that.⁹⁷

In *Gobeli Research, Ltd. v. Apple Computer Inc.*, Judge Ward emphasized that *Phillips* simply “set forth several guideposts that courts should follow” in claim construction.⁹⁸ Specifically, the court should determine the ordinary meaning as how a person of ordinary skill in the art would understand the term, which is to read the claim term in light of the specification and prosecution history.⁹⁹ Dictionaries are assigned a subordinate

92. *Kamatani v. BenQ Corp.*, No. 2:03-CV-437, 2005 U.S. Dist. LEXIS 42764, at *6-7 (E.D. Tex. June 29, 2005) (quoting *Tex. Digital*, 308 F.3d at 1202).

93. *See Tex. Digital Sys., Inc. v. Telegenix, Inc.*, 308 F.3d 1193, 1202-1204 (Fed. Cir. 2002).

94. *See Plaintiff's Opening Brief Regarding Claim Construction Issues*, *Kamatani v. BenQ Corp.*, No. 2:03-CV-437, U.S. Dist. LEXIS 42764 (E.D. Tex. Mar. 14, 2005); *Responsive Claim Construction Brief of Defendants*, *Kamatani v. BenQ Corp.*, No. 2:03-CV-437, U.S. Dist. LEXIS 42764 (E.D. Tex. Mar. 28, 2005).

95. *Kamatani*, 2005 U.S. Dist. LEXIS 42764, at *17-18.

96. *See Responsive Claim Construction Brief of Defendants* at 32, *Kamatani v. BenQ Corp.*, No. 2:03-CV-437 (E.D. Tex. Mar. 28, 2005).

97. *Kamatani*, 2005 U.S. Dist. LEXIS 42764, at *11-16.

98. *Gobeli Res., Ltd. v. Apple Computer Inc.*, 384 F. Supp. 2d 1016, 1020 (E.D. Tex. 2005).

99. *Id.* at 1020-21.

role.¹⁰⁰ This explanation somewhat contrasts with Judge Ward's previous description of the law of claim construction.¹⁰¹

Judge Ward construed several terms relating to "interrupt" and "interrupt handler" technology, which related to operating system software for processing signals from peripheral devices, such as printers.¹⁰² In construing the term "assigned to each of said processes," the court used the specification to reject both parties' proposed constructions, finding evidence that every memory allocation involved in the claim must assign both permanent and transient storage in the memory stack.¹⁰³ Similarly, in construing a term containing "concurrently, but independently, processing," Judge Ward used his knowledge of extrinsic evidence about the nature of computer operation,¹⁰⁴ as well as the specification, to inform the conclusion that "concurrently" requires that the relevant instructions not be executed serially.¹⁰⁵

Like Judge Whyte, Judge Ward has primarily changed his claim construction decisions in form rather than substance. Although Judge Ward's pre-*Phillips* decisions frequently involved selecting constructions from competing dictionary definitions,¹⁰⁶ his method of claim construction reflected a willingness to use the specification and the prosecution history to determine claim language without explicit disavowals of claim scope.¹⁰⁷ In the post-*Phillips* context, the parties have changed their approach to making claim construction arguments, citing dictionaries far more sparingly,¹⁰⁸

100. *Id.* at 1022.

101. *Compare Katamani*, 2005 U.S. Dist. LEXIS 42764, at *7 ("[D]ictionaries, encyclopedias and treatises are particularly useful resources to assist the court in determining the ordinary and customary meaning of claim terms.") (citing *Tex. Digital*, 308 F.3d at 1202), *with Gobeli*, 384 F. Supp. 2d at 1022 ("*Phillips* does not preclude all uses of dictionaries in claim construction proceedings. Instead, the court assigned dictionaries a role subordinate to the intrinsic record.").

102. *Gobeli*, 384 F. Supp. 2d at 1018.

103. *Id.* at 1025-26.

104. *See id.* at 1026 ("Contrary to the Plaintiff's argument, serial processing does not comport with the specification or the general understanding of the term "concurrently.""). The phrase "serial processing" does not appear in either party's brief, but is a term of art in computing. Serial processing, *The American Heritage New Dictionary of Cultural Literacy*, 3d ed., Houghton Mifflin Co., 2005, available at [http://dictionary.reference.com/browse/serial processing](http://dictionary.reference.com/browse/serial%20processing).

105. *Gobeli*, 348 F. Supp. 2d at 1026.

106. *See Kamatani*, 2005 U.S. Dist. LEXIS 42764, at *17, *21.

107. *See id.* at *15, *18, *21.

108. *Compare* Plaintiff's Opening Brief Regarding Claim Construction, *supra* note 94 (citing forty-one dictionary and encyclopedia definitions for fifteen terms), *with* Defendant Sun Microsystems, Inc.'s Opening Brief in Support of Its Proposed Claim Con-

but Judge Ward seems to rule largely the same, having already used intrinsic evidence and his understanding of the nature of the technology to determine claim language.¹⁰⁹

Examining the post-*Phillips* cases, at least some decisions will come out differently as *Nystrom* demonstrates. Furthermore, the methodology employed has changed, at least facially, as courts will no longer use dictionaries to apply the widest possible construction of a disputed term that is not obviously disavowed by the specification or in the prosecution history. Additionally, the method of briefing for claim construction hearings, as well as the format of claim construction opinions, has changed somewhat: neither parties nor the courts cite dictionaries as often. However, courts were willing before *Phillips* to use their understanding of the technology, as supplied by the specification, the prosecution history, and extrinsic sources, to determine the meaning of claim terms, and this continues after *Phillips*. So it appears that *Phillips* has had substantial effect on the form, but only a minor effect on the substance of claim construction decisions.

IV. EMPIRICAL ANALYSIS OF THE FEDERAL CIRCUIT: FINDINGS AND METHODOLOGIES

A significant number of researchers have applied quantitative and qualitative methods to empirically analyze the Federal Circuit claim construction jurisprudence, especially with regard to reversal rates. The following Sections will review some of these works, particularly describing their methodologies and results.

A. Studies of Reversal Rates Find Problems in the Federal Circuit's Claim Construction Rulings

Christian Chu's Empirical Analysis of Federal Circuit Claim Construction Trends evaluated all patent decisions by the Federal Circuit filed be-

structions, *Gobeli*, 384 F. Supp. 2d 1016 (No. 2:04-CV-00149-TJW) (citing only two dictionary definitions eighteen terms).

109. See *Kamatani*, 2005 U.S. Dist. LEXIS 42764, at *11-16 (using understanding of how laser read information off of optical disk to preclude a literal but otherwise seemingly valid claim interpretation); *Kamatani*, 2005 U.S. Dist. LEXIS 42764, at *17-18. (relying on the specification to resolve dispute over definitions supported by dictionary sources); *Gobeli*, 384 F. Supp. 2d at 1025-26 (using the specification to reject both parties proposed constructions); *supra* note 100 (showing that Judge Ward used a term of art not mentioned in either party's brief in his analysis of a claim term, evidence of independent knowledge and understanding of the technology).

tween January 1, 1998, and April 30, 2000.¹¹⁰ In addition to collecting basic information such as case name and panel composition, the author collected information regarding claim construction decisions: the number of claims addressed and/or construed, whether the Federal Circuit made any change to the lower tribunal's claim construction, whether such changes were outcome determinative, and whether claims reviewed involved means-plus-function claims.¹¹¹ The author only addressed instances where the court explicitly reviewed claim language,¹¹² and therefore he could only estimate the effect that including Rule 36 summary affirmances would have on his results.¹¹³

Chu found an overall reversal rate of 47.3% excluding Rule 36 affirmances and 36.6% including such affirmances.¹¹⁴ On claim construction issues, Chu found that the Federal Circuit changed at least one claim construction in 44% of cases.¹¹⁵ Furthermore, Chu found that 29.6% of cases were reversed due to claim construction.¹¹⁶ Chu concluded that such high reversal rate numbers undermine the trial courts, dooming most litigation to a subsequent appeal with a substantial chance of a reversal.¹¹⁷ The seemingly obvious result of the uncertainty and protracted length of litigation would be higher costs and greater difficulty in resolving patent disputes.¹¹⁸ Chu recommended removing the *de novo* standard of review for claim construction decisions, as well as issuing more consistent rulings on specific claim language.¹¹⁹

Professor Kimberley Moore's claim construction study focused on the Federal Circuit's reversal rates, especially on claim construction issues.¹²⁰ This study analyzed all patent decisions in the Federal Circuit after the Supreme Court's *Markman* decision until 2003, including individualized analyses of Rule 36 summary affirmances.¹²¹ Moore analyzed the briefs

110. Christian A. Chu, *Empirical Analysis of the Federal Circuit's Claim Construction Trends*, 16 BERKELEY TECH. L.J. 1075, 1092 (2001).

111. *Id.* at 1093.

112. *Id.* at 1094.

113. See FED. CIR. R. 36 (allowing the court to enter judgment of affirmance without a written opinion if the opinion would have no precedential value and at least one additional condition is met).

114. Chu, *supra* note 110, at 1098-1100.

115. *Id.* at 1104.

116. *Id.*

117. *Id.* at 1143.

118. *Id.*

119. *Id.*

120. Kimberly A. Moore, *Markman Eight Years Later: Is Claim Construction More Predictable?*, 9 LEWIS & CLARK L. REV. 231, 233 (2005).

121. *Id.* at 234-37.

submitted in the Rule 36 cases to determine whether the litigants argued claim construction and how many terms were at issue.¹²² Assuming that all Rule 36 cases approved all claim constructions at issue, Moore found that the Federal Circuit found error in 34.5% of constructions, with at least one term held to have been incorrectly construed by the lower court in 37.5% of cases. This resulted in 29.7% of such cases being reversed.¹²³ Furthermore, Moore found that 39.3% of terms that either the district court or the Federal Circuit considered to be means-plus-function claims were reversed.¹²⁴ Moore also criticized the current *de novo* standard of review, as well as the absence of clear standards for claim construction from the court.¹²⁵

B. Methodological Studies Show Lack of Consensus in the Federal Circuit

Wagner and Petherbridge's study focused on the methodology of the Federal Circuit's claim construction rulings.¹²⁶ The authors developed a system by which claim construction rulings were coded into "holistic" or "procedural" groups, with a degree of strength assigned to each such coding.¹²⁷ Procedural approaches were those primarily involving strict presumptions, formulistic application of a hierarchy of source, and frequent use of dictionaries and similar extrinsic sources.¹²⁸ The holistic approaches were defined as those avoiding an abstract concept of "ordinary meaning" and looking at terms within the context of the invention, drawing more on the specification and prosecution history.¹²⁹

Analyzing opinions decided from April 23, 1996 through November 1, 2002, the authors found that 63.1% of cases showed a procedural approach and 36.9% of cases showed a holistic approach.¹³⁰ Furthermore, the authors linked six of the twelve active judges with an identifiable methodology, and could accurately determine the likelihood of approach used by a specific panel of judges.¹³¹ The authors recommended, among other

122. *Id.*

123. *Id.* at 238.

124. *Id.* at 242.

125. *Id.* at 245-47.

126. Wagner & Petherbridge, *supra* note 32, at 1110-11.

127. *See id.* at 1130-39.

128. *Id.* at 1133-34.

129. *Id.*

130. *Id.* at 1148.

131. *Id.* at 1159-68.

things, the standardization of the methodologies in the Federal Circuit, as well as taking methodology more seriously.¹³²

In Miller and Hilsenteger's study, the authors use a database search-based methodology to determine the frequency at which Federal Circuit and district court claim construction decisions employ dictionary and dictionary-like sources.¹³³ Searching the Westlaw database for decisions by both the Federal Circuit and the district courts, the authors revealed that there has been a significant increase in the use of dictionaries in claim construction decisions since *Markman I.*¹³⁴ The authors, supporting the use of dictionaries, propose the selection process for dictionaries be standardized by the Patent Office.¹³⁵

C. Methodology Compared to the Previous Studies

This study adopts many of the approaches of those in previous studies. Opinions were analyzed from July 13, 2005, immediately after the *Phillips* decision until September 13, 2006. Data were collected regarding the outcome of the case, number of terms at issue, and the number of constructions changed. This study only examines explicit claim constructions by the Federal Circuit, thereby excluding Rule 36 affirmances. Additionally, each claim construction was coded based on the primary source of authority that the Federal Circuit claimed to cite in its construction: dictionaries, specifications, prosecution history, the claims (including the form of claim differentiation, "ordinary meaning" of the claims, or "the language of the claims themselves"), extrinsic factual evidence, other, or not clear. These methods are designed to be comparable with Chu's results.¹³⁶ Additionally, this study employs Miller and Hilsenteger's methodology to compare pre- and post-*Phillips* datasets.¹³⁷

132. *Id.* at 1174-79.

133. Joseph Scott Miller & James A. Hilsenteger, *The Proven Key: Roles and Rules for Dictionaries at the Patent Office and the Courts*, 54 AM. U. L. REV. 829, 835-36 (2005).

134. *See id.* at 845-51. The authors use the following search strings: Narrow Search—"patent! /s claim! /s (constru! or interpret!) /s (dictionar! or encyclopedia! or treatise! or handbook!) and date([re-strictor])". Broad Search—"patent! /p claim! /p (constru! or interpret!) /p (dictionar! or encyclopedia! or treatise! or handbook!) and date([re-strictor])". Baseline Search—"patent! /p claim! /p (constru! or interpret!) and date([restrictor])". *See id.* at 845.

135. *Id.* at 896-904.

136. *See supra* Section IV.A.

137. *See* Miller & Hilsenteger, *supra* note 133.

D. The Empirical Results: Reversal Rates Remain High, Methodology is Less Clear

The Federal Circuit interpreted at least one claim term or limitation in a total of eighty-six applicable cases. The overall reversal rate for these cases was 53.5%. Additionally, the Federal Circuit changed 33.3% of the district courts' claim constructions, resulting in 39.5% of these cases having one or more terms reversed. Based on the previously described coding method, 44.4% of terms were decided on the specification, 29.6% on claim language, 8.6% on the prosecution history, 7.4% on factual extrinsic evidence, 6.2% explicitly based on a dictionary definition, and 3.7% on other or undetermined grounds.

The results indicate that *Phillips* has not reduced reversal rates.¹³⁸ Compared to the results of Chu's study, the overall reversal rate in claim construction cases, excluding summary affirmances, is 53.5%, slightly up from 47.3% for Chu's study. Similarly, the percent of cases where at least one construction changed is 39.5%, only slightly down from 44% from Chu's study.

On the other hand, at first glance it seems that *Phillips* had more of an effect on methodology than previously thought, with only 6% of cases explicitly based on dictionary definitions and 45% based on the specification. However, the search-based methodology of Miller and Hilsenteger gives results that show almost no change in the rates of dictionary-like extrinsic evidence before and after *Phillips*.¹³⁹ These contradictory results may seem confusing at first, but looking more closely at these post-*Phillips* cases, it becomes clear that the basic substance of claim construction methodology has not changed, even though the form has. As described below, cases in the category where issues of construction were decided by referring to the claims themselves often relied on the "ordinary meaning" of the claims as a replacement for dictionaries. Adding this category along with explicit dictionary references yields 35.8%. This is significantly lower than Wagner and Petherbridge's 63.1% proceduralist rat-

138. See *infra* Appendix A.

139. Using the Miller & Hilsenteger method, see *supra* note 133, for the Federal Circuit, one gets 13.8% for a broad search between *Markman* and *Phillips* and 13.7% for a broad search between *Phillips* and Sept. 13, 2006. For narrow searches in the Federal Circuit, the results are 3.8% pre-*Phillips* and 4.6% post-*Phillips*. For the district courts, a broad search is 20.5% pre-*Phillips* and 24.3% post-*Phillips*. The narrow search returns 7.8% pre-*Phillips* and 8.6% post-*Phillips*. Although this may reflect an increase in language related to the legal standard section of decisions post-*Phillips* to include the words "dictionary," "encyclopedia," "treatise," or "handbook," the results show at least no significant change.

ing, most likely due to *Phillips* doing what it professed to do, causing a shift away from *Texas Digital*'s strict dictionary definition approach and toward a more holistic method.¹⁴⁰ However, the results still reflect that a substantial number of litigants will face great uncertainty in the methodology of claim construction that the court will employ, as claim construction decisions will still frequently rely on dictionaries, and often in the more obtuse form of "ordinary meaning."¹⁴¹

E. Post-*Phillips* Claim Construction Cases Hide *Texas Digital*-Style Analysis Under the Guise of "Ordinary Meaning"

Many Federal Circuit decisions now cite directly to the claims as a source of authority to establish that the "ordinary" meaning of the claim term controls. In many cases, this action simply masks the fact that the court uses "ordinary" meaning to avoid intrinsic sources. For example, in *Grayzel v. St. Jude Medical, Inc.*, the Federal Circuit responded to the patentee's claim that "the district court erroneously relied on a dictionary definition to trump both the intrinsic and extrinsic record" in construing the term "sheath" in a medical device patent by stating that the "patent uses the term 'sheath' in the ordinary sense of the word."¹⁴² After the court examined the specification and prosecution history, it concluded that statements in them were "consistent with an ordinary definition for the term as accorded by the district court."¹⁴³

Similarly, in *Cross Medical Products, Inc. v. Medtronic Sofamor Danek, Inc.*, the Federal Circuit derived the "ordinary meaning" of the term "bone interface" using a complex dictionary analysis, breaking the term apart into its constituent words, to conclude "the anchor seat has a 'lower' portion that may share a 'common boundary' with 'bone.'"¹⁴⁴ Only then did the court refer to the intrinsic evidence to confirm this definition.¹⁴⁵ These decisions demonstrate that the Federal Circuit is willing to continue to perform *Texas Digital*-like analyses, substituting explicit references to dictionaries with references to the "ordinary meaning" of the claim language.

In other cases, the Federal Circuit simply rubber-stamps the district court definitions based on dictionaries, as being part of the "ordinary

140. See *supra* Section IV.B.

141. See *infra* Section IV.E; Wagner & Petherbridge, *supra* note 32, at 1176.

142. *Grayzel v. St. Jude Med., Inc.*, 162 Fed. Appx. 954, 959 (Fed. Cir. 2005).

143. *Id.* at 959-60.

144. *Cross Med. Prods., Inc. v. Medtronic Sofamor Danek, Inc.*, 424 F.3d 1293, 1305 (Fed. Cir. 2005).

145. *Id.*

meaning” of the claims. In *Philips Electronics North America Corp. v. Contec Corp.*, the Federal Circuit affirmed the definition “information (data) that identifies a signal structure” as the “plain and ordinary meaning” of the claim term “signal structure identification data.”¹⁴⁶ However, the Federal Circuit did not mention that the district court derived this “plain and ordinary meaning” of the claim language from multiple dictionary definitions.¹⁴⁷ Similarly, in *Sorensen v. International Trade Commission*, the Federal Circuit overruled the administrative law judge’s holding that a “different characteristic” in a claim related to plastic injection molding did not include color.¹⁴⁸ The judge had held that the alternate interpretation would require “an open-ended concept that could encompass every type of measurement possible and every type of measurable characteristic,” and, after carefully investigating the specification and prosecution history, one of ordinary skill in the art would not interpret the term so broadly.¹⁴⁹ However, the Federal Circuit dismissively overturned the decision, stating:

The claim does not limit these differences to any particular subset of the broad term ‘characteristics.’ In other words, according to the claim language any difference in characteristics between the two injected materials would satisfy the claim language. Thus, a difference in color alone would satisfy the ‘different characteristics’ limitation. The color would be the characteristic that differs.¹⁵⁰

This statement simply reiterated the complainant’s argument that the ordinary meaning of the word “characteristic” included color, which was based on dictionary definitions.¹⁵¹ These cases illustrate that the Federal Circuit will continue to hold that dictionary definitions take precedence over intrinsic evidence in some cases, but will no longer be as overt in doing so.¹⁵²

146. *Philips Elecs. N. Am. Corp. v. Contec Corp.*, 177 Fed. Appx. 981, 986 (Fed. Cir. 2006).

147. *See Philips Elecs.*, 177 Fed. Appx. at 986; *Philips Elecs. N. Am. Corp. v. Contec Corp.*, 312 F. Supp. 2d 592, 601 (D. Del. 2004).

148. *Sorensen v. Int’l Trade Comm’n*, 427 F.3d 1375, 1378, 1381 (Fed. Cir. 2005).

149. *In re Certain Automobile Tail Light Lenses & Prods. Incorporating Same*, USITC Pub. 210941, Inv. No. 337-TA-502, at 18-30 (July 2004).

150. *Sorensen*, 427 F.3d at 1379, 1381.

151. *Certain Automobile Tail Light Lenses*, USITC Pub. 210941, at 17.

152. For a good example of an overt use of dictionary in the pre-*Phillips* context, see *Nystrom v. Trex Co.*, (*Nystrom I*), 374 F.3d 1105, 1110-13 (Fed. Cir. 2004).

V. CONCLUSION

When the *en banc* court in *Phillips* reversed the panel decision that purportedly used the same methodology,¹⁵³ it was a clear message that the *Phillips* decision was not going to redeem the Federal Circuit's claim construction jurisprudence. It should not therefore be surprising that *Phillips* has had some effect on claim construction reasoning, but has not resolved the underlying disputes and problems with claim construction. This Note's empirical study shows that reversal rates remain substantially the same as shown in previous studies, but Federal Circuit panels in the post-*Phillips* world are now more willing to rely on specifications than dictionaries to interpret claims. However, to the extent the Federal Circuit's methodology has changed, it has largely shifted from a somewhat transparent but haphazard use of dictionaries into an even less predictable system where the court will often use dictionary definitions under the guise of "ordinary meaning" without indicating what sources to which it will refer. This Note's empirical study reveals this subterfuge, showing a high number of claim terms decided by referring simply to claim language, rather than to dictionaries. By including this category with the category representing other sources of extrinsic evidence, it appears that extrinsic evidence still contends with intrinsic evidence as a significant source for claim construction rulings, undermining the public-notice function of claims and resulting in uncertain decision-making and perpetuating a fractured system of claimed construction.¹⁵⁴ Because of this, the promise that "much of the time . . . it will be clear"¹⁵⁵ whether the court should read a limitation from the specification into the claims has proven largely hollow. The primary reason for these failures, as many other suggest, is the *de novo* standard of review of claim construction.

There is however, a glimmer of hope. Professor Moore is now Judge Moore of the Federal Circuit, and her detailed and insightful criticisms of the Federal Circuit's claim construction jurisprudence¹⁵⁶ will, with any luck, influence her colleagues on the bench.¹⁵⁷ The recent *Amgen Inc. v. Hoechst Marion Roussel, Inc.* decision seems to reflect Judge Moore's influence: counting up the multitude of concurrences and dissents to this pe-

153. See *Phillips v. AWH Corp. (Phillips II)*, 415 F.3d 1303, 1328-30 (Fed. Cir. 2005) (*en banc*) (Lourie, J., concurring).

154. See *supra* Sections I.B and IV.E.

155. *Phillips II*, 415 F.3d at 1323.

156. See generally Moore, *supra* note 120.

157. See The White House Judicial Nominations: Judge Kimberly A. Moore,, <http://www.whitehouse.gov/infocus/judicialnominees/moore.html> (last visited Dec. 12, 2006).

tition for rehearing *en banc* shows that no fewer than eight out of the twelve sitting Federal Circuit judges are willing to revisit the standard of review,¹⁵⁸ at least if the “appropriate case” arises.¹⁵⁹ Until then, litigants should simply endeavor to expect the unexpected.

Appendix

% Dictionary	% Specification	% Procedural Hist.	% Claim language	% Other extrinsic evidence	% Other / Not Clear
6.17%	44.44%	8.64%	29.63%	7.41%	3.70%
Overall Reversal Rate for Fed. Cir. Decisions Containing Claim Constructions					
			% Terms Reversed	% Cases with 1 or more Terms Reversed	
53.49%			33.33%	39.53%	

158. *Amgen Inc. v. Hoechst Marion Roussel, Inc.*, 469 F.3d 1039 (Fed. Cir. 2006).

159. *Id.* at 1045.

EVERYONE IN THE PATENT POOL: *U.S. PHILIPS CORP. V. INTERNATIONAL TRADE COMMISSION*

By David W. Van Etten

When separate firms hold their patent rights together under joint management, they create package licenses, commonly known as patent pools.¹ On the one hand, package licenses may benefit competition by efficiently integrating complementary patent rights owned by multiple firms. On the other hand, package licenses may hurt competition by foreclosing alternative technologies and retarding innovation. In an effort to capture the beneficial potential and discourage the harmful potential of package licensing, the U.S. Department of Justice (DOJ) approved a “patent-expert mechanism”: the DOJ did not prosecute a package license owner for anti-trust violation if an independent and disinterested patent expert verified that the package license consisted solely of “essential” patents, to which there were no commercially viable alternatives.² Accordingly, firms that employ a patent-expert mechanism safeguard themselves from federal anti-trust prosecution. However, the patent-expert mechanism does not necessarily safeguard firms from a patent misuse defense in private litigation.

In *U.S. Philips Corp. v. International Trade Commission*, the United States Court of Appeals for the Federal Circuit reviewed an opinion by the International Trade Commission (ITC), which held a package license unenforceable due to patent misuse.³ The ITC held the package license to be patent misuse under a *per se* standard of review because the package license included “non-essential” patents. On appeal, the Federal Circuit confronted two legal issues surrounding package licenses: first, whether the ITC erred applying a *per se* standard rather than a rule of reason standard of review; and second, whether the ITC correctly distinguished be-

© 2007 David W. Van Etten

1. “Patent pool” and “package license” are not necessarily coextensive categories. A single firm could license the rights to several of its own patents in a “package license” without combining its patents with another firm’s patents to establish a “patent pool”. However, for the sake of uniformity, I will be employing the terms interchangeably throughout this Note.

2. See Letter from Joel I. Klein, Assistant Attorney General, Department of Justice, Antitrust Division, to Garrard R. Beeney, Esq., Sullivan & Cromwell (Dec. 16, 1998) (on file with author), available at <http://www.usdoj.gov/atr/public/busreview/2121.pdf> [hereinafter Business Review Letter].

3. *U.S. Philips Corp. v. Int’l Trade Comm’n*, 424 F.3d 1179 (Fed. Cir. 2005).

tween “essential” and “non-essential” patents when reviewing the package license. First, the Federal Circuit rejected the ITC’s use of a *per se* standard, holding that the rule of reason was the appropriate standard for reviewing package licenses, regardless of whether the package license included “non-essential” patents. Second, the Federal Circuit rejected the ITC’s determination of “non-essential” patents. Accordingly, the Federal Circuit reversed the ITC ruling and remanded for further proceedings.

This Note examines the implications of *Philips*, a decision that serves to restrict patent misuse doctrine and encourage patent pools. Part I frames the *Philips* discussion by outlining the legal background of package licenses and patent misuse doctrine. Part II reports the facts and procedural history of *Philips* and details the Federal Circuit’s holdings and reasoning. Part III analyzes the subtler implications of the Federal Circuit’s holdings: (1) how *Philips* implicitly holds that package licenses are inherently pro-competitive for purposes of the rule of reason analysis; (2) how *Philips* implicitly holds that “essentiality” is determined at the time of transaction, not at the time of litigation; (3) how *Philips* implicitly endorses the DOJ’s patent-expert mechanism; and (4) how *Philips* creates a heavy burden for licensees who argue the anticompetitive harms of a package license. Ultimately, this Note concludes that *Philips* creates a presumption that heavily favors the creation of, participation in, and enforcement of package licenses.

I. PACKAGE LICENSES AND PATENT MISUSE DOCTRINE

A. Package Licenses

1. *Benefits and Harms*

When separate firms combine their patent holdings together under joint management, they create package licenses, commonly known as patent pools. Package licenses promise transactional efficiency: it is easier, quicker, and cheaper to conduct transactions with one pool containing multiple patents than it is to transact individual patents separately. However, firms may potentially exploit package licenses for cartel-like ends that hurt consumers and unfairly harm competitors.⁴

4. See U.S. DEP’T OF JUSTICE & FED. TRADE COMM’N, ANTITRUST GUIDELINES FOR THE LICENSING OF INTELLECTUAL PROPERTY §5.5, at 27-30 (1995) [hereinafter IP GUIDELINES]; HERBERT HOVENKAMP, IP AND ANTITRUST 34-37 (2004); Steven C. Carlson, *Patent Pools and the Antitrust Dilemma*, 16 YALE J. ON REG. 359, 379-98 (1999).

The transactional efficiency of package licenses leads to potential benefits.⁵ First, package licenses often serve to clear blocking patents and integrate complementary patents, thus resolving the “tragedy of the anti-commons.”⁶ Imagine that firms A, B, C, and D each possess a patent that covers specific knowledge needed to manufacture widgets. The patents, taken separately, give their owners the right to exclude each other from making, using, and selling widgets. However, each firm does not have any affirmative right to make, use, and sell widgets unless it licenses the complementary patent rights from the other three firms. An anti-commons problem arises: too many entangled intellectual property rights (IPRs) obstruct the smooth functioning of a productive market. Pooling overcomes this thicket of entangled IPRs by creating one organizational unit of enabled teachings—the package license—thus clearing the exclusionary blocking rights. By joining the patent pool, A, B, C, and D contract out of their patents’ statutory exclusionary rights and contract into cross-licenses that allow each firm to manufacture widgets. Certainly, the firms could form bilateral agreements: A contracts with B, A contracts with C, and so on. However, the package license consolidates the formidable transaction costs of multiple agreements, including the costs of associating, negotiating, and decision-making with competitors.

Second, package licenses may lead to unique efficiencies when industry standards are necessary or desirable.⁷ An industry standard—a common design for a product or process shared by all competitors in an industry—is necessary or desirable in network markets where there are sizable “network externalities” or “network effects,” such as the computer networking and telecommunications industries.⁸ Network externalities exist

5. See Carlson, *supra* note 4, at 379-98. Besides clearing blocking patents and enhancing network interoperability, patent pools possess additional pro-competitive benefits. First, patent pools tend to facilitate the rapid development of technology, often hindered by patent disputes that are more likely to arise in atomized and un-pooled transactions. Second, patent pools reduce costly, time-consuming, and uncertain litigation: *ex ante* through pooling contracts, and *ex post* through cross-licensing settlements. Third, patent pools resolve uncertainties in the scope of patent claims, distribute risks among members of the pool, promote the success of smaller firms, and counter spillover effects.

6. *Id.* at 379; see also Michael Heller & Rebecca Eisenberg, *Can Patents Deter Innovation? The Anticommons in Biomedical Research*, 280 SCIENCE 698 (1998) (discussing the anti-commons problem of clustered proprietary patent rights).

7. See Mark A. Lemley, *Intellectual Property Rights and Standard-Setting Organizations*, 90 CALIF. L. REV. 1889 (2002) (discussing the relationship between patents and technology standards).

8. See Joseph Farrell & Garth Saloner, *Standardization, Compatibility, and Innovation*, 16 RAND J. ECON. 70 (1985); Michael Katz & Carl Shapiro, *Network Externalities, Competition, and Compatibility*, 75 AM. ECON. REV. 424 (1985); Mark A. Lemley & David McGo-

when the consumer derives benefits from every other consumer sharing the same network and network-related products. As Professor Mark Lemley explains,

[j]ust as the value of having a telephone increases from zero as more and more people are added to the network, so the value of being on the Internet increases as more people get on the Net. The implication of network effects in both markets is the same: the optimal number of both Internets and telephone networks is one.⁹

It is in the public's best interest to have unified standards in network markets, in contrast to classic consumer markets where cereal-box-style product variety carries the day.

Package licenses clear blocking patents and enhance network interoperability because they serve to prevent the phenomenon of the "hold-up." Imagine that consumers would benefit most from a network market consisting either entirely of widgets or entirely of gadgets. In fact, imagine that consumers suffer if two markets of widgets and gadgets exist, because—like VHS and Betamax video-recording systems—the network will eventually trend toward one market, either widgets or gadgets, and certain unfortunate consumers will be stuck with latter-day switching costs. In this hypothetical, firms A, B, and C pool their patent teachings together, which may serve to make both widgets and gadgets. Assume widgets and gadgets are equally innovative, consumer-friendly technologies. Imagine firm D owns the final complementary patent on widget development and is willing to join the patent pool, while firm E owns the gadget's final complementary patent and is unwilling to join the pool. Consumers are best served if firms A, B, and C invite firm D into the patent pool and collectively drive widget development as the ultimate industry standard. Conversely, if the standard tips toward gadgets firm E would possess a patent that covers the common design for the industry's core product or process, encouraging firm E to engage in "hold-up" behavior: holding the entire industry hostage to its bargaining demands, inefficiently increasing market prices and hindering future product development. Ac-

wan, *Legal Implications of Network Economic Effects*, 86 CALIF. L. REV. 479 (1998); S.J. Liebowitz & Stephen E. Margolis, *Network Externality: An Uncommon Tragedy*, 8 J. ECON. PERSP. 133 (1994).

9. Mark A. Lemley, *The Law and Economics of Internet Norms* (Berkeley Program of Law & Econ., Working Paper Series, Paper No. 132, 1999), <http://repositories.cdlib.org/blewp/art132>.

cordingly, consumers benefit enormously if a package license exists and contains all the patents that are relevant to the network standard.¹⁰

While package licenses have the beneficial potential to clear blocking patents and enhance network interoperability, package licenses also carry the potential to hurt consumers or unfairly harm competitors. First, firms hurt consumers when they use package licenses to collectively fix prices or coordinate output restrictions.¹¹ Second, package licenses hurt consumers when they retard innovation by discouraging participating firms from conducting research that would displace the existing standard.¹² Meanwhile, firms unfairly hurt their competitors when they exclude them from joining the pooling arrangement or from the benefits of cross-licensing enjoyed by other firms. Finally, returning to the issue of network standards, firms hurt both consumers and competitors when they use a package license to drive a standard that is less innovative and less customer-friendly than an existing alternative being promoted by a competitor. In short, firms that participate in patent pool arrangements have incentives to engage in anticompetitive behavior that adversely affects the market.

2. DOJ's Business Review Letter: Patent-Expert Mechanism

The mixed blessing of patent pools has in the past made the DOJ wary. The DOJ demonstrated a general hostility toward package licenses in the 1960s and 1970s.¹³ The DOJ considered package licenses to be one of its "nine no-nos" of plainly anticompetitive behavior, deserving targeted enforcement.¹⁴ However, the DOJ's treatment of package licenses shifted during the Reagan Administration. The DOJ's Roger B. Andewelt expressed in 1984, "[b]ecause of the important pro-competitive benefits that can result from patent pools, *per se* condemnation is inappropriate."¹⁵ Finally, in 1995, the DOJ and the Federal Trade Commission issued "Antitrust Guidelines for the Licensing of Intellectual Property" ("IP Guidelines"), explicitly recognizing the pro-competitive benefits of pooling arrangements that "integrat[e] complementary technologies, reduc[e] trans-

10. See, e.g., Lemley, *supra* note 7 (discussing standard-setting organizations as an alternative organizational model for achieving the patent pool's aims).

11. See IP GUIDELINES, *supra* note 4, at 28.

12. *Id.*

13. See Daniel Hommiller, *Patent Misuse in Patent Pool Licensing: From National Harrow to the "Nine No-Nos" to Not Likely*, 2006 DUKE L. & TECH REV. 7, 13 (2006).

14. *Id.*

15. Roger B. Andewelt, *Analysis of Patent Pools under the Antitrust Laws*, 53 ANTITRUST L.J. 611, 619 (1984).

action costs, clear[] blocking positions, and avoid[] costly infringement litigations.”¹⁶

In 1998, the DOJ published a business review letter approving a patent-expert mechanism for package licenses that would be acceptable to the DOJ and would prevent antitrust prosecution.¹⁷ The three firms seeking the DOJ’s advice—Philips, Sony, and Pioneer (collectively “the Licensors”)—were interested in combining their separate patent rights into a package license for purposes of manufacturing DVDs. The Licensors proposed the following patent-expert mechanism: the package license would be composed solely of patents that were “essential” to compliance with the established industry standard; by “essential,” the Licensors meant that there were no commercially viable alternative technologies on the market.¹⁸ As a show of good faith, the Licensors proposed verification of the “essentiality” of each patent included in the package license by an independent and disinterested patent expert. Further, the Licensors proposed assurances that the expert’s interests were sufficiently insulated to qualify as independent and disinterested.¹⁹

In its analysis, the DOJ business review letter addressed “(i) whether the proposed licensing program [was] likely to integrate complementary patent rights and (ii), if so, whether the resulting competitive benefits [were] likely to be outweighed by the competitive harm posed by other aspects of the program.”²⁰ The DOJ was content that the first prong of its analysis was satisfied by the proposed expert-mechanism: “so long as the patent expert applie[d] this criterion scrupulously and independently, it [was] reasonable to expect that the [package license would] combine complementary patent rights while not limiting competition between them and other patent rights for purposes of licensed applications.”²¹ The DOJ, addressing the second prong, held that the package license did not foreclose competition in related markets, nor did it pose a risk to future innovation by discouraging the Licensors from continuing standard-related research and development. Accordingly, the DOJ sanctioned the Licensor’s patent-expert mechanism as a successful safeguard against antitrust violations. Although not binding authority in subsequent disputes, the business review letter persuasively suggests how the DOJ might address factually analogous package licenses.

16. IP GUIDELINES, *supra* note 4, § 3.4, at 16.

17. Business Review Letter, *supra* note 2.

18. *Id.*

19. *Id.*

20. *Id.*

21. *Id.*

However, while it functioned as a dependable safeguard against anti-trust prosecution by the DOJ, the patent-expert mechanism did not necessarily safeguard against the claim of patent misuse in private litigation—an issue central to *Philips*.

B. Patent Misuse: Two Standards of Review

Patent misuse is a judicially created doctrine, establishing an equitable and affirmative defense for patent infringers when patentees have “misused” their patent rights.²² If successfully argued, the defense may render an opposing party’s patent rights unenforceable. The rationale behind patent misuse doctrine, generally, is to prevent unfair market behavior, barring patentees from leveraging their patent rights to obtain unrelated market benefits.²³ The federal government grants a *limited* monopoly through patent rights: limited in time to the patent’s twenty-year duration and limited in scope to the patent’s claims. Patent misuse doctrine ensures that a patent owner does not extend his monopoly unfairly beyond the bounds of that limited time and scope.

The patent misuse doctrine has two potential standards of judicial review: the rule of reason standard and the *per se* standard. Most intellectual property licensing arrangements should be evaluated under the rule of reason.²⁴ The Supreme Court advises a two-step process for analyzing a licensing arrangement under the rule of reason: first, inquire whether the restraint is likely to have anticompetitive effects; and second, inquire whether the restraint is reasonably necessary to achieve pro-competitive benefits that outweigh its anticompetitive effects.²⁵ The rule of reason is an equity-balancing standard, where pro-competitive benefits are weighed against anticompetitive harms. The Federal Circuit has held that a licensing arrangement is impermissible only if its effect is to restrain competition in a relevant market, under the rule of reason.²⁶

The second standard—the *per se* standard—is reserved only for intellectual property licensing arrangements that demonstrate *plainly* anticompetitive behavior. Certain transactions, by their very nature, carry a high likelihood of creating anticompetitive harm in the market, and therefore

22. See 6 DONALD S. CHISUM, CHISUM ON PATENTS § 19.04 (2005). Congress has limited the scope of patent misuse doctrine with 35 U.S.C. § 271. However, the statutory limitations are not relevant for the purposes of this Note.

23. See *Mallinckrodt v. MediPart*, 976 F.2d 700, 704 (Fed. Cir. 1992).

24. IP GUIDELINES, *supra* note 4, § 3.4, at 16.

25. See *FTC v. Ind. Fed’n of Dentists*, 476 U.S. 447 (1986); 7 PHILIP E. AREEDA, ANTITRUST LAW § 1502 (1986); IP GUIDELINES, *supra* note 4, § 3.4, at 16.

26. *Monsanto Co. v. McFarling*, 363 F.3d 1336, 1341 (Fed. Cir. 2004).

have been singled out as *per se* illegal. The Supreme Court has said “[c]ertain types of contractual arrangements are deemed unreasonable as a matter of law.”²⁷ In *Virginia Panel Corp. v. MAC Panel Corp.*, the Federal Circuit identified two types of patent transactions that constitute *per se* patent misuse.²⁸ First, there are the “arrangements in which a patentee effectively extends the term of its patent by requiring post-expiration royalties.”²⁹ In other words, the patent owner extends the patent monopoly beyond the statutorily limited duration of twenty years. Second, there are patent-to-product arrangements, the “so-called tying arrangements in which a patentee conditions a license under the patent on the purchase of a separable, staple good.”³⁰ In other words, the patent owner extends the limited monopoly beyond the scope of the patent’s claims. However, if a particular transaction has not been specifically deemed *per se* illegal, it should be analyzed under the rule of reason.

II. *U.S. PHILIPS CORP. V. INTERNATIONAL TRADE COMMISSION*

In *Philips*, the Federal Circuit ruled in favor of patentee Philips, reversing the district court’s holding of patent misuse and remanding for further proceedings.³¹

A. Facts and Procedural History

Compact-disc technology is a network market in which consumers benefit if there are unified standards. Accordingly, Philips and Sony—two competitor firms in the CD-technology industry—pushed the adoption of a standard called the Recordable CD Standard (the “Orange Book”).³² The Orange Book included technical compliance standards for the production of recordable and rewritable CDs. Philips, Sony, Taiyo Yuden, and Ricoh pooled their separate patent properties so they could be jointly managed and sold as package licenses, with the royalties split pro rata by the participating firms. Philips created four different package licenses: one package with patents covering recordable CD technology owned by Philips alone, and one package for recordable CD technology with patents owned by Philips and others; one package with patents covering rewritable CD tech-

27. *Jefferson Parish Hosp. v. Hyde*, 466 U.S. 2, 9 (1984).

28. *Virginia Panel Corp. v. MAC Panel Corp.*, 133 F.3d 860, 869 (Fed. Cir. 1997).

29. *Id.*

30. *Id.* at 868-69.

31. *U.S. Philips Corp. v. Int’l Trade Comm’n*, 424 F.3d 1179, 1182 (Fed. Cir. 2005).

32. *Id.*

nology owned by Philips alone, and one package for rewriteable CD technology with patents owned by Philips and others. Philips included an additional option with each package: a customer could choose to purchase all relevant patents, or only "essential" patents with no commercially viable substitute. However, customers could not choose to license individual patents; if they wanted to practice recordable CD teachings, for instance, they had to license all of the related patents necessary to practicing the Orange Book standard.³³ Philips used an independent patent expert to confirm that each patent was "essential," in accordance with the DOJ's advice to package licensors who wish to safeguard themselves from antitrust violations.³⁴

Philips entered into package license agreements with Princo, GigaStorage, and Linberg (collectively the "Customers"). Shortly after formalizing the package license agreements, the Customers stopped paying their licensing fees. Consequently, Philips filed suit in the International Trade Commission (ITC), claiming that the Customers imported CDs that infringed six of Philips' patents.³⁵ During the proceedings, the Customers raised patent misuse as an affirmative defense, claiming that Philips' package licenses included four "non-essential" patents because commercially viable alternative technology existed as a substitute for those four patents. Thus, the Customers argued that Philips leveraged essential patents to force the Customers to license non-essential patents, and this constituted patent misuse.³⁶ One of the ITC's administrative law judges (ALJs) ruled that the Customers had in fact infringed claims of six of Philips' patents. However, the ALJ ruled that the six patents were unenforceable due to Philips' patent misuse.³⁷

On Philips' petition for review, the full board of the ITC affirmed the ALJ's holding of patent misuse. The ITC based its holding in the alternative on both the *per se* standard and the rule of reason standard.³⁸ The ITC found patent misuse according to the *per se* standard because Philips' package license constituted a "tying arrangement," analogous to block-booking arrangements that tie valuable copyrights to inferior copyrights in mandatory packages.³⁹ Philips, according to the ITC, tied patents that were

33. *Id.*

34. See Business Review Letter, *supra* note 2.

35. *Philips*, 424 F.3d at 1183.

36. *Id.*

37. *Id.*

38. *Id.*

39. *Id.*; see also *United States v. Paramount Pictures, Inc.*, 334 U.S. 131, 156-59 (1948) (condemning block-booking sales to movie theaters under the *per se* standard);

essential to practicing the Orange Book standard to non-essential patents. Four patents—the Farla, Iwasaki, Yamamoto, and Lohhoff patents—were non-essential because there existed commercially viable alternatives in the market.⁴⁰ However, the ITC took no position on the ALJ’s ruling that the package license constituted *per se* patent misuse on theories of price fixing and price discrimination. The ITC, alternatively, found patent misuse under the rule of reason standard because the anticompetitive effects of including non-essential patents in the package licenses outweighed the pro-competitive benefits.⁴¹ Philips’ package licenses, the ITC reasoned, foreclosed alternative technologies and injured the competitors who sought to license alternative technologies.⁴² However, the ITC took no position on the ALJ’s finding under rule of reason analysis that the package license’s royalty structure constituted an unreasonable restraint on competition.⁴³

B. The Federal Circuit’s Holdings and Reasoning

The Federal Circuit reversed the ITC’s ruling on Philips’ patent misuse, addressing and rejecting each of the Commission’s alternative holdings: Philips’ package license did not constitute patent misuse under the *per se* standard nor did the package license constitute patent misuse under the rule of reason.⁴⁴

1. *The Per Se Standard of Patent Misuse is Inappropriate for Package Licenses*

The Federal Circuit rejected the ITC’s holding of patent misuse under the *per se* standard as both legally flawed and factually unjustified.⁴⁵ The ITC’s *per se* holding was legally flawed, first, because it was unsupported

United States v. Loew’s, Inc., 371 U.S. 38, 44-51 (1962) (condemning block-booking sales to television stations under the *per se* standard).

40. *Philips*, 424 F.3d at 1184.

41. *Id.*

42. *Id.*

43. *Id.*

44. The Federal Circuit called attention to *Illinois Tool Works, Inc. v. Independent Ink, Inc.*, which had been recently granted *certiorari*. Specifically, the court stated that “[i]t is possible that the Supreme Court’s decision in that case will offer some guidance with respect to the patent misuse issue presented in this case.” *Philips*, 424 F.3d at 1193 n.6. After the Federal Circuit’s *Philips* decision, the Supreme Court has, indeed, clarified patent misuse doctrine, shifting the evidentiary burden of proving a patent misuser’s market power to the complaining parties. *See Ill. Tool Works, Inc. v. Indep. Ink, Inc.*, 126 S. Ct. 1281 (2006); Puneet V. Kakkar, Note, *Still Tied Up: Illinois Tool Works v. Independent Ink*, 22 BERKELEY TECH. L.J. 47 (2007).

45. The Federal Circuit begins its analysis by sustaining the ITC’s ruling that Philips has market power and therefore does not achieve “safe harbor” under the Congressional exception to the patent misuse defense in 35 U.S.C. § 271(d). *Philips*, 424 F.3d at 1186.

by precedent and, second, because it went against sound economic reasoning.⁴⁶

First, the Federal Circuit rejected and distinguished the Supreme Court's block-booking precedents, *United States v. Loew's, Inc.* and *United States v. Paramount Pictures, Inc.*, upon which the ITC based its holding.⁴⁷ Block-booking is when a distributor only licenses a valuable Hollywood film on the condition that customers simultaneously license other inferior films. Philips' package license, consisting entirely of patents, was an entirely different intellectual creature than block-booking packages, which consisted entirely of copyrighted works. First, the block-booking package in *Loew's* required customers to *exhibit* all of the films bundled in the package.⁴⁸ Second, the block-booking package in *Paramount*, charged a fee not only for the valuable film, but also for the inferior film.⁴⁹ Philips' package license, unlike *Loew's*, did not require customers to do anything with the allegedly non-essential patents; customers were not required to use the patents nor were they prohibited from using commercial alternatives.⁵⁰ Instead, the patent license was simply a promise from Philips not to sue. Second, unlike *Paramount*, there was no evidence that any portion of the royalties from Philips' package license stemmed from the questionably non-essential patents. On the contrary, the evidence strongly suggested that Philips charged a flat royalty regardless of the inclusion or exclusion of the allegedly non-essential patents.⁵¹ Thus, when the ITC used a *per se* standard based on block-booking precedent, its holding was legally flawed.

Second, the ITC's use of a *per se* standard was flawed according to sound economic reasoning. Sound economic reasoning suggests that package licenses—even package licenses that include non-essential patents—are not *plainly* anticompetitive. Package licenses are not plainly anticompetitive because they do not automatically, nor are they likely to, leverage essential patents to force the license of non-essential patents. Instead, according to the Federal Circuit, “the value of any patent package is based largely, if not entirely, on the patents that are essential to the technology in question.”⁵² “It is entirely rational for a patentee who has a patent that is essential to particular technology, as well as others that are not essential,

46. *Id.* at 1187.

47. *Id.*

48. 371 U.S. 38 (1962).

49. 334 U.S. 131 (1948).

50. *Id.* at 1188.

51. *Id.*

52. *Id.* at 1191.

to charge what the market will bear for the essential patent and to offer the others for free.”⁵³

Package licenses are also not plainly anticompetitive because they generally carry unique pro-competitive benefits.⁵⁴ Philips introduced evidence showing that package licensing generally reduced transactions costs, obviated potential patent disputes, unified calculations, and reduced the degree of uncertainty associated with investment decisions.⁵⁵ The Federal Circuit referenced the DOJ’s IP Guidelines as further support that package licenses carry unique pro-competitive benefits.⁵⁶ Thus, according to the Federal Circuit, the ITC’s holding of patent misuse under the *per se* standard was legally flawed according to both precedent and sound economic reasoning. Even if Philips’ package license *did* include non-essential patents, the *per se* standard was inappropriate.

The Federal Circuit also rejected the ITC’s holding of patent misuse under the *per se* standard as unjustified by the facts of the case. The ITC’s holding was unjustified by the facts, first, because Philips’ package license included no “non-essential” patents, as the term “non-essential” is generally understood; and second, because the ITC employed an incorrect time-frame to determine the distinction between essential and non-essential patents.

First, Philips’ package license included no “non-essential” patents, as “non-essential” is generally understood, because the evidence did not show commercially viable alternatives for the Farla, Iwasaki, Yamamoto, and Lokhoff patents.⁵⁷ In this case, the Customers failed to show that commercially viable alternatives to these patents—realistic, practical alternatives—existed in the market. According to the Federal Circuit, the Customer’s expert testimony by Dr. Laughlin from Calimetrics failed to carry the customer’s evidentiary burden. The expert testimony established that Calimetrics had an alternative technology for the Farla and Iwasaki patents, but did not establish that the customers had any interest in the Calimetrics alternative. Dr. Laughlin could “conceive” of alternatives to the Yamamoto patent, and was familiar with “research” into alternatives to the Lokhoff patent.⁵⁸ According to the Federal Circuit’s reasoning, however, none of these “alternatives” reached the requisite level of commercial viability.

53. *Id.*

54. *Id.* at 1192

55. *Id.* at 1192-93.

56. *Id.*; see also IP GUIDELINES, *supra* note 4, § 5.5, at 28.

57. *Philips*, 424 F.3d at 1194-96.

58. *Id.*

Second, the ITC employed the incorrect timeframe to determine the distinction between essential and non-essential patents, as the Federal Circuit expressed in dictum near the end of *Philips*.⁵⁹ The ITC understood “non-essential” to mean commercially viable alternatives *at the time of litigation*. The Federal Circuit questioned the wisdom of such hindsight analysis:

[u]nder the ITC’s approach, an agreement that was perfectly lawful when executed could be challenged as *per se* patent misuse due to developments in the technology of which the patentees [were] unaware, or which ha[d] just become commercially viable. Such a rule would make [the package license] subject to being declared unenforceable due to developments that occurred after the execution of the license or were unknown to the parties at the time of licensing.⁶⁰

In short, the essentiality of a patent could shift with time.⁶¹ Accordingly, the Federal Circuit rejected the ITC’s understanding of “non-essential” with regards to timing: it is inappropriate to demonstrate commercially viable alternatives *at the time of litigation*.⁶²

C. The Package License Was Not Patent Misuse Under the Rule of Reason Standard

Finally, the Federal Circuit rejected the ITC’s alternative holding of patent misuse under the rule of reason standard. According to the Federal Circuit, the ITC’s rule of reason analysis was flawed for three reasons.⁶³ First, the ITC’s ruling was predicated on its incorrect determination that commercially viable alternatives existed, rendering the Farla, Iwasaki, Yamamoto, and Lokhoff patents “non-essential.” Second, the ITC failed to acknowledge the pro-competitive benefits and unique efficiencies of Philips’ package license. Third, the ITC failed to acknowledge the anticompetitive harms and inefficiencies that would beset Philips if it was forced to license patents individually, or forced to constantly revise its package li-

59. *Id.* at 1196-97.

60. *Id.* at 1197.

61. *Id.* (“[T]he line between competitive patents and blocking or complementary patents is frequently very difficult to draw.”) (quoting Andewelt, *supra* note 15, at 616).

62. The Federal Circuit, however, stopped short of explicitly endorsing the other logical understanding of “non-essential”: commercially viable alternatives *at the time of transaction*. This Note further pursues the issue of timing in Part III.

63. *Philips*, 424 F.3d at 1198. Since the Federal Circuit mostly disputes the appropriateness of the *per se* standard, the rule of reason section is brief and based on reiterated arguments.

censes according to changing technology and shifting commercial alternatives.⁶⁴

Accordingly, the Federal Court reversed the ITC's ruling on patent misuse—rejecting the holding based on the *per se* standard as well as the rule of reason standard—and remanded the case back to the ITC.⁶⁵

III. IMPLICATIONS OF *PHILIPS*

Philips explicitly clarified the appropriate standard of review for package licenses. First, *Philips* rejected the *per se* standard of review, taking away the defendant-friendly standard for establishing a patent misuse defense. Second, *Philips* embraced the rule of reason as the appropriate standard for reviewing package licenses, balancing a package license's pro-competitive benefits against its anticompetitive harms. This Note argues that the Federal Circuit decision in *Philips* creates a presumption in favor of enforcing package licenses for three reasons: (1) the court implies that package licenses are inherently pro-competitive for purposes of the rule of reason analysis; (2) based on the court's reasoning, licensors can easily avoid anticompetitive harms before litigation using the patent-expert mechanism; and (3) the case sets precedent that licensees carry a heavy burden establishing anticompetitive harms *ex post*.

A. Package Licenses Are Inherently Pro-Competitive For Purposes of the Rule Of Reason Analysis

Package licenses are inherently pro-competitive because a licensor bears no burden to demonstrate the pro-competitive benefits of its *particular* package license. Instead, under the Federal Circuit's reasoning, a licensor can rely on the *general* recognition of the pro-competitive benefits of package licenses. In *Philips*, the licensor introduced four pieces of evidence about package licensing—generally speaking—that the Federal Circuit deemed adequate to fulfill its evidentiary burden. First, “Philips introduced evidence that package licensing reduces transaction costs by eliminating the need for multiple contracts and reducing licensors’ administrative and monitoring costs.”⁶⁶ This evidence of reduced transaction costs was supported with federal precedent.⁶⁷ Second, Philips showed “[p]ackage licensing can also obviate any potential patent disputes be-

64. *Id.*

65. *Id.* at 1198-99.

66. *Id.* at 1193.

67. *See id.* at 1192 (citing *Texas Instruments, Inc. v. Hyundai Elecs.*, 49 F. Supp. 2d 893, 901 (E.D. Tex. 1999) (describing how patent portfolios are preferable to the “extremely expensive and time-consuming” process of managing individual patents)).

tween a licensor and licensee and thus reduce the likelihood that a patentee will find itself in costly litigation.”⁶⁸ This evidence of reduced legal uncertainty was supported with a law review article.⁶⁹ Third, Philips presented evidence that package licenses allow parties to establish pricing on general estimates of the value of technologies, rather than calculations of the marginal benefit of each patent. This evidence, arguably, was supported by particular fact-finding.⁷⁰ Fourth, and finally, Philips relied on the DOJ’s recognition of the unique pro-competitive benefits of package licenses in its IP Guidelines, which credited the licenses with “integrating complementary technologies, reducing transaction costs, clearing blocking patents, and avoiding costly infringement litigation.”⁷¹ The Federal Circuit recognized the “unique pro-competitive benefits associated with package licensing” *in general*—and the licensors bore no burden to establish those pro-competitive benefits *in particular*.

Accordingly, this Note concludes that *Philips* implies that package licenses are inherently pro-competitive, for purposes of the rule of reason analysis.

B. Licensors Can Easily Avoid A Package License’s Anticompetitive Harms *Ex Ante*

The anticompetitive harms of package licenses, this Note argues, can be easily avoided *ex ante* through the patent-expert mechanism endorsed in the DOJ’s business review letter for purposes of avoiding antitrust violations.⁷² The patent-expert mechanism is a procedure employed by patent owners during the creation of package licenses, whereby an independent expert verifies the inclusion of solely essential patents.⁷³ The Federal Circuit did not *explicitly* endorse the patent-expert mechanism. However, this Note argues that *Philips* can be reasonably read to *implicitly* endorse the patent-expert mechanism.

The Federal Circuit explicitly rejected the hindsight analysis, which determined “non-essential” patents according to commercially viable alternatives *at the time of litigation*.⁷⁴ Hindsight analysis would lead to legal uncertainty. Package licenses consisting entirely of “essential” patents at

68. *Id.* at 1192-93.

69. *Id.* at 1193 (citing Carlson, *supra* note 6, at 379-81).

70. *See id.* at 1991 (finding that “the royalty rate under Philips’ package licenses depended on the number of discs. . . not the number of individual patents”).

71. *Id.* at 1192 (citing IP GUIDELINES, *supra* note 4, § 5.5, at 28).

72. *See* Business Review Letter, *supra* note 2.

73. *Id.*

74. *Philips*, 424 F.3d at 1197.

the time of transaction, would be subject to invalidation according to later developments in commercial technology.⁷⁵ Further, hindsight analysis would create perverse incentives for litigation. If a licensee can demonstrate that even one of a package license's patents has become "non-essential" due to market changes, a court would invalidate the entire package license according to patent misuse doctrine.⁷⁶ The Federal Circuit did not simply reject hindsight analysis; the Federal Circuit opinion can reasonably be read to hold that *transactional analysis* is appropriate for determining the essentiality of patents in a package license. In other words, courts should look to "essential" and "non-essential" distinctions according to the commercially viable alternatives *at the time of transaction*—not at the time of litigation. Accordingly, licensors bear the burden of proving that its package license consisted entirely of essential patents at the time of transaction—which, under the DOJ framework, can be accomplished by a patent-expert mechanism.

It is unclear whether the Federal Circuit endorses the DOJ's patent-expert mechanism. On the one hand, the Federal Circuit's failure to explicitly address the patent-expert issue suggests it does not endorse the mechanism. In an amicus brief, the Intellectual Property Owners Association ("IPOA") raised an argument in favor of a "good-faith process" closely resembling the DOJ's patent-expert mechanism, and the Federal Circuit did not address the argument explicitly. The IPOA argued,

there should be a threshold inquiry as to whether the licensors of the package have instituted a good-faith process to avoid tying non-essential patents to essential patents. . . . The hiring of an objective, independent expert to assess the essentiality of the patents, along with the adequate support and resources for the expert, should be found to constitute a good-faith process and should preclude a finding of misuse.⁷⁷

The Federal Circuit had an opportunity to explicitly address the amicus argument and did not.

On the other hand, the Federal Circuit's policy reasoning suggests that it *implicitly* endorses the DOJ's patent-expert mechanism. The Federal Circuit's primary policy concerns—with regards to "essentiality" determinations—are the dangers of legal uncertainty and perverse incentives to

75. *Id.*

76. *Id.*

77. Brief for Intellectual Property Owners Ass'n as Amicus Curiae Supporting Appellant U.S. Philips Corp. at 13, *U.S. Philips Corp. v. Int'l Trade Comm'n*, 424 F.3d 1179 (Fed. Cir. 2005) (No. 04-1361), 2004 WL 4996603.

litigate. The patent-expert mechanism is an apt and appropriate procedure that licensors could use to safeguard themselves against future litigation; more importantly, the patent-expert mechanism is a procedure that licensors *already use* to safeguard themselves against antitrust litigation. Thus, if the Federal Circuit rejected the DOJ's patent-expert mechanism as inadequate proof of "essentiality," it prudentially would have said so. Saying nothing suggests that the Federal Circuit endorses the pre-existing and widely-practiced safeguard of the patent-expert mechanism.

Accordingly, this Note concludes, first, that *Philips* implies that "essentiality" is determined at the time of transaction, not at the time of litigation. Second, this Note concludes that the Federal Circuit implicitly endorses the DOJ's patent-expert mechanism.⁷⁸

C. Licensees Carry A Difficult Burden Establishing A Package License's Anticompetitive Harms *Ex Post*

Even if licensors do not employ a patent-expert mechanism and do not verify the "essentiality" of the patents in their package license, the odds are still in their favor. Licensees, according to the Federal Circuit's logic, carry a heavy burden when they attempt to establish the anticompetitive harms of a package license. Specifically, a licensee must prove there were commercially available alternatives to the disputed patents.⁷⁹ However, it is not enough for licensees to establish that alternatives were conceivable, being researched, or on the horizon. Further, it is not enough for licensees to establish that alternatives existed in the marketplace. Instead, the Federal Circuit requires licensees to prove that they would have pursued particular alternatives had it not been for the package licensee: "[Dr. Laughlin's expert testimony] did not show that the Calimetrics technology was an alternative that Philips' licensees wished to use in place of the technology covered by the Farla and Iwasaki patents."⁸⁰ Thus, licensees would have to pursue more expensive, time-consuming, and uncertain litigation to demonstrate with a degree of particularity that they not only knew of commercial alternatives, but would have pursued the commercial alternative if they were not locked into the package license in dispute.

Accordingly, this Note concludes that *Philips* creates a heavy burden for licensees arguing the anticompetitive harms of a package license.

78. See Business Review Letter, *supra* note 2.

79. *Philips*, 424 F.3d at 1194.

80. *Id.* at 1195.

IV. CONCLUSION

Philips, foremost, clarified that the rule of reason standard, and not the *per se* standard, is the appropriate standard of judicial review for disputes involving package licenses, commonly known as patent pools. *Philips* implies that package licenses are inherently or generally pro-competitive for purposes of the rule of reason analysis, regardless of their factual particulars. Further, *Philips* implies that the “essentiality” of a patent is determined at the time of transaction, not at the time of litigation; and the Federal Circuit implicitly endorses the DOJ’s patent-expert mechanism as an appropriate procedure for establishing the essentiality of patents at the time of transaction and safeguarding against future litigation. Finally, *Philips* creates a heavy burden for licensees arguing the anti-competitive harms of a package license because licensees must prove they would have used commercially viable alternative technology, available at the time of the package license’s transaction, with considerable particularity. Ultimately, this Note concludes that *Philips* heavily favors the creation of, participation in, and enforcement of package licenses: everyone in the patent pool, because *Philips* gives patent pools remarkable legal protections.

ADDITIONAL DEVELOPMENTS— PATENT

GOLDEN BLOUNT, INC. v. ROBERT H. PETERSON CO.

438 F.3d 1354 (Fed. Cir. 2006)

The United States Court of Appeals for the Federal Circuit held that an analysis of non-infringement opinions of counsel may be relevant in determining the willfulness of a patent infringement. In doing so, the court clarified its holding in *Knorr-Bremse Systeme Fuer Nutzefahrzeuge GmbH v. Dana Corp.* and stated that a court could draw an inference of willfulness from analyzing the waiver of attorney-client privilege and non-infringement opinions. The Federal Circuit upheld the district court's finding of infringement and addressed the willfulness question.

Golden Blount, Inc. ("Golden Blount") makes fireplace equipment and holds U.S. Patent No. 5,988,159, which relates to fireplace burners and associated equipment. Golden Blount sued a competitor, the Robert H. Peterson Company ("Peterson"), for willful patent infringement. Prior to the suit, Golden Blount wrote a letter to Peterson informing them of the alleged infringement. In response, Peterson sought the advice of counsel and received a cursory, oral opinion that Peterson did not infringe Golden Blount's patent. Peterson subsequently asked Golden Blount for a detailed explanation of the infringement. Golden Blount did not reply and filed suit against Peterson. Peterson then sought and received from counsel two more oral opinions of non-infringement.

The district court found willful infringement, granted an injunction, and awarded damages and attorneys' fees to Golden Blount. The district court stated that the oral non-infringement opinions "were rendered without counsel having examined the patent's prosecution history or the accused device, and were thus incompetent." The district court found that the opinions were "to be used only as an illusory shield against a later charge of willful infringement, rather than in a good faith attempt to avoid infringing another's patent."

On appeal, Peterson asserted that the district court had drawn an inference of the type prohibited by *Knorr-Bremse* by finding willfulness based on Peterson's failure to obtain a written opinion letter from counsel. Peterson argued that Golden Blount could not use the lack of a written opinion letter as *prima facie* evidence of willfulness or recklessness. Peterson also claimed that it had a reasonable, good faith belief that it was not infringing Golden Blount's patents.

The Federal Circuit rejected Peterson's argument and upheld the district court's ruling. In doing so, the Federal Circuit reiterated that *Knorr-Bremse* precludes an inference of willfulness when "the [infringer fails] to obtain or produce an exculpatory opinion." However, if attorney-client privilege is not asserted, the patentee "is free to introduce as evidence whatever opinions were obtained and to challenge the competence of those opinions in satisfaction of the patentee's burden on willfulness. Nothing in *Knorr-Bremse* precludes a patentee from attempting to make such a showing." In its analysis of the record, the court concluded that "[t]he district court did not infer that if Peterson had obtained a competent opinion regarding the . . . patent, the opinion would have been unfavorable to Peterson. That would have been an improper basis upon which to rest a willfulness finding."

IN RE ECHOSTAR COMMUNICATIONS CORP.

448 F.3d 1294 (Fed. Cir. 2006), cert. denied sub nom., TiVo, Inc. v. EchoStar Communications Corp., 127 S.Ct. 846 (2006)

The United States Court of Appeals for the Federal Circuit held that a defendant's waiver of attorney-client privilege for an advice-of-counsel patent infringement defense does not also waive protection of attorney work-product that was not communicated to the client. In doing so, the Federal Circuit court granted Echostar's petition for mandamus, which required the United States District Court for the Eastern District of Texas to vacate an order compelling Echostar to produce documents created by its counsel.

TiVo sued Echostar for willful patent infringement. Echostar defended, relying on advice of counsel. Echostar received advice from both in-house and outside counsel as to whether their product infringed TiVo's patents, but only relied on advice of its in-house council. In response, TiVo sought to discover legal documents reflecting such advice from both in-house and outside counsel. The district court held that Echostar's advice-of-counsel defense waived the attorney-client privilege and any protection of attorney work-product regarding infringement opinions. The district court asserted that this waiver included all advice and work-product relating to infringement before and after suit was filed, whether or not the work-product was not communicated to Echostar.

Echostar petitioned the Federal Circuit court for a writ of mandamus with respect to the non-communicated work product of outside counsel. Echostar argued that the district court erred in determining that attorney-client privilege had been waived and further erred in asserting that the waiver of attorney-client privilege allowed access to non-communicated attorney work-product.

The Federal Circuit affirmed that the attorney-reliance defense in response to an assertion of willful infringement waives the attorney client privilege. According to the court, this waiver applies to the work-product and opinions of in-house and outside counsel conveyed to Echostar both prior to and during the suit.

However, the court held that waiver of attorney-client privilege did not expose all attorney work-product to discovery. In the context of willful infringement, "[i]t is what the alleged infringer knew or believed, and by contradistinction not what other items counsel may have prepared but did not communicate to the client, that informs the court of an infringer's willfulness." According to the court, the advice-of-counsel defense regarding willful infringement waives "immunity for any document or opinion that embodies or discusses a communication. . . concerning whether that patent is valid, enforceable, and infringed by the accused." This includes "not only any letters, memorandum, conversation, or the like between the attorney and his or her client, but also includes, when appropriate, any documents referencing a communication between attorney and client."

The district court was ordered to vacate its contrary order and allow discovery consistent with the Federal Circuit ruling.

*IPXL HOLDINGS, LLC v. AMAZON.COM, INC.**430 F.3d 1377 (D.C. Cir. 2005)*

The United States Court of Appeals for the Federal Circuit affirmed the ruling of the United States District Court for the Eastern District of Virginia, granting summary judgment in favor of Amazon.com, Inc. (“Amazon”). The Federal Circuit held that several of the plaintiff’s patent claims were anticipated and invalid. However, the Federal Circuit reversed the district court’s \$1.67 million award of attorneys’ fees and expenses because Amazon failed to file its motion for fees in a timely manner.

To facilitate online sales on its website, Amazon created and implemented a “1-click” feature, allowing users to purchase items without re-entering previously stored information like credit card information. IPXL Holdings, LLC (“IPXL”) holds United States Patent No. 6,149,055 (“the ’055 patent”) for executing electronic financial transactions, including those used in Automated Teller Machines (ATMs).

In 2004, IPXL sued Amazon, alleging that the 1-click system infringed claims 1, 2, 9, 15, and 25 of the ’055 patent. The district court found that claims 1, 2, 9, and 15 were anticipated and invalid pursuant to 35 U.S.C. § 102 and that claim 25 was indefinite and invalid under 35 U.S.C. § 112. The district court also found that Amazon had not infringed the claims. The district awarded attorneys’ fees and expenses to Amazon pursuant to Rule 54 of the Federal Rules of Civil Procedure, finding the case to be “exceptional” under 35 U.S.C. § 285.

The Federal Circuit affirmed. A claim is anticipated pursuant to 35 U.S.C. § 102 if all limitations are “found either expressly or inherently” in a “single prior art reference.” The Federal Circuit noted that the appeal centered only on one particular limitation, and upon extensively examining the language and meanings of relevant terminology from the patent, the court affirmed that claims 1, 2, 9, and 15 were anticipated.

In affirming that claim 25 of the plaintiff’s patent was indefinite, the Federal Circuit held that a single claim may not cover both an apparatus and a method of use for that apparatus. Courts have understood a claim to be indefinite if it “does not reasonably apprise those skilled in the art of its scope.” Under 35 U.S.C. § 112, a claim must “particularly point[] out and distinctly claim[] the subject matter” regarded as the invention. The court held that when a claim combines an apparatus and a method of use into one claim, the claim is “not sufficiently precise.” As claim 25 had combined these elements, the Federal Circuit affirmed that it was invalid for indefiniteness.

The court did not reach the question of whether Amazon infringed the claim because all the claims at issue were invalidated. The court reversed with respect to attorney’s fees because Amazon did not file timely. The Federal Circuit did not reach the question of whether the case was exceptional, as the court held that there was no proper basis for the district court to have disregarded the breach of the fourteen-day filing requirement of Federal Rule of Civil Procedure Rule 54.

LAVA TRADING, INC. V. SONIC TRADING MANAGEMENT, LLC

*445 F.3d 1348 (Fed. Cir.), reb'g denied,
2006 U.S. App. LEXIS 14548 (Fed. Cir. 2006)*

The United States Court of Appeals for the Federal Circuit held that knowledge of the accused infringing product provides meaningful context for claim construction during an infringement analysis. The Federal Circuit set aside the district court's claim construction and its final judgment orders, remanding the case.

Lava Trading, Inc. ("Lava") owns a patent covering "software that aggregates and integrates securities trading and order placement information from various alternative trading systems." Lava brought suit against Sonic Trading Management LLC, Joseph Cammarata and Louis Feng Liu (collectively "Sonic"), and Royalblue Group PLC, Royalblue Financial Corporation and Royalblue Financial PLC (collectively "Royalblue") for patent infringement in the United States District Court for the Southern District of New York.

The district court held a Markman hearing and issued a claim construction ruling, and the parties stipulated to final judgments of non-infringement. With Sonic's invalidity and unenforceability counterclaims still pending, Lava appealed the stipulated final judgment orders regarding non-infringement. The Federal Circuit noted that the procedural posture of the case—Sonic's pending invalidity and unenforceability counterclaims—"presented problems" and put the court in an "awkward position of reviewing a claim construction that may implicate issues and claims beyond this court's current reach."

The record on appeal did not supply a meaningful comparison of the accused products to the asserted claims, without which the court could not assess the accuracy of the infringement judgment under review. The court held that although a trial court should not prejudge whether infringement by construing claims with an aim to include or exclude the accused product, knowledge of the accused infringing product provides meaningful context during claim construction. Without this knowledge, "this appeal takes on the attributes of something akin to an advisory opinion" about the scope of Lava's patent. Nonetheless, the Federal Circuit concluded that it had jurisdiction under 28 U.S.C. § 1295(a)(1) because the district court, in its role as a "dispatcher," issued of certification pursuant to Federal Rule of Civil Procedure 54(b).

Even though the Federal Circuit was "troubled by the pending counterclaims and the absence of a detailed infringement analysis," the Federal Circuit set aside the trial court's flawed claim construction as well as the final judgment orders. The case was remanded to the district court.

Judge Mayer dissented on the grounds that the court's appellate jurisdiction was lacking. This was "yet another example of the unfortunate consequences of [the] *Markman* [decision]" wherein treating claim construction as a matter of law enables parties to argue claim constructions on appeal different than those argued in the trial court. In hearing this case on an undeveloped record, the Federal Circuit invited itself to hear the issue of claim construction again later. In effect, the Federal Circuit was allowing an interlocutory appeal on claim construction "which portends chaos in process."

LAWMAN ARMOR CORP. V. WINNER INTERNATIONAL, LLC*449 F.3d 1190 (Fed. Cir. 2006)*

The United States Court of Appeals for the Federal Circuit issued a supplemental opinion and denied rehearing and rehearing en banc to Lawman Armor Corporation despite several *amicus curae* briefs alleging that the court's decision in *Lawman Armor v. Winner International*, 437 F.3d 1383 (Fed. Cir. 2006) was overbroad and inconsistent with precedent. The court issued a supplemental opinion aimed to clarify any potential confusion or uncertainty over what constitutes a "point of novelty" in the context of design patents.

Lawman Armor Corporation ("Lawman") was the exclusive licensee of U.S. Design Patent No. 357,621 ("the '621 patent"), which claims "[t]he ornamental design for a sliding hook portion of a vehicle steering wheel lock assembly, as shown and described." The patent contained seven drawings of different views of the device. Lawman sued Winner International, LLC and Winner Holding LLC (collectively "Winner") for patent infringement in the United States District Court for the Eastern District of Pennsylvania. After the district court construed the claim in the patent, Winner moved for summary judgment for non-infringement. In opposition, Lawman listed eight specific "points of novelty" that Winner appropriated from the patented design. In response, Winner listed Lawman's proposed points of novelty and cited to other patents that depicted Lawman's proposed points. The district court granted Winner summary judgment of non-infringement, holding that "Lawman's proposed points of novelty are found in the prior art" and that "Lawman has failed to create a material issue of fact regarding the point of novelty test."

In its first opinion, the Federal Circuit affirmed that to find infringement of a design patent, a court must conduct two inquiries: (1) the "ordinary observer" test, i.e. whether the patented and allegedly infringing designs as a whole appear substantially the same to the ordinary observer, and (2) the "point of novelty" test, which determines whether the accused device "appropriates the novelty in the patented device which distinguishes it from the prior art." The court held that although the designs at issue were substantially the same under the "ordinary observer" test, Winner did not infringe Lawman's design patent because under the "point of novelty" test, each of Lawman's "points of novelty" were disclosed in the prior art.

The court rejected Lawman's contention that combining many non-novel "points of novelty" constituted an additional "point of novelty." The Federal Circuit reasoned that allowing the combination of old elements in a single design to constitute a "point of novelty" would undermine the rationale of the test, which was meant to focus on the aspects of a design distinguishing it from prior art. If the court were to tolerate this view, "it would be the rare design that would not have a point of novelty."

In its supplemental opinion, the Federal Circuit explained that it did not intend to cast doubt on prior decisions allowing combinations of design elements to constitute "points of novelty" in appropriate circumstances. Instead, the court emphasized that the concept of a novel combination is distinct from the "overall appearance of a design," which the court explained has never been recognized as a point of novelty. Despite this clarification, however, Judges Rader and Gajarsa pointed out in their dissent to the denial of rehearing *en banc* that there remains some confusion over precisely what constitutes a "point of novelty" in a design patent claim.

PFIZER INC. V. RANBAXY LABORATORIES LTD.

457 F.3d 1284, reh'g denied, 2006 U.S. App. LEXIS 28925 (Fed. Cir. 2006)

The Court of Appeals for the Federal Circuit held that the product described in Ranbaxy's Abbreviated New Drug Application (ANDA) infringed Pfizer's patent for Lipitor.

In 2003, Pfizer filed suit against Ranbaxy, an Indian generics pharmaceutical manufacturer, alleging that the compound disclosed in Ranbaxy's ANDA infringed U.S. Pat. Nos. 4,681,893 ("the '893 patent") and 5,273,995 ("the '955 patent").

The Federal Circuit entered partial judgment of infringement against Ranbaxy, but held that a drafting error invalidated one of the claims of the '955 patent under 35 U.S.C. § 112. Claim 1 of the '955 patent covers atorvastatin acid, atorvastatin lactone, and pharmaceutically acceptable salts of those substances. Claim 2, dependent on Claim 1, recites only atorvastatin acid, but no salts. Claim 6, the only claim of the '955 patent Pfizer asserted against Ranbaxy, incorporates Claim 2 and expresses a limit to the hemicalcium salt of atorvastatin acid.

The court held that Claim 6 of the '955 patent was invalid because it did not explicitly incorporate by reference all of the claims upon which it was dependent. The court found that "the two claims [dealt] with non-overlapping subject matter." While the claims of acids can be liberally construed to also include the salts thereof, such a reading was unavailable here because the sales of atorvastatin acid were explicitly mentioned in Claim 1 but absent in Claim 2.

Because the court found that the '955 patent was invalid, other issues pertaining to the '955 patent were "rendered moot." Nevertheless, the court affirmed the district court's finding of infringement of the '893 patent.

ZOLTEK CORP. v. UNITED STATES

442 F.3d 1345, *reh'g denied* 464 F.3d 1335 (Fed. Cir. 2006)

The United States Court of Appeals for the Federal Circuit held that the United States Government could be held liable for unauthorized use of a method patent under 28 U.S.C. § 1498 when all steps of the patented method are performed within the United States. Additionally, the government was not liable under the Tucker Act because patent infringement does not constitute a taking under the Fifth Amendment.

Zoltek brought suit against the United States government and Lockheed Martin Corporation for infringement of its method patent covering construction of materials used in the assembly of the F-22 Fighter. Specifically, the Zoltek patent covered methods relating to the preparation of woven fiber sheets with a specific electrical resistance resulting from the process of partial carbonization.

The government contracted with Lockheed to build F-22 fighters. Lockheed subsequently subcontracted for the production of two types of partially carbonized fiber sheets. One type of sheet was both partially carbonized and manufactured in Japan. The second type of sheet was partially carbonized in Japan but woven into a sheet in the United States. Zoltek alleged that the production of these sheets infringed its method patent and brought suit under 28 U.S.C. § 1498(a). The Court of Federal Claims granted the United States partial summary judgment on the ground that § 1498(c) requires that all claims under § 1498(a) must arise in the United States. Here the claims at issue arose in Japan. Zoltek could, however, assert infringement claims under § 1491(a)(1), the Tucker Act, as a taking in violation of the Fifth Amendment.

The Federal Circuit affirmed the lower court's ruling that all steps of a method patent must be performed in the United States to warrant liability under § 1498. The court reasoned that infringement of a process patent under § 271 requires that "each of the [method patent's] steps is performed within this country" and that "direct infringement under section 271(a) is a necessary predicate for government liability under section 1498," citing *NTP, Inc. v. Research in Motion, Ltd.* Because some of the alleged infringement took place in Japan, there was no liability under § 1498(a).

The Federal Circuit also held that infringement of a patent right did not constitute a taking under the Fifth Amendment. The court cited *Schillinger v. United States* in which the Supreme Court held that a patent holder cannot sue the United States for patent infringement under the Fifth Amendment. If patent rights were protected by the Fifth Amendment, the Federal Circuit reasoned, then Congress' enactment of the 1910 Patent Act (later codified at 35 U.S.C. § 1498)—expressly waiving sovereign immunity for state-sponsored patent infringement in limited circumstances—would be superfluous.

SOVEREIGN IMMUNITY DEVELOPMENTS

TEGIC COMMUNICATIONS. CORP. V. BOARD OF REGENTS

458 F.3d 1335 (Fed. Cir. 2006)

PENNINGTON SEED, INC. V. PRODUCE EXCHANGE NO. 299

457 F.3d 1334 (Fed. Cir. 2006)

In August 2006, the United States Court of Appeal for the Federal Circuit issued two rulings sustaining sovereign immunity for state universities against charges brought under federal patent law.

At issue in *Tegic Communications v. Board of Regents* was whether the University of Texas, by filing suit to enforce a patent in one federal district, waived its immunity from counterclaims concerning the same patent in a different federal venue. Initially, the University brought suit in the Western District of Texas against forty-eight cellular telephone companies, alleging infringement of its patent on word-recognition software. Tegic Communications Corp. ("Tegic"), who licensed and supplied text-input word-recognition software to thirty-nine of the original forty-eight defendants, brought a declaratory judgment action against the University in the Western District of Washington. Tegic asserted that the patent was invalid, unenforceable, and not infringed. The University responded that its sovereign immunity pursuant to the Eleventh Amendment required dismissal of the action, and the district court agreed and dismissed the action.

On appeal, the Federal Circuit affirmed, holding that a state's waiver of immunity from suit in one district does not extend to all districts, particularly where, as here, such litigation would in fact constitute a new action that the defendant would otherwise be unable to bring independently. Even though the University brought the original action, it did not, according to the court, thereby submit itself to a new action in a different state and district court. Rejecting Tegic's argument that the "customer suit exception" ought to apply, the court held that Tegic had made no showing that efficiency and judicial economy warranted sustaining Tegic's Washington action.

Similarly, in *Pennington Seed, Inc. v. Produce Exchange No. 299*, the Federal Circuit held that the University of Arkansas was immune under the Eleventh Amendment from suit for infringement of a patent owned by Pennington Seed, Inc. ("Pennington"). Challenging the district court's dismissal, Pennington submitted that in this case, the Fourteenth Amendment due process requirement abrogated the University's immunity from federal suit because the Arkansas State Court, the only body allowed to hear claims against the state, provided no adequate remedies for patent infringement. The court held that although the remedies available for State acts may be "uncertain" or "less convenient" than those available under federal patent law, they are nonetheless not a violation of the patentee's due process rights under the Fourteenth Amendment, and thus do not warrant any limitations on the state's right to sovereign immunity.

A BITE OUT OF APPLE? iTUNES, INTEROPERABILITY, AND FRANCE'S DADVSI LAW

By Deana Sobel

In the nearly ten years since computer software companies and content owners lobbied Congress for statutory protection against digital piracy, leading to the enactment of the 1998 Digital Millennium Copyright Act (DMCA) in the United States, the role of technical protection measures (TPMs) in protecting digital media has developed into a globally contested issue. Traditionally, content providers regarded TPMs as a fail-safe system for protecting digital content. Both the DMCA and the 2001 European Union Copyright Directive (EUCD), which harmonizes digital copyright law in Europe, recognize the importance of anti-circumvention legislation in stimulating the global digital marketplace.¹ Their theory is that safeguarding TPMs cultivates the digital marketplace by creating an incentive for companies to develop new products. Yet the role of governments in *limiting* the reach of TPMs is inchoate. For this reason, companies have been given free reign to use TPMs that not only prevent digital piracy, but also restrict how consumers use their products. This restriction has created controversy in Europe and beyond.

In August of 2006, in order to implement the EUCD, France passed the "Law on Copyright and Neighboring Rights in the Information Society" known as Dadvsi.² Under this law, individuals may now petition the government to compel the disclosure of TPM source code in order to permit product interoperability. Parallel to the enactment of Dadvsi, French, Scandinavian, German, and Dutch consumer groups have waged a campaign against Apple, creator of iTunes software and the iPod portable music player.

Apple's digital rights management system (a type of TPM), called FairPlay, limits interoperability between iTunes and devices created by

© 2007 Deana Sobel

1. The legislative history of the DMCA reveals that this principle was highlighted in the 1998 World Intellectual Property Organization (WIPO) Treaty. *See* S. REP. NO. 105-190, at 8 (1998); *see also* text accompanying note 16.

2. In French, Dadvsi stands for *Loi relative au droit d'auteur et aux droits voisins dans la société de l'information*, which translates as "Law on Copyright and Neighboring Rights in the Information Society." *See* Law No. 2006-961 of Aug. 1, 2006, *Journal Officiel de la République Française* [J.O.] [Official Gazette of France], Aug. 3, 2006, p. 11529, available at <http://www.legifrance.gouv.fr/WAspad/UnTexteDeJorf?numjo=MCX0300082L>.

Apple's competitors. In other words, it obligates iTunes users to listen to their music on an iPod by preventing songs purchased from the iTunes Store from playing on any competing player.³ Apple's critics, including open-source proponents and consumer rights groups such as Union Federale des Consommateurs-Que Choisir (UFC Que Choisir), argue that FairPlay's primary function is to enable Apple to monopolize the market and create consumer lock-in, and not, as the company suggests, to prevent illegal file sharing.⁴

Apple's CEO Steve Jobs has attempted to shift all responsibility to the music labels, which he claims require an effective digital rights management (DRM) system as a precondition for selling their music.⁵ Indeed, Apple's iTunes is far less restrictive than the earlier music label-led platforms, such as PressPlay and MusicNet, which themselves survived U.S. antitrust investigations by the Department of Justice.⁶ Nevertheless, the question of whether Apple should be permitted to employ copyright protection technology that also prevents software interoperability has important ramifications for whether intellectual property rights can justifiably limit consumer choice.

This Note examines how Dadvsi attempts to reconcile intellectual property rights with consumer rights, bringing interoperability under government regulation but with no clear-cut answer as to whether intellectual property rights or consumer rights take priority. Part I explains Dadvsi's impact on interoperability in France. Part II discusses the interoperability debate in more depth, with particular regard to the European consumer actions against FairPlay. Part III evaluates the right of consumers to interoperability and the right of companies like Apple to unregulated use of DRM. Finally, Part IV proposes ways that governments may more effec-

3. Thomas Crampton, *Key Parts of 'iPod Law' Struck Down*, INT'L HERALD TRIB., July 28, 2006. FairPlay does not prevent iTunes from being played on iTunes mobile phones, or, of course, on computers. Hamish Porter & Rebecca Swindells, *Wrangling over French Copyright Legislation Continues*, 161 COPYRIGHT WORLD 20, 21 (2006).

4. See Porter & Swindells, *supra* note 3, at 21.

5. Jobs' statements will be discussed in Section II.B. See *infra* text accompanying notes 85-93.

6. These early platforms were developed by the music labels themselves. The U.S. Department of Justice found that the music label's joint ventures did not harm competition or consumer choice. See Press Release, Statement by Assistant Attorney General R. Hewitt Pate Regarding the Closing of the Digital Music Investigation (Dec. 23, 2003), http://www.usdoj.gov/atr/public/press_releases/2003/201946.htm. For a description of the restrictions created by pressplay and MusicNet, see Jim Hu, *Labels defend MusicNet*, Pressplay, CNET NEWS.COM, July 8, 2002, <http://news.com.com/2100-1023-942066.html>.

tively regulate DRM in the digital age. This Note concludes that intellectual property rights will most likely enjoy priority over consumer rights under Dadvsi in view of France's general approach to copyright and the nature of Dadvsi's interoperability provisions.

I. DADVSI: BACKGROUND, HISTORY, AND INTEROPERABILITY

This Part gives a brief background on French copyright law, followed by a discussion of Dadvsi's foundation in the EUCD, Dadvsi's legislative history, and finally, Dadvsi's impact on interoperability.

A. French Copyright

A brief background on French copyright law is helpful for understanding Dadvsi. French copyright is known as *droit d'auteur* or "author's right." The modern concept of *droit d'auteur* is composed of a moral right (*droit moral*⁷) and property right (*droit patrimonial*⁸).⁹ In 1985, France codified copyright protection for performers, phonogram producers, video producers, and audiovisual communication companies under the title *droits voisins*, or "neighboring rights."¹⁰ *Droits voisins* are secondary to author's rights; they may not limit or infringe authors' rights.¹¹ Such rights have no direct connection with the author of the work.

France's Intellectual Property Code includes several exceptions to the *droit d'auteur*, most notably the private copy (*la copie privée*) exception, codified at Article L. 122-5-2^o.¹² This exception permits individuals to

7. Code de la propriété intellectuelle [C.P.I.] [Intellectual Property Code] art. L. 121-1 (as last amended 2006), available at <http://www.legifrance.gouv.fr> (click on "Les Codes" and then scroll down to find "Code de la propriété intellectuelle") and in English at <http://195.83.177.9/code/index.phtml?lang=uk>.

An author shall enjoy the right to respect for his name, his authorship and his work. This right shall attach to his person. It shall be perpetual, inalienable and imprescriptible. It may be transmitted mortis causa to the heirs of the author. Exercise may be conferred on another person under the provisions of a will.

Id.

8. "The right of exploitation belonging to the author shall comprise the right of performance and the right of reproduction." *Id.* art. L. 122-1.

9. Société de l'information: Débat Autour du Droit d'Auteur, VIE PUBLIQUE.FR, Apr. 27, 2006, <http://www.vie-publique.fr/actualite/dossier/droit-auteur/societe-information-debat-autour-du-droit-auteur.html> [hereinafter Débat Autour du Droit d'Auteur].

10. CPI arts. L 211-1-L 211-5 ; Débat Autour du Droit d'Auteur, *supra* note 9.

11. CPI. art. L. 211-1.

12. CPI art. L. 122-5 ; see also CHRISTOPHE GEIGER, DROIT D'AUTEUR ET DROIT DU PUBLIC A L'INFORMATION: APPROCHE DE DROIT COMPARE 232-34 (2004). While the

make “copies or reproductions reserved strictly for the private use of the copier and not intended for collective use.”¹³ Copyright holders are compensated for this exception through a tax on private copies placed on blank media (*la taxe prélevée sur les medias vierges*).¹⁴ Exceptions to intellectual property rights under the French code are not intended to interfere in any way with the author’s exclusive rights.¹⁵ This prioritization of author’s rights has ramifications for the future of interoperability in France, indicating that author’s rights—and the rights of DRM holders who protect them—will be upheld over the consumer interest in interoperability.

B. The European Union Copyright Directive (EUCD)

In 1998, France, the United States, and other World Intellectual Property Organization (WIPO) nations signed the WIPO Treaty, under which signatory states were required to provide, *a priori*, “adequate legal protection and effective legal remedies” against the circumvention of TPMs.¹⁶ The WIPO Treaty embraced the theory that safeguarding TPMs encourages copyright owners to disseminate digital content because the circumvention of TPMs reduces the incentive for dissemination.¹⁷ As a direct result of the WIPO Treaty, the European Union issued the 2001 EU Directive on the Harmonization of Certain Aspects of Copyright and Related Rights in the Information Society, commonly known as the European Union Copyright Directive, or EUCD.¹⁸

The EUCD reflects the WIPO Treaty’s goal of providing incentives for progress. In clause 2, the EUCD stresses the need to create a legal frame-

American fair use defense is a general defense to the copyright holder’s exclusive rights, the French exceptions are individually enumerated. In addition to *la copie privée*, the CPI also contains separate exceptions for private and free performances carried out exclusively within the family circle; press reviews; dissemination of a work as news or for political, judicial or administrative speeches or ceremonies; analysis and short quotations used for critical, educational and similar purposes; parody, pastiche and caricature; reproductions for a catalogue used in a judicial sale in France; and finally acts necessary to access the contents of an electronic database within the terms provided by contract. *See* CPI art. L. 122-5.

13. CPI art. L. 122-5-2; *see also* GEIGER, *supra* note 12.

14. *See* Débat Autour du Droit d’Auteur, *supra* note 9.

15. *See infra* text accompanying notes 63-65.

16. Bruce G. Joseph, *Copyright Issues on the Internet, the DMCA and Technological Protection Measures*, in *ADVANCED SEMINAR ON COPYRIGHT LAW*, at 483, 509 (PLI Patents, Copyrights, Trademarks, & Literary Property, Course Handbook Series No. 6127, 2005) (quoting H.R. REP. NO. 105-551, at 63 (1998)).

17. *Id.*

18. Council Directive 2001/29, cl. 15, 2001 O.J. (L 167) 0010-0019 (EC), *available at* <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32001L0029:EN:HTML>.

work that supports the development of an information society in Europe, explaining that copyright and related rights play an important role in this project by protecting and stimulating new products.¹⁹ Thus, technology that restricts interoperability, and therefore the development of new products and services, at first appears contrary to the EUCD's objectives. Clause 54 of the EUCD seems to address this concern as it emphasizes the importance of interoperability to the development of the digital marketplace.²⁰ However, protection of DRM is nonetheless consistent with the EUCD's objectives. To begin with, the EUCD does not *require* interoperability; rather, it states that interoperability "should be encouraged."²¹ Unlike the DMCA, the EUCD is not a statute that member states must codify word-for-word. Instead, it is a series of common principles that member states are required to adapt and refine. Moreover, clause 2 of the EUCD promotes the development of new products, but only under the tenet that copyright and related rights are essential to the development of the global digital marketplace.²² Products must receive protection in order to exist in the first place. Like their American counterparts, copyright and related rights in Europe exist as an incentive to progress.²³ It is not entirely certain from the EUCD whether intellectual property rights are valued more highly than the promotion of interoperability, but it is possible that without protection, the development of creative works would slow. In sum, without a diversity of products, interoperability would not be an option.²⁴

19. *Id.* cl. 2.

20. *Id.* cl. 54.

21. *Id.*

22. *Id.* cl. 2.

23. *See* S. REP. NO. 105-190, at 8 (1998); *see also* Council Directive 2001/29, cl. 2, cl. 54.

24. Protecting works against illegally-created interoperability is crucial to the development of the market according to clause 56 of the EUCD, which modifies clause 55:

There is, however, the danger that illegal activities might be carried out in order to remove or alter the electronic copyright-management information attached to it, or otherwise to distribute, import for distribution, broadcast, communicate to the public or make available to the public works or other protected subject-matter from which such information has been removed without authority. In order to avoid fragmented legal approaches that could potentially hinder the functioning of the internal market, there is a need to provide for harmoni[z]ed legal protection against any of these activities.

Council Directive 2001/29, cl. 56.

C. Legislative History of Dadvsi

Bringing French copyright law up to speed with the European digital marketplace, Dadvsi represents France's implementation of the EUCD.²⁵ Dadvsi struggled through the legislative process, largely because reconciling intellectual property holder's rights with consumer rights proved difficult. When the bill was introduced in France in November 2003,²⁶ France already faced possible European Commission sanctions for its delay in implementation. For this reason, Dadvsi was reviewed under a "declaration of urgency," meaning it needed only be examined once by each house of Parliament (the National Assembly and the Senate) before proceeding to President Chirac to be signed into law.²⁷

Dadvsi was argued in two stages before the National Assembly—first between December 20 and 22, 2005, and then again between March 7 and 21, 2006—consuming more than eighty hours of debate in the first reading of the bill alone.²⁸ Although the bill was approved by the National Assembly on March 21, 2006 and by the Senate on May 10, 2006, the definitive text was not officially adopted by both houses of Parliament until June 30, 2006.²⁹ Significantly, the version of Dadvsi finally passed would have forced Apple to disclose FairPlay's source code for purposes of interoperability.³⁰ Apple had dubbed the bill "state-sponsored piracy" when it was passed by the National Assembly in March, and so the bill's adoption by Parliament represented a huge win for consumer rights groups.³¹ At that point, Apple's status in France was uncertain. Because less than two per-

25. *Loi du 1er août 2006 Relative au Droit d'Auteur et aux Droits Voisins dans la Société de l'Information*, VIE PUBLIQUE.FR, <http://www.vie-publique.fr/actualite/panorama/texte-vote/loi-du-1er-aout-2006-relative-au-droit-auteur-aux-droits-voisins-societe-information.html> [hereinafter *Loi du 1er août*] ("Le point de départ du projet de loi est la transposition d'une directive européenne du 22 mai 2001 sur le droit d'auteur.").

26. *Loi du 1er août*, *supra* note 25 ("[Le projet de loi a été] [p]résenté en Conseil des ministres le 12 novembre 2003 . . .").

27. See Winston Maxwell & Julie Massaloux, *French Copyright Law Reform: French Supreme Court Upholds Legality of DVD Anti-Copy Measures*, ENT. L.R. 2006, 17(5), 145, 147 n.5; *Loi du 1er août*, *supra* note 25.

28. *Observations du Gouvernement sur le Recours Dirige contre le Lois Relative au Droit d'Auteur et aux Droits Voisins dans la Société de l'Information*, Jul. 18, 2006, section I.B.1 or p. 2, available at <http://www.conseil-constitutionnel.fr/decision/2006/2006540/obs.htm>.

29. See *Loi du 1er août*, *supra* note 25.

30. Jean Philippe Hugot, *The Dadvsi Code: Remodeling French Copyright Law for the Information Society*, 17 ENT. L. R. 139, 144 (2006).

31. Elinor Mills, *Apple calls French law 'state-sponsored piracy'*, CNET NEWS.COM, Mar. 22, 2006, http://news.com.com/Apple+calls+French+law+state-sponsored+piracy/2100-1025_3-6052754.html.

cent of Apple's iPod and iTunes business is generated in France, analysts speculated Apple would rather abandon the French market than disclose the source code to its DRM.³² Subsequently, more than one hundred members of the National Assembly demanded that the bill be reviewed by the Constitutional Council (*Conseil Constitutionnel*).³³ This move had a striking affect on the interoperability debate in France.

In July 2006, the Constitutional Council reviewed Parliament's version of the Dadvsi statute and struck down several of its major provisions.³⁴ The Council's findings referenced the 1789 Declaration on Human Rights, holding that the bill violated constitutionally protected property rights.³⁵ Notably, the Council found that because DRM is protected under French intellectual property law, DRM owners should receive a fair compensation if compelled to publish their DRM source code.³⁶ The Council also eliminated the reduction of penalties for consumer file sharing passed by Parliament, which had amounted to little more than a parking fine.³⁷ In response to the Council's decision, the consumer rights group UFC-Que Choisir declared: "UFC-Que Choisir is concerned about the consequences of the [Council's] decision, which censured the provisions . . . most favorable to consumers, reinforcing the unacceptable, 'all-repressive' logic of the bill."³⁸

32. *Id.*

33. See Crampton, *supra* note 3. The Constitutional Council is composed of nine members—three appointed by the President, three by the National Assembly, and three by the Senate. It serves primarily two functions. First, it oversees national elections. Second, it reviews statutes for constitutionality before they are enacted. Stéphane Cottin & Jérôme Rabenou, *Researching French Law*, <http://www.llrx.com/features/french.htm> (last visited Oct. 27, 2006).

34. Crampton, *supra* note 3.

35. "[Article 17 of the 1789 Declaration states] 'Property being an inviolable and sacred right, no one can be deprived of it, except when the public necessity, legally defined, obviously requires it, and under the condition of just compensation in advance.'" CC decision no. 2006-540DC, July 27 2006, J.O. 178, para. 14, *available at* <http://www.conseil-constitutionnel.fr/decision/2006/2006540/2006540dc.htm>.

36. CC decision no. 2006-540DC, July 27 2006, J.O. 178, para. 41; *see also* Crampton, *supra* note 3.

37. *Id.*

38. In French, «L'UFC-Que Choisir s'inquiète des conséquences de la décision du Conseil constitutionnel qui a censuré les dispositions du texte les moins défavorables aux consommateurs, ce qui aboutit à renforcer la logique inadmissible du 'tout répressif' du projet de loi.» *Décision du Conseil Constitutionnel sur le Projet de Loi DADVSI : De pire en pire . . .*, UFC-Que Choisir, July 28, 2006, <http://www.quechoisir.org/Position.jsp;jsessionid=F58502A610CAAABF12F37A7C900C47D9.tomcat-21?id=Ressources:Positions:4FB82D871CF4428BC12571B900391935&catcss=LOI302&categorie=Nœud PClassement:5BC62046FC35E798C1256F0100348ED8>.

Following the Constitutional Council's review, *Dadvisi* was not returned to Parliament due to the Declaration of Urgency. When President Jacques Chirac signed the bill on August 1, 2006, the version of *Dadvisi* amended by the Constitutional Council became official law in France.³⁹

D. *Dadvisi's Effect on DRM*

The antagonism between the promotion of interoperability and the desire to end illegal circumvention and unauthorized copying explains why France struggled to enact *Dadvisi*. It also explains why *Dadvisi's* interoperability provisions are not entirely clear as to the state of interoperability. A balance between the two objectives, if possible is not easy to achieve. How can government impose limitations on interoperability without enabling illegal file sharing? How can it uphold copyright by forcing companies to disclose the source code to their DRM? At the same time, how can it promote progress without promoting interoperability? Under *Dadvisi*, as noted above, individuals may now request that the government compel the disclosure of DRM source code for purposes of interoperability. This Section details *Dadvisi's* interoperability provisions, beginning with the establishment of a regulatory authority to oversee interoperability. It then explains the procedures for requesting disclosure of DRM source code and for avoiding source code disclosure. Finally, it notes *Dadvisi's* effect on the private-use exemption.

1. *The Regulatory Authority*

Article 14 of *Dadvisi* establishes guidelines for a new regulatory authority ("the Authority") to mediate requests for DRM source codes from individuals who want to make their programs interoperable; to order companies to disclose source codes, but only if they do not satisfy the requirements for keeping the source code confidential (discussed further below in Section I.D.3); and to impose fines against copyright infringers, including individuals for distributing information on how to circumvent DRM.⁴⁰ Larger fines (€ 3,750) apply for those who circumvent DRM technology for reasons other than research;⁴¹ the largest fine (€ 300,000)—plus up to three years imprisonment—applies for circulating software specifically designed for the unauthorized distribution of copyrighted works.⁴² The Authority is to be composed of six representatives:

39. Law No. 2006-961 of Aug. 1, 2006, *Journal Officiel de la République Française* [J.O.] [Official Gazette of France], Aug. 3, 2006, p. 11529, available at <http://www.legifrance.gouv.fr/WAspad/UnTexteDeJorf?numjo=MCCX0300082L>.

40. Law No. 2006-961, art. 17.

41. *Id.* art. 22.

42. *Id.* art. 21.

(1) a representative of the State; (2) a member from the Council of State; (3) a member from the French Supreme Court (*La Cour de cassation*); (4) a member from the Court of Auditors; (5) a member of the Academy of Technologies; and (6) a member of the High Council of Literary and Artistic Property.⁴³ The members will serve on the Authority for six years, and their terms will be neither renewable nor revocable.⁴⁴

2. *Requests for Source Code*

The establishment of a procedure for requesting the disclosure of source code is Dadvsi's most influential, and controversial, contribution to interoperability.⁴⁵ It is, in essence, government-enforced interoperability.⁴⁶ Per Article 14, clause 2:

any software publisher, manufacturer of a technical system or owner of an internet service may, in the event of being refused access to information essential for interoperability, ask that the Authority . . . [ensure] the interoperability of the systems and existing services . . . and obtain from TPM rights holders the information required for [interoperability].⁴⁷

The Authority may compel disclosure of source code and inflict a monetary penalty that is proportional to the damage caused by non-disclosure if the DRM owner refuses to comply.⁴⁸

3. *Keeping Source Code Confidential*

Clause 4 of Article 14 limits clause 2, providing that parties may avoid publication of their source code if they can show that publication would seriously undermine the security and effectiveness of the DRM.⁴⁹ Dadvsi

43. *Id.* art. 17.

44. *Id.*

45. *See supra* text accompanying notes 30-38.

46. Indeed, this provision in particular was the target of Apple's comment about "state-sponsored piracy." *See supra* text accompanying note 31.

47. *Id.* art. 14, L. 331-7.

48. *Id.*

49. *Id.*

Le titulaire des droits sur la mesure technique ne peut imposer au bénéficiaire de renoncer à la publication du code source et de la documentation technique de son logiciel indépendant et interopérant que s'il apporte la preuve que celle-ci aurait pour effet de porter gravement atteinte à la sécurité et à l'efficacité de ladite mesure technique.

Id.; *see also* Porter & Swindells, *supra* note 3, at 21. Clause 1 of article 14 may contain a loophole for DRM holders, enabling them to avoid disclosure of source code if they can show that prevention of interoperability was expressly authorized by the work's copy-

thus places the burden on the entity imposing technical protection measures. Combined with the Constitutional Council's decision that companies cannot be forced to share their source code without receiving fair compensation, this provision most likely gives DRM holders an advantage over consumers.⁵⁰

4. *Private Copy Exception*

Dadvisi leaves the private copy exception mostly intact, stating that the implementation of DRM must not deprive consumers of the private copy exception and other exceptions granted in the Intellectual Property Code, and permitting personal use by an individual and his or her close relations of a "reasonable number" of legally acquired copies.⁵¹ However, Dadvisi does place two limitations on private copying: first, the user must be legally entitled to access the work; and second, the exception must not interfere with the normal exploitation of the work or other protected device or cause unjustified damage to the interest of the work's author.⁵²

Dadvisi establishes a Regulatory Authority to oversee enforced disclosure of DRM source code for interoperability, limits disclosure of DRM source code where disclosure would make the DRM ineffective, and preserves the private copy exception but only where it does not interfere with the author's right.

II. THE INTEROPERABILITY DEBATE

The key development post-Dadvisi with respect to interoperability is that DRM holders can be forced to disclose their DRM source code, but can avoid disclosure upon a showing that publication of the source code would seriously undermine the safety and effectiveness of the DRM. This Part discusses the interoperability debate in more depth, which will help explain why forced disclosure of DRM source code is important to DRM holders and consumers. Specifically, this Part details the major legal developments involving Apple and consumers in France, Scandinavia, Germany, and the Netherlands and introduces their arguments concerning interoperability.

right owner. This is because clause 1 calls for the Authority to prevent the use of TPMs for purposes *other than* those expressly approved by the copyright holder. See Law No. 2006-961, art. 14, L. 331-6; Porter & Swindells, *supra* note 3, at 21.

50. See Law No. 2006-961, art. 14; CC decision no. 2006-540DC, July 27 2006, J.O. 178, para. 39-41; Crampton, *supra* note 3.

51. See *Loi du 1er août 2006*, *supra* note 25.

52. Law No. 2006-961, art. 14, cl. 8; see also Maxwell & Massaloux, *supra* note 27, at 146.

A. Background and Major Developments of the Debate in France

From the standpoint of technology corporations such as Apple, Sony, and Microsoft, the primary purpose of DRM is to prevent illegal copies by allowing only authorized devices to play protected material.⁵³ Yet the question remains: is the real purpose of DRM really to prevent unauthorized copies, or is it to enable companies to limit the interoperability of their products? In February of 2005, UFC-Que Choisir sued Apple and Sony, claiming their DRM technology limits consumer choice.⁵⁴ According to UFC-Que Choisir, "The total absence of interoperability between DRM removes not only consumers' power to independently choose their purchase and where they buy it from but also constitutes a significant restraint on the free circulation of creative works."⁵⁵ This lawsuit was not the first time Apple's policies had come under fire: several months earlier, in late 2004, French downloading site VirginMega sued Apple under competition law.⁵⁶ The case was dismissed by France's Competition Council (the *Conseil de la Concurrence*), which found that "access to [Apple's] FairPlay DRM isn't indispensable to the development of legal platforms for the downloading of online music."⁵⁷ Stated another way, the council found that the attractiveness of the pay-to-play system to consumers was not dependent on interoperability; many different factors played a part.⁵⁸ Furthermore, it held that although lack of interoperability limits consumer choice, such limitations are normal in the information technology sector and do not necessarily fall under competition restrictions.⁵⁹

In another recent French decision known as the *Mulholland Drive* case, the French Supreme Court (*La Cour de Cassation*) confirmed the legality of certain anti-copy protection measures on DVDs.⁶⁰ The plaintiff purchased a DVD of David Lynch's film *Mulholland Drive*. After disco-

53. See Steve Jobs, *Thoughts on Music*, APPLE.COM, Feb. 6, 2007, <http://www.apple.com/hotnews/thoughtsonmusic>; Porter & Swindells, *supra* note 3, at 21.

54. Jo Best, *Apple, Sony sued over DRM in France*, CNET NEWS.COM, Feb. 14, 2005, http://news.com.com/Apple,+Sony+sued+over+DRM+in+France/2100-1027_3-5575417.html.

55. *Id.*

56. See Estelle Dumout, *French court won't force Apple to open up iTunes*, CNET NEWS.COM, Nov. 10, 2004, http://news.com.com/French+court+wont+force+Apple+to+open+up+iTunes/2100-1027_3-5447124.html?tag=nl.

57. See *id.*

58. François Lévêque, *Is Online Music Locked in by Leveraging?*, 63 COMMUNICATIONS & STRATEGIES 1, 8 (2006) (on file with author).

59. See Dumout, *supra* note 56.

60. Cass. 1e civ., Feb. 28, 2006, Bull. civ. I, No. 05-15824; see also Maxwell & Massaloux, *supra* note 27, at 145.

vering that he could not copy the film onto VHS in order to watch it at his mother's house, he sued the production company and distributor for allegedly violating the private copy exception in Art.L.122-5 of the Intellectual Property Code.⁶¹

Reversing the decision of the Paris Court of Appeals, the French Supreme Court found that the private copy exception did not apply in this case. It held that the Court of Appeals should have applied a three-step test from the EUCD before finding the anti-copy protection illegal.⁶² Also contained in the Berne Convention, the EUCD's test provides that the exceptions to the *droit d'auteur* "shall only be applied [1] in certain special cases which [2] do not conflict with a normal exploitation of the work . . . and [3] do not unreasonably prejudice the legitimate interests of the rightholder."⁶³ It is important to note that because the EUCD is an EU directive as opposed to an EU regulation, member states are only required to implement its general principles rather than adopt it word-for-word. The *Mulholland Drive* case decided that France's Intellectual Property Code should be interpreted according to the three-step test so that French law would be consistent with the EUCD.⁶⁴

In effect, Dadvsi codifies the test applied by the French Supreme Court in this case: the private copy exception must not interfere with the normal exploitation of the work or other protected device, or cause unjustified damage to the rights of the author of the work.⁶⁵ When it applied the test, the French Supreme Court also based its decision on a derivative factor, namely, whether the private copy exception took priority over the author's right to insert anti-copy protection in his or her digital work.⁶⁶ In overturning the Court of Appeals ruling, the Supreme Court explained that the pri-

61. See Maxwell & Massaloux, *supra* note 27, at 145-46.

62. See *id.* at 146.

63. Council Directive 2001/29, cl. 2, 2001 O.J. (L 167) 0010 - 0019 (EC), available at <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32001L0029:EN:HTML>; see also Cass. 1e civ., Feb. 28, 2006, Bull. civ. I, No. 05-15824; Maxwell & Massaloux, *supra* note 27, at 146.

64. See Maxwell & Massaloux, *supra* note 27, at 146.

The court was able to interpret French law 'in light of' the Directive, and to apply the Directive's three-step test directly, pursuant to the theory of 'compliant interpretation' (théorie de l'interprétation conforme). This legal theory requires Member State courts to interpret provisions of national law in a way that would make them consistent with the clear and unambiguous provisions of a Directive.

Id.

65. Law No. 2006-961, art. 17, cl. 8; see also Maxwell & Massaloux, *supra* note 27, at 146.

66. See Maxwell & Massaloux, *supra* note 27, at 146.

vate copy exception was not an absolute right, but merely an exception to the author's right.⁶⁷ Like all exceptions under French law, the Court explained, the private copy exception must be strictly construed.⁶⁸ Because the private copy impaired the normal exploitation of the work, in light of the risks inherent in the digital environment and the economic significance of DVDs to the motion picture industry, the private copy exception did not apply.⁶⁹ Thus, the French Supreme Court found that interests of intellectual property rights holders trumped the private copy exception.

The *Mulholland Drive* holding can be understood by the music industry as an indication that DRM in France, such as Apple's FairPlay platform, will be upheld over the consumer interest in interoperability. Like the private copy exception, interoperability is not an absolute right. Indeed, interoperability is not even a codified "exception" to intellectual property rights. This conclusion is undoubtedly one reason why Dadvsi provides for limitations on source code disclosure. Both *Mulholland Drive* and Dadvsi's limitations on forced disclosure of source code reflect a trend towards upholding DRM holders' rights, fueling consumer unrest.

B. The European Debate

The consumer outcry in France has developed into a legal battle spanning much of Western Europe. The united consumer action was initiated by the Scandinavian countries in 2006 under the tenet that Apple's FairPlay platform is contrary to consumer rights in violation of Scandinavian law.⁷⁰ Consumers there threatened to take Apple to court and seek an injunction banning iTunes from their marketplace.⁷¹ Apple produced a fifty-page response in which it claimed that it intends to meet the interests of consumers and to work with Scandinavian regulators to perhaps reach an agreement over iTunes use.⁷² While Apple said it was unwilling to license

67. Cass. 1e civ., Feb. 28, 2006, Bull. civ. I, No. 05-15824 ("Après avoir relevé que la copie privée ne constituait qu'une exception légale aux droits d'auteur et non un droit reconnu de manière absolue à l'usager, retient que cette exception ne saurait être limitée alors que la législation française ne comporte aucune disposition en ce sens.")

68. See Maxwell & Massaloux, *supra* note 27, at 146 ("[The court was] asserting that the private copy was not an absolute right for consumers, only an exception to an author's rights—an exception which, as all exceptions under French law, should be strictly construed.")

69. See Maxwell & Massaloux, *supra* note 27, at 146.

70. Eric Bangeman, *Apple, Scandinavian Consumer Ombudsmen Talk iTunes*, ARS TECHNICA, Aug. 24, 2006, <http://arstechnica.com/news.ars/post/20060824-7580.html>.

71. Jaime Espantaleon, *Apple Defends iTunes Restrictions, But Norway Not Swayed*, USA TODAY, Aug. 2, 2006, http://www.usatoday.com/tech/news/techpolicy/2006-08-02-apple-norway_x.htm?csp=34.

72. *Id.*

FairPlay to competitors, it agreed to consider modification of the iTunes license agreement and clarification of the terms and conditions under which consumers browse its iTunes Music Store.⁷³ Apple contends that the prevention of interoperability does not illegally limit consumer choice when consumers have the choice of buying other devices and using other music sources. Yet to many of the major consumer organizations in Europe, a choice with limitations is no choice at all.⁷⁴

In January 2007, UFC Que Choisir of France partnered with the Federation of German Consumer Organizations and the Consumer Ombudsmen of Norway and Finland in an effort to improve consumer conditions for iTunes users throughout Europe.⁷⁵ The organizations were soon joined by the Dutch Consumer Ombudsman, who filed a complaint with the newly created Dutch Consumer Authority (*ConsumentenAutoriteit*) as well as the Dutch antitrust agency.⁷⁶ The leader of the German Consumer Federation declared: “Interoperability and more flexibility in using downloaded content [are] key for the further development of the legal music download market.”⁷⁷ In addition, the joint statement issued by the original four organizations proclaimed: “Consumers entering into a contract with iTunes should be able to rely on the consumer protection rules according to the law of the country in which they live.”⁷⁸ The organizations believed that joining forces would enable them to achieve a stronger negotiation position vis-à-vis Apple, as well as to strengthen the negotiating position of iTunes vis-à-vis the music labels.⁷⁹

Meanwhile, on January 24, 2007, the Norwegian Consumer Ombudsman ruled that iTunes’ DRM is illegal.⁸⁰ The Norwegian Consumer Council, Forbrukerradet, had previously lodged a complaint with the Consumer

73. Bangeman, *supra* note 70.

74. *See supra* text accompanying note 55.

75. *Forbrukerombudet, European Consumer Organisations Join Forces in Legal Dispute Over iTunes Music Store*, FORBRUKEROMBUDET, Jan. 22, 2007, <http://www.forbrukerombudet.no/index.gan?id=11037079> [hereinafter European Consumer Organizations].

76. Jan Libbenga, *Dutch Consumer Chief Puts Apple Through the Mill*, THE REGISTER, Jan. 25, 2007, http://www.theregister.co.uk/2007/01/25/dutch_out_of_tune_with_apple.

77. European Consumer Organizations, *supra* note 75.

78. John Oates, *France and Germany Join Anti-iTunes Crusade*, THE REGISTER, Jan. 23, 2007, http://www.theregister.co.uk/2007/01/23/itunes_slagged_again.

79. European Consumer Organizations, *supra* note 75.

80. OUT-LAW.COM, *Apple DRM Illegal in Norway: Ombudsman*, THE REGISTER, Jan. 24, 2007, http://www.theregister.co.uk/2007/01/24/apple_drm_illegal_in_norway.

Ombudsman on behalf of Norwegian consumers.⁸¹ According to a senior advisor to Forbrukerradet,

Fairplay is an illegal lock-in technology whose main purpose is to lock the consumers to the total package provided by Apple by blocking interoperability. . . . [T]his means that iTunes Music Store is trying to kill off one the most important building blocks in a well functioning digital society, interoperability, in order to boost its own profits.⁸²

The Consumer Council believes that Apple has three options: licensing FairPlay to competing manufacturers, developing open-source platforms with other companies, or abandoning DRM.⁸³ The Ombudsman approved the Council's claim that FairPlay goes beyond merely protecting unauthorized copies, agreed that it violates Norwegian contract law, and set an October 1, 2007 deadline for Apple to revise its conditions.⁸⁴

In response to the European legal action against FairPlay, Steve Jobs issued a bold statement on Apple's website in which he attempted to shift all blame for iTunes' use of DRM to the record labels.⁸⁵ Jobs argued that the "big four" music companies—Universal, Sony BMG, Warner, and EMI—from whom Apple licenses the majority of its music, require strong DRM to prevent illegal copying.⁸⁶ After decrying the alternative of licensing FairPlay's DRM (it would be too easy for DRM code to leak), Jobs called on consumers to lobby the Big Four for the removal of DRM.⁸⁷ Moreover, he attempted to debunk allegations that FairPlay locks consumers into the iPod. He explained that the iPod is capable of playing not only iTunes, but any music that is DRM free and encoded in an "open" format, such as MP3 or AAC.⁸⁸ He pointed out that less than three percent of music on the average iPod is purchased from the iTunes store, meaning that the vast majority of music on iPods comes from other sources, such as CD's.⁸⁹ Jobs argued that "it's hard to believe" consumers are locked into

81. *Id.*

82. *Id.*

83. *Id.*

84. *Id.*; Jan Libbenga, *Dutch Consumer Chief Puts Apple Through the Mill*, THE REGISTER, Jan. 25, 2007, http://www.theregister.co.uk/2007/01/25/dutch_out_of_tune_with_apple.

85. Jobs, *supra* note 53.

86. According to Jobs, the Big Four music labels control seventy percent of the world's music. *Id.*

87. *Id.*

88. *Id.*

89. *Id.*

the iPod when so little of their music comes from iTunes; because non-iTunes music must be DRM-free in order to play on the iPod, ninety-seven percent of music on the average iPod is playable on any device.⁹⁰

Although many would agree that DRM should be eliminated, Jobs' critics responded to his statements with skepticism. The Norwegian Consumer Council, Forbrukerradet, stated that although the record companies carry their share of responsibility, Apple is still the party selling the music and is responsible for offering the consumer a fair deal under Norwegian law.⁹¹ Another group of critics, the staff at DRMWatch.com, predicted Jobs' statements would have little market impact.⁹² Instead, they felt Jobs had revealed Apple's vulnerability: "[B]y asking his customers in Europe to petition record companies to drop DRM, Jobs has now made it clear that Apple is truly concerned about the mounting European legal opposition to the closed iTunes/iPod system."⁹³

Regardless of the earnestness of Jobs' statement on DRM, it indicated that the removal of DRM is not an impossible dream. Yet it is surely an idealistic one. It ignores the fact that copyright owners and the music labels that work with them have a real, legitimate interest in controlling the dissemination of their product.

III. EVALUATION OF THE CONSUMER RIGHT TO INTEROPERABILITY

Clearly the European consumer movement has made progress, most notably with the Norwegian Consumer Ombudsman. However, the French and American governments have taken actions that cast doubt on the consumer right to interoperability. This Section first evaluates the consumer right to interoperability under *Dadvsí* and then analyzes whether Apple's FairPlay platform creates consumer lock-in, relating the discussion to *Dadvsí*'s goal of the development of the digital marketplace. Finally, it discusses two additional actions by consumers that may help define interoperability's legal justifications and its place in digital copyright law.

90. *Id.*

91. John Oates, *Norwegian Regulator Gives Steve Jobs Cool Response*, THE REGISTER, Feb. 7, 2007, http://www.theregister.co.uk/2007/02/07/norway_on_jobs_letter.

92. DRM Watch Staff, *Steve Jobs Speaks Out Against DRM for Music*, DRM WATCH.COM, Feb. 8, 2007, <http://www.drmmwatch.com/drmtech/article.php/3658821>.

93. *Id.*

A. The Consumer Right to Interoperability Under Dadvsi

The consumer argument for enforced disclosure of DRM source code is that DRM is motivated not by copyright protection but by a desire to “maximi[z]e . . . market share by enforced customer loyalty.”⁹⁴ Additionally, consumer groups argue that the interoperability of iTunes would deter them from infringing activity by granting them access to a wider, superior choice of products and services.⁹⁵ As reflected in the EUCD, Dadvsi’s regulation of source code disclosure is intended to address the consumer argument, but source code disclosure is ultimately not guaranteed. This Section discusses the consumer right to interoperability under Dadvsi, concluding that Dadvsi is likely to uphold intellectual property rights over consumer rights.

Under Dadvsi, parties may bring their cases for interoperability before the Authority to compel disclosure. Yet owners of DRM may avoid disclosure of source code by demonstrating that disclosure would render the DRM ineffective. This is akin to a defense to “violating” interoperability.⁹⁶ It remains to be seen whether companies will win with this defense. Undoubtedly the answer depends on the Authority’s interpretation of “effectiveness,” and whether the Authority may weigh the promotion of interoperability in a specific case against the interests of DRM protection and decide that, regardless of any evidence of ineffectiveness, the interest of interoperability outweighs the interest of the DRM.

On its face, Dadvsi does not give a final answer as to whether intellectual property rights to TPMs or the consumer’s right to interoperability takes precedence. Nevertheless, from what we know about French intellectual property law, the *droit d’auteur* should take precedence over interoperability. Otherwise, the interoperability interest, not traditionally part of French intellectual property law, would infringe on the copyright owner’s exclusive rights. Moreover, Dadvsi’s limitation of disclosure of DRM source code where disclosure would seriously undermine the system’s effectiveness is consistent with French copyright law, which provides deference to the author’s right. As established by the French Supreme Court in the *Mulholland Drive* case, the EUCD’s three-step test for copyright exceptions, and Dadvsi’s limitation of the private copy exception, the exceptions to the author’s right are to be strictly construed so that they do not interfere with the legitimate interests of the author of the work.⁹⁷

94. Porter & Swindells, *supra* note 3, at 21.

95. *Id.*

96. *See supra* Section I.D.3.

97. *See supra* Section II.A.

Ultimately, because “interoperability” is not a codified “exception,” it is likely to be emphasized even less than exceptions like the *copie privée*. Until France chooses to codify the consumer right to interoperability as an “exclusive right,” it is unlikely to outweigh the intellectual property rights of DRM holders. If, for example, a consumer requests interoperability in order to make use of the private copy exception, the DRM owner could argue that publication of source code would seriously undermine the effectiveness of the DRM, leaving the copyrighted material unprotected (contrary to the legitimate interest of the author of the work who authorized the DRM). In light of the EUCD, the *Mulholland Drive* case, and the fact that DRM owners have the final move in the Authority’s proceedings (avoiding publication by proving necessity for effectiveness), the Authority will no doubt interpret *Dadsvi* as giving preference to intellectual property rights.⁹⁸ For that reason, the Authority can be expected to liberally construe the proof required to demonstrate that disclosure of source code would seriously undermine the DRM system’s effectiveness.

B. FairPlay and Consumer Lock-In

The issue of whether FairPlay creates consumer lock-in is directly related to whether *Dadsvi*’s enforcement of interoperability, and limitations on source code disclosure, are necessary and justifiable. If DRM such as FairPlay does not create consumer lock-in, then *Dadsvi*’s provisions for avoiding source code disclosure uphold intellectual property rights without unjustly burdening consumers. This Section discusses developments related to Apple and competition law in the France and the United States. Further, it analyzes whether consumers are in fact locked into the iPod by FairPlay. It concludes that because the goal of the EUCD and *Dadsvi* is the development of the digital marketplace, DRM that affects consumer choice but that does not create complete lock-in is granted significant leeway in order to provide for a diversity of products in the long-run.

In addition to its justifications in intellectual property law, the reach of Apple’s DRM also appears consistent with competition law in France despite the ongoing consumer movement there. According to the French Competition Council’s finding discussed above,⁹⁹ Apple’s FairPlay does *not* violate competition law by preventing interoperability and refusing to license FairPlay to competitors.¹⁰⁰ According to the Council, although lack of interoperability limits consumer choice, such limitations are normal in

98. See Cass. 1e civ., Feb. 28, 2006, Bull. civ. I, No. 05-15824; see *supra* Sections I.D.2-3.

99. See *supra* Section II.A.

100. See Dumout, *supra* note 56.

the information technology sector.¹⁰¹ This decision preceded the Norwegian Consumer Ombudsman's finding that FairPlay is illegal in Norway.¹⁰²

In addition to surviving the scrutiny of French competition law, in September 2006, FairPlay obtained a vote of confidence from the United States Department of Justice. The Assistant Attorney General for the Antitrust Division, Thomas Barnett, advocated a laissez-faire approach to Apple's iTunes and iPod development.¹⁰³ He criticized governments and regulators for attempting to force Apple to make iTunes interoperable with rival devices.¹⁰⁴ Significantly, he dismissed complaints that Apple's music platform creates consumer lock-in.¹⁰⁵ "[T]his type of business model has been criticized in the past because the cheap product was the one that was sold first—think cheap razors and expensive replacement blades or cheap printers and expensive replacement ink," he said.¹⁰⁶ He continued, "Apple's model is the opposite: consumers buy the expensive iPod device first, then have the option—not the obligation—to use the free iTunes software and buy the cheap iTunes songs."¹⁰⁷ Furthermore, he explained, while FairPlay ensures that the first copy of a song downloaded from iTunes can only play on an Apple device, consumers are free to re-record the song in an MP3 format and play it on other devices.¹⁰⁸

This raises a crucial point: consumers have legal options for creating compatibility. First, although FairPlay blocks consumers from playing the primary copy of the song they download from the iTunes Music Store on a rival device, FairPlay permits users to copy songs from iTunes to a CD.¹⁰⁹ The resulting CD is free of DRM. This means that consumers can convert these CDs into MP3 format and play the song on a rival device or plat-

101. *See id.*

102. OUT-LAW.COM, *Apple DRM Illegal in Norway: Ombudsman*, THE REGISTER, Jan. 24, 2007, http://www.theregister.co.uk/2007/01/24/apple_drm_illegal_in_norway.

103. Siobhan Hughes, *Apple Gets Vote of Confidence For iTunes From Antitrust Chief*, WALL ST. J., Sept. 14, 2006, at B5; *see also* Thomas O. Barnett, Assistant Att'y General, Dept. of Justice Antitrust Div., *Interoperability between Antitrust and Intellectual Property*, Presentation to the George Mason University School of Law Symposium: *Managing Antitrust Issues in a Global Marketplace* (Sept. 13, 2006), *available at* <http://www.usdoj.gov/atr/public/speeches/218316.htm>.

104. Hughes, *supra* note 103.

105. "One theory is that consumers are locked into buying songs only from the iTunes service and that they will have to pay too high a price for iTunes songs." Barnett, *supra* note 103, at 11; *see also* Hughes, *supra* note 103.

106. Barnett, *supra* note 103, at 11.

107. *Id.*; Hughes, *supra* note 103.

108. Barnett, *supra* note 103, at 10-11.

109. *See id.*

form.¹¹⁰ Second, using the opposite technique, consumers can burn songs bought on a rival platform onto a CD, rip them onto their computer with iTunes, and play them on the iPod.¹¹¹ Third, as the iPod plays *any* DRM-free song in an open format like MP3 or AAC, consumers may load songs from other sources such as CDs to their iPods.¹¹² As Steve Jobs pointed out in his statement on DRM, the vast majority of songs on the average iPod were not purchased from the iTunes Music Store.¹¹³

Notwithstanding the European consumer arguments to the contrary, the availability of legal avenues to interoperability indicates that consumers are not locked in.¹¹⁴ Although iTunes' lack of interoperability costs consumers time and money (basically the cost of a CD), consumers are not forced to use Apple's products. Rather, they have the *option* to use them. Of course, converting iTunes to MP3 format can affect the sound quality of the file. Furthermore, less technology-savvy consumers are unlikely to be aware of these techniques. Thus, while consumers are not completely locked into the iPod, FairPlay still affects their use of Apple's products with rival products. For many consumers, this limited freedom is not sufficient.¹¹⁵

While many consumers attack DRM under the freedom of choice theory, other DRM critics argue that DRM does not actually control consumer choice at all.¹¹⁶ They contend consumers will do whatever is necessary to access and use information. Consumers will decide how and when DRM is effective by choosing which products to buy, when to pirate, and when to design around DRM platforms.¹¹⁷ Under this theory, too many restrictions will merely drive consumers to the pirated product.¹¹⁸

110. *See infra* note 114.

111. *See* Lévêque, *supra* note 58, at 6; Jobs, *supra* note 53.

112. Jobs, *supra* note 53.

113. *Id.*

114. *See supra* Section II.B; *see also* Barnett, *supra* note 103, at 11.

115. The consumer organizations of France, Norway, Finland, and Germany who united in negotiations against Apple conceded in a joint statement that "iTunes allow their consumers to make the songs playable on other devices through re-ripping burnt CDs containing songs downloaded from iTunes." Yet they maintain that "this will not serve as a long-term solution," adding, "[w]e thus urge Apple to make substantial progress towards full interoperability until the end of September 2007." *European Consumer Organisations Join Forces in Legal Dispute Over iTunes Music Store*, FORBRUKEROMBUDDET, Jan. 22, 2007, <http://www.forbrukerombudet.no/index.gan?id=11037079>.

116. *Symposium, Panel II: Licensing in the Digital Age: The Future of Digital Rights Management*, 15 FORDHAM INTELL. PROP. MEDIA & ENT. L.J. 1009, 1031-32 (2005).

117. *Id.* at 1032.

118. *Id.*

The above argument is problematic because it ignores the reality that creators require incentives.¹¹⁹ If creators know they will not be able to control their intellectual property because government regulation will force them to share it, they are less likely to create in the first place.¹²⁰ This principle underlies Dadvsi, the EUCD, and the DMCA. Technical protection measures receive significant leeway under all three regulatory regimes because the goal is development of the global digital marketplace. Even if FairPlay affects consumer choice by making alternatives to the iPod more difficult to use, protecting the FairPlay source code from public disclosure will aid consumers in the long run. In the face of digital piracy, the success of iTunes has boosted the sale of legal downloads, growing the marketplace for legal online music platforms.¹²¹ In a word, granting creators control over their intellectual property benefits consumers by providing for superior products and services.

C. The Future of the Consumer Right to Interoperability

Because iPod users have viable alternatives for achieving interoperability, Apple's FairPlay arguably does not create consumer lock-in. If France and the United States continue their position that FairPlay does not lock consumers in, consumers will need to seek other legal justifications for the right to interoperability. This Section discusses the recent efforts of consumers in the United States to curb Apple's market power, decode FairPlay, and legalize access to programs enabling the interoperability of iTunes. Eventually, these efforts may shed light on the legal basis of the right to interoperability and its place in digital copyright law.

In January 2005, consumer Thomas Slattery brought suit on behalf of himself and all other consumers "similarly situated" in the Northern District of California.¹²² Slattery alleged Apple held monopoly power over the digital music market with iTunes Music Store.¹²³ He filed several claims relating to anticompetitive conduct, including that Apple foreclosed iTunes music from being played on any device other than an iPod, forcing consumers to purchase music and portable digital music players from Apple rather than from competitors.¹²⁴ The court denied Apple's motion to

119. See Barnett, *supra* note 103, at 11-12; Hughes, *supra* note 103.

120. See Barnett, *supra* note 103, at 11-12; Hughes, *supra* note 103.

121. Hughes, *supra* note 103.

122. Slattery v. Apple Computer, No. 5:05-CV-00037, 2005 WL 2204981 (N.D. Cal. Sept. 9, 2005).

123. *Id.* at *1

124. *Id.* Specifically, Slattery alleged violation of the Sherman Act, California's Cartwright Act, California's unfair competition law, common law monopolization, and common law unjust enrichment. *Id.*

dismiss with respect to several claims of federal antitrust, monopolization, and unfair competition.¹²⁵

Slattery also alleged that Apple prevented competitor RealNetworks from selling online digital music to customers.¹²⁶ In 2004, RealNetworks decoded FairPlay and released a program called Harmony intended to enable songs from its RealPlayer Music Store to be played on the iPod.¹²⁷ It began selling music files compatible with the iPod for forty-five cents per song (less than half of the price of an iTunes song of ninety-nine cents).¹²⁸ In response, Apple changed its software code, making Harmony ineffective.¹²⁹ Slattery claimed Apple's actions prevented consumers from accessing cheaper music files.¹³⁰ On August 17, 2006, the district court granted plaintiffs' motion to file a Second Amended Complaint, which, according to the plaintiffs, differs from the original complaint only in that it names different plaintiffs, Slattery having encountered a conflict of interest preventing his participation in the case.¹³¹ This case is still pending in the district court.¹³²

In the most recent installment of the Apple saga in the United States, Norway native and San Francisco resident Jon "DVD Jon" Lech Johansen cracked FairPlay's DRM.¹³³ Johansen plans to "license" the code to Apple's competitors through his company, DoubleTwist Ventures.¹³⁴ Johansen's new program "wraps" songs with code that mimics FairPlay, enabl-

125. *Id.* at *6.

126. *Id.* at *2.

127. Robert Levine, *Jon Johansen Hacks FairPlay, the Apple iTunes Closed System*, CNNMONEY.COM, Oct. 30, 2004, http://money.cnn.com/magazines/fortune/fortune_archive/2006/10/30/8391726/index.htm.

128. *Slattery*, No. 5:05-CV-00037, 2005 WL 2204981 (N.D. Cal. Sept. 9 2005) (order granting in part, denying in part defendant's motion to dismiss).

129. Levine, *supra* note 127.

130. *Slattery*, No. 5:05-CV-00037, 2005 WL 2204981 at *2 (N.D. Cal. Sept. 9 2005) (order granting in part, denying in part defendant's motion to dismiss).

131. *Charoensak v. Apple*, No. 5:05-CV-00037, 2006 WL 3190513 (N.D. Cal. Oct. 30, 2006) (denying Apple's motion to dismiss the Second Amended Complaint).

132. The most recent filing was *Charoensak v. Apple*, No. 5:05-CV-00037, 2007 WL 500179 (N.D. Cal. Jan. 19, 2007).

133. BBC News, *iTunes Copy Protection Cracked*, BBC NEWS, Oct. 25, 2006, <http://news.bbc.co.uk/2/hi/technology/6083110.stm>. At the age of fifteen, Johansen garnered media attention for creating and distributing a program capable of cracking the encryption codes on DVDs, thereby permitting DVDs to be copied and played on any device. *Id.* Johansen created the DVD program with the help of two other hackers. *See id.* Johansen distributed that program online for free, but he intends to capitalize on his current project with the help of his new company. *Id.*

134. *Id.*

ing iTunes to be played on other devices.¹³⁵ Yet he intends to steer clear of legal ramifications under the DMCA. Johansen claims that he reverse-engineered FairPlay and that his code avoids DMCA restrictions by *adding* protection rather than removing it.¹³⁶ He argues his actions are covered by the DMCA's reverse-engineering exemption, § 1201(f).¹³⁷ Because the law is relatively untested in this area, it remains to be seen whether Johansen and his program are actually in line with the DMCA.¹³⁸

The outcome of *Slattery* and Johansen's reverse engineering of FairPlay will help define whether there is a legally justified consumer right to interoperability, and, if so, how to reconcile that right with digital copyright law. If *Slattery* is decided in the plaintiffs' favor, it will indicate that the right to interoperability lies in antitrust law, despite the Assistant Attorney General's position that FairPlay does not create consumer lock-in.¹³⁹ A decision for the plaintiffs would be consistent with the position of the European consumer organizations and Norwegian Consumer Ombudsman that Apple's DRM violates their countries' competition laws.¹⁴⁰ The problem is that even if antitrust law can be used to create a consumer right to interoperability, we are left with the question of how to reconcile interoperability with copyright law. This is where Johansen's actions become important. If he can demonstrate that promoting interoperability by "adding protection" to FairPlay does not violate the DMCA, he might reveal a way to promote interoperability within the confines of digital copyright law.

135. Levine, *supra* note 127.

136. *Id.*

137. 17 U.S.C. § 1201(f) (2000).

138. In a seminal pre-DMCA case, *Sega Enters. Ltd. v. Accolade, Inc.*, 977 F.2d 1510 (9th Cir. 1992), Accolade disassembled and modified the computer object code in Sega's videogame cartridges in order to create a competing product. *Id.* By reverse engineering Sega's product, Accolade generated computer files containing modifications of Sega's computer object code. *Id.* at 1518. The Ninth Circuit found that Accolades' actions constituted fair use. *Id.* at 1527-28. It held, "where disassembly is the only way to gain access to the ideas and functional elements embodied in a copyrighted computer program and where there is a legitimate reason for seeking such access, disassembly is a fair use of the copyrighted work, as a matter of law." *Id.* Thus, under *Sega*, Johansen may be protected so long as he can demonstrate "a legitimate reason" for reverse engineering FairPlay. However, *Sega* is important to an analysis of Johansen's actions under the DMCA due to *Sega's* holding that reverse engineering is justified where there is a legitimate reason. This holding may shed light on whether "adding protection" to FairPlay not only constitutes an action consistent with the DMCA, but an action justified by the "legitimate reason" of product interoperability.

139. See *supra* text accompanying note 105.

140. See *supra* text accompanying note 80.

IV. CONCLUSION: PROPOSALS FOR THE FUTURE

Thus far, both the United States and France have granted DRM holders a great deal of freedom. Yet the Johansen saga and the European consumer movement raise questions about the effectiveness of government regulation of DRM. While legal penalties hopefully deter digital copyright violations, the internet enables a massive number of users to immediately transfer and receive information, making it easy for violators to avoid surveillance. This difficulty explains why companies have taken matters into their own hands, applying DRM as a “private” security guard, and why governments have willingly conceded that role to companies.

Regulating unauthorized copying would be more difficult if individuals like Johansen were permitted to control product interoperability. However, governments might consider a registration process for these efforts, requiring such individuals to demonstrate how their code, while establishing interoperability, does not interfere with the original DRM’s effectiveness. This would be the reverse of the burden-shifting process established under *Dadsvi’s Authority*. Individuals who circumvented the code would bear the burden of proof rather than DRM holders. Requiring registration would maintain government regulation of interoperability and hopefully deter illegal circumvention and unauthorized copying.

One problem with the registration approach is that it is unclear how individuals would establish that interoperability does not interfere with the DRM’s effectiveness. No doubt Johansen would argue his program does not prevent FairPlay’s effectiveness because it does not remove FairPlay’s protection; instead, it adds *new* protection. Yet how does “adding” protection not interfere? So long as adding protection impedes the purpose of the DRM, it manipulates the system’s effectiveness. In other words, if preventing interoperability prevents the unauthorized distribution of copyrighted works, then enabling interoperability, even through “added protection,” interferes with the DRM’s effectiveness. Both France and the United States would do well to define specifically what DRM holders can do with their DRM, which in turn would help define what third parties like Johansen are permitted to manipulate. Can DRM be effective without preventing interoperability?

Hopefully, the purpose and limits of DRM will be defined over time. If it becomes clear that interoperability does not enable piracy to a dangerous degree, governments might consider offering companies like Apple (or the music labels) business incentives to invest in and adapt to interoperability.¹⁴¹ Yet empowering companies to regulate the interoperability of their

141. See Porter & Swindells, *supra* note 3, at 22.

product through DRM is perhaps the most powerful business incentive available. Government-subsidized incentives might not be sufficient to encourage companies to invest in the digital marketplace, as companies would have no control over downstream/future use of their products. Lack of control would arguably translate to lack of profit.

In sum, Dadvsi and the interoperability debate reflect the struggle to define the proper scope of government regulation of DRM. Intellectual property rights and the consumer interest in interoperability are challenging to reconcile. In order to foster the development of the digital global marketplace, both France and the United States have granted DRM holders a great deal of leeway. While granting creators and distributors freedom encourages the development of new products, limiting consumer choice could stifle the market for competitors.

Though Dadvsi does not give a final answer as to whether the rights of DRM holders outweigh the interoperability concerns of consumers, its interoperability provisions undoubtedly give DRM holders the upper hand. As consumers continue to push for limits on DRM holder's rights, governments should explore new ways of regulating interoperability. With time, the needs of the marketplace, creators, and consumers will become more obvious. Still, governments will only be able to balance these competing interests successfully if they create law that is flexible. Because the internet enables the instantaneous exchange of information, it also causes abrupt shifts in competing interests. Ironically, in the end, Dadvsi's lack of clarity on interoperability may prove to be just the sort of adaptable law the digital age requires.

BERKELEY TECHNOLOGY LAW JOURNAL

PRESERVING COMPETITION FOR COMPUTER MAINTENANCE IN THE DMCA ERA: 17 U.S.C. § 117(C) AND § 1201(A)(1) AFTER *STORAGE TEK*

By Alan Galloway

During the early 1990s, computer equipment manufacturers wielded copyright law as a sword against independent service organizations (ISOs) to dominate the market for computer repair and maintenance.¹ Industry licensing practices and copyright restrictions on RAM copies of computer programs left ISOs unable to even turn on computer hardware for repair without infringing copyright. In 1998, after manufacturers had won several infringement actions against ISOs,² Congress passed the Computer Maintenance Competition Assurance Act (CMCAA) to restore free competition in the computer service industry.³ The CMCAA created section 117(c) of the Copyright Act—a safe harbor declaring that software copies made by activating a machine for repair or maintenance are noninfringing, subject to certain conditions.⁴ Yet, in the same bill Congress enacted section 1201 of the Digital Millennium Copyright Act (DMCA), which created liability for the circumvention of technology protection measures (TPMs) restricting access to copyrighted works.⁵ This raised the possibili-

© 2007 Alan Galloway

1. See, e.g., *DSC Commc'ns. Corp. v. DGI Techs.*, 81 F.3d 597, 601 (5th Cir. 1996) (“DGI may well prevail on the defense of copyright misuse, because DSC seems to be attempting to use its copyright to obtain a patent-like monopoly over unpatented microprocessor cards”); *MAI Sys. Corp. v. Peak Computer, Inc.*, 991 F.2d 511, 517-19 (9th Cir. 1993) (holding that ISO infringed manufacturer’s software copyright by turning on computer for repair); *CSU Holdings v. Xerox*, 910 F. Supp. 1537, 1541-46 (D. Kan. 1995) (granting preliminary injunction against ISO that asserted manufacturer was misusing copyright to perpetuate antitrust violations); *Advanced Computer Servs. of Mich., Inc. v. MAI Sys. Corp.*, 845 F. Supp. 356, 363-71 (E.D. Va. 1994) (holding that ISO infringed copyright of manufacturer controlling 90% of the repair market and rejecting ISO’s antitrust claims).

2. See *Peak*, 991 F.2d at 517-19 (holding that an ISO infringed); *Advanced Computer Servs.*, 845 F. Supp. at 363-71 (holding that ISO infringed); *CSU Holdings*, 910 F. Supp. at 1541-46 (granting preliminary injunction against ISO). But see *DGI*, 81 F.3d at 601 (denying preliminary injunction against ISO).

3. Computer Maintenance Competition Assurance Act (CMCAA), Pub. L. 105-304 § 302, 112 Stat. 2860, 2886-87 (1998) (codified at 17 U.S.C. § 117 (2000)); see H.R. REP. NO. 105-551, pt. 1, at 27 (1998) (discussing the goals of the amendments).

4. CMCAA, Pub. L. 105-304 § 302, 112 Stat. 2860, 2886-87 (1998) (codified at 17 U.S.C. § 117 (2000)).

5. The CMCAA was enacted as Title III of the Digital Millennium Copyright Act (DMCA) on October 28, 1998. The DMCA included the CMCAA, the WIPO Copyright

ty that, the CMCAA notwithstanding, manufacturers could use TPMs backed by DMCA liability to lock ISOs out of the market for maintenance.⁶

*Storage Technology Corp. v. Custom Hardware Engineering & Consulting, Inc.*⁷ was the first appellate construal of the CMCAA,⁸ clarifying both the scope of maintenance activities protected and the conditions for that protection.⁹ Moreover, it was the first appellate decision to address whether maintenance activity protected by the safe harbor can nonetheless trigger liability under the DMCA's anti-circumvention provision, 17 U.S.C. § 1201(a)(1).¹⁰ Finally, it clarified a critical intersection of contract law and copyright law by limiting the circumstances when breaches of software licenses give rise to copyright liability.¹¹

In *StorageTek*, the Court of Appeals for the Federal Circuit vacated a preliminary injunction against an ISO that triggered RAM copies of software, circumvented a TPM, and made use of restrictively licensed software during a three-year maintenance contract.¹² The court interpreted § 117(c)'s safe harbor to cover long-term maintenance and the use of software that was not functionally necessary to activate the equipment.¹³ The court held that the DMCA anti-circumvention provision, § 1201(a)(1)(A), creates no separate enforceable right where defendant's conduct neither constitutes nor facilitates infringement (and in particular, when the conduct falls within the § 117(c) safe harbor).¹⁴ Finally, it cau-

and Performances and Phonograms Treaties Implementation Act of 1998, the Online Copyright Infringement Liability Limitation, and the Vessel Hull Design Protection Act, as well as miscellaneous provisions affecting small webcasters. Digital Millennium Copyright Act, Pub. L. 105-304, 112 Stat. 2860 (1998).

6. See Dan L. Burk, *Anticircumvention Misuse*, 50 UCLA L. REV. 1095, 1096-97, 1140 (2003) (arguing that the anticompetitive potential of TPMs requires an equitable doctrine of anticircumvention misuse, in order to prohibit anticompetitive practices); see also Julie E. Cohen, *Reverse Engineering and the Rise of Electronic Vigilantism: Intellectual Property Implications of "Lock-Out" Programs*, 68 S. CALIF. L. REV. 1091, 1096-97 (1995) (arguing that technological "lock-out" measures merit copyright protection, but have potential for misuse when combined with license terms).

7. *Storage Tech. Corp. v. Custom Hardware Eng'g. & Consulting, Inc. (StorageTek II)*, 421 F.3d 1307 (Fed. Cir. 2005), *further opinion on denial of reh'g*, 431 F.3d 1374 (Fed. Cir. 2005).

8. *Id.* at 1311.

9. See *id.* at 1312-15.

10. See *id.* at 1318.

11. See *id.* at 1316.

12. *Id.* at 1310, 1321.

13. See *id.* at 1313-14; *Storage Tech. Corp. v. Custom Hardware Eng'g. & Consulting, Inc. (StorageTek III)*, 431 F.3d 1374, 1376 (Fed. Cir. 2005).

14. *StorageTek II*, 421 F.3d at 1318-19.

tioned that actions in breach of software licenses do not create copyright liability unless those actions violate the exclusive rights of section 106 of the Copyright Act.¹⁵

StorageTek preserves the spirit of the CMCAA by construing a robust § 117(c) safe harbor. The Federal Circuit's analysis suggests a coherent, restrained approach to the use of copyright law in the context of computer equipment manufacturers and ISOs competing in the market for hardware repair and maintenance. This approach disentangles copyright law from claims of anticompetitive conduct, from circumvention of TPMs that do not guard the exclusive rights of copyright, and from the *use* of software (as opposed to the copying or distribution of software) beyond the scope of a license. By curtailing the role of copyright law (and the availability of copyright remedies) in disputes that do not center on the traditional exclusive rights, this approach respects the CMCAA's goal of restoring the competitive balance inadvertently upset by the rise of digital copyright. The Federal Circuit's approach prevents hardware manufacturers from wielding copyright law as a sword against the ISOs responsible for maintaining their equipment, but also prevents use of the safe harbor as an absolute shield against license violations, trade secret misappropriation, or unfair competition.

Part I of this Note considers the legal background of both the CMCAA's safe harbor for maintenance, 17 U.S.C. § 117(c), and the DMCA's anti-circumvention provision, 17 U.S.C. § 1201(a)(1). Part II provides the factual record that gave rise to the claims and the district court proceedings in *StorageTek*. Part III examines the Federal Circuit's key holdings with respect to the § 117(c) safe harbor, the § 1201(a)(1) anti-circumvention provision, and licensing issues—arguing that the decision exhibits generally sound reasoning, preserves the CMCAA safe harbor, and sensibly limits copyright liability and remedies to disputes that center on conduct that tends to infringe the exclusive rights defined in 17 U.S.C. § 106. Part IV concludes that this decision is a positive development for both for copyright law and the computer service market.

I. LEGAL BACKGROUND

This Part provides the legal background of both the CMCAA's safe-harbor for repair and maintenance and the DMCA's § 1201(a)(1) anti-circumvention provision—the two provisions of copyright law at the center of *StorageTek*. Section I.A traces the origins of the obstacles to compe-

15. *Id.* at 1316.

tition in the computer service market that the CMCAA was enacted to remove. Section I.B surveys the various roles that TPMs play and the opposing views on how the DMCA reinforces the roles of TPMs.

**A. The CMCAA's Safe Harbor for Computer Service:
17 U.S.C. § 117(c)**

This Section explains how the competitive landscape for ISOs vying with computer manufacturers for service contracts was distorted by three elements—(1) copyright protection for computer software, (2) software licensing practices, and (3) court holdings that copyright encompasses RAM copies of software—such that ISOs could not even turn on equipment without infringing a manufacturer's copyright. This provoked Congress to enact the CMCAA, with its § 117(c) safe harbor, to restore fair competition for computer repair and maintenance.¹⁶

In 1980, Congress embraced copyright protection for software as a literary work. Although the Copyright Act of 1976 included a definition of "literary works" broad enough to encompass software code,¹⁷ its original section 117 specified that any software protections under previous law were unchanged—preserving the status quo as Congress awaited the report of the National Commission on New Technological Uses of Copyrighted Works (CONTU).¹⁸ Congress had established CONTU in 1974 to study the reproduction, use, and creation of copyrighted works in conjunction with automatic systems.¹⁹ In 1978, CONTU recommended that both source and object code should be protected by copyright as literary works,

16. See S. REP. NO. 105-190, at 21 (1998). The Senate Report stated that the new section would "ensure that independent service organizations do not inadvertently become liable for copyright infringement merely because they have turned on a machine in order to service its hardware components." *Id.* at 21 (1998).

17. See 17 U.S.C. § 101 (Supp. II 1978). "Literary works' are works, other than audiovisual works, expressed in words, numbers, or other verbal or numerical symbols or indicia, regardless of the nature of the material objects, such as books, periodicals, manuscripts, phonorecords, film, tapes, disks, or cards, in which they are embodied." *Id.*

18. See 17 U.S.C. § 117 (Supp. II 1978). The House Report reveals Congressional uncertainty, upon enacting the Copyright Act of 1976, regarding both whether copyright already protected software and whether it ought to do so. The report noted that "the problems are not sufficiently developed for a definitive legislative solution," and stated that CONTU would "recommend definitive copyright provisions to deal with the situation." H.R. REP. NO. 94-1476, at 116 (1976), as reprinted in 1976 U.S.C.C.A.N 5659, 5731 (1976).

19. FINAL REPORT OF THE NATIONAL COMMISSION ON NEW TECHNOLOGICAL USES OF COPYRIGHTED WORKS I (July 31, 1978) [hereinafter "CONTU REPORT"], available at <http://digital-law-online.info/CONTU/PDF>.

subject to certain limitations.²⁰ Congress embraced this recommendation in 1980 by simply adding computer programs to the definitions listed in 17 U.S.C. § 101 and rewriting § 117 to permit the owner of a program copy to make (or authorize) copies necessary to utilize or archive the software.²¹

In 1993, in *MAI Systems Corp. v. Peak Computer, Inc.*,²² the Ninth Circuit held that (a) random access memory (RAM) is a tangible medium of expression, and consequently, that (b) the § 106 reproduction right encompasses loading software from a storage device (e.g., a disk) into RAM.²³ Other courts followed this holding, creating obstacles to competition in the computer repair industry.²⁴ *Peak* illustrates the resulting problem for ISOs. *Peak* was an ISO hired to repair equipment manufactured by MAI.²⁵ Whenever *Peak* turned on the equipment to service it, the equipment automatically loaded a copy of MAI's software into RAM.²⁶ Based on this copying, the Ninth Circuit held that *Peak* infringed MAI's copyright.²⁷

20. *Id.* at 1, 12-15.

21. See Copyright Act Amendments of December 12, 1980, Pub. L. No. 96-517, 94 Stat. 3015, 3028 (codified as amended at 17 U.S.C. § 101 and § 117 regarding computer programs (Supp. IV 1980)). The language of § 117, as enacted in 1980, allowed owners of programs to copy programs as an "essential step" in the utilization of the program, and to make and keep backup ("archival") copies of programs they owned. 17 U.S.C. § 117 (Supp. IV 1980). The CONTU report had recommended language identical but for the substitution of "rightful possessor" for "owner." Compare CONTU REPORT, *supra* note 19, at 12, with 17 U.S.C. § 117 (Supp. IV 1980).

22. *MAI Sys. Corp. v. Peak Computer, Inc.*, 991 F.2d 511, 519 (9th Cir. 1993).

23. Section 106 of the Copyright Act gives owners of copyrights in literary works five exclusive rights: reproduction, preparation of derivative works, distribution, public performance, and public display. 17 U.S.C. § 106 (2000).

24. See, e.g., *Stenograph L.L.C. v. Bossard Assocs.*, 144 F.3d 96, 101 (D.C. Cir. 1998) (citing *Peak* for the proposition that loading into RAM creates a "copy"); *DSC Commc'ns. Corp. v. DGI Techs.*, 81 F.3d 597, 600 (5th Cir. 1996) (citing *Peak* for the proposition that a copy is made when software is loaded into RAM); *NLFC, Inc. v. Devcom Mid-America*, 45 F.3d 231, 235 (7th Cir. 1995) (citing *Peak* as an authority for the proposition that loading into RAM creates a "copy"); *CSU Holdings v. Xerox*, 910 F. Supp. 1537, 1541 (D. Kan. 1995) ("We agree with [*Peak*] that transferring a computer program from a storage device to a computer's RAM constitutes a copy for purposes of copyright law."); *Advanced Computer Servs. of Mich., Inc. v. MAI Sys. Corp.*, 845 F. Supp. 356, 363-64 (E.D. Va. 1994) (citing *Peak* as support for holding that RAM copies maintained for minutes infringe as copies).

25. *Peak*, 991 F.2d at 513.

26. *Id.* at 518.

27. The Ninth Circuit's opinion in *Peak* fails to explain why § 117(a), codified at that time as § 117, did not place *Peak*'s activity outside the scope of MAI's exclusive rights. Section 117, as revised in 1980, provided that "it is not an infringement for the owner of a copy of a computer program to make or authorize the making of another copy

In the wake of *Peak*, any ISO without a license to make copies of protected software faced copyright liability for activities essential to its business. Computer hardware manufacturers sold hardware, but licensed the software that enabled it to function.²⁸ These licenses allowed equipment purchasers to boot up their machines (copying software into RAM in the process), but in some instances barred third parties from doing so.²⁹ The inability of ISOs to turn on equipment without a license from the computer equipment manufacturer gave the manufacturers a competitive advantage in the service market—at least to the extent that manufacturers controlled license terms.

The CMCAA addressed this anticompetitive use of copyright law in order to restore competition in the service market.³⁰ The statutory safe harbor it created, § 117(c), reads:

or adaptation of that computer program provided . . . that such a new copy or adaptation is created as an essential step in the utilization of the computer program in conjunction with a machine and that it is used in no other manner . . .” 17 U.S.C. § 117(1) (Supp. IV 1980) (emphasis added). The Ninth Circuit dismissed this exclusion in a single footnote, stating that “[s]ince MAI licensed its software, the Peak customers do not qualify as ‘owners’ of the software and are not eligible for protection under § 117.” *Peak*, 991 F.2d at 518 n.5. The Ninth Circuit did not address whether the owner of *the copy* (presumably the party that hired Peak) had authorized Peak to make a RAM copy in order to utilize the equipment. The opinion has been criticized for failing to distinguish between ownership of copyright in software and ownership of a single copy of that software. *See, e.g.*, *DSC Commc’ns. Corp. v. Pulse Commc’ns, Inc.*, 170 F.3d 1354, 1360 (Fed. Cir. 1999) (“[A] party who purchases copies of software from the copyright owner can hold a license under a copyright while still being an ‘owner’ of a copy of the copyrighted software for purposes of section 117.”); MELVILLE B. NIMMER & DAVID NIMMER, 2 NIMMER ON COPYRIGHT § 8.08[B][1][c] (2006) (characterizing the Ninth Circuit’s logic as “inadequate”). A district court not only repeated this mistake, but went so far as to omit “of a copy” when reciting the statute. *See Advanced Computer Servs. of Mich., Inc. v. MAI Sys. Corp.* 845 F. Supp. 356, 367 (E.D. Va. 1994) (“Section 117 only permits ‘the owner . . . of a computer program to make or otherwise authorize the making of another copy.’”).

28. *See, e.g., Peak*, 991 F.2d at 517 n.3 (quoting license term that software was equipment manufacturer’s “valuable and exclusive property”); *DSC*, 81 F.3d at 599 (noting software license accompanying hardware sale); *CSU Holdings*, 910 F. Supp. at 1540-43 (noting manufacturer sold copiers while selling software licenses). Software is typically licensed rather than sold. *See* Christian Nadan, *Software Licensing In the 21st Century: Are Software “Licenses” Really Sales, and How Will the Software Industry Respond?*, 32 AIPLA Q.J. 555, 557 (2004); *see also* Andrew Rodau, *Computer Software: Does Article 2 of the Uniform Commercial Code Apply?*, 35 EMORY L.J. 853, 862 (1986).

29. *See, e.g., Peak*, 991 F.2d at 517 n.3 (describing a license that had the practical effect of prohibiting third parties from activating equipment that made RAM copies when booted).

30. *See* H.R. REP. NO. 105-551, pt. 1, at 27 (1998).

[I]t is not an infringement for the owner or lessee of a machine to make or authorize the making of a copy of a computer program if such copy is made solely by virtue of the activation of a machine that lawfully contains an authorized copy of the computer program, for purposes only of maintenance or repair of that machine, if—

(1) such new copy is used in no other manner and is destroyed immediately after the maintenance or repair is completed; and

(2) with respect to any computer program or part thereof that is not necessary for that machine to be activated, such program or part thereof is not accessed or used other than to make such new copy by virtue of the activation of the machine.³¹

Before *StorageTek*, no federal court of appeals had construed this statutory provision.³²

B. The DMCA's Legal Reinforcement for TPMs: 17 U.S.C. § 1201

Technical protection measures (TPMs) introduce artificial barriers restricting the access, copying, and use of digital works.³³ By raising the cost of copying digital works, TPMs alleviate the “public goods” problem created by the very low cost of copying works relative to the cost of creating original works.³⁴ TPMs constitute a form of “self-help” through which content owners take extra-legal measures to control their works.³⁵ Self-help measures may be a precondition for legal protections, may be encouraged and reinforced by legal protections, or may disqualify one from legal

31. 17 U.S.C. § 117(c) (2000).

32. *Storage Tech. Corp. v. Custom Hardware Eng'g. & Consulting, Inc. (StorageTek II)*, 421 F.3d 1307, 1311 (Fed. Cir. 2005).

33. TPMs may prevent access or copying altogether; limit access to particular individuals, particular hardware, or particular regions; or prevent viral or multi-generational copies, for instance by disallowing further copying of copies, or by artificially introducing degradation into each copy. TPMs need not be insurmountable to be effective. A surmountable TPM may still be effective by raising the cost (including time, effort, and resources) of unauthorized access or copying.

34. This problem has been recognized for decades. See Kenneth J. Arrow, *Economic Welfare and the Allocation of Resources for Invention*, 9 (RAND Corporation, Research Paper No. P-1856-RC, 1959) (“In the absence of special legal protection, [one] cannot however simply sell information on the open market. Any one purchaser can destroy the monopoly, since he can reproduce the information at little or no cost.”), available at <http://www.rand.org/pubs/papers/2006/P1856.pdf> (last visited Feb. 18, 2007). For a recent discussion, see Lee Kovarsky, *A Technological Theory of the Arms Race*, 81 IND. L.J. 917, 919-21 (2006).

35. Douglas Lichtman, *How the Law Responds to Self-Help*, 1 J.L. ECON. & POL'Y 215, 216 (2005).

protections.³⁶ TPMs may even contravene legal rights to access, copy, or use works.³⁷ In some circumstances, legal support for self-help, through liability or penalties for TPM circumvention, may be beneficial; anti-circumvention laws may discourage a socially wasteful “arms race” between protection and circumvention technologies.³⁸

By 1998, the content industries demanded legal reinforcement of TPMs used to protect digital works.³⁹ The WIPO Copyright Treaty also required the U.S. to provide legal remedies to authors where TPMs were circumvented to infringe copyrights.⁴⁰ The Senate Report reflected these driving concerns behind Title I of the DMCA:

36. *Id.* at 257.

37. *See* LAWRENCE LESSIG, CODE AND OTHER LAWS OF CYBERSPACE, 135-41 (1999). Lawrence Lessig has pointed out that where a TPM prevents lawful uses of a work, such as fair use, the theoretical right to engage in fair use loses practical value unless it can be legally enforced—an example of statutory law superseded by the law of software code. Lessig argues that software code has greater potential than legal code to create regulations and limitations on what users can do, a potential that raises a host of policy questions regarding the architecture, norms, and legal frameworks governing the internet. *See id.*

38. *See* Dan L. Burk, *Muddy Rules for Cyberspace*, 21 CARDOZO L. REV. 121, 172 (1999). In the absence of legal penalties to discourage the circumvention of TPMs and the development of circumvention technologies, the use of TPMs to create restrictions on digital works might become an unchecked “arms race,” with one side constantly expending resources to create new barriers while another side spends resources to overcome them. Such an arms race is inefficient because it diverts resources that could be directed towards the development or acquisition of content, just as a real arms race diverts resources away from other forms of economic development. *See id.*; *cf.* Lee Kovarsky, *A Technological Theory of the Arms Race*, 81 IND. L.J. 917, 917-19, 945 (2006) (arguing that the inefficiency of arms races is under-theorized and stems primarily from cannibalization of authors’ ability to choose an optimal mix of copyright and self-help measures). In addition, Doug Lichtman points out that at least in the context of copyright and digital rights management, “there is no reason to believe th[e] back and forth [of an arms race] would yield anything close to an optimal division between rights and restrictions.” Lichtman, *supra* note 35, at 240 (2005). Lichtman notes that the effectiveness of the DMCA against such an arms race has been disappointing, in part because of the difficulty in identifying, establishing jurisdiction over, and extracting judgments from those that circumvent TPMs. *Id.* at 232-33. Lichtman identifies the general problem of prohibitive expense in enforcing copyright against individuals. *Id.* at 242. Similarly, Glenn Lunney questions the practicality of § 1201(a)(1) because it requires lawsuits against individual users. Glenn Lunney, *The Death of Copyright: Digital Technology, Private Copying, and the Digital Millennium Copyright Act*, VIRGINIA L. REV. (2001). *StorageTek* thus may represent a rare case where § 1201(a)(1) enforcement was practical.

39. Peter S. Menell, *Envisioning Copyright Law’s Digital Future*, 46 N.Y.L. SCH. L. REV. 63, 134 (2002).

40. Article 11 of the WIPO Copyright Treaty reads:

Due to the ease with which digital works can be copied and distributed worldwide virtually instantaneously, copyright owners will hesitate to make their works readily available on the Internet without reasonable assurance that they will be protected against massive piracy. Legislation implementing the [World Intellectual Property Organization] treaties provides this protection and creates the legal platform for launching the global digital on-line marketplace for copyrighted works. It will facilitate making available quickly and conveniently via the Internet the movies, music, software, and literary works that are the fruit of American creative genius. It will also encourage the continued growth of the existing off-line global marketplace for copyrighted works in digital format by setting strong international copyright standards.⁴¹

With these concerns in mind,⁴² Congress passed Title I of the DMCA.⁴³ The central anti-circumvention provision, § 1201(a)(1)(A), states, “No person shall circumvent a technological measure that effectively controls access to a work protected under this title.”⁴⁴

Contracting Parties shall provide adequate legal protection and effective legal remedies against the circumvention of effective technological measures that are used by authors in connection with the exercise of their rights under this Treaty or the Berne Convention and that restrict acts, in respect of their works, which are not authorized by the authors concerned or permitted by law.

WIPO Copyright Treaty, art. 11, Dec. 20, 1996, S. Treaty Doc. No. 105-17, at 1 (1997), 36 I.L.M. 65, available at http://www.wipo.int/treaties/en/ip/wct/trtdocs_wo033.html.

41. S. REP. NO. 105-190, at 8 (1998).

42. See Menell, *supra* note 39, at 134. Nonetheless, the final DMCA text did not exclusively reflect the concerns of content owners. Negotiation and lobbying efforts resulted in some exclusions sought by technology firms. See Pamela Samuelson, *Intellectual Property and the Digital Economy: Why the Anti-Circumvention Regulations Need to Be Revised*, 14 BERKELEY TECH. L.J. 519, 522-23 (1999).

43. Title I of the DMCA was formally known as the WIPO Copyright and Performances and Phonograms Treaties Implementation Act of 1998, but is commonly referred to simply as the DMCA. WIPO Copyright and Performances and Phonograms Treaties Implementation Act of 1998, Pub. L. 105-304 § 101, 112 Stat. 2860, 2861 (1998).

44. Section 1201(a) of Title 17 of the United States Code reads, in relevant part:

(1)(A) No person shall circumvent a technological measure that effectively controls access to a work protected under this title.

(2) No person shall manufacture, import, offer to the public, provide, or otherwise traffic in any technology, product, service, device, component, or part thereof, that—

(A) is primarily designed or produced for the purpose of circumventing a technological measure that effectively controls access to a work protected under this title;

Two views of § 1201 have since emerged. The “paracopyright” view is that § 1201 creates independent property rights that center on the TPMs circumvented, not the works accessed or copied.⁴⁵ Under this view, if a DVD encryption scheme, such as CSS,⁴⁶ controls access to some protected works, then circumventing it to gain access to a public domain work, or to make fair use of a protected work, would result in DMCA liability.⁴⁷ Dicta by the Second Circuit in *Universal City Studios, Inc. v. Corley* suggested that the DMCA prohibits access even for fair use: “Fair use has never been held to be a guarantee of access to copyrighted material in order to copy it by the fair user’s preferred technique or in the format of the original.”⁴⁸ Similarly, in *Davidson & Associates v. Jung*, the Eighth Circuit focused on the existence of access controls rather than whether material being protected by a TPM was copyrightable.⁴⁹

However, two subsequent appellate cases have rejected the paracopy-right view. In *Chamberlain Group, Inc. v. Skylink Technologies*, the Fed-

(B) has only limited commercially significant purpose or use other than to circumvent a technological measure that effectively controls access to a work protected under this title; or

(C) is marketed by that person or another acting in concert with that person with that person’s knowledge for use in circumventing a technological measure that effectively controls access to a work protected under this title.

The DMCA exhibits an asymmetry in that it does not ban circumvention of anti-copying technology while banning the trafficking in devices for that purpose.

45. H.R. REP. NO. 105-551, pt. 2, at 24 (1998). As noted in the House Report, the term “paracopyright” was used in a September 16, 1997 letter sent to Congress by concerned law professors. *Id.*

46. CSS, or Content Scramble System, is the encryption system used to encrypt commercial DVDs. *See Universal City Studios, Inc. v. Corley*, 273 F.3d 429, 436-37 (2d Cir. 2001).

47. *See Burk, Anticircumvention Misuse, supra* note 6, at 1095, for a discussion that offers this interpretation and identifies resulting problems. Other language in the DMCA fails to clarify the relation between the § 1201 and § 106 rights; for instance, § 1201(c) states that § 1201 does not “affect rights, remedies, limitations, or defenses to copyright infringement, including fair use, under this title,” but this is itself ambiguous, compromise language with unclear impact on the ambiguous, compromise language of § 1201(a).

48. *Universal City Studios, Inc. v. Corley*, 273 F.3d 429, 459 (2d Cir. 2001). The court, however, did not hold that circumvention to make fair use violated the DMCA, because the appellants had not claimed to be making fair use of copyrighted works, other methods of making fair use of the DVDs in question were possible, and the effects on possible fair use of others were not evident. *Id.*

49. *Davidson & Assocs. v. Jung*, 422 F.3d 630 (8th Cir. 2005). *See* A.H. Rajani, Note, *Davidson & Associates v. Jung: (Re)interpreting Access Controls*, 21 BERKELEY TECH. L.J. 365, 376 (2006).

eral Circuit held that the anti-trafficking provision of the DMCA, § 1201(a)(2), was not violated where no relationship existed between circumvention and a violation of one of the exclusive rights defined in the Copyright Act.⁵⁰ The Federal Circuit signaled that the DMCA protections were not independent property rights, but served only to protect the rights already enumerated in the Copyright Act.⁵¹ Similarly, in *Lexmark International, Inc. v. Static Control Components, Inc.*, the Sixth Circuit drew a strong distinction between appropriation of protected expression and use of functionality, holding that where a TPM prevented use—but not reproduction—of protected software, then a device that circumvented the TPM did not violate § 1201(a)(2) of the DMCA.⁵² The court also held that the DMCA only protects access to works protected by the Copyright Act.⁵³ A concurring opinion went further, stating that if underlying copying were shown to be fair use, there would be no violation of the DMCA.⁵⁴

Chamberlain and *Static Control* illustrate how the paracopyright interpretation of the DMCA could restrict activities far-removed from the distribution of digital content. While *Universal* concerned the kind of activity the DMCA was enacted to address (enabling widespread copying of digitized movies), both *Chamberlain* and *Static Control* concerned manufacturers (of garage door openers and printers, respectively) that sued to block after-market activities of potential competitors (selling remote control devices and chips for remanufactured toner cartridges).⁵⁵ These attempts to use the DMCA to control competition for after-market sales resembled earlier attempts to use ordinary copyright to control post-sale service, as seen in *Peak*.⁵⁶ By declining to adopt the paracopyright view, the *Chamberlain* and *Static Control* courts stymied these efforts.⁵⁷

50. *Chamberlain Group, Inc. v. Skylink Techs.*, 381 F.3d 1178, 1204 (Fed. Cir. 2004). *Chamberlain*, a manufacturer of garage door openers (GDOs) had used “rolling code” technology to restrict access to the GDO. *Id.* at 1183. *Skylink*, a maker of after-market GDO transmitters, had circumvented this restriction so that its universal transmitter could interoperate with GDOs sold by *Chamberlain*. The opinion by Judge Gajarsa, citing § 1201(c)(1), found no DMCA violation in the absence of a nexus to infringement of *Chamberlain*’s § 106 rights. *Id.*

51. *Id.* at 1204.

52. *Lexmark Int’l, Inc. v. Static Control Components, Inc.*, 387 F.3d 522, 546-50 (6th Cir. 2004).

53. *Id.* at 550.

54. *Id.* at 552-53 (Merritt, J., concurring) (stating that the DMCA requires plaintiff to show defendant circumvented TPM for the purpose of pirating a protected work).

55. *See Universal City Studios, Inc. v. Corley*, 273 F.3d 429, 435-36 (2d Cir. 2001); *Chamberlain*, 381 F.3d at 1183-85; *Static Control*, 387 F.3d at 530-31.

56. *See Chamberlain*, 381 F.3d at 1183; *Static Control*, 387 F.3d at 530; *MAI Sys. Corp. v. Peak Computer, Inc.*, 991 F.2d 513-16 (9th Cir. 1993) (discussing injunctions

Such was the state of the law prior to *StorageTek*.

II. *STORAGETEK*: FACTS AND CASE HISTORY

This Part discusses the facts of *StorageTek* and the proceedings at the district court. Section II.A presents an overview of the technology at issue—a tape library system manufactured by plaintiff Storage Technology Corp. (“StorageTek”), the software that was licensed, and the conduct at issue—the RAM-copying of software and TPM circumvention by defendant ISO Custom Hardware Engineering (“CHE”). Section II.B recounts the procedural history of *StorageTek*.

A. Factual Record: The Computer System and the ISO’s Conduct

CHE was hired to maintain a StorageTek tape library system, which comprised multiple tape library units coordinated by a single Library Management Unit (LMU)—a computer with a processor, RAM, and a hard disk containing specialized software.⁵⁸ Each tape library included a Library Control Unit (LCU)—another computer with a processor and RAM—that controlled and monitored a huge Library Storage Module (or “Silo”) containing racks of tapes, tape drives, and a robotic arm.⁵⁹ Each tape library operated like a data jukebox, storing and retrieving massive amounts of data distributed across thousands of tapes, which the robotic arm inserted into the tape drives as needed.⁶⁰

When something went wrong with the operation of the robotic arm, numeric fault system codes were generated by software running in the

sought by MAI). *Davidson* blocked the use of third-party servers for a multiplayer video game—arguably an after-market competition issue as well. However, the court’s comment that “games can be easily copied and distributed over the Internet” suggests that the court viewed the case through the lens of core DMCA concerns about distribution of digital content. *See Davidson*, 422 F.3d at 633, 637.

57. Indeed, the entire panel in *Static Control* agreed that “the [DMCA] was not intended by Congress to be used to create a monopoly in the secondary markets for parts or components of products that consumers have already purchased.” *Id.* at 553 (Feikens, J., concurring in part).

58. The following descriptions and diagrams are based on: the district court’s findings of facts, *Storage Tech. Corp. v. Custom Hardware Eng’g (StorageTek I)*, No. 02-12102, 2004 WL 1497688, at *1-2 (D. Mass. July 2, 2004); the description provided in the Federal Circuit’s initial opinion, *StorageTek II*, 421 F.3d at 1309-10; and StorageTek’s specifications for the 9310 tape library [hereinafter *9310 Specifications*], available at http://www.storagetek.com/products/product_page32.html (last visited Jan. 25, 2007).

59. *StorageTek I*, No. 02-12102, 2004 WL 1497688, at *1; *StorageTek II*, 421 F.3d at 1309-10; *see also 9310 Specifications*, *supra* note 58.

60. *StorageTek I*, No. 02-12102, 2004 WL 1497688, at *1; *9310 Specifications*, *supra* note 58.

LCU.⁶¹ The LCU could be set to various maintenance levels—basically logging levels—ranging from zero to nine.⁶² Above level zero, the generated fault codes were packaged into an “Event Message” sent over the network to the LMU, which stored the messages in an error log on its hard drive.⁶³

A system called GetKey allowed technicians to set the maintenance level by entering a password on the LMU, keyed to the LMU’s serial number and desired level.⁶⁴ StorageTek technicians could obtain these passwords by telephone,⁶⁵ but CHE resorted to a device, called the Library Event Manager (LEM), that tried successive passwords until it found one that set the desired level.⁶⁶ After the GetKey password was accepted, the system was then rebooted (which propagated the change to the LCU).⁶⁷ Later, CHE discovered it could simply send a file to the LCU as it rebooted, which mimicked a file normally sent by the LMU.⁶⁸ This method eliminated the need to use GetKey, and starting in March 2003, CHE phased out the LEM in favor of a new device, the Enhanced LEM (ELEM), which employed the newer method.⁶⁹

A system reboot was required to make the new level take effect.⁷⁰ Rebooting caused the LMU first to copy its own software from disk into

61. *StorageTek II*, 421 F.3d 1307, 1310 (Fed. Cir. 2005).

62. *StorageTek I*, No. 02-12102, 2004 WL 1497688, at *2.

63. *StorageTek II*, 421 F.3d at 1310. The district court characterized the Maintenance Code differently than did the Federal Circuit, finding that “[w]hen activated . . . [it] runs a series of diagnostic tests, provides information as to the nature of the problem and where the system difficulties have occurred or are likely to blossom, and performs other maintenance-specific operations.” *StorageTek I*, No. 02-12102, 2004 WL 1497688, at *2. Yet, the district court goes on to note that “event logging” is among the most important of the diagnostic functions performed by the code, and nothing in either the district court or Federal Circuit’s opinion indicates that CHE was making use of any features other than event logging. *See id.*

64. *StorageTek I*, No. 02-12102, 2004 WL 1497688, at *2; *StorageTek II*, 421 F.3d at 1310. Although this Note follows the Federal Circuit in using the term “password,” the password was not an arbitrary set of characters like a user-created password for a computer, but an algorithmically generated string based on the serial number of the hardware and a specified maintenance level, perhaps more aptly compared to a CD-ROM registration key. *See id.*

65. *StorageTek I*, No. 02-12102, 2004 WL 1497688, at *2.

66. *Id.* at *3; *StorageTek II*, 421 F.3d at 1310.

67. *StorageTek I*, No. 02-12102, 2004 WL 1497688, at *2; *StorageTek II*, 421 F.3d at 1310.

68. *StorageTek I*, No. 02-12102, 2004 WL 1497688, at *3; *StorageTek II*, 421 F.3d at 1310.

69. *StorageTek I*, No. 02-12102, 2004 WL 1497688, at *3.

70. *StorageTek II*, 421 F.3d at 1310.

RAM, then to send a copy of the LCU software across the network into the LCU's RAM.⁷¹ The factual record reveals nothing that could stop these software copies from being created upon rebooting.⁷² During the term of CHE's maintenance contract, the LEM (or ELEM) would reside on the network between the LCU and LMU, intercepting Event Messages sent by the LCU and forwarding them to CHE headquarters in Arizona, where technicians would interpret them to diagnose problems.⁷³ At the end of the three-year contract, the system was again rebooted.⁷⁴

StorageTek sold customers the tape library hardware, but merely licensed the software.⁷⁵ Two disputed features of the license played a role in the case. First, StorageTek contended that the licenses excluded "maintenance code" that "detects, records, displays and/or analyzes malfunctions in [the] Equipment."⁷⁶ Second, it claimed that non-transferability provisions precluded the license from covering ISOs hired by the purchaser.⁷⁷

Diagram 1 illustrates how StorageTek technicians used GetKey to set the maintenance level. Diagram 2 depicts use of the LEM to circumvent GetKey. Diagram 3 shows how CHE's ELEM set the maintenance level by interacting only with the LCU, not the LMU or GetKey.

71. *Id.* at 1309.

72. *Id.* As CHE's appellate brief noted, "[t]he only way to prevent the 'Maintenance Code' from being loaded or executed on activation is to leave the [tape library] System turned off." Non-Confidential Brief of Defendants-Appellants Custom Hardware Engineering & Consulting, Inc. and David York at 12, *Storage Tech. Corp. v. Custom Hardware Eng'g, Inc.*, 421 F.3d 1307 (Fed. Cir. 2005) (No. 04-1462), 2004 WL 5003204.

73. *StorageTek I*, No. 02-12102, 2004 WL 1497688, at *3; *StorageTek II*, 421 F.3d at 1310.

74. *StorageTek II*, 421 F.3d at 1312.

75. *Id.* at 1310.

76. *StorageTek I*, No. 02-12102, 2004 WL 1497688, at *2 ("Plaintiff licenses the use of the Functional Code when it sells its systems. However, it retains exclusive use of the Maintenance Code portion and zealously guards it by means of its copyright registrations and by disabling and enabling the functions of the code with its GetKey.").

77. Corrected Non-Confidential Brief of Plaintiff-Appellee Storage Technology Corporation at 23-24, *Storage Tech. Corp. v. Custom Hardware Eng'g, Inc.*, 421 F.3d 1307 (Fed. Cir. 2005) (No. 04-1462), 2004 WL 5003205.

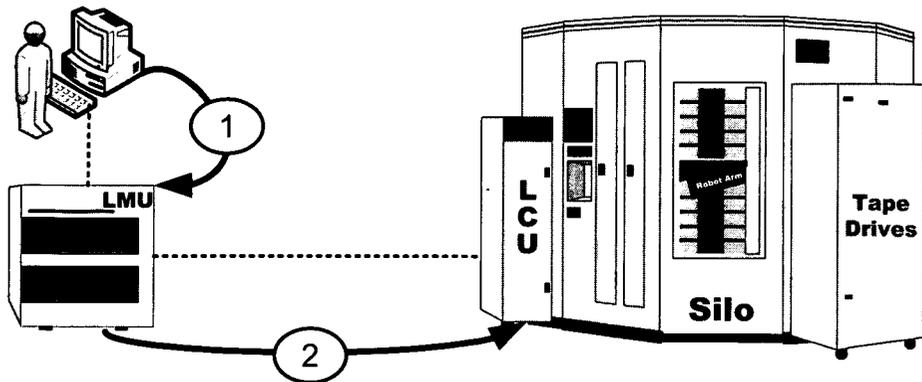


Diagram 1: Maintenance provided by StorageTek: (1) StorageTek technician enters password into workstation connected to the LMU. (2) In the LMU, GetKey software accepts password, causing LMU to send a file to the LCU (attached to the Silo). (3) The LCU begins sending Event Messages, to the LMU, which stores them in a log file readable by the technician.

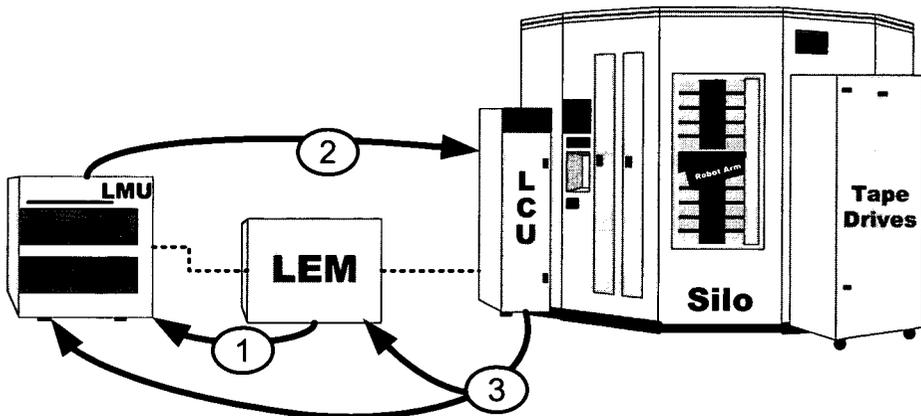


Diagram 2: LEM Method: (1) The LEM tries many passwords, each sent to the LMU. (2) In the LMU, GetKey software accepts correct password and the LMU sends a file to LCU (3) Upon rebooting, the LCU begins sending Event Messages to the LMU, which are copied by the LEM and sent to CHE over the internet (not depicted).

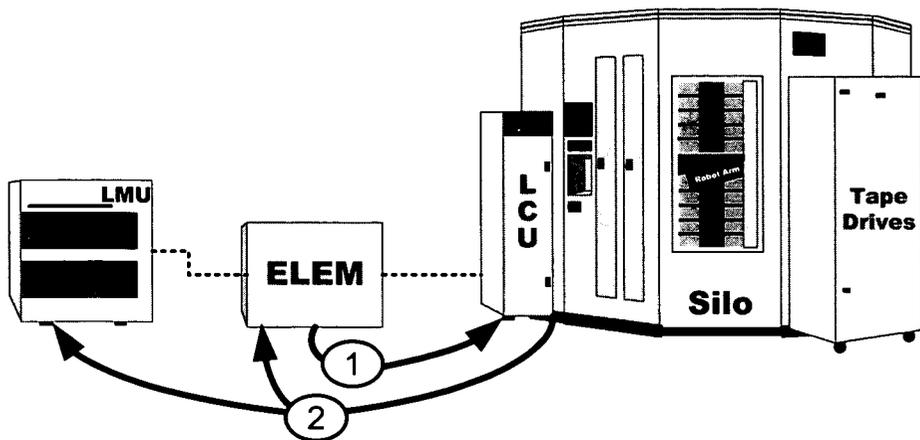


Diagram 3: ELEM Method: (1) The ELEM, instead of interacting with GetKey, sends a file (normally sent by the LMU) to the LCU (2) Upon rebooting, the LCU begins sending Event Messages to the LMU, which are copied by the ELEM and sent to CHE.

B. Procedural History

In October 2002, StorageTek sued CHE in the District of Massachusetts.⁷⁸ StorageTek alleged: (i) violation of its § 106 reproduction right through CHE's copying of StorageTek's "maintenance code" and (ii) through CHE's copying of Event Messages using the LEM/ELEM, (iii) violations of DMCA § 1201(a)(1) based on CHE's circumvention of GetKey, (iv) misappropriation of trade secrets, based on the theory that intercepted Event Messages were trade secrets, and (v) patent infringement.⁷⁹

The district court granted StorageTek's motion for a preliminary injunction.⁸⁰ The district court held that StorageTek was likely to succeed in showing copyright infringement of the maintenance code,⁸¹ on its DMCA claims,⁸² and on the trade secret claims.⁸³ Regarding the copyright infringement claim, the district court rejected CHE's § 117(c) defense as

78. Complaint for Damages and Injunctive Relief at 1, *Storage Tech. Corp. v. Custom Hardware Eng'g, Inc.*, No. 02-12102, 2002 WL 33928462, (D. Mass. Oct. 28, 2002).

79. Third Amended Complaint for Damages and Injunctive Relief at 2-3, *Storage Tech. Corp. v. Custom Hardware Eng'g, Inc.*, No. 02-12102-RWZ, 2004 WL 4908848, (D. Mass. Mar. 31, 2004); see *Storage Tech. Corp. v. Custom Hardware Eng'g, Ltd.*, No. 02-12102-RWZ, 2006 WL 1766434, at *1 (D. Mass. June 28, 2006).

80. *StorageTek I*, No. 02-12102, 2004 WL 1497688, at *5.

81. *Id.* at *3.

82. *Id.* at *4.

83. *Id.* at *4-5.

well as its defense that the RAM copies it made were permitted under the license granted by StorageTek to the machine owner.⁸⁴ The district court did not reach StorageTek's claim that copying the Event Messages constituted additional infringement.⁸⁵ The district court enjoined CHE from circumventing the password, intercepting and displaying the error messages, or causing the copying of the maintenance code.⁸⁶

CHE appealed.⁸⁷ Because StorageTek's complaint had included a patent claim (adjudicated prior to the appeal) CHE's appeal landed before the Federal Circuit.⁸⁸ The Federal Circuit vacated the preliminary injunction in a split-panel decision, concluding that StorageTek was unlikely to prevail on *any* of the key issues.⁸⁹ StorageTek then petitioned for rehearing, which was denied by the same panel, which issued a supplemental opinion clarifying aspects of its original decision.⁹⁰

III. ANALYSIS OF *STORAGETEK*

This Part analyzes the key holdings of the Federal Circuit concerning the § 117(c) safe harbor, StorageTek's anti-circumvention claims, and the software license terms. Section III.A considers the court's broad construction of the safe harbor, focusing on the court's interpretation of "maintenance," its analysis of CHE's purpose, and the test by which the court found certain software code necessary for activation. Section III.B assesses the court's extension of its *Chamberlain* DMCA analysis to *StorageTek*. Section III.C explores the court's finding of an implied license and its distinction between contract law and copyright law claims.⁹¹

84. *Id.* at *4.

85. *Id.* at *3 n.3.

86. *Id.* at *6.

87. *StorageTek II*, 421 F.3d at 1307.

88. *Id.* at 1310. Federal Circuit jurisdiction depends on the claims in the complaint, not on the subject of the appeal. 28 U.S.C. § 1295(a)(1) (2000).

89. *StorageTek II*, 421 F.3d at 1321.

90. *Storage Tech. Corp. v. Custom Hardware Eng'g, Inc. (StorageTek III)*, 431 F.3d 1374 (Fed. Cir. 2005).

91. The Federal Circuit also rejected the trade secret claims. *StorageTek II*, 421 F.3d at 1321. The court ruled that StorageTek's error codes were not trade secrets because the information was "not actually secret," citing "overwhelming evidence" that from 1987 to 1992 StorageTek had made the information freely available, including displaying the messages on display panels to users. The court deemed StorageTek's subsequent efforts to keep the codes secret irrelevant. The court also dismissed StorageTek's argument that while the error messages were in the public domain, particular event error messages sent corresponding to the malfunction of a specific machine remained trade secrets. This argument, the court ruled, amounted to a claim that although the customer owns the ma-

A. The § 117(c) Maintenance Safe Harbor Analysis

The district court ruled that CHE did not qualify for the § 117(c) safe harbor on three grounds.⁹² First, CHE activated the machines not “for purposes only of maintenance or repair,” as required by § 117(c) itself,⁹³ but to circumvent GetKey, set the maintenance level, and intercept the Event Messages.⁹⁴ Second, CHE did not destroy the RAM copies immediately, as required by § 117(c)(1), because it left the copies in RAM for the duration of the maintenance contract.⁹⁵ Third, the district judge implied that code unnecessary for activation was accessed or used, in violation of § 117(c)(2).⁹⁶

Thus, whether CHE’s activities were within the safe harbor turned on three issues: (1) whether CHE activated the tape libraries “for purposes only of maintenance or repair,”⁹⁷ (2) whether it destroyed the ensuing RAM copies “immediately” after the maintenance was completed,⁹⁸ and (3) whether the code used was “necessary for that machine to be activated.”⁹⁹ The Federal Circuit, taking a quite different view of the same facts, answered each of these questions affirmatively. This Section examines the Federal Circuit’s analysis of each of these issues, in turn.¹⁰⁰

1. Purpose: What is Activation “for Purposes Only of Maintenance or Repair”?

To fall within the safe harbor, the activation that caused the copying had to be “for purposes *only* of maintenance or repair.”¹⁰¹ The district court had agreed with StorageTek that CHE was outside the safe harbor

chine, the factual reason that a customer’s particular machine is malfunctioning is owned by StorageTek—a claim the court found implausible on its face. *StorageTek II*, 421 F.3d at 1319-21. Because the trade secret holding did not substantially change existing law, this Note focuses on the copyright and DMCA issues raised in the case.

92. *StorageTek I*, No. 02-12102, 2004 WL 1497688, at *3.

93. 17 U.S.C. § 117(c) (2000).

94. *StorageTek I*, No. 02-12102, 2004 WL 1497688, at *3.

95. *Id.*

96. *Id.*

97. *See* 17 U.S.C. § 117(c).

98. *See id.* § 117(c)(1).

99. *See id.* § 117(c)(2).

100. Other elements set forth in the main clause of § 117 were not in dispute. The owner of the machine had authorized the copy by hiring CHE to maintain the equipment. Rebooting the machine automatically caused the software to be copied into RAM. Because the program was actually stored on the LMU and loaded over the network, the LCU arguably did not “lawfully contain[] an authorized copy of the computer program,” but the courts did not address this technical, formalistic point.

101. 17 U.S.C. § 117(c) (emphasis added).

because its purposes included circumventing GetKey, changing the maintenance level, and reading Event Messages.¹⁰² The district judge also expressed concerns about CHE's business practices in servicing StorageTek equipment, commenting, "To do [CHE's] work effectively and efficiently, [CHE], too, needed a diagnostic tool, and they chose to piggyback on [StorageTek's] Maintenance Code."¹⁰³

The Federal Circuit arrived at a different conclusion by distinguishing the *purpose* in activating the equipment from (i) the incidental steps taken, (ii) the propriety of the means employed, and (iii) possible anticompetitive motives in selecting which means to employ.¹⁰⁴ The Federal Circuit found that circumventing GetKey, setting the maintenance level, and reading the Event Messages were merely intermediate steps taken for the purpose of maintenance—not purposes that would disqualify CHE from the safe harbor.¹⁰⁵ Even CHE's alleged piggybacking, the court reasoned, concerned the propriety of the means employed, not the nature of the end pursued:

If CHE had rebooted the storage library and loaded its own proprietary code to detect and diagnose errors in the silo, that activity would surely be considered "repair and maintenance." Merely because CHE uses StorageTek's proprietary code to do the same thing does not cause CHE's activities to no longer be "for the purpose only of maintenance or repair of that machine."¹⁰⁶

Several considerations favor the Federal Circuit's analysis over that of the district court. First, as the Federal Circuit suggests, the district court approach would eliminate the safe harbor. Under the district court's broad reading of "purpose," any activity complex enough to involve subsidiary steps would involve multiple "purposes." In this instance, CHE used the LEM to circumvent GetKey, which in turn allowed reconfiguration, which in turn allowed reading Event Messages, which allowed effective monitoring. If these subsidiary "purposes" count as disqualifying under the statute, then only the simplest, single-step activities could ever be "only for purposes of maintenance or repair." Since this would effectively eliminate the safe harbor, it is the wrong approach.

102. *StorageTek I*, No. 02-12102, 2004 WL 1497688, at *3; Non-Confidential Brief of Plaintiff-Appellee Storage Technology Corporation at 19, *Storage Tech. Corp. v. Custom Hardware Eng'g, Inc.*, 421 F.3d 1307 (Fed. Cir. 2005) (No. 04-1462), 2004 WL 5003205.

103. *Id.*

104. *StorageTek II*, 421 F.3d at 1315.

105. *Id.*

106. *Id.*

Second, simply tallying up all these “purposes” ignores the hierarchy involved—the difference between an end that remains constant and the changing means to achieve it.¹⁰⁷ Yet the facts of *StorageTek* illustrate this distinction. When the ELEM technique was developed, the LEM was discarded.¹⁰⁸ Where CHE found machines already configured, neither method was necessary.¹⁰⁹ The flexibility in the means employed contrasts with, and indeed resulted from, the constancy of the ISO’s maintenance purpose.

Third, if every node in the hierarchy of means and ends is a “purpose” under § 117, then so should CHE’s over-arching purpose of making a profit. ISOs do not perform maintenance as an end in itself; CHE performed maintenance for the “purpose” of making money. Yet disqualifying an ISO based on this “purpose” would be absurd, since competing in the service market to make a profit is the very activity the statute was created to protect.

Finally, under the Federal Circuit’s approach, the language of § 117(c)(1) remains a meaningful limitation on ISO activity. The Federal Circuit correctly focused not on “counting up” multiple purposes, but on whether CHE’s activities fit within the purpose of maintenance.¹¹⁰ This treatment suggests that the limiting factor is consistency. The presence of an extra purpose *inconsistent* with maintenance, presumably, would still close the safe harbor.

By holding that a maintenance purpose pursued by anticompetitive means nonetheless qualifies for the safe harbor, the court deftly separated the copyright issue, whether CHE’s purpose disqualified it from the safe harbor, from a claim that CHE engaged in anticompetitive “piggybacking” to achieve that purpose, which would be better addressed under unfair competition laws. This exhibits a recurrent theme of the court’s decision: refusal to create copyright liability or grant copyright remedies for acts that, while perhaps unlawful, do not constitute the unauthorized copying

107. See *StorageTek I*, No. 02-12102, 2004 WL 1497688, at *3 (“[CHE] use[s] their LEM or ELEM mechanisms for the express purpose of circumventing plaintiff’s GetKey and resetting the Maintenance Level. . . . Defendants copy the Code . . . not just for repair, but also for the express purpose of circumventing plaintiff’s security measures, modifying the Maintenance Level, and intercepting plaintiff’s Event Messages.”).

108. *StorageTek I*, No. 02-12102, 2004 WL 1497688, at *3.

109. CHE’s appellate papers indicate that about one-third of the machines serviced already had maintenance levels set above zero. Non-Confidential Reply Brief of Defendant-Appellants Custom Hardware Engineering & Consulting, Inc. and David York at 22, *Storage Tech. Corp. v. Custom Hardware Eng’g, Inc.*, 421 F.3d 1307 (Fed. Cir. 2005) (No. 04-1462), 2004 WL 5003204.

110. See *StorageTek II*, 421 F.3d at 1315.

of protected expression or otherwise infringe the exclusive rights enumerated under section 106 of the Copyright Act.

2. *Duration: What is the Duration of Maintenance?*

Section 117(c)(1) requires that the RAM copies be “destroyed immediately after the maintenance or repair is completed.”¹¹¹ Although the statute defines “repair” and “maintenance,” the definitions do not resolve the scope of each term.¹¹² The key issue was how long “maintenance” may last. The district court adopted StorageTek’s position that because CHE left the copies in RAM for the three-year duration of the maintenance contract, CHE had failed to destroy the copies “immediately.”¹¹³ Vacating the lower court’s ruling, the Federal Circuit held that because CHE rebooted the machines at the end of the three-year monitoring period, the copy was “destroyed immediately after the maintenance.”¹¹⁴

The Federal Circuit based its holding on (a) the statutory language, (b) the legislative history, and (c) the policy goal of § 117(c). First, the Federal Circuit reasoned that Congress intended to identify distinct activities by using the different terms “repair” and “maintenance,” and that “‘maintenance’ has a much broader temporal connotation.”¹¹⁵ Second, the court stated that inclusion of “checking the proper functioning of [] components” in the legislative history indicated that Congress intended the term to cover “monitoring systems for problems.”¹¹⁶ Third, the court stated that such an interpretation promoted Congress’ stated policy goal of avoiding “artificial restraints on companies engaged in legitimate repair and maintenance activities.”¹¹⁷

This reading of “maintenance” was not inevitable. Another plausible view, suggested by Judge Rader’s dissent, is that maintenance is distinguished from repair because it involves preventative (but still temporally

111. 17 U.S.C. § 117(c)(1) (2000).

112. Section 117(d) provides definitions for “repair” and “maintenance”:

(1) the “maintenance” of a machine is the servicing of the machine in order to make it work in accordance with its original specifications and any changes to those specifications authorized for that machine; and

(2) the “repair” of a machine is the restoring of the machine to the state of working in accordance with its original specifications and any changes to those specifications authorized for that machine.

17 U.S.C. § 117(d) (2000).

113. *StorageTek I*, No. 02-12102, 2004 WL 1497688, at *3.

114. *StorageTek II*, 421 F.3d at 1312-13.

115. *See id.* at 1312.

116. *Id.* at 1312.

117. *Id.*

discrete) tasks.¹¹⁸ This view is also consistent with the statutory definitions. Moreover, it fits with the legislative history because most of the examples of maintenance therein are temporally limited, and “checking the proper functioning of equipment” could easily describe a one-hour activity rather than a three-year monitoring project.¹¹⁹ Finally, since the CMCAA was a response to cases like *Peak*, Congress arguably had in mind a temporally limited conception of service, as was involved in that case, when it enacted § 117(c).¹²⁰

The Federal Circuit’s analysis, however, has the advantage that it allows for efficient computer maintenance techniques that involve ongoing continuous monitoring during everyday operations, rather than discrete periods of scheduled downtime.¹²¹ Though Congress was responding to *Peak*, it was also mindful of ongoing technological advances,¹²² and presumably intended the statutory safe harbor to continue to preserve competition as service techniques evolve along with technology.¹²³ Thus, even if

118. *Id.* at 1322.

119. See H.R. REP. NO. 105-551, pt. 1, at 28 (1998) (“These acts can include, but are not limited to, cleaning the machine, tightening connections, installing new components such as memory chips, circuit boards and hard disks, checking the proper functioning of these components, and other similar acts.”). Note that the word “acts” arguably also supports the view of maintenance as temporally discrete.

120. *Peak* involved repairs to malfunctioning circuit boards, as opposed to the years-long monitoring at issue in *StorageTek, MAI Sys. Corp. v. Peak Computer, Inc.*, 991 F.2d 511, 513 (9th Cir. 1993).

121. Minimizing downtime is increasingly important as companies seek “high availability” systems and vendors tout features that reduce downtime. See, e.g., Doug Dineley, *Improve Availability of Enterprise Data; For Those Striving to Avoid System Downtime, Change is Enemy No. 1*, INFOWORLD, Mar. 12, 2007 (emphasizing importance of high availability systems); High Availability, <http://www.linuxvirtualserver.org/HighAvailability.html> (last visited Mar. 16, 2007) (touting advantages of a system that allows upgrades without bringing down the system).

122. Starting with the title, “Digital Millennium Copyright Act,” the legislative history of the DMCA evinces an awareness of rapid changes in both technology and commerce, as well as a concern not to stand in the way of such advances: “Much like the agricultural and industrial revolutions that preceded it, the digital revolution has unleashed a wave of economic prosperity and job growth. Today, the information technology industry is developing versatile and robust products to enhance the lives of individuals throughout the world,” H.R. REP. NO. 105-551, pt. 2, at 21 (1998). The Senate Report anticipated that “rapid and dynamic development of better technologies,” concerning technological protection measures. S. REP. NO. 105-190, at 15 (1998). The House Report noted that “[a]s technology advances, so must our laws.” H.R. REP. NO. 105-551, pt. 2, at 25 (1998).

123. The Senate Report expressly stated that “maintenance” is “not limited to” the activities cited as examples of maintenance. S. REP. NO. 105-190, at 58 (1998). Given this open-ended language and the general awareness of dynamically evolving technolo-

the Federal Circuit stretched the statutory language to cover current maintenance practices, it may be justified in light of the purpose and the difficulty in regulating evolving technology.

By holding that Congress intended “maintenance” to encompass years-long monitoring of systems, the Federal Circuit created a wide safe harbor, but at the cost of weakening the requirement that the RAM copies be destroyed immediately after the maintenance or repair. Yet, given that the purpose of the destruction provision is, as both majority and dissent agree, “to prevent persons from invoking the protection of § 117 and then later using the copied material for a prohibited purpose,” this cost is not too great.¹²⁴ For whether the code remains in the RAM of a single machine for a day or a year does not determine whether it is used for prohibited purposes. Rather, the primary danger is that the software “escapes into the wild” through the creation and distribution of additional copies (say, by posting the software on the internet). This could occur in mere seconds, regardless of whether the legitimate copy persists in RAM for an extended period.

3. *Necessity: When is Software Code Necessary for a Machine to be Activated?*

Section 117(c)(2) excludes from the safe harbor the access or use of programs (and parts of programs) that are not “necessary for that machine to be activated.”¹²⁵ The district judge implied that the “maintenance code” that CHE accessed and used was not necessary for activation, such that CHE violated § 117(c)(2), but offered no analysis concerning necessity.¹²⁶

In determining what the statute meant by “necessary” here, the Federal Circuit considered the legislative history of the CMCAA.¹²⁷ The House Report contemplated that a hardware manufacturer might provide diagnos-

gies exhibited throughout the bill, it is reasonable to conclude the Congress intended to authorize current and future maintenance techniques.

124. *StorageTek II*, 421 F.3d at 1322.

125. 17 U.S.C. § 117(c)(2) reads: “[W]ith respect to any computer program or part thereof that is *not necessary for that machine to be activated*, such program or part thereof *is not accessed or used* other than to make such new copy by virtue of the activation of the machine.” 17 U.S.C. § 117(c)(2) (2000) (emphasis added).

126. *StorageTek I*, No. 02-12102, 2004 WL 1497688, at *3.

127. *StorageTek II*, 421 F.3d at 1314. StorageTek cited this history in its brief. Corrected Non-Confidential Brief of Plaintiff-Appellee Storage Technology Corporation at 17-18, *Storage Tech. Corp. v. Custom Hardware Eng’g, Inc.*, 421 F.3d 1307 (Fed. Cir. 2005) (No. 04-1462), 2004 WL 5003205. In denying rehearing, the Federal Circuit again addressed the legislative history in clarifying its finding that the maintenance code was necessary in this case. *Storage Tech. Corp. v. Custom Hardware Eng’g, Inc. (StorageTek III)*, 431 F.3d 1374, 1376 (Fed. Cir. 2005).

tic programs that “may be loaded into RAM when the computer is turned on, but . . . did not need to be so loaded . . . for the machine to be turned on,” and stated that under section 117(c)(2), “if such a program is accessed or used without the authorization of the copyright owner, the initial reproduction of the program [into RAM] shall not be deemed exempt from infringement.”¹²⁸

The Federal Circuit held that the “maintenance code” was necessary for activation because it was “so entangled with the functional code that the entire code *must be loaded into RAM* for the machine to function at all.”¹²⁹ As the court noted in denying StorageTek’s petition for rehearing, this finding of entanglement was tied to the particular facts of this case,¹³⁰ and while the court engaged in a long discussion of necessity, it did not

-
128. The House Report contains the following paragraph on § 117(c)(2):
Third, as is made clear in paragraph (c)(2), the amendment is not intended to diminish the rights of copyright owners of those computer programs, or parts thereof, that also may be loaded into RAM when the computer is turned on, *but which did not need to be so loaded in order for the machine to be turned on*. A hardware manufacturer or software developer might, for example, provide diagnostic and utility programs that load into RAM along with or as part of the operating system, even though they market those programs as separate products—either as freestanding programs, or pursuant to separate licensing agreements. Indeed, a password or other technical access device is sometimes required for the owner of the machine to be able to gain access to such programs. In other cases, it is not the hardware or software developer that has arranged for certain programs automatically to be reproduced when the machine is turned on; rather, the owner of the machine may have configured its computer to load certain applications programs into RAM as part of the boot-up process (such as a word processing program on a personal computer). This amendment is not intended to derogate from the rights of the copyright owners of such programs. In order to avoid inadvertent copyright infringement, these programs need to be covered by subsection (c), but only to the extent that they are automatically reproduced when the machine is turned on. This legislation is not intended to legitimize unauthorized access to and use of such programs just because they happen to be resident in the machine itself and are reproduced with or as part of the operating system when the machine is turned on. According to paragraph (c)(2), if such a program is accessed or used without the authorization of the copyright owner, the initial reproduction of the program shall not be deemed exempt from infringement under subsection (c).

H.R. REP. NO. 105-551, pt. 1, at 28 (1998) (emphasis added). Senate Report 105-190 contains almost identical language. S. REP. NO. 105-190, at 57 (1998).

129. *StorageTek II*, 421 F.3d at 1314 (emphasis added).

130. *StorageTek III*, 431 F.3d at 1376.

articulate a single, bright-line test for necessity.¹³¹ Thus, it might seem that the holding provides little guidance for future cases.

Yet the holding, when considered along with the extensive dicta, suggests a coherent approach to whether object code—that is, compiled software—is necessary for activation.¹³² As a whole, the case suggests a disjunctive test under which code may qualify based on either of two distinct notions of necessity, which this Note will call *functional* necessity and *practical* necessity. Code is *functionally necessary* (i.e., necessary to *run*) if executing the instructions in the code is necessary to activate the machine and perform the essential functions for which the machine was purchased.¹³³ Code is *practically necessary* (i.e., necessary to *load*) if the machine's user has no practical way to keep it from loading into RAM upon activation given the factory configuration of the machine—even if the manufacturer could have designed the machine to function without loading such code.¹³⁴

Several of the court's statements indicate that functional necessity, if established, would be sufficient to show code was necessary under § 117(c). Drawing on the definitions of “repair” and “maintenance” in § 117(d), the court stated, “the service provider must be able to cause the machine to boot up in order to determine if it ‘works in accordance with its original specifications.’”¹³⁵ The court also stated that what is “necessary” is more than “the minimal amount of code that, when loaded into RAM, causes the machine to produce any response.”¹³⁶ It is the execution of

131. See *StorageTek II*, 421 F.3d at 1314-15.

132. References to “code” in this section refer to compiled software, rather than source code.

133. For example, on a laptop computer, functionally necessary code would include the operating system kernel, keyboard and display drivers, and the internal system clock. Only if such software not only loads but *runs* can the laptop perform the essential functions for which it is purchased.

134. These two forms of necessity are logically independent. Code that is practically necessary to load might lack any critical function. Examples include drivers for uninstalled peripherals, code that displays logos or plays music during startup. Easter eggs—code hidden in programs by programmers that displays frivolous content in response to particular “secret” input—also fall into this class. Such code is not functionally necessary, but would be practically necessary unless the owner can configure the machine not to load the code. On the other hand, code may be functionally, but not practically, necessary in cases where the owner of a machine can configure it into a less functional or non-functional state. For example, it is possible, on some computers, for users to configure the machine to fail to load the operating system kernel, or to fail to load critical device drivers necessary to perform basic operations.

135. *StorageTek II*, 421 F.3d at 1314.

136. *Id.* at 1313 (emphasis added).

code—its *functioning*, not its mere loading into RAM, that causes a machine to work and respond to requests. Judge Rader, in his dissent, appeared to endorse an exclusively functional criterion of necessity, stating that “[e]ven though Storage Tek has chosen to load the maintenance code upon activation, the maintenance code is incidental, not indispensable, to activation.”¹³⁷

Other key statements by the court concern practical necessity, i.e., whether the owner, as opposed to the manufacturer, controls which programs load into RAM. The court noted that the legislative history stated that “software is necessary for the machine to be activated if it ‘need[s] to be so *loaded* in order for the machine to be turned on.’”¹³⁸ The court rejected the simple rule that all code loaded at startup is necessary (which it noted, correctly, would read the § 117(c)(2) limitation right out of the statute).¹³⁹ The panel characterized software that machine owners independently configured to load at startup as unnecessary for activation,¹⁴⁰ and the language of the opinion suggests an operative distinction between “separate, ‘freestanding programs,’” that the machine’s owner can opt not to load, and “entangled” software that must be loaded.

Indeed, the holding rested on practical necessity; the “maintenance code” was practically necessary for activation because it was intertwined with other, functionally necessary code. This was clarified in the denial of rehearing, in which the court indicated that StorageTek’s argument that its maintenance code was not functionally necessary was irrelevant given the practical necessity of loading the code:

StorageTek argues . . . that loading the maintenance code was not “necessary” . . . because it could be loaded into RAM with one of its functions disabled. While that may be true, it does not change the fact that a copy of the entire maintenance code *must be loaded into RAM* when the machine is turned on¹⁴¹

Taken as a whole, the discussion in *StorageTek* suggests that code may be “necessary for activation” if it is *either* functionally or practically necessary. That is, it allows the practical necessity of *loading* code (rather than

137. *Id.* at 1321 (Rader, J., dissenting) (emphasis in original).

138. *Id.* at 1314 (emphasis added) (quoting H.R. REP. NO. 105-551, pt. 1, at 28 (1998)).

139. *Id.* at 1313.

140. *Id.*

141. *Storage Tech. Corp. v. Custom Hardware Eng’g, Inc. (StorageTek III)*, 431 F.3d 1374, 1376 (Fed. Cir. 2005) (emphasis added).

just the necessity of *running* it) to establish that code as necessary for activation.

Four considerations suggest that this approach is a sound one. First, this approach is consistent with the legislative history. Second, it avoids placing an unreasonable burden on ISOs. Third, it creates positive incentives for manufacturers. Fourth, it is more judicially administrable than an approach that always requires *functional* necessity.

First, the legislative history's examples of unnecessary software include (i) separately marketed programs that load into RAM at startup, (ii) software the owner has configured to load at startup, and more generally, (iii) software that "may be loaded into RAM when the computer is turned on, but which did not need to be so loaded in order for the machine to be turned on."¹⁴² These references suggest that machine owners exercise some control over the loading of any software that is *not* necessary for activation.

Second, a pure functional necessity rule would place the burden on ISO technicians to avoid either copying *or executing* code that is not functionally necessary, since under § 117(c)(2) unnecessary portions of code may not be "accessed or used other than to make such new copy by virtue of the activation of the machine."¹⁴³ Yet ISOs, like the machine owners that hire them, have little information about what non-essential parts of a program might execute in response to particular actions; thus, such a rule would in effect create potential traps for ISOs. In contrast, a practical necessity rule avoids such pitfalls by allowing a technician to use any software that cannot be configured not to load into RAM—though with the restriction that use be "only for purposes of maintenance or repair."¹⁴⁴

Third, to the extent that this allows the technician to "get away with" using code that is *not* functionally necessary, it simply creates an incentive for the manufacturer—who has much better information about the internal code structure—to redesign/configure the machine so that the purchaser may easily activate the machine without loading the code into RAM. In cases where the manufacturer chooses to configure products so that only functionally necessary code is loaded at startup, then outcomes under this approach will be the same as under a functional rule—but with much less costly analysis (see the next point). This creates a positive incentive for manufacturers to make code practically necessary only if it is also functionally necessary, avoiding unnecessary "entanglement" of code.

142. S. REP. NO. 105-190, at 57 (1998).

143. 17 U.S.C. § 117(c)(2) (2000).

144. *See id.* § 117(c).

Fourth and finally, under a purely functional approach, courts would need to make determinations about what functions are essential for the machine to work within its specifications. As the Federal Circuit's discussion of functional necessity indicates, such determinations may be fact-intensive and difficult.¹⁴⁵ It should be easier for the court to determine whether users can control whether code loads at startup. To do so, courts can look to configuration procedures set forth in documents, such as user's guides and owner's manuals—evidence that can be easily produced. Thus, this approach is more judicially administrable than a strict functional necessity rule.

In conclusion, the court's discussion implies that *either* practical or functional necessity may establish code as necessary for activation. While this approach is justified for the reasons stated above, a more precise formulation of the test awaits future litigation.

B. The DMCA § 1201(a)(1)(A) Circumvention Claim

This Section examines the Federal Circuit's rejection of StorageTek's DMCA claims, focusing on its application of its own precedent in *Chamberlain Group, Inc. v. Skylink Technologies*, and whether this approach might spark a TPM "arms race." The court's extension of *Chamberlain* to this anti-circumvention case reflected its concern—also apparent vis-à-vis the licensing dispute—that copyright-like protections not be divorced from violations of the traditional exclusive rights granted by copyright law. While the court's approach removes DMCA liability where TPMs are used to bar activity that facilitates no infringement, this is unlikely to trigger a TPM arms race.

1. *Straightforward, but Significant: The Federal Circuit's Extension of Chamberlain*

Section 1201(a)(1)(A) of the DMCA prohibits any person from "circumvent[ing] a technological measure that effectively controls access to a work protected under this title."¹⁴⁶ The text suggests that a successful § 1201(a)(1)(A) claim requires showing at least five elements: (1) circumvention, (2) of a TPM, that (3) effectively (4) controls access to an identifiable work (5) that is protected by copyright.¹⁴⁷ Adapting the elements

145. See *StorageTek II*, 421 F.3d at 1314 ("[I]t may be difficult to determine whether particular software is necessary to make the computer function and to ascertain whether the computer is working properly."); see also *StorageTek III*, 431 F.3d at 1375-76.

146. 17 U.S.C. § 1201(a)(1)(A) (2000).

147. Cf. Rajani, *supra* note 49, at 376 (discussing essentially the same elements as required for an adequate circumvention analysis, but treating the absence of defenses as an additional element).

that courts have required for § 1201(a)(2) claims yields essentially these same elements,¹⁴⁸ but adds a sixth: (6) that the circumvention “infringes or facilitates infringing a right protected by the Copyright Act,” rather than merely allowing noninfringing use of the protected work.¹⁴⁹

In ruling that StorageTek was likely to prevail on its DMCA circumvention claim,¹⁵⁰ the district court fully considered only two elements: (1) the fact that GetKey was circumvented, and (2) that GetKey was a TPM.¹⁵¹ The district court did not analyze (3) whether the access control was “effective.”¹⁵² Rather, it simply asserted that “GetKey is unquestionably a qualifying access control measure.”¹⁵³ Nor did the district court clearly identify (4) a work to which GetKey restricted access that was (5) protected by copyright. Although the court stated that GetKey restricted CHE’s “ability to access the Event Messages,”¹⁵⁴ it expressly declined to reach the issue of whether Event Messages were protectable under copyright.¹⁵⁵

Because the First Circuit, from which the case arose,¹⁵⁶ had not construed this portion of the DMCA, the Federal Circuit relied on its own de-

148. *Cf. Chamberlain Group, Inc. v. Skylink Techs., Inc.*, 381 F.3d 1178, 1203 (Fed. Cir. 2004) (listing the elements required for a § 1201(a)(2) claim); *see also Lexmark Int’l, Inc. v. Static Control Components, Inc.*, 387 F.3d 522, 546-50 (6th Cir. 2004) (discussing in turn the importance of a TPM controlling access, the effectiveness of the access controls, the existence of actual circumvention, and that the work in question be protected by copyright).

149. *Chamberlain*, 381 F.3d at 1203; *see also Static Control*, 387 F.3d at 564.

150. *Storage Tech. Corp. v. Custom Hardware Eng’g, Inc.*, No. 02-12102, 2004 WL 1497688, at *3-4 (D. Mass. July 2, 2004).

151. *Id.* at *4. The failure to adequately address elements of the alleged DMCA violation here echoes the shortcomings of the Eighth Circuit’s analysis in *Davidson & Associates v. Jung*, 422 F.3d 630 (8th Cir. 2005). *See Rajani, supra* note 49, at 375-76 (arguing that the Eighth Circuit failed to address six elements required for an adequate circumvention analysis).

152. *Id.* at *4.

153. *Id.*

154. *StorageTek I*, No. 02-12102, 2004 WL 1497688, at *4. After noting that GetKey is an access control, the district court states that “[GetKey] is designed to prevent precisely what defendants achieved, the modification of the Maintenance Level and consequent ability to access the Event Messages.” *Id.* The focus thus seems to be on the conduct prevented, not the work protected. Given that the court specifically declined to reach the question of whether Event Messages were protected by copyright, the opinion is unclear as to the identity of the work protected by copyright.

155. *StorageTek I*, No. 02-12102, 2004 WL 1497688 at *3 n.3.

156. The First Circuit typically has jurisdiction over appeals from the District Court of Massachusetts. In this case, StorageTek’s complaint contained patent claims, *StorageTek II*, 421 F.3d at 1310, which, although not the subject of appeal, created Federal Circuit jurisdiction. *See* 28 U.S.C. § 1295(a)(1) (2000).

cision in *Chamberlain*, which held that § 1201 only prohibits circumvention that infringes or facilitates infringement of an underlying exclusive right under the Copyright Act.¹⁵⁷ Applying *Chamberlain*, the Federal Circuit stated that the district court erred by not considering whether the circumvention actually facilitated infringement (element (6)).¹⁵⁸ Although the Federal Circuit found no underlying infringement (based both on the § 117(c) theory discussed in Section III.A and an implied license theory, discussed in Section III.C), it stated that even if CHE's RAM copies were unauthorized, StorageTek's DMCA claims would fail because of an insufficient link between rebooting, which caused the copying, and the circumvention of GetKey, which, itself, caused no copying.¹⁵⁹ The fact that the copying of code into RAM and circumvention happened concurrently was insufficient to establish the required nexus between the circumvention and infringement.¹⁶⁰

StorageTek, by holding that § 1201(a)(1) serves existing rights rather than creating an independent right, applies the reasoning set out in *Chamberlain* and *Static Control* beyond the anti-trafficking provision at issue in those cases to the critical anti-circumvention provision. Thus, in Federal Circuit jurisprudence, this DMCA holding technically breaks new ground by requiring a nexus to infringement as an element of a § 1201(a)(1)(A) claim. Nevertheless, given the broad dicta in *Chamberlain*, this extension is unsurprising and straightforward.

This portion of the decision is remarkable because it again exhibits the theme—also seen in the licensing analysis—that use of a copyright remedy is appropriate only when the underlying wrong violates (or facilitates

157. *StorageTek II*, 421 F.3d at 1307, 1318-19 (discussing Chamberlain Group, Inc. v. Skylink Techs., Inc., 381 F.3d 1178 (Fed. Cir. 2004)). *Chamberlain* indicated that while § 1201 may be violated without actual infringement of the § 106 rights, some nexus to either infringement or the facilitation of infringement is required. *Chamberlain*, 381 F.3d at 1204. As the court noted, this nonetheless represents a new weapon in the arsenal of the copyright owner: "Prior to the DMCA, a copyright owner would have had no cause of action against anyone who circumvented any sort of technological control, but did not infringe. The DMCA rebalanced these interests to favor the copyright owner; the DMCA created circumvention liability for 'digital trespass' under § 1201(a)(1)." *Chamberlain*, 381 F.3d at 1195-96. The court indicated the limits of this "digital trespass," writing, "circumvention is not a new form of infringement but rather a new violation prohibiting actions or products that facilitate infringement." *Chamberlain*, 381 F.3d at 1197 (emphasis in original).

158. *StorageTek II*, 421 F.3d at 1318.

159. *Id.* at 1319.

160. *Id.* Note that the Federal Circuit viewed the maintenance code, rather than the Event Messages, as the work in question.

the violation of) the core rights that copyright protects.¹⁶¹ In other words, the DMCA exists to help protect copyrighted works,¹⁶² not to create an independent set of rights, nor to help owners of copyrighted works enforce license terms, and certainly not to assist manufacturers in dominating the service market for computer equipment. Thus, this decision rejects the “paracopyright” view of the DMCA discussed in Part I.

2. *A New TPM Arms Race?*

A legitimate concern after *StorageTek* is whether the Federal Circuit’s decision, and the view of the DMCA it reflects, will simply encourage the StorageTekes of the world to employ more powerful TPMs in an attempt to lock ISOs out of the market for equipment service regardless of § 117(c) or legal penalties for the circumvention of TPMs. This effort would be undesirable not only if it succeeded in using TPMs to lock up the service market, but also if it failed after successive generations of TPMs were met with escalating circumvention efforts in an economically wasteful “arms race” between equipment makers and ISOs.

Although this is a danger, there are reasons to expect that the decision will not trigger massive investment in TPMs. First, an arms race is not only undesirable for society, but unattractive for potential participants because of the prospect that even those that invest heavily may lose the race. Second, the continued availability of DMCA liability to reinforce TPMs when actually used to protect the legitimate rights of copyright, which is presumably the majority of cases, limits the need for super-TPMs and lowers the expected return on investment in such TPMs. Third, use of TPMs outside that context might itself be considered anticompetitive behavior, triggering a cause of action under antitrust or unfair competition laws.¹⁶³ Fourth, as discussed above, bargaining over license terms would appear to be a much lower-cost, lower-risk approach.

Of course, providing DMCA liability for circumventing TPMs, regardless of underlying infringement, might head off an arms race. But the law is not obliged to avoid an arms race at all costs. On the contrary, the law

161. *Id.* at 1318.

162. *Id.*

163. For instance, using a TPM to tie the right to copy a work, which is one of the § 106 exclusive rights, to the right to use a work might be challenged as an illegal tying arrangement under § 1 of the Sherman Act (15 U.S.C. § 1 (2000)). CHE made an antitrust argument in its appellate brief, arguing that *StorageTek* effectively tied service to its hardware through its licensing terms. But use of TPMs might have a similar anticompetitive effect. Or, use of TPMs to essentially fence-off what the fence-builder does not own might be deemed unfair competition under broad unfair competition statutes. *See, e.g.*, CAL. BUS. & PROF. CODE § 17200 (2007).

should only back up TPMs with circumvention penalties when the law has an interest in protecting that to which the TPMs restrict access. Otherwise the law simply assists parties in putting up fences—regardless of whether they own what is fenced-off.

C. Software Licensing, Agency, and Copyright Liability

This Section considers the holdings of *StorageTek* concerning (1) whether the use of works beyond the scope of a license results in copyright liability, and (2) the circumstances in which a license extends to the licensee's agent.

Like the use of TPMs, the use of restrictive software licensing terms potentially enable licensors to restrict access to or uses of works that would otherwise be allowed under copyright law.¹⁶⁴ The Federal Circuit's discussion of the relationship between license rights and copyright in *StorageTek* exhibits an awareness of the limits of copyright law and the dangers of invoking copyright remedies based on conduct that does not fall within the exclusive rights recognized by copyright law.

Besides claiming the § 117(c) safe harbor, CHE argued that as the agent of StorageTek's licensee (the machine owner), it had a license to copy the maintenance code.¹⁶⁵ StorageTek contended that this argument failed because its licensee's rights were not transferable to CHE, and in any case, the licensee itself had no rights to use the maintenance code.¹⁶⁶ Having found CHE likely to prevail under § 117(c), the court nonetheless reached the license issue, holding both that CHE benefited from an implied license to copy the code into RAM, and that *use* that went beyond the license terms would not give rise to copyright infringement.¹⁶⁷ The Federal Circuit presented this holding as an alternative ground for vacating the district court's preliminary injunction.¹⁶⁸

164. J.H. Reichman & Jonathan A. Franklin, *Privately Legislated Intellectual Property Rights: Reconciling Freedom of Contract with Public Good Uses of Information*, 147 U. PA. L. REV. 875, 912 (1999) ("Software vendors could . . . override the express exceptions and limitations of copyright law, including the negative rights of users codified in that law and other elements of the statutory 'cultural bargain.'").

165. Non-Confidential Brief of Defendant-Appellants Custom Hardware Engineering & Consulting, Inc. and David York at 28-29, *Storage Tech. Corp. v. Custom Hardware Eng'g, Inc.*, 421 F.3d 1307 (Fed. Cir. 2005) (No. 04-1462), 2004 WL 5003204.

166. *StorageTek II*, 421 F.3d at 1315-16.

167. *Id.*

168. *Id.* at 1317.

1. *Contract Liability versus Copyright Liability for Use-Based License Breaches*

StorageTek argued that *use* of maintenance functions was expressly prohibited by the license, and thus outside its scope.¹⁶⁹ In response, the Federal Circuit held that *copying* of the maintenance code into RAM was within the scope of the license, and stated that even if CHE's *use* of the maintenance code went beyond the license, since the *copying* was within the scope, StorageTek's claims would sound in contract, not in copyright.¹⁷⁰ In reaching this conclusion, the court distinguished earlier appellate decisions—including one by the First Circuit, whose law it was applying—that suggested that copyright protection extends to all conduct that violates the scope of a license.¹⁷¹ Examining those decisions, the court found that the unlicensed uses in each case involved acts of copying, such that “those cases thus stand for the entirely unremarkable principle that ‘uses’ that violate a license agreement constitute copyright infringement only when those uses would infringe in the absence of any license agreement at all.”¹⁷²

The approach taken by the court is superficially at odds with the approach taken by the Ninth Circuit in *Arizona Cartridge Remanufacturers Association v. Lexmark International, Inc.*¹⁷³ Like *StorageTek*, the *Arizona Cartridge* case concerned a manufacturer attempting to restrict after-market competition—namely competition for printer cartridges. In *Arizona Cartridge*, printer cartridge purchasers received an upfront discount (or “prebate”) on cartridges in return for an agreement to return them to Lexmark rather than having third parties “remanufacture” the cartridges for reuse.¹⁷⁴ The Ninth Circuit affirmed the district court ruling that this restriction was enforceable, such that using the cartridges product beyond the restrictive terms of the license would be patent infringement.¹⁷⁵

169. *Id.* at 1315.

170. *Id.* at 1316.

171. *Id.* The cases distinguished included *S.O.S., Inc. v. Payday, Inc.*, 886 F.2d 1081 (9th Cir. 1989) (finding infringement where licensee exceeded scope of license by copying and modifying software), and a case from the First Circuit, whose law the Federal Circuit was applying, *John G. Danielson, Inc. v. Winchester-Conant Props., Inc.*, 322 F.3d 26, 40 (1st Cir. 2003) (“Uses of the copyrighted work that stay within the scope of a nonexclusive license are immunized from infringement suits.”).

172. *StorageTek II*, 421 F.3d at 1316.

173. *Ariz. Cartridge Remanufacturers Ass’n v. Lexmark Int’l, Inc.*, 421 F.3d 981, 986 (9th Cir. 2005).

174. *Id.* at 983-84.

175. *Id.* at 986-87, 989. Nonetheless, the force of this statement by the Ninth Circuit is unclear. Although the Ninth Circuit affirmed the district court’s finding, it stated that

The critical difference between *Arizona Cartridge* and *StorageTek* is that the right to *use* a product is central to patent law, whereas use is *not* one of the exclusive rights granted under the Copyright Act.¹⁷⁶ That use of software is not within the exclusive rights is clear from the legislative history: “Section 102(b) is intended, among other things, to make clear that the expression adopted by the programmer is the copyrightable element in a computer program, and that the actual processes or method embodied in the program are not within the scope of the copyright law.”¹⁷⁷ CONTU expressed the same limitation.¹⁷⁸ In short, license violations create copyright liability only when the activity that goes beyond the license is within the § 106 rights.

The Federal Circuit’s separation of contract and copyright claims has practical consequences. Remedies available for breach of a software license may be less attractive than the statutory damages and attorney’s fees available for copyright infringement. In addition, federal court may be a more attractive venue for plaintiffs in certain cases. Moreover, to enforce its license, a manufacturer such as *StorageTek* would presumably have to sue its own customer/licensee, which might be an unattractive prospect.

But these consequences, if unattractive to the copyright holder, are nonetheless entirely appropriate. Contract remedies are designed to protect the expectation interests of the contracting parties—in this case *Storage-*

because the issue was not raised by the parties, it would not address the merits of the Federal Circuit case on which this rule was based. *Id.* at 987. See *Mallinckrodt, Inc. v. Medipart, Inc.*, 976 F.2d 700, 708 (Fed. Cir. 1992) (“The appropriate criterion is whether [a] restriction is reasonably within the patent grant, or whether the patentee has ventured beyond the patent grant and into behavior having an anticompetitive effect not justifiable under the rule of reason.”). Extending this rule to *StorageTek* would support the Federal Circuit’s restriction of copyright liability for activity within the “copyright grant.”

176. Compare 35 U.S.C. § 271(a) (2000) (“[W]hoever without authority makes, uses, offers to sell, or sells any patented invention . . . infringes the patent”), with 17 U.S.C. § 106 (2000) (setting forth rights of reproduction, preparation of derivative works, distribution, public performance, and public display).

177. H.R. REP. NO. 94-1476, at 57, as reprinted in 1976 U.S.C.C.A.N 5659, 5670 (1976).

178. The CONTU REPORT states:

Copyright, therefore, protects the program as long as it remains fixed in a tangible medium of expression but not the electro-mechanical functioning of a machine. The way copyright affects games and game-playing is closely analogous—one may not adopt and republish or redistribute copyrighted game rules, but the copyright owner has no power to prevent others from playing the game Thus one is always free to make a machine perform any conceivable process (in the absence of a patent), but one is not free to take another’s program.

CONTU REPORT, *supra* note 19, at 20 (citations omitted).

Tek and its licensee. Copyright should not provide a boon to manufacturers like StorageTek in disputes that do not directly concern the exclusive rights of § 106. Moreover, the inability to get copyright remedies for license violations does not limit a vendor's ability to negotiate terms restricting use, if such terms are mutually advantageous. Agreeable terms might even include stipulated damages provisions in amounts comparable to copyright damages. By limiting such disputes to contract remedies, this decision encourages open negotiation between the parties, which should produce economically efficient outcomes.¹⁷⁹

2. *The Extension of Software Licenses to ISO Agents*

StorageTek highlighted a license term stating that the licensee/owner could not "sublicense, assign, lease or permit another person to use [StorageTek's] code" as evidence that CHE could not make use of the license at all.¹⁸⁰ Yet the Federal Circuit found that this restriction was unclear in light of other license language expressly allowing the owner to "transfer possession of [the code] only with the transfer of the equipment."¹⁸¹ The court ruled that:

Because the whole purpose of the license is to allow the tape library owners to activate their machine without being liable for copyright infringement, such activity by the licensee *and its agents* is implicitly authorized by the license agreement unless the agreement explicitly prohibits third parties from powering up the machines.¹⁸²

The court compared the StorageTek license to more explicitly restrictive licenses in cases, including *Peak*, where ISO activity was held to be outside the scope of the equipment owners' licenses.¹⁸³

The import of this holding is limited insofar as it is tied to the particular license in this case. Yet the holding signals to future licensors that to be effective, license terms prohibiting use by agents must be both explicit and consistent with the license as a whole. Assuming that those conditions were met, the holding indicates such a term would be enforceable. As such, the Federal Circuit's decision amounts to a default rule that agents of a machine owner are authorized to power up the machine, making RAM

179. See generally Ronald Coase, *The Problem of Social Cost*, 3 J.L. & ECON. 1 (1960).

180. *StorageTek II*, 421 F.3d at 1316.

181. *Id.* at 1316.

182. *Id.* at 1317 (emphasis added).

183. *Id.*

copies of software in the process. As a default rule, it can be contracted around if doing so is in the interests of both parties. Because doing so requires unambiguous language, the term is more likely to come to the attention of an equipment purchaser and thus be the subject of informed bargaining leading to a mutually acceptable outcome. Future purchasers are likely to demand concessions in exchange for giving up the rights to authorize ISOs or other agents to act within the scope of the license.

IV. CONCLUSION: COPYRIGHT LAW AS NEITHER SWORD NOR SHIELD IN THE COMPUTER MAINTENANCE MARKET

In *StorageTek*, the Federal Circuit interpreted section 117(c) of the Copyright Act and section 1201(a)(1) of the DMCA in a manner that respects the competition-promoting purpose of the CMCAA, requires a nexus between DMCA violations and underlying infringement, and reasonably limits the role copyright law plays in the competition between computer equipment makers and ISOs in the computer equipment service market.

The Federal Circuit construed the contours of § 117(c)'s safe harbor broadly, informed by the policy goal of allowing ISOs to compete for computer service with manufacturers. The court's allowance for various actions done "for purposes only of maintenance or repair" is necessary for the safe harbor's existence, and its analysis of software "necessary for activation" is instructive. If the court's focus on eliminating "artificial restraints on companies engaged in legitimate repair and maintenance activities"¹⁸⁴ effectively weakened the requirement that RAM copies are "immediately" destroyed after maintenance, the basic limitations on the safe harbor survive.

In *StorageTek*, as in *Peak*, a manufacturer arguably tried to use (or misuse) copyright to gain an anticompetitive advantage in the after-market for computer service.¹⁸⁵ Indeed, Custom Hardware Engineering (CHE) accused StorageTek of antitrust violations and of misusing copyright to lock CHE out of the maintenance market for StorageTek tape libraries.¹⁸⁶ The Federal Circuit did not reach CHE's misuse or antitrust defenses. But

184. *StorageTek II*, 421 F.3d at 1312.

185. *Id.* at 1310; *cf.* MAI Sys. Corp. v. Peak Computer, Inc., 991 F.2d 511, 517-19 (9th Cir. 1993) (holding that ISO infringed manufacturer's software copyright by turning on computer for repair).

186. *StorageTek II*, 421 F.3d at 1310; *StorageTek I*, No. 02-12102, 2004 WL 1497688, at *3.

its decision suggests concerns that either a narrow reading of § 117(c), an over-broad reading of the DMCA, or the granting of copyright liability for mere license violations would effectively close off the service market to ISOs—concerns similar to those that drove Congress to create § 117(c).¹⁸⁷

Although passage of the DMCA raised the possibility that computer equipment manufacturers could simply trade the threat of copyright liability for the threat of DMCA liability in order to dominate the service market, the requirement that § 1201(a)(1)(A) violations have a nexus to underlying infringement alleviates this fear and suggests lessons learned from the impact of *Peak*.¹⁸⁸

However, in *StorageTek*, accusations of anticompetitive conduct ran in two directions. In the eyes of StorageTek and the district court, it was CHE that was probably engaged in anticompetitive behavior—using § 117(c) as a liability shield while piggybacking off of StorageTek’s development efforts.¹⁸⁹ Judge Rader’s dissent echoes these concerns, stating that “§ 117(c) is not a carte blanche license to use any program loaded into a computer’s RAM when the machine is turned on,”¹⁹⁰ and exuding concern that the “court’s opinion today destroys copyright protection for software that continually monitors computing machine behavior.”¹⁹¹

Free-riding by ISOs is a legitimate concern. It would be troubling if the Federal Circuit simply traded anticompetitive practices of equipment manufacturers for anticompetitive practices of ISOs and license violations by the companies that hire them.

Fortunately, the court’s ruling does not make § 117(c) into an absolute shield that protects CHE from non-copyright legal claims. In the wake of the decision, companies like StorageTek remain free to bring claims of license breaches, just as they remain free to bring claims of unfair competition. Rather, the Federal Circuit’s decision in *StorageTek* channels allegations of license violations and anticompetitive behavior away from copyright law, to be adjudicated within the appropriate realms of contract law and unfair competition laws. Thus, it discourages parties from dressing up such allegations as copyright claims and tying up the Federal courts. The opinion also encourages informed negotiation about service by requiring that language barring ISO service must be clear and unambiguous if it is to be enforceable.

187. See H.R. REP. NO. 105-551, pt. 1, at 27 (1998) (discussing the goals of the amendments to § 117).

188. See *Chamberlain*, 381 F.3d at 1183-85; *Static Control*, 387 F.3d at 530-31, 553.

189. *StorageTek I*, No. 02-12102, 2004 WL 1497688, at *3.

190. *StorageTek II*, 421 F.3d at 1321 (Rader, J., dissenting).

191. *Id.*

StorageTek establishes 17 U.S.C. § 117(c) as a broad safe harbor from copyright infringement for ISOs, but not an impregnable safe-haven that shelters opportunistic ISOs from legitimate contract claims or unfair competition claims arising from their activities. The decision should effectively discourage use of copyright as either a sword or a shield in the battle between manufacturers and ISOs for the service market—thus helping to set the conditions for a fair fight.

FAIR USE IN THE 21ST CENTURY: *BILL GRAHAM AND BLANCH V. KOONS*

By Jeannine M. Marques

“You’ve got to ask yourself one question: ‘Do I feel lucky?’ Well, do ya, punk?”¹ In an era in which ninety-two million Americans use the internet daily² and in which YouTube is one of the top ten most highly viewed websites internationally,³ both amateur and professional creators must increasingly wade through the fair use thicket—an arena that countless creators and lawyers alike have characterized as an enigma, a mystery, a fairy tale.⁴ YouTube, MySpace, Blogspot, and countless other websites offer amateur creators (and even professional content companies like CBS) the opportunity to produce innovative content and to post it immediately and freely to a worldwide audience. Many of these creators incorporate copyrighted works such as songs, videos, and trademarked clothing into their art. Commentators agree that this type of artwork plays a vital role in today’s cultural commentary.⁵ Traditionally, however, courts do not sanction this type of wholesale reproduction of copyrighted works unless the subsequent work constitutes a fair use.

Courts developed the fair use doctrine to balance copyright’s competing goals.⁶ On the one hand, copyright encourages the creation of artistic works through a limited monopoly that ensures that creators can profit from their labors. On the other hand, a strict monopoly discourages the production of new art that builds from these existing copyrighted works.⁷

© 2007 Jeannine M. Marques

1. *DIRTY HARRY* (Warner Brothers 1971).

2. Pew Internet & Am. Life Project, Internet Activities, http://www.pewinternet.org/trends/Internet_Activities_7.19.06.htm (last visited Mar. 23, 2007).

3. Alexa, a website that collects web traffic information and maintains a daily-updated list of top 500 websites, reports that YouTube is ranked in the top ten among internet users internationally, and that site traffic increases daily. Alexa, Top Sites, http://www.alexa.com/site/ds/top_500 (last visited Mar. 17, 2007).

4. David Nimmer, *The Fairest of Them All*, 66 *LAW & CONTEMP. PROBS.* 263, 263 (Winter/Spring 2003).

5. See, e.g., Molly Shaffer Van Houweling, *Distributive Values in Copyright*, 83 *TEX. L. REV.* 1535, 1540 (2005); Richard Koman, *Remixing Culture: An Interview with Lawrence Lessig*, *O’Reilly Network*, Feb. 24, 2005, <http://www.oreillynet.com/pub/a/policy/2005/02/24/lessig.html>.

6. See generally *Folsom v. Marsh*, 9 F. Cas. 342 (C.C.D. Mass. 1841) (No. 4901) (establishing what will come to be known as the fair use test).

7. Kenly Ames, Note, *Beyond Rogers v. Koons: A Fair Standard for Appropriation*, 93 *COLUM. L. REV.* 1473, 1479 (1993) (“Numerous contemporary artists appropriate

Thus, fair use operates as the fulcrum that balances an author's economic rights against a secondary use that surpasses the original piece by contributing to society's wealth of knowledge in a way in which the original does not. The problem lies in judicial interpretation of this balance because since its inception, judges have failed to use a uniform scale to accomplish this fair use balancing. Thus, disparate rulings leave secondary users wondering, "What is enough for fair use?" or even worse, "Will I be lucky enough to get away with a fair use defense?"⁸

Despite its seemingly standardless application, fair use can be described as falling into three categories—classical, personal, and personal-productive.⁹ Classical fair use encompasses a "professional" artist's unauthorized, yet productive, use of copyrighted content. Along with book reviews or film critiques, classical fair use encompasses both historical accounts and "appropriation art." The more traditional, historical works use copyrighted works in historical accounts such as documentary films or biographies.¹⁰ Conversely, appropriation art is a type of post-modern art that incorporates the copyrighted work into a larger object of social, political, or cultural critique. Appropriation artists, such as Andy Warhol, do not create "art about Art" in the modernist sense, but create art about the images found in our daily lives.¹¹ Thus, appropriation art is valuable in its own right because it forces the viewer to perceive a familiar image differently.¹²

The second general category of fair use, personal fair use, includes home uses such as recording television shows on VCR or TiVo.¹³

existing images as source material. Their works encompass a wide variety of methods, ranging from the incorporation of a single element into a much larger work through collage to the reproduction of an image without physical alteration, but reattributed to the appropriating artist.").

8. A recent study by Peter Jaszi and Patricia Aufderheide surveyed hundreds of documentary filmmakers on fair use and the issues surrounding it, and the filmmakers tended to agree that they used fair use as a last resort partly because of its instability as a defense. For example, one filmmaker noted, "fair use is a crap shoot because it really depends on [attitude]." PATRICIA AUFDERHEIDE & PETER JASZI, *UNTOLD STORIES: CREATIVE CONSEQUENCES OF THE RIGHTS CLEARANCE CULTURE FOR DOCUMENTARY FILMMAKERS* (Nov. 2004), http://www.centerforsocialmedia.org/files/pdf/UNTOLD_STORIES_Report.pdf.

9. Michael Madison, *Rewriting Fair Use & the Future of Copyright Reform*, 23 *CARDOZO ARTS & ENT. L.J.* 391, 393-94 (2005).

10. *See id.*

11. Ames, *supra* note 7, at 1477-80.

12. *Id.* at 1482.

13. Madison, *supra* note 9, at 393-94 (pointing to the example of time-shifting of television shows in *Sony Corp. v. Universal Studios, Inc.*, 464 U.S. 417 (1984)).

Finally, personal productive use combines the categories of classical and personal uses into a new category of home users (i.e. “non-professionals”) who exercise creative and editorial discretion in classical fair use areas, such as a blog entry that includes an image of the writer’s favorite movie.¹⁴ This category also encompasses amateur appropriation artists.

In the realm of classical fair use, courts have been reluctant to expand fair use beyond works that are specifically enumerated in the preamble to § 107 (criticism, comment, news reporting, teaching—including multiple copies for classroom use, scholarship, or research) or works that are akin to these enumerated examples.¹⁵ Additionally, courts have tended to favor copyright holders in disputes over appropriation art, especially if the secondary user’s work is commercial.¹⁶ Two recent Second Circuit opinions, however, seem to diverge from this traditionally conservative approach: *Bill Graham Archives v. Dorling-Kindersley Ltd.* and *Blanch v. Koons*.¹⁷ In *Bill Graham*, a historical account case, the Second Circuit upheld the use of seven graphic images of the Grateful Dead in a coffee table book that narrates a detailed history of the band.¹⁸ Likewise, in *Blanch*, an appropriation art case, the Second Circuit upheld the use of a photograph in a painted collage.¹⁹

This Note explores how these recent developments seem to crack open the door to classical fair use jurisprudence, bringing into its purview a broader definition of transformative use and consequently an increased acceptance of secondary uses as fair despite the impact on a copyright holder’s potential market. While these developments likely will increase the production of creative works, especially in the digital realm, the transformative test is limited and still leaves room for continued judicial discretion to grant fair use only to the truly “lucky.”

Part I provides a brief evolution of fair use jurisprudence, with an emphasis on the transformative test. Part II presents an overview of the

14. *Id.* (describing another example of personal productive use as the cleansing of a film’s violent or sexually explicit content).

15. 17 U.S.C. § 107 (2006); *see, e.g.*, *Castle Rock Entm’t v. Carol Publ’g Group*, 150 F.3d 132, 143 (2d Cir. 1998) (holding that a trivia quiz book fails to meet the transformative test because its purpose is not one enumerated in § 107).

16. *See Stewart v. Abend*, 495 U.S. 207, 238 (1990) (“This case presents a classic example of an unfair use: a commercial use of a [creative work] that adversely affects the [artist’s market].” (quoting *Abend v. MCA, Inc.*, 863 F.2d 1465, 1482 (9th Cir. 1988))).

17. *Bill Graham Archives v. Dorling-Kindersley Ltd.*, 448 F.3d 605 (2d Cir. 2006); *Blanch v. Koons*, 467 F.3d 244 (2d Cir. 2006).

18. *Bill Graham*, 448 F.3d at 608.

19. *Blanch*, 467 F.3d at 32.

Blanch and *Bill Graham* cases, which are particularly important because of the Second Circuit's precedent setting role in fair use jurisprudence. Part III explores how these opinions have broadened the transformative test to perhaps set the stage for increased activity in the realm of personal productive use. Finally, Part IV explains that despite these opinions, the fair use doctrine is still limited in both its doctrinal and institutional reach, and as a result leaves enough flexibility to allow continued disparate rulings in the realm of fair use.

I. THE EVOLUTION OF FAIR USE

At its core, fair use balances the inherent tension in copyright law between establishing an economic incentive for new works and fueling the production of works that build on these older creations.²⁰ Courts employ fair use as an equitable rule of reason to allow an otherwise infringing use when honoring the copyright would stifle the very creativity that the law strives to foster.²¹ Courts also apply fair use as a kind of implied license when an unauthorized use does not injure the value associated with the copyright.²² Thus, as Michael Madison writes:

Fair use marks the precious and elusive line between the future and the present, and between the good of the many and the good of the one, that exists for reasons of justice, fairness, utility, or otherwise. The world is a better place in some small measure because fair use enables it to be so.²³

Part A of this section outlines the historical development of fair use. Parts B and C then provide an in-depth analysis of the two biggest fair use considerations: the transformative test and economic effects on plaintiff's market, respectively.

A. Background

Fair use has matured from a vague common law doctrine into a statutory rule that embodies copyright's competing principles. After Justice Story initially proclaimed the doctrine of fair use,²⁴ courts did not use it as a defense, but as a way to establish the rights included in the copyright monopoly.²⁵ In 1976, Congress finally codified this broad doctrine in 17

20. *Sony Corp. v. Universal Studios, Inc.*, 464 U.S. 417, 429 (1984).

21. *Stewart*, 495 U.S. at 236.

22. Madison, *supra* note 9, at 398.

23. *Id.* at 392.

24. *Folsom v. Marsh*, 9 F. Cas. 342, 345 (C.C.D. Mass. 1841) (No. 4901).

25. PAUL GOLDSTEIN, COPYRIGHT 188-89 n.5 (Little, Brown & Co. 1989).

U.S.C. § 107.²⁶ The preamble of § 107 enumerates several examples of fair use including criticism, comment, news reporting, teaching (including multiple copies for classroom use), scholarship, or research.²⁷ The statute then lists the fair use factors as follows: (1) purpose and character of the use, (2) nature of the copyrighted work, (3) amount and substantiality of the portion used in relation to the copyrighted work as a whole, and (4) effect of the use on the potential market for or value of the copyrighted work.²⁸ Congress intended this rule to act as a broad guideline—applicable on an ad hoc basis and flexible enough to handle rapid technological changes.²⁹

In the wake of § 107, the courts defined fair use as a kind of implied license for a defendant's reasonable or customary uses.³⁰ Today, most courts apply fair use as an affirmative defense to copyright infringement.³¹ Fair use is a mixed question of law and fact that can be determined at summary judgment if no genuine issue of material fact exists.³² In analyzing the fair use of an original creator's work, courts do not treat the statutory factors as a bright line rule, nor do they consider the factors in isolation; rather, courts weigh the factors together in light of the goals of copyright.³³ Hence, a use is usually fair if it can serve the dual purposes of stimulating the public's wealth of knowledge without diminishing incentives for creativity.³⁴

This balancing test has led to a general disagreement over which factor should weigh more heavily in the fair use analysis—the transformative or productive nature of the secondary use or the economic effects on a copyright holder. Courts use the transformative test to determine if a defendant's work differs enough from a copyright holder's work that it makes its own independent contribution to society's knowledge but does not significantly impact the copyright holder's market. However, no bright line rule has emerged to determine the amount of transformation needed or a sufficient level of economic harm, which in turn has led courts to formulate disparate and wide-ranging rationales and outcomes in fair use cas-

26. 17 U.S.C. § 107 (2006).

27. *Id.*

28. *Id.*

29. H.R. REP. NO. 94-1476 (1976).

30. *Harper & Row Publishers, Inc. v. Nation Enters.*, 471 U.S. 539, 549-51 (1985).

31. 4-13 NIMMER ON COPYRIGHT § 13.05 (2006).

32. *Harper & Row*, 471 U.S. at 560.

33. *Campbell v. Acuff-Rose Music, Inc.*, 510 U.S. 569, 578 (1994).

34. Pierre Leval, *Toward a Fair Use Standard*, 103 HARV. L. REV. 1105, 1110 (1990).

es.³⁵ Thus, this debate has left copyright owners and potential secondary users alike wondering what counts as fair use.

B. Transformative Test: Promoting Progress in the Arts

Courts use the transformative test as a tool to calculate the amount a secondary use contributes to society in its own right and therefore advances copyright's goal of promoting progress in the arts. The transformative tests asks "whether the new work merely supersedes the objects of the original creation or instead adds something new, with a further purpose or different character, altering the first with new expression, meaning, or message."³⁶ Judge Pierre Leval of the Southern District of New York first developed this test in his influential article, *Toward a Fair Use Standard*.³⁷ The Supreme Court, in turn, then adopted the formulation in *Campbell v. Acuff-Rose*, one of its landmark fair use cases.

Transformative works tip in favor of fair use because they further copyright's goal of promoting the arts.³⁸ Courts usually analyze the transformative test under the first fair use factor, the purpose and character of defendant's use, but the analysis also informs the other fair use factors.³⁹ Although the courts have not yet formulated a clear standard for transformative, they have considered two key factors of a secondary work: (1) actual transformation and (2) different functional purpose of the secondary work. Under actual transformation, the courts highlight the actual, aesthetic differences between the original and the secondary works.⁴⁰ For example, transformative works have included smaller, lower resolution thumbnail

35. For example, in *Campbell*, the Supreme Court stated that transformative works lay at the heart of the fair use doctrine, and that the more transformative a new work is, the less significant the other fair use factors, including commercialism become. 510 U.S. at 579. However, recent opinions still cite *Harper & Row* for the idea that the defendant's effect on plaintiff's commercial market is the most important fair use factor. *Harper & Row*, 471 U.S. at 566-67; *Stewart*, 495 U.S. at 238; see, e.g., *Video Pipeline, Inc. v. Buena Vista Home Entm't, Inc.*, 275 F. Supp. 2d 543, 565 (D.N.J. 2003).

36. *Campbell*, 510 U.S. at 579.

37. Leval, *supra* note 34, at 1110.

38. *Campbell*, 510 U.S. at 579.

39. See *id.*; see, e.g., *Castle Rock Entm't v. Carol Publ'g Group*, 150 F.3d 132, 132 (2d Cir. 1998) (concluding that under the first fair use factor, defendant's work is minimally transformative at best, which tips the balance to plaintiffs on the other fair use factors); *Ringgold v. Black Entm't Television*, 126 F.3d 70, 81-82 (2d Cir. 1997) (concluding that defendant's use supersedes plaintiff's original purpose and therefore does not meet the standard for transformativeness, which in turn tips the balance of the factors in favor of plaintiff).

40. *Elvis Presley Enters. v. Passport Video*, 357 F.3d 896, 896 (9th Cir. 2004) (stating that transformation must be a real, substantial condensation of materials and not merely a facile use).

images⁴¹ and parodies.⁴² The more the defendant adds or changes, the more likely the secondary work is transformative because the effect on plaintiff's market decreases and the secondary work comes closer to copyright's goals of spurring further creativity.⁴³

Works that serve an entirely different functional purpose than the original are also transformative.⁴⁴ For example, in *Nunez v. Caribbean International News Corp.*, the court found fair use for a defendant who transformed a photograph from a promotional modeling purpose into a depiction of an important news story.⁴⁵ Thus the function of the secondary work, which was to inform, was transformatively different from the function of the original work, which served to illustrate the model's talent. Some courts also refer to the preamble of § 107 to define types of transformative purposes. In *Castle Rock Entertainment v. Carol Publishing Group*, for example, the Second Circuit denied fair use to defendant's creative trivia book based on the bizarre characters and comical situations of the hit television show *Seinfeld* not only because it superceded the entertainment purpose of *Seinfeld* but also because the trivia book did not have a transformative purpose as enumerated in the preamble of section 107.⁴⁶

Historically, courts have been reluctant to extend the definition of transformation beyond aesthetic changes, a different functional purpose, and the preamble's examples. Consequently, this narrow reading of transformation translates into a conservative trend in fair use outcomes, leading courts oftentimes to find for a plaintiff even if the secondary work is transformative or takes very little of the copyrighted work.⁴⁷ In *Ringgold v. Black Entertainment Television, Inc.*, for example, the Second Circuit ruled against fair use because the defendants' purpose superceded the plaintiff's purpose.⁴⁸ In this case, the defendants depicted the plaintiff's work, an elaborate mosaic of paint, quilting, and text that illustrates the story of an African-American family, in a sitcom about an African-

41. *Kelly v. Arriba Soft Corp.*, 336 F.3d 811, 818 (9th Cir. 2003).

42. *Campbell*, 510 U.S. at 579 (holding that a parody is transformative because it sheds light on the original work while creating a new work).

43. *Id.*

44. *Arriba Soft*, 336 F.3d at 818-19 (stating that if the secondary user uses plaintiff's work for the same intrinsic purpose, this weakens the claim for fair use).

45. *Nunez v. Caribbean Int'l News Corp.*, 235 F.3d 18, 23 (1st Cir. 2000).

46. *Castle Rock Entm't v. Carol Publ'g Group*, 150 F.3d 132, 143 (2d Cir. 1998).

47. *See Sony Corp. v. Universal Studios, Inc.*, 464 U.S. 417, 457 (1984) (Blackmun, J. dissenting) (noting that the Court tends to evade difficult questions and punt to the legislature despite the legislative history of § 107, which states that fair use is flexible enough to encompass new technologies).

48. *Ringgold v. Black Entm't Television, Inc.*, 126 F.3d 70 (2d Cir. 1997).

American family.⁴⁹ The quilt appeared on screen for only 26.75 seconds and did not appear alone, but in a church scene filled with actors.⁵⁰

The Second Circuit held that this use was enough to give rise to substantial similarity under the *de minimus* test.⁵¹ After finding infringement, the court then marched through the fair use factors and deemed the use unfair because the defendant's purpose, using the painting as a set decoration, superceded the plaintiff's decorative purpose in creating the work.⁵² The court commented that the plaintiff created the work with a significant decorative purpose even if she intended other purposes such as illuminating human understanding or inspiring others.⁵³ Furthermore, and perhaps more startling, the court did not require the plaintiff to demonstrate any harm to her current market; rather, the court held the use unfair because it affected a reasonable market that the plaintiff could develop, licensing her work as a set decoration.⁵⁴

Although *Ringgold* seems to stand for the proposition that the transformative test clearly distinguishes between transformation and infringement, the test actually allows for much judicial discretion. For example, the test allows the court to determine whether aesthetic changes have been made between the secondary work and the original work. While an aesthetic change such as shrinking an image to thumbnail-size might be obvious in some circumstances, this type of change might not be so obvious in other ways, especially in the realm of appropriation artwork which recontextualizes familiar images.⁵⁵ Additionally, the test permits the court to determine the purposes of both the original and secondary works. If the original work has multiple purposes, however, this inquiry is problematic. In these instances, a court will look to the work's primary purpose to determine if the secondary use transforms this primary purpose.⁵⁶ Both of these decisions, however, beg the question, "Is the court equipped to handle these types of determinations," especially in light of the fact that many fair use cases end at summary judgment?⁵⁷ Looking to the disparate fair

49. *Id.* at 71-72.

50. *Id.* at 74-75.

51. *Id.* at 76 (stating that *de minimus* means either (1) a technical violation that is so trivial that the law will not impose legal consequences, or (2) copying that has occurred to such a trivial extent as to fall below the quantitative threshold of substantial similarity, which is a requirement for actionable copying).

52. *Id.* at 78.

53. *Id.* at 79 n.10.

54. *Id.* at 81.

55. See Ames, *supra* note 7, at 1479.

56. See *Ringgold*, 126 F.3d at 79 n.10.

57. See 4-13 NIMMER, *supra* note 31, §13.05 n.17.

use jurisprudence and confusion over fair use overall, the answer seems to be “no.”

C. Economic Interest: Providing Sufficient Incentives for Creation

Further complicating the fair use analysis is the second copyright goal, providing sufficient incentives for creation. *Ringgold* exemplifies this tension between creation and economic incentives in trying to balance transformation with a secondary use’s economic effects on a copyright owner. As courts traditionally refrain from finding transformation, they simultaneously stress the importance of a copyright holder’s economic interests.⁵⁸

As with the transformative test, courts consider economic harm within each of the fair use factors.⁵⁹ Under the first factor, purpose and character of the secondary use, courts consider the commercial nature of a secondary use. For commerciality to weigh heavily against fair use, the secondary use must involve more than a simple profit-making scheme.⁶⁰ In *Campbell*, the Supreme Court rejected the notion that the commercial nature of a defendant’s work leads to a presumption of market harm.⁶¹ The Court held that a secondary use beyond duplication, in other words a transformative use, does not give rise to this presumption because profit motivates nearly all creators to produce, and thus this presumption would stifle creativity.⁶²

Courts will not sustain a fair use defense when the secondary use is a form of commercial exploitation—that is—if the copier derives explicit financial rewards from the use of the copyrighted material.⁶³ For example, in *American Geophysical Union v. Texaco*, Judge Leval found against fair use for Texaco scientists who photocopied scientific journal articles merely to avoid buying more subscriptions or paying for the rights from the Copyright Clearance Center.⁶⁴

Courts also consider the effect of defendant’s work on a plaintiff’s market in the fourth factor. The question is not merely whether the sec-

58. Further complicating this tension is the notion that the desire for a certain outcome drives courts to weigh these factors differently depending on the fact patterns. Again, this leaves copyright holders and users without much guidance. See Nimmer, *Fairest of Them All*, *supra* note 4, at 280.

59. See, e.g., *Nunez v. Caribbean Int’l News Corp.*, 235 F.3d 18, 22 (1st Cir. 2000).

60. *Campbell v. Acuff-Rose Music, Inc.*, 510 U.S. 569, 584 (1994).

61. *Id.* at 590-91.

62. *Id.*

63. *Am. Geophysical Union v. Texaco, Inc.*, 802 F. Supp. 1 (S.D.N.Y. 1992), *aff’d*, 37 F.3d 881 (2d Cir. 1994).

64. *Id.*

ondary work affects the plaintiff's market overall; rather, the court asks whether the secondary use acts as a market substitute for a market that properly belongs to the copyright holder.⁶⁵ Thus, the fourth factor also accounts for the original work's potential market.⁶⁶ Potential market has been defined as one which is traditional, reasonable, or likely to develop.⁶⁷ This includes the market for derivative works⁶⁸ and the ability to license or further develop the original work.⁶⁹ This ability to license rights, however, does not mean a copyright owner can prevent fair uses: "Thus, by developing or licensing a market for parody, news reporting, educational, or other transformative uses of its own creative work, a copyright owner cannot prevent others from entering those fair use markets."⁷⁰

This definition of potential market, however, raises a problem of circularity because it allows plaintiffs to define their own markets and hence claim an economic harm.⁷¹ In an era of rapid digitalization and extended copyright terms,⁷² copyright holders can increasingly close subsequent users out of the market. For example, in *Perfect 10 v. Google, Inc.*, the court held defendant Google's use of thumbnail images, while productive, was unfair because Perfect 10 had created a market for thumbnail images

65. *Nunez*, 235 F.3d at 24-25.

66. *Campbell*, 510 U.S. at 590.

67. *Castle Rock Entm't v. Carol Publ'g Group*, 150 F.3d 132, 145 n.11 (2d Cir. 1998); see, e.g., *Ringgold v. Black Entm't Television, Inc.*, 126 F.3d 70, 81 (2d Cir. 1997) (holding that the fourth factor weighs in favor of the plaintiff if she can prove traditional, reasonable, or likely-to-be-developed market for licensing her art as set decorations).

68. A copyright owner has the right to exploit a derivative market. Section § 101 defines a "derivate work" as:

[A] work based upon one or more preexisting works, such as a translation, musical arrangement, dramatization, fictionalization, motion picture version, sound recording, art reproduction, abridgment, condensation, or any other form in which a work may be recast, transformed, or adapted....[or] a work consisting of editorial revisions, annotations, elaborations, or other modifications which, as a whole, represent an original work of authorship.

17 U.S.C. § 101 (2006). Derivative works, unlike transformative works, do not transform the purpose of the original work. *Castle Rock*, 150 F.3d at 143. However, derivative works can also complement or fulfill a different function than the original. *Blanch*, 467 F.3d at 252 n.4.

69. *Campbell*, 510 U.S. at 592; see, e.g., *Castle Rock*, 150 F.3d at 145 (holding that the SAT book was likely to fill gap in market that could likely have developed).

70. *Castle Rock*, 150 F.3d at 145 n.11.

71. *American Geophysical Union v. Texaco, Inc.*, 37 F.3d 881, 929 n.17 (2d Cir. 1994).

72. See William F. Patry & Richard A. Posner, *Fair Use and Statutory Reform in the Wake of Eldred*, 92 CALIF. L. REV. 1639, 1640-41 (2004).

for use on cell phones.⁷³ Thus, this ruling exemplifies the danger of favoring economic harm over transformation. As technology advances and copyright owners claim more potential markets, transformative uses will likely be stifled.

The Sixth Circuit's opinion in *Bridgeport Music v. Dimension Films* further illustrates this conflict between potential economic effects versus productive secondary uses.⁷⁴ Although the court did not employ the fair use test, its opinion strongly supports a copyright holder's economic right to his work despite the apparent transformation of the secondary work.⁷⁵ In this case, the defendants copied just two seconds of the plaintiff's guitar solo, looped the sound into 16 beats, and repeated the combination five times in a film soundtrack.⁷⁶ Although this use seems to be transformative, in an uncompromising opinion, the court held that digital sampling is nevertheless infringement: "Get a license or don't sample."⁷⁷ Even if the digital sample alters the original to the point where a lay observer can no longer recognize it,⁷⁸ sampling constitutes infringement because a copyright owner has the exclusive right to rearrange, remix, or license her actual sounds.⁷⁹ This ruling supporting a copyright holder's right to all potential markets departs from the Supreme Court's focus in *Campbell* on the transformativeness of a secondary use. Consequently, a strong emphasis on a copyright owner's market in some cases versus an emphasis on transformation in other cases, evinces the fundamental tension in fair use and leaves unlicensed users, regardless of their creativity, wondering what, if anything, is enough for fair use.

II. THE SECOND CIRCUIT FAIR USE CASES

The Second Circuit has played a significant role in molding the fair use balancing test.⁸⁰ New York is home to numerous copyright holders,

73. *Perfect 10 v. Google, Inc.*, 416 F. Supp. 2d 828, 848-49 (C.D. Cal. 2006).

74. *Bridgeport Music v. Dimension Films*, 410 F.3d 792 (6th Cir. 2005).

75. *Id.* at 802.

76. *Id.* at 796.

77. *Id.* at 801.

78. This wording sounds like the court is trying to preempt the transformative inquiry, but the court explicitly states that its holding does not consider a fair use analysis. *Id.*

79. *Id.*

80. See *Nimmer*, *supra* note 4, at 263 (calling the Second Circuit justices the "copyright specialists"); see, e.g., *Campbell v. Acuff-Rose Music, Inc.*, 510 U.S. 569, 579 (1994) (adopting Judge Leval's transformative test); *Stewart v. Abend*, 495 U.S. 207, 238 (1990) (adopting the Second Circuit's rule that denied fair use if a defendant's product unfairly competed with a copyright holder's work).

such as photographers, film companies, book publishers, advertising agencies, magazines, and newspapers. Accordingly, many fair use cases arise in the Second Circuit. Continuing this tradition of precedential rulings, the Second Circuit's two most recent fair use cases break from its traditionally conservative findings of fair use. This Part gives a brief overview of these two cases: *Bill Graham Archives v. Dorling-Kindersley Ltd.* and *Blanch v. Koons*. Part III explores how these opinions have departed from the transformative test's narrow definition of purpose and simultaneously deemphasized the economic harm factor. Finally, Part IV explains how these opinions are limited in both their doctrinal and institutional reach, leaving enough flexibility in the purpose definition to continue to foster conservative and disparate rulings in fair use jurisprudence.

A. *Bill Graham Archives v. Dorling-Kindersley Ltd.*

In *Bill Graham Archives v. Dorling-Kindersley Ltd.*, the Second Circuit found that the defendants' complete reproduction of seven of the plaintiff's graphic images in a biographical book constituted fair use.⁸¹ Plaintiff, Bill Graham Archives ("BGA"), owned the copyright in seven graphic images depicting the famous rock band, the Grateful Dead.⁸² Six of these images were large posters that featured concert information at various venues, and one image depicted a Grateful Dead concert ticket.⁸³ BGA originally used these huge poster-size pieces to generate public interest in the Grateful Dead and their forthcoming concerts.⁸⁴

Defendant, Dorling-Kindersley ("DK"), published *Grateful Dead: The Illustrated Trip*, a 480-page coffee-table book that chronicles the history of the famous rock band.⁸⁵ The book follows the band's developments through a timeline that features text, graphics, and photographs, including the seven BGA images.⁸⁶ DK initially asked for permission to reprint the images, but after the parties failed to agree on a licensing fee, negotiations collapsed.⁸⁷ Nevertheless, DK proceeded to publish the art in full.⁸⁸ DK "significantly" reduced the image size, surrounded each image with expla-

81. *Bill Graham Archives v. Dorling-Kindersley Ltd.*, 448 F.3d 605 (2d Cir. 2006).

82. *Id.* at 607.

83. *Id.* at 605.

84. *Id.* at 607 n.1.

85. *Id.* at 607.

86. *Id.*

87. *Id.*

88. *Id.*

natory text, and placed them on the Grateful Dead Timeline as a graphic representation of these historic moments.⁸⁹

The Southern District of New York granted summary judgment to DK on the rationale that their use of the images constituted fair use.⁹⁰ The Second Circuit affirmed the grant of summary judgment also on fair use grounds.⁹¹ The Second Circuit framed its analysis within the policy behind fair use, stating, “The ultimate test of fair use is whether the copyright law’s goal of promoting the Progress of Science and the Useful Arts would be better served by allowing the use than by preventing it.”⁹² Then in the traditional march through the fair use factors, the court found that because DK’s use constituted a transformative use, the fair use analysis tipped in its favor on each factor.⁹³ Under the first factor, purpose and character of the use, the court announced that the transformative test is the most important part of the fair use inquiry.⁹⁴

The court then held that DK’s use of all seven images was transformative.⁹⁵ The court reasoned the use of copyrighted material in biographies is generally permissible because these works are akin to § 107’s enumerated examples of fair use such as criticism and comment.⁹⁶ The court extended this inquiry, however, to the expressive purpose of *Illustrated Trip* and the aesthetic transformation. DK used each image for a transformatively different “expressive purpose” than the original.⁹⁷ After their creation, BGA displayed the images to generate public interest and convey information to audiences about the band.⁹⁸ Conversely, DK exploited the images’ historical value, displaying the images as artifacts to document actual events.⁹⁹ Thus, the images in *Illustrated Trip* enhanced the reader’s understanding of the text, a transformatively different purpose than conveying information to a broad public.¹⁰⁰

Moreover, the placement and context of the images in *Illustrated Trip* also constituted a visual transformation.¹⁰¹ Drawing on the Ninth Circuit’s

89. *Id.*

90. *Id.*

91. *Id.*

92. *Id.* at 608 (citing U.S. CONST. art. I, § 8, cl. 8).

93. *Id.* at 615.

94. *Id.* at 608.

95. *Id.* at 609.

96. *Id.* at 608 (citing 17 U.S.C. § 107).

97. *Id.* at 609.

98. *Id.*

99. *Id.* at 610.

100. *Id.*

101. *Id.* at 611.

rationale in *Kelly v. Arriba Soft Corp.*,¹⁰² in which it found a website's thumbnail images of plaintiff's photographs to be a transformative use, the Second Circuit found that the aesthetic changes to BGA's images constituted transformation.¹⁰³ DK both minimized the images until they could no longer capture the originals' expressive value and placed them within the larger collage of the book.¹⁰⁴ The court found that because of their reduced size, the images constitute an inconsequential portion of the book as a whole (one-fifth of one percent).¹⁰⁵ Thus, even though DK wholly reproduced BGA's images, the importance to the work overall counted in favor of fair use.

The court continued with the fair use analysis with a particular emphasis on transformation in each factor. Resuming its purpose and character inquiry, the court concluded that DK did not actively use the images to promote the sale of the book.¹⁰⁶ Instead, the use of the images was incidental to the commercial value of the book which aimed to describe the life of the Grateful Dead.¹⁰⁷ Under the second factor, the nature of the copyrighted work, the court concluded that although BGA's images constituted creative works, this factor only weighed slightly in their favor because of the transformative way in which DK exhibited the works.¹⁰⁸ Likewise, under the third factor, the amount and substantiality of the portion used, the Second Circuit cited to *Campbell* for the proposition that even though DK featured the entire images, the transformatively different purpose of *Illustrated Trip* necessitated including the entire images.¹⁰⁹ Thus, this factor played a neutral role in the fair use analysis.¹¹⁰ Finally with respect to the market harm analysis of the fourth factor, the court concluded that because DK transformed the works, BGA did not suffer any market harm.¹¹¹ Notably, the court stated that the mere existence of a licensing market does not mean that a secondary user cannot use the work fairly.¹¹²

102. *Kelly v. Arriba Soft Corp.*, 336 F.3d 811, 818-20 (9th Cir. 2003).

103. *Bill Graham*, 448 F.3d at 611.

104. *Id.*

105. *Id.*

106. *Id.* at 612.

107. *Id.*

108. *Id.*

109. *Id.* at 613.

110. *Id.* at 615.

111. *Id.*

112. *Id.* ("Moreover, a publisher's willingness to pay license fees for reproduction of images does not establish that the publisher may not, in the alternative, make fair use of those images.")

B. *Blanch v. Koons*

In *Blanch v. Koons*, the Second Circuit again upheld a ruling of fair use, following a very similar rationale.¹¹³ The plaintiff, Andrea Blanch, is a renowned portrait and fashion photographer.¹¹⁴ In August of 2000, *Allure* magazine published Blanch's photo "Silk Sandals By Gucci" in a six-page spread on metallic make-up.¹¹⁵ The photo depicted the lower half of a woman's bare legs (from below the knee to the feet) crossed at the ankles, resting on a man's knee and pointing diagonally upwards (from right to left at a 45-degree angle).¹¹⁶ The minimal background, which appears to portray the floor, window, wall and seat of an airline cabin, tightly framed the woman's ornately jeweled shoes and sparkling metallic toenail polish.¹¹⁷ In creating the image, Blanch carefully controlled the lighting, camera, film, and composition of the photo, with an emphasis on the scene's sexuality.¹¹⁸

Jeff Koons is a "visual artist" renown for dabbling in appropriation, art, and litigation.¹¹⁹ In preparation for an art show at the Guggenheim Museum in New York,¹²⁰ Koons scanned several advertisement photographs, including "Silk Sandals" into his computer.¹²¹ Koons then collected these fragments into various paintings with the goal of compelling the viewer to reconceptualize familiar media images.¹²² Koons incorporated "Silk Sandals" into a painting entitled "Niagara," which featured three other pairs of women's legs displayed prominently in front of Niagara Falls and dangling above images of confections such as a colorful ice cream sundae and plates of donuts and pastries.¹²³ When "Niagara" was painted, "Silk Sandals" was altered—the background was discarded, the

113. *Blanch v. Koons*, 467 F.3d 244 (2d Cir. 2006).

114. *Id.* at 247.

115. *Id.* at 248.

116. *Id.*

117. *Id.*

118. *Id.*

119. *Id.* at 246. Koons is actually a repeat defendant in copyright infringement litigation and has been sued by several different artists/copyright holders for "using" their works in his art. See, e.g., *Rogers v. Koons*, 960 F.2d 301 (2d Cir. 1992), *cert. denied*, 506 U.S. 934 (1992).

120. *Blanch*, 467 F.3d at 246. Co-defendants in this suit are Deutsche Bank AG, a German Company, and the Guggenheim Foundation in New York, both of which commissioned Koons' allegedly infringing work. *Id.*

121. *Id.* at 248.

122. *Id.*

123. *Id.* at 247.

legs were rotated to a vertical position, a heel was added to one of the sandals, and the color was modified.¹²⁴

Parallel to their analysis in *Bill Graham*, the Second Circuit walked through the fair use factors with an eye towards transformation. The court first determined that, like the book in *Bill Graham*, Koons' use in "Niagara" was transformative. Under the first factor, even though Koons' work did not fall into § 107's examples, the work did have an entirely different expressive purpose.¹²⁵ In a laborious inquiry, the court carefully examined depositions from both Blanch and Koons to determine their respective purposes, and the court noted numerous times that Blanch failed to contest much of Koons' testimony.¹²⁶ With his painting, Koons wanted viewers to consider their own personal experiences with media objects and gain new insights into how those affect their lives.¹²⁷ Conversely, Blanch wanted to highlight the erotic sexuality of the moment.¹²⁸ Thus, the two works expressed an entirely different meaning to the viewer. In addition, as in *Bill Graham*, the court found that the aesthetic changes between the two images, notably the medium and the size of the image, were transformative.

With a finding of transformation in hand, the court proceeded through the other fair use factors, weighing each one in light of this transformative use. Under the commercial use inquiry, the court concluded that the transformative nature of Koons' work overshadowed its commercial nature.¹²⁹ In considering the nature of Blanch's work, the court cited to its decision in *Bill Graham*. It held that even though the work is creative, the second factor was of limited usefulness where the defendant used the art for a transformative purpose such as that evidenced in Koons' painting.¹³⁰ With respect to the amount and substantiality test of factor three, the court again cited *Campbell* for the notion that the copying must be reasonable in light

124. *Id.* at 248. As William Patry notes, oftentimes Koons does not actually create his own artwork, and in this case it is not clear whether Koons himself actually painted "Niagara." Patry Copyright Blog, Koons Affirmed (Don't Blanch), <http://williampatry.blogspot.com/2006/10/koons-affirmed-dont-blanch.html> (Oct. 26, 2006, 19:07 EST). For example, Koons did not personally sculpt the sculpture at issue in *Rogers v. Koons*; rather he printed out an image of plaintiff's photograph and sent it to a factory for sculpting. *Rogers v. Koons*, 751 F. Supp. 474, 476 (S.D.N.Y. 1990).

125. *Blanch*, 467 F.3d at 251-52; see *Bill Graham Archives v. Dorling-Kindersley Ltd.*, 448 F.3d 605, 609 (2d Cir. 2006).

126. *Blanch*, 467 F.3d at 252.

127. *Id.* at 252-53.

128. *Id.*

129. *Id.* at 257.

130. *Id.*

of the transformative purpose.¹³¹ The court went on to note that although Koons conveyed the facts of Blanch's photo, he stripped out the individual expressive elements, which Blanch had defined as the airline cabin backdrop and the exact positioning of the women's legs.¹³² Finally under the market effect analysis, the court accepted Blanch's testimony that Koons' use did not affect her economically.¹³³ Blanch admitted that she had never licensed her works to other visual artists and that Koons' use did not harm her market, career, or the value of "Silk Sandals."¹³⁴ Thus, the court found that both the transformative nature and the absence of any current market effect tip the fair use calculus in favor of Koons.¹³⁵

III. DEVELOPMENTS IN THE TRANSFORMATIVE TEST

Bill Graham and *Blanch* seem to mark a shift in focus in fair use jurisprudence towards promoting and encouraging transformative works, regardless of economic effects, in areas in which classical fair use was all but closed to secondary users. Section A first outlines the changes in the meaning of transformative post *Bill Graham* and *Blanch*. Section B applies this meaning to the realm of classical fair uses. Finally, Section C extends these implications to the arena of personal productive uses in the post-modern, YouTube, age.

A. Transformation and its Reach Revisited

Both *Bill Graham* and *Blanch* strongly support the notion that the transformative inquiry dominates the fair use analysis. Moreover, the opinions go beyond paying lip service to this principle; they actually implement it through a fairly broad reading of transformative use. Specifically, the opinions expand the definition of transformative in four ways: (1) defining transformative purpose beyond the preamble's enumerated examples to include creative works, (2) considering a secondary work's expressive purpose not just its functional purpose, (3) considering minimal aesthetic changes as sufficient for transformation, and (4) deemphasizing any market harm once transformation is found.

From *Ringgold* to *Blanch*, the Second Circuit has broadened the meaning of both transformative purpose and aesthetic transformation. In both *Bill Graham* and *Blanch*, the court evidences a willingness to move

131. *Id.* (citing *Campbell v. Acuff-Rose Music, Inc.*, 510 U.S. 569, 586 (1994)).

132. *Id.* at 257-58.

133. *Id.* at 258.

134. *Id.*

135. *Id.*

beyond § 107's enumerated examples in finding transformative purpose. Although the court noted that the biography in *Bill Graham* is like a criticism, biography is not enumerated in the preamble of § 107. Moreover, the list does not include any creative works akin to Koons' painting.

The Second Circuit stepped even further beyond the traditional purpose inquiry by determining expressive purpose of the secondary works. The *Ringgold* opinion turned on the functional purpose of both plaintiff's and defendant's uses as decorative works of art, explicitly ignoring any expressive purposes of either work such as "illuminating human understanding."¹³⁶ Conversely, in both *Bill Graham* and *Blanch*, the court identified the expressive purposes of plaintiffs' and defendants' works as relevant to the fair use inquiry.¹³⁷ Even though the secondary works in both cases served the same functional purpose as the underlying works, the determinative factor became expressive purpose. For example, in *Blanch* the purpose inquiry turned on the differences between the types of emotions each artist wanted to evoke even though both works endeavored to evoke emotion in the viewer. Likewise, in *Bill Graham* both works strove to convey information about the Grateful Dead to a large number of people, but each work accomplished this in a different context, and thus each work embodied a different expressive meaning.

Furthermore, the Second Circuit in both *Bill Graham* and *Blanch* emphasized the context and size alterations of the secondary works under the actual transformation prong of the transformative test in accord with the transformative nature of a website's thumbnail images in *Kelly*.¹³⁸ DK surrounded the shrunken Grateful Dead images with explanatory text while Koons enlarged the legs from "Silk Sandals" and surrounded them with other tantalizing images. Thus, unlike previous fair use cases which seemed to demand a high level of aesthetic transformation, such as a parody, these opinions seem to excuse a defendant's wholesale reproduction of a work if the defendant incorporates minimal additions into a copyright owner's work.¹³⁹

136. See *Ringgold v. Black Entm't Television, Inc.*, 126 F.3d 70, 79 n.10 (2d Cir. 1997).

137. See *Bill Graham*, 448 F.3d at 609.

138. *Id.* at 605 (citing *Kelly v. Arriba Soft Corp.*, 336 F.3d 811, 818-20 (9th Cir. 2003)).

139. *Contra* *Castle Rock Entm't v. Carol Publ'g Group*, 150 F.3d 132 (2d Cir. 1998) (holding that a trivia book which cleverly incorporated the bizarre characters and comical situations of the hit show *Seinfeld* into a series of multiple-choice questions was not transformative enough).

Once the Second Circuit had determined that the secondary work was transformative, it deemphasized the effect of the secondary use on the owner's market. Previously, as evidenced in both *Ringgold* and *Bridgeport*, market harm and potential market harm greatly concerned the courts. But, in both *Bill Graham* and *Blanch*, the Second Circuit discounted each of the fair use factors, including market harm and commerciality, in light of the defendants' transformative use. More notably, unlike previous cases, the court seemed to limit its analysis of potential market under the fourth fair use factor. In *Blanch*, for example the court did not even consider *Blanch's* potential licensing market, an analysis it so willingly engaged in previously.¹⁴⁰ Moreover, in *Bill Graham* even though a licensing market actually existed for BGA's graphic poster images, the transformative nature of DK's book meant that DK did not usurp this market. Thus, in both cases, the transformative test seems to have shifted the focus of the fair use analysis from providing economic incentives for copyright owners to stimulating the production of new works.¹⁴¹

B. Implications for Classical Fair Use

This seemingly broader transformative test appears to crack open the door to fair use for both classical fair use and, by implication, personal productive fair uses. Thus, these rulings give hope to creators that their sheer ingenuity in using a copyrighted work to craft a new work will allow them to win fair use on the merits.

Under this new formulation, the Second Circuit likely would have reached a different outcome in *Ringgold*, a paradigmatic classical fair use case. The *Ringgold* court noted that the defendants' television show did not fit the preamble's enumerated examples.¹⁴² Under the new transformative formulation, this fact would not weigh against the defendants. Additionally, the transformative purpose inquiry in *Ringgold* turns on the functional purpose of both works. Under the new formulation, the court would determine the expressive purpose of each use. The court noted that aside from a functional, decorative purpose, the plaintiff could also have created the quilt for an expressive purpose, to provide information or provoke thought about that moment or event in history.¹⁴³ Likewise, the defendants could have used the work for a different expressive purpose. The scene

140. See, e.g., *id.* at 145-46 (holding that even though Castle Rock did not develop a market for *Seinfeld* trivia books it was a reasonable market that they could develop).

141. See *Bill Graham*, 448 F.3d at 608 (couching the fair use analysis in copyright's goal of promoting further progress in the arts).

142. *Ringgold*, 126 F.3d at 78-79.

143. See *id.* at 79 n.10.

that features the quilt depicts a modern African American family at Church. Thus, the defendants could have used the quilt as an expressive commentary on the parallels between the lives of African Americans in the quilt and today.

Furthermore, even though the defendants used the entire quilt, just like DK reprinted the Grateful Dead graphics in their entirety, the defendants in *Ringgold* also placed the quilt in a different context and surrounded the quilt with singing and talking actors.¹⁴⁴ Additionally, like in *Bill Graham*, the defendants in *Ringgold* only used the quilt for 26.75 seconds, which the court could then conclude is only a de minimus portion of the television show as a whole.¹⁴⁵ Finally, like in *Blanch* because the plaintiff in *Ringgold* failed to show any market harm, this factor would weigh strongly in favor of defendants, and consequently tip the fair use calculus in their favor. Thus, armed with this broader definition of transformation, creators using copyrighted material to capture historically significant moments might be able to win under fair use.

Along with this impact on classical fair use in general, a broader transformative analysis may also affect historical compilations in particular because *Illustrated Trip* is an historical account. For example, this expanded formulation could greatly affect documentary films. The creative enterprise of documentary films depends on the use of copyrighted works because documentarians track real-life events and people. When filming is complete, documentarians face the daunting task of clearing rights for all of the copyrighted works captured in their films—anything from wall art like in *Ringgold* to background television clips to songs the subjects are singing. Sometimes these rights' clearance costs are so debilitating that it forces documentarians to delete scenes or change the scene, and thus alter reality, while trying to reflect it accurately.¹⁴⁶ In the end, the audience loses out on valuable bits of the story.¹⁴⁷

Currently, documentarians rely on fair use sparingly, but these Second Circuit rulings could open the door for its use. Jan Krawitz, the producer of *Little People*, a documentary about dwarfs, notes, "There's no way you can argue fair use—'Oh it just happened to be in the back-

144. See *id.* at 74-75.

145. See *Bill Graham*, 448 F.3d at 611.

146. Jaszi, *supra* note 8, at 17.

147. For example, Peter Gilbert, one of the makers of *Hoop Dreams* described a moving scene in which the main character's family sings "Happy Birthday" to the tune of \$15,000 dollars. Without a budget to clear this song, this pivotal scene would have been cut. *Id.* at 11.

ground.’ . . . That just doesn’t fly with the music publishers.”¹⁴⁸ Under the Second Circuit’s new ruling, however, documentarians might now feel more comfortable with this argument. Even though the preamble to § 107 does not explicitly mention documentaries, under the new formulation, a court will be more willing to view a documentary as having a productive purpose. The court might also consider the documentary film’s expressive purpose overall as different from any single copyrighted work featured in the film. For example, Jeffrey Tuchman, a filmmaker who produced a documentary about the history of medicine, cut a sequence about cloning that included short clips from *Jurassic Park* that illustrated modern cloning.¹⁴⁹ Under the new formulation of transformation, however, he could argue that the expressive purpose of the clip, to illustrate an example or to act as an historical artifact, is transformatively different from *Jurassic Park*’s entertainment purpose. The broader purpose inquiry should lead to the production of more works like documentary films and hence promote copyright’s goal of stimulating the creation of more works.

C. Implications for Appropriation Art

This broadening of the transformative test in the area of classical fair use could also impact appropriation art especially in the digital context in light of the Second Circuit’s reliance on *Kelly v. ArribaSoft* in the *Bill Graham* case.¹⁵⁰ Both amateur and professional artists of the digital age increasingly use copyrighted works in the same manner as Jeff Koons.¹⁵¹ These amateur creators, dabbling with cheap equipment and easily available, high-quality content incorporate copyrighted works into all sorts of new, expressive, appropriation works just like Koons did with “Silk Sandals.” Anyone with an internet connection can easily and cheaply create and distribute these types of appropriation art without the traditional barriers of rights clearances. For example, many of the most popular websites such as MySpace and Blogspot, allow internet users and bloggers to incorporate images and video and music clips into their blog entries.¹⁵² Thus, a greater emphasis on transformation in fair use as opposed to the market effects of an appropriation work on a copyright owner’s market could spur the creation of even more appropriation work. Creators can

148. *Id.* at 16.

149. *Id.* at 14.

150. *See* Madison, *supra* note 9, at 393-94 (explaining the different realms of fair use).

151. *See generally* Van Houweling, *supra* note 5, at 1540.

152. “A blog, short for web log, is a Web site that contains an online personal journal with reflections, comments, and often hyperlinks provided by the writer.” Merriam Webster Online, <http://www.m-w.com> (search “blog”) (last visited Mar. 22, 2007).

craft their works with more confidence in their own ingenuity and their capacity to invent a new expression and less concern for the rights of other copyright holders.

IV. LIMITATIONS OF THIS DEVELOPMENT IN THE TRANSFORMATIVE TEST

No matter which side of the fair use fence one falls, *Bill Graham* and *Blanch* neither establish a bright line rule of fair use nor blow the fair use door wide open. Both doctrinal constraints, such as the increased flexibility of the fair use test and the specific facts of these cases, and institutional constraints, such as insurance coverage and industry partnerships, limit this development and consequently limit any grand upsurge in the production of new works.

A. Doctrinal Constraints

The broader transformative test still permits enough leeway for courts to exercise discretion on how to focus the fair use analysis—on transformation or on economic harm to a plaintiff. Consequently, even though both *Bill Graham* and *Blanch* support the notion of discounting the fair use calculus if a work is transformative, the expressive purpose test allows courts to assess the expressive purpose, and consequently even the value and creativity, of both the copyrighted and secondary works.¹⁵³ The expressive purpose inquiry allows for even more judicial discretion than functional purpose, an inquiry that the courts already seemed ill-equipped to handle. Accordingly, the expressive purpose test could lead courts to calculate fair use on an outcome driven basis, providing little comfort to secondary users, especially in circuits, like the Sixth Circuit in *Bridgeport*, where copyrights are especially valued.¹⁵⁴ Without firmer footing on which to stand, creators such as documentarians will continue to rely on fair use cautiously if at all, thus limiting any increased production the test could have promised.

Another doctrinal constraint arises in that these cases' rulings may not actually extend much farther than their factual situations. As the Second Circuit noted in *Bill Graham*, works such as biographies require the use of

153. See *Campbell v. Acuff-Rose Music, Inc.*, 510 U.S. 569, 582 (1994) ("It would be a dangerous undertaking for persons trained only in the law to constitute the final judges of the worth of a work, outside of the narrowest and most obvious limits." (internal quotations omitted)).

154. See *Nimmer*, *supra* note 4, at 291.

copyrighted works in order to give a more complete historical picture.¹⁵⁵ While this argument benefits documentarians, it does little for post-modern artists who use copyrighted works in creative expressions. Additionally, in *Blanch*, the court permitted Koons' use of Blanch's photograph, yet historically unlike other creative works, photographs have usually received copyright protection from slavish copying only.¹⁵⁶ Thus, post-modern artists might be hard-pressed to extend the *Blanch* rationale to copying of other expressive works such as songs or movie posters. Again, these factors limit the possible increase of the production of new works in the wake of *Bill Graham* and *Blanch*.

B. Institutional Constraints

In addition to doctrinal constraints, content providers who advocate stronger copyrights in the post-modern era still maintain institutional checks that prevent classical creators from invoking the fair use defense. Movie studios and other content distributors hesitate to use any copyrighted work without clearing the rights because of the enormous costs of litigation or even threatened litigation.¹⁵⁷ Moreover, insurance carriers and financier hesitate to support a film that has not cleared its rights. In the documentary film context, for example, before a traditional broadcaster like CBS will broadcast a film, the filmmaker must obtain errors and omissions insurance.¹⁵⁸ Insurers, in turn, will require filmmakers to clear all their rights because they do not want to risk litigation even if a viable fair use defense exists.¹⁵⁹ This problem reaches the internet realm because many of the traditional broadcasters now also distribute content on the internet through their own sites or sites such as YouTube. Thus, even if documentarians believe that they have a viable fair use defense, they face resistance from broadcasters and insurers against whom they do not have the resources to fight.¹⁶⁰

155. *Bill Graham Archives v. Dorling-Kindersley Ltd.*, 448 F.3d 605, 608 (2d Cir. 2006).

156. *See, e.g., Gentieu v. Tony Stone Images*, 255 F. Supp. 2d 838, 848 (D. Ill. 2003) (holding that even though plaintiff's photo meets the minimal standard for originality, she only received protection for wholesale copying because the subject matter itself, the babies and their natural movements, was not protected); *SHL Imaging v. Artisan House, Inc.*, 117 F. Supp. 2d 301, 311 (S.D.N.Y. 2000) (noting that the totality of plaintiff's creative choices on the photograph meet the originality requirement, but this originality prevents only wholesale copying because plaintiff cannot protect many of the photo's individual elements such as the subject, technique, or backgrounds from being used again).

157. *Jaszi*, *supra* note 8, at 24.

158. *Id.*

159. *Id.*

160. *Id.* at 25.

V. CONCLUSION

Between ensuring economic incentives and encouraging further creation, the fair use doctrine has left judges striving to strike the perfect balance to fulfill copyright's constitutional mandate. Before *Blanch* and *Bill Graham*, the Second Circuit blazed the trail towards conservative findings of fair use with a focus on market harm. Both *Blanch* and *Bill Graham* seem to mark a shift away from this traditional conservatism. While these opinions are limited in their reach, they are significant in their meaning. They evince the Second Circuit's willingness to step beyond its narrow focus on economic harm to emphasize copyright's goal of promoting and furthering the arts. These cases may not change the behaviors of creators tied to the major content producers/distributors, especially in light of the continued flexibility for judges to recalibrate the fair use calculus. But, they just might give personal productive fair users, today's YouTube generation, even more of a reason to create their quirky, referential, and innovative works.

**WALL DATA INC. V. LOS ANGELES
COUNTY SHERIFF'S DEPARTMENT:
LICENSE VERSUS SALE AT THE CROSSROADS
OF CONTRACT AND COPYRIGHT**

By Christopher B. Yeh

Technological innovation poses a unique challenge to the traditional framework of copyright.¹ When Congress made the decision to incorporate computer software into the existing copyright framework, some questioned whether copyright would provide adequate protection for a form of expression distinct from “traditional” forms of expression like print and artistic works.² Since then, software developers’ use of software licenses as a means of maintaining control over their exclusive rights raises questions about the extent to which rights provided by those licenses may conflict with, and to some extent preempt, copyright doctrine. The software industry insists that it is possible to “contract out” of limits on copyright protection such as fair use, reverse engineering, and essential step,³ while

© 2007 Christopher B. Yeh

1. See, e.g., Ernest Miller & Joan Feigenbaum, *Taking the Copy Out of Copyright, in Security and Privacy in Digital Rights Management: ACM CCS-8 Workshop DRM 2001*, Philadelphia, PA, USA, November 5, 2001. Revised Papers 233, 244 (Tomas Sander ed., 2002), available at <http://www.springerlink.com/content/y57pk5487ymrdqk8/fulltext.pdf>.

2. See, e.g., Stacey L. Dogan & Joseph P. Liu, *Copyright Law and Subject Matter Specificity*, 61 N.Y.U. ANN. SURV. AM. L. 203, 207 (2005) (“CONTU recognized that the pairing [of copyright and software] might present challenges for the law, but suggested that the flexibility of copyright doctrine would allow for accommodation to software’s unique character.”); Michael A. Dryja, *Looking to the Changing Nature of Software for Clues to Its Protection*, 3 U. BALT. INTELL. PROP. L.J. 109 (1995) (“Since the first judicial decisions on the legal protection of computer software more than twenty years ago, the appropriate mechanism for the protection of computer software, patent or copyright, has been a point of debate in the legal community.”); Bruce Abramson, *Promoting Innovation in the Software Industry: A First Principles Approach to Intellectual Property Reform*, 8 B.U. J. SCI. & TECH. L. 75, 80 (2002) (describing the contentious debate leading to the decision to protect software through copyright).

3. See, e.g., Raymond T. Nimmer, *Breaking Barriers: The Relation Between Contract and Intellectual Property Law*, 13 BERKELEY TECH. L.J. 827, 882-86 (1998) (arguing that first sale and fair use may be non-infringing under copyright but precluded by contract); Christian Nadan, *Software Licensing in the 21st Century: Are Software “Licenses” Really Sales, and How Will the Software Industry Respond?*, 32 AIPLA Q.J. 555, 653 n.324 (2004) (noting confusion in case law regarding fair use and reverse engineering); David Nimmer, Elliot Brown & Gary N. Frischling, *The Metamorphosis of Contract*

others disagree.⁴ Ultimately, these arguments come to a head in an ongoing debate over whether software contracts may be construed as licenses or sales.

This tension between contract and copyright is evident in the Ninth Circuit's decision in *Wall Data Inc. v. Los Angeles County Sheriff's Department*.⁵ Viewed in the context of the ongoing "license versus sale" debate against which *Wall Data* is set, the Ninth Circuit's ruling against the Los Angeles County Sheriff's Department ("LASD") ultimately favors those on the side of licensing. This pro-license tilt is apparent in the court's analysis of fair use and essential step, and in the court's recognition of the debate (despite its refusal to fully engage in it). The court's ruling is significant to the extent that it adds one more voice to the growing consensus that software agreements should be interpreted as licenses rather than sales.

Part I of this Note explains copyright and licensing protection for software, the basic principles underlying software licensing, and key arguments and court decisions that fuel both sides of the license versus sale debate. Part II provides the factual and procedural background of *Wall Data*, as well as a summary of the Ninth Circuit's holding. Part III analyzes the Ninth Circuit's reasoning in *Wall Data*, and identifies its role in the greater license versus sale debate.

I. PROTECTION FOR SOFTWARE

Most computer software is protected by both copyright and contract,⁶ which together serve as two distinct yet overlapping means of enforcing the software developer's rights in the product.⁷ Copyright provides one layer of protection by creating enforceable property rights in the work, though that protection is also subject to exceptions like fair use and the first sale doctrine.⁸ Software contracts, which most often take the form of software licenses, allow the software developer to expand protection for the software product beyond that provided by copyright through terms and

into Expand, 87 CALIF. L. REV. 17, 30, 35 n.49, 63-68 (1999); Robert W. Gomulkiewicz, *The License is the Product: Comments on the Promise of Article 2B for Software and Information Licensing*, 13 BERKELEY TECH. L.J. 891, 901-03 (1998).

4. See Gomulkiewicz, *supra* note 3, at 186 (concluding licensing does not avoid first sale); see also Nimmer, Brown & Frischling, *supra* note 3, at 30-31 (stating that essential step and fair use should apply to licensed software).

5. *Wall Data Inc. v. L.A. County Sheriff's Dep't*, 447 F.3d 769 (9th Cir. 2006).

6. See Nadan, *supra* note 3, at 557.

7. See R. Nimmer, *supra* note 3, at 844.

8. See *id.* at 844, 880.

restrictions tailored to the specific circumstances of a given transaction.⁹ The scope of these overlapping protections has generated an ongoing debate, however, especially with regard to the first sale doctrine. Generally, courts have held that software contracts should be interpreted as licenses rather than sales, but a few notable outliers have challenged this dominant view.¹⁰

A. The Need to “Protect” Software

In copyright law, a “license” is the transfer of anything less than a totality of a work.¹¹ Thus by definition, a license grants a licensee less than the total bundle of intellectual property rights possessed by the copyright holder.¹² In the context of computer programs, software licenses take the form of contracts which grant “nonexclusive authorizations for use subject to agreed terms and conditions.”¹³ The “law draws a sharp distinction between an ‘exclusive’ license, which is considered a transfer of copyright ownership, and a ‘nonexclusive’ license,” in which the licensor retains ownership.¹⁴

In the software industry, almost all software is licensed rather than sold (i.e. transferred with full ownership).¹⁵ This is due to the ease with which software can be reproduced, as well as the structure of the market for software. In terms of ease of reproduction, software can be quickly and

9. *See id.* at 844-45, 853. A myriad of issues may arise in a business transaction, including product issues, liability issues, and performance issues, all of which fall within the realm of contracts, and none of which would be within the scope of a copyright regime, which is only concerned with granting or withholding certain rights. *Id.* at 835.

10. RAYMOND T. NIMMER, *LAW OF COMPUTER TECH.* § 1:112 (2006) (“The very few lower court cases that hold to the contrary [that software is sold rather than licensed] are outside the mainstream and inconsistent with commercial practice. Among the few courts that have suggested this result, two were reversed on appeal . . . [and] two were vacated[.]”) [hereinafter *LAW OF COMPUTER TECH.*]; *see also* Deanna L. Kwong, *The Copyright-Contract Intersection: SoftMan Products Co. v. Adobe Systems, Inc. & Bowers v. Baystate Technologies, Inc.*, 18 *BERKELEY TECH. L.J.* 349, 358 (2003) (“There are only a few lower court cases holding that copies of software are sold. The majority of courts conclude that copies of software are licensed.”).

11. *CORPUS JURIS SECUNDUM COPYRIGHT* § 27 (West 2007) [hereinafter *CORPUS JURIS SECUNDUM COPYRIGHT*].

12. IAN BALLON, *E-COMMERCE & INTERNET LAW* § 21.02 (West LegalWorks 2001).

13. David A. Rice, *Licensing the Use of Computer Program Copies and the Copyright Act First Sale Doctrine*, 30 *JURIMETRICS J.* 157, 158 (1990).

14. *CORPUS JURIS SECUNDUM COPYRIGHT*, *supra* note 11. Hereinafter, all references to “licenses” or “licensing” will be in reference to the nonexclusive license, which does not grant ownership to the licensee.

15. Nadan, *supra* note 3, at 557.

easily duplicated at a nominal cost, for instance, that of a blank data CD.¹⁶ Software can also be distributed with relative ease due to the myriad of available programs that facilitate the movement of large amounts of data over the internet.¹⁷ While the exclusive rights provided by copyright provide some means for software developers to safeguard their product, they do not always serve as an adequate deterrent due to the ease of duplication and reproduction, as well as the impracticality of pursuing litigation against thousands or millions of infringers—many of whom lack substantial financial resources.¹⁸

Licenses form an integral part of the software industry's business model because they provide a means to get around the first sale doctrine¹⁹ and thus control (and in some cases prevent) subsequent transfers of the software that would otherwise interfere with a functioning software market.²⁰ The first sale doctrine within copyright law extinguishes the copyright holder's right to control subsequent use and distribution of a copyrighted work once it has been sold.²¹ If a developer is unable to avoid the doctrine through contract, this may substantially limit a software developer's ability to profit from its product, which may in turn decrease the affordability or availability of the product to the public.²² For example, different commercial customers, possessing the need to deploy the software on varying degrees of scale, may be willing to pay more or less than other consumers for the exact same software product.²³ By controlling distribution, developers can maximize revenue from their software product by en-

16. See, e.g., *Adobe Sys. Inc. v. Stargate Software Inc.*, 216 F. Supp. 2d 1051, 1059 (N.D. Cal. 2002).

17. Examples of this kind of software include BitTorrent, KaZaA, and other peer-to-peer file sharing programs. See David Operbeck, *Peer-to-Peer Networks, Technological Evolution, and Intellectual Property Reverse Private Attorney General Litigation*, 20 BERKELEY TECH. L.J. 1685 (2005); Andrew J. Lee, Note, *MGM Studios, Inc. v. Grokster, Ltd. & In re Aimster Litigation: A Study of Secondary Copyright Liability in the Peer-to-Peer Context*, 20 BERKELEY TECH. L.J. 485 (2005).

18. Michael B. Rutner, *The Ascap Licensing Model and the Internet: A Potential Solution to High-Tech Copyright Infringement*, 39 B.C. L. REV. 1061 (1998) ("Those who can locate infringers often find that the infringers lack the financial resources to make legal action worthwhile."); see also Ian C. Ballon, *Pinning the Blame in Cyberspace: Towards a Coherent Theory for Imposing Vicarious Copyright, Trademark and Tort Liability for Conduct Occurring Over the Internet*, 18 HASTINGS COMM. & ENT. L.J. 729, 735 (1996) (stating that on-line infringers tend to be judgment-proof as a result of being too young or poor to satisfy a judgment award).

19. See BALLON, *supra* note 12, § 21.02.

20. See Nadan, *supra* note 3, at 573-74.

21. See BALLON, *supra* note 12, § 21.02.

22. See Nadan, *supra* note 3, at 567-70.

23. See *id.* at 557.

sure that different end users are charged differently according to their use.²⁴ If they were deprived of this means to control subsequent transfers, the developers' attempt to price discriminate would be thwarted through arbitrage.²⁵

Licenses solve this problem because the first sale doctrine only allows "owners" of a copy of a copyrighted work to transfer the work without permission, and since a license grants less than full "ownership," the first sale doctrine does not protect licensees.²⁶ Licenses allow a software company to market a software product targeted at single-user markets separately from products for use in multi-user commercial networks, and accordingly charge different prices, even though the software product itself is identical in both cases.²⁷ If the software developer were subject to the first sale doctrine, it would not be permitted to contractually distinguish what rights it grants or withholds, thus forcing it to sell only one package of rights: full ownership of the software.²⁸

24. *See id.* at 559, 567-72.

25. In the hands of a large number of users, it would be difficult to maintain the separation across different market segments without the restrictions on use that licenses provide. *Id.* at 568. Without the legal safeguard that licenses provide, "market seepage" would force software developers to compete against themselves, while those who have purchased the software at the lower price level offer to resell the software to large-scale entities for less than the software developer's price. *Id.*

26. *ISC-Bunker Ramo Corp. v. Altech, Inc.*, 765 F. Supp. 1310, 1331 (N.D. Ill. 1990) ("[A] copyright holder does not lose his right to control distribution of copies of his work that have never been sold. Thus, given the substantial evidence that [defendant] only licensed and did not sell its copyrighted software, the first sale doctrine has no application . . . as a matter of law.").

27. This ability of a single copy of software to be marketed as separate products with different sets of rights as provided for by different licensing terms means that, in essence, the licenses themselves are the product. The same copy of software is often marketed to several different end-users or market segments. By allowing or disallowing different types of uses, licenses create different packages of rights. This ability to segment the market and price discriminate creates a situation where, rather than choosing among different software programs, consumers choose among different packages of use. R. Nimmer, *supra* note 3, at 841-42. This key distinction sets computer software apart from traditional tangible goods. Indeed licenses, rather than the software, are the product around which the software industry is built. Gomulkiewicz, *supra* note 3, at 896; *see* Nadan, *supra* note 3, at 558, 567-72, 588; *see also* Frank Easterbrook, *Contract and Copyright*, 42 HOUS. L. REV. 966, 968 (2005) ("Contract terms are product attributes, no different functionally from the quality of a car's tires.").

28. *See* Nadan, *supra* note 3, at 567-68. It has been argued that this "one-size-fits-all" transaction model would increase product prices while decreasing variety and choices available to consumers. *See* Gomulkiewicz, *supra* note 3, at 903.

Software licensing's ability to avoid the first sale doctrine also allows software developers to control downstream transfers of the software.²⁹ A licensee cannot transfer more rights than she received, since the licensing limitations run with the software and bind every subsequent transferee.³⁰ Thus, even if an end-user successfully redistributes the software to a subsequent transferee, that transferee would have no greater rights than the original end user possessed.³¹ If a subsequent transferee exceeds the scope of the license, even if unknowingly or in good faith, that transferee is liable for copyright infringement because contractual privity and intent are irrelevant to a copyright infringement claim.³² Thus, assuming that a license does not permit distribution, it is impossible for end users to sell their licensed copy or copies of a given piece of software without infringing the software company's copyright.³³ This ability to ensure that restrictions survive through several transfers of possession enables the software creator to use multiple tiers of distribution, without the need to have a contractual relationship with everyone in the chain, and with the confidence that its product will not be transferred without permission.³⁴

B. License versus Sale and the Intersection of Copyright and Contract

Software licenses and copyright law share an uneasy coexistence; aspects of each both reinforce and conflict with the other. On one hand, software licenses are ineffective without a copyright law that defines authorship and creates exclusive property rights for them to enforce,³⁵ and contracts are necessary to identify the infinitely divisible property rights granted by copyright and separate them into spheres of exploitation.³⁶ At the same time, software licenses may conflict with copyright in cases where it provides contractual software protection that closely resembles the exclusive rights provided by copyright, or expressly provides for ex-

29. See *Nadan*, *supra* note 3, at 578 ("For example, if a licensee receives an 'educational use only' license to a copy of software, she cannot use it for other purposes, and all subsequent transferees would have no greater rights than she had.").

30. See, e.g., *Adobe Sys. v. One Stop Micro, Inc.*, 84 F. Supp. 2d 1086, 1092-93 (N.D. Cal. 2000) (holding that transferee was bound by restrictions of original agreement).

31. See *Nadan*, *supra* note 3, at 578-79.

32. *Id.* at 579-80; see also 17 U.S.C. § 501(a) (2006).

33. See *Nadan*, *supra* note 3, at 566.

34. See *id.* at 580-83.

35. See *Nimmer, Brown & Frischling*, *supra* note 3, at 63 ("If a copyright owner contracts to exploit a work up to the limits of his constitutionally and congressionally conferred monopoly, he is acting legitimately.").

36. *Id.* at 24-26, 63.

emptions to traditional copyright defenses like the first sale doctrine.³⁷ Within this context, the legal community continues to debate the extent to which licenses may take precedence over copyright. Some argue that copyright is nothing more than a default legal regime, where express license terms can “contract out” of those rules.³⁸ Others argue that copyright law embodies certain fundamental rights and protections that should continue to carry weight even in the face of contractual relationships to the contrary.³⁹

1. *Software Licenses: Copyright and Contract*

The license versus sale debate is a subset of the larger discussion about the complimentary yet conflicting nature of contract and copyright. The debate concerns the extent to which software licenses can contract out of the first sale doctrine, which in turn implicates everything from contract interpretation issues to the § 117 essential step defense, which specifies that only owners may exercise the defense or make legal backups of software.⁴⁰ The predominant view takes the position that given the integral and essential role licensing plays in underpinning the software industry’s business model, the only practical way to ensure the continued viability of that model is with licenses.⁴¹ Critics argue that despite the myriad of practical rationales for software licensing, the literal terms of most software licensing agreements suggest a sale rather than a license.⁴²

Supporters of software licensing point to the diversity and complexity of issues that face the software industry, and suggest that no other scheme

37. See R. Nimmer, *supra* note 3, at 861-62, 882.

38. See, e.g., *id.* at 844-45.

39. See, e.g., Nimmer, Brown & Frischling, *supra* note 3, at 50-63.

40. Notwithstanding the provisions of section 106, it is not an infringement for the owner of a copy of a computer program to make or authorize the making of another copy or adaptation of that computer program provided . . . that such a new copy or adaptation is created as an essential step in the utilization of the computer program in conjunction with a machine and that it is used in no other manner, or . . . that such new copy or adaptation is for archival purposes only and that all archival copies are destroyed in the event that continued possession of the computer program should cease to be rightful.

17 U.S.C. § 117(a).

41. Early cases deferred to the software owner’s characterization of the transaction without much examination. See Nadan, *supra* note 3, at 590-604. This “consensus” continued, for the most part, with courts upholding the license classification, until the *SoftMan* decision in 2001. *Id.* at 609. For further discussion of *SoftMan*, see *infra* Section I.B.2.

42. See, e.g., Microsoft Corp. v. DAK Indus. (*In re DAK*), 66 F.3d 1091, 1096 (9th Cir. 1995) (discussing the “economic realities” doctrine).

besides licensing can bring such a degree of flexibility and nuance to a transaction.⁴³ Countless issues may arise in a given business transaction (including product issues, liability issues, and performance issues) that do not fall within the scope of a copyright regime, which is only concerned with granting or withholding certain rights.⁴⁴ The key rationale, however, for supporting a licensing regime is concern for preservation of the software industry's business model. The first sale doctrine is the bane of the business model because it prevents software developers from controlling subsequent transfers of their product, which in turn prevents them from generating revenue from it.⁴⁵ Indeed, given that the licenses themselves rather than the software are the object of the transaction,⁴⁶ proponents insist that it is absolutely necessary that licenses be employed to avoid the doctrine.⁴⁷

Critics of software licenses emphasize the overriding public policy interest embodied in the Copyright Act to uphold the "delicate balance" between the rights of the consumer and the content creator.⁴⁸ Some critics are wary of software contracts, regarding them as a means for companies to "tip the balance" by expanding their exclusive rights at the expense of the end user's freedom and flexibility.⁴⁹ Critics express concern that acceptance of a blanket ability to contract out of copyright doctrines would allow copyright holders to perform an "end-run" around other traditional protections, like fair use, that were instituted by Congress to counterbalance the exclusive rights granted by copyright.⁵⁰

43. See, e.g., R. Nimmer, *supra* note 3, at 888 ("The idea that property rights law, with its concentration on vested rights and positions stated against third parties, can ever provide an adequate template for the complex and increasingly diverse information economy borders on the absurd and certainly entertains the impossible.").

44. *Id.* at 835.

45. Nadan, *supra* note 3, at 567-70.

46. Gomulkiewicz, *supra* note 3, at 896; see Easterbrook, *supra* note 27, at 968.

47. See Nadan, *supra* note 3, at 567-68.

48. Nimmer, Brown & Frischling, *supra* note 3, at 43.

49. See Gomulkiewicz, *supra* note 3, at 900.

50. Nimmer, Brown & Frischling, *supra* note 3, at 43, 55. These concerns are magnified by their concern that many EULAs (including shrink-wrap licenses) are adhesion contracts that threaten to impose unconscionable terms on consumers. See Easterbrook, *supra* note 27, at 968; see also R. Nimmer, *supra* note 3, at 847. Their concern that consumers are bound by these contracts, often unwittingly and with no chance for negotiation, by virtue of merely installing the software or even opening the box, opens the door for abuse by the copyright owner. This potential for abuse challenges one of the basic assumptions of licensing: as a bargained-for exchange, licensees should not be able to protest the terms. See Easterbrook, *supra* note 27, at 969.

2. License versus Sale: Restrictive Terms and Economic Realities

In recent years, the arguments of both proponents and critics of software licensing have been weighed and considered in several court decisions dealing with the question of license versus sale and the scope of ownership rights associated with subsequent transferees of software.⁵¹ This Section discusses those decisions and extracts several distinct themes that have arisen from them.

The presence of terms in the agreement that restrict the rights of the end user signals that a software agreement confers a license rather than a sale. The leading case for this principle is *MAI Systems Corp. v. Peak Computer, Inc.*, where Peak copied MAI's software from removable media to the computer's RAM by simply turning on the computer for the purposes of repair.⁵² The Ninth Circuit held that Peak could not employ the § 117 essential step defense because it was not an "owner" of the software within the meaning of the statute.⁵³ Unfortunately, the court did not elaborate on why it deemed Peak was a licensee rather than an owner, a move that has been widely criticized.⁵⁴

The Ninth Circuit's holding in *MAI* was reiterated, albeit with more sound reasoning, in *DSC Communications Corp. v. Pulse Communications, Inc.*⁵⁵ In *DSC*, the Federal Circuit had to determine whether Pulsecom's interface cards violated the software copyright in DSC's telecommunication switching system.⁵⁶ Every time DSC's communications device

51. All of these cases have been decided within the last 15 years. See *MAI Sys. Corp. v. Peak Computer, Inc.*, 991 F.2d 511 (9th Cir. 1993); *Microsoft Corp. v. DAK Indus. (In re DAK)*, 66 F.3d 1091 (9th Cir. 1995); *DSC Coms. Corp. v. Pulse Commc'ns, Inc.*, 170 F.3d 1354 (Fed. Cir. 1999); *Adobe Sys. Inc. v. One Stop Micro, Inc.*, 84 F. Supp. 2d 1086 (N.D. Cal. 2000); *SoftMan Prods. Co. v. Adobe Sys. Inc.*, 171 F. Supp. 2d 1075 (C.D. Cal. 2001); *Adobe Sys. Inc. v. Stargate Software Inc.*, 216 F. Supp. 2d 1051 (N.D. Cal. 2002).

52. *MAI*, 991 F.2d 511.

53. *Id.* at 519 n.5.

54. The court appeared to take it as a given that Peak was a licensee rather than an owner, leaving a significant gap in reasoning with respect to the distinction between the owner of the copyright in the software (which is usually licensed) versus the owner of the media containing the software (which is usually owned). Thus, the *MAI* court did not foreclose the possibility that a copyright owner could license the software to the end user, while the end user retained ownership rights over the *copy* of software. See 2 MELVILLE B. NIMMER & DAVID NIMMER, NIMMER ON COPYRIGHT § 8.08[B][1]; cf. *Wall Data Inc. v. L.A. County Sheriff's Dep't*, 447 F.3d 769, 786 n.9 (9th Cir. 2006).

55. *DSC*, 170 F.3d 1354.

56. *Id.* at 1359 ("DSC's theory of contributory infringement is that each time an RBOC powers up a Pulsecom POTS card in one of its Litespan systems, it directly in-

was activated, it copied DSC's proprietary firmware into the resident memory of Pulsecom's third-party interface card. DSC claimed this violated its exclusive right of reproduction.⁵⁷ In its defense, Pulsecom argued that it was entitled to the § 117 essential step defense, which required the court to determine whether Pulsecom was an "owner" of the firmware within the meaning of the statute.⁵⁸ The Federal Circuit ultimately rejected the defense, holding that the lower court erred in ruling, as a matter of law, that Pulsecom was an owner.⁵⁹ In relying on *MAI*, the Federal Circuit in *DSC* provided a fuller explanation of the Ninth Circuit's reasoning:

[T]he agreement between MAI and Peak . . . imposed more severe restrictions on Peak's rights with respect to the software than would be imposed on a party who owned copies of software subject only to the rights of the copyright holder under the Copyright Act. And for that reason, it was proper to hold that Peak was not an 'owner' of copies of the copyrighted software for purposes of section 117.⁶⁰

The court's reasoning turned on the fact that the agreement between DSC and Pulsecom, like that between MAI and Peak, "imposed severe restrictions."⁶¹ The agreement's conditions required, among other things, that the end user not disclose or make the software available without DSC's express written consent, and required that end users could not use the software on any hardware other than that provided by DSC.⁶² The court held that these conditions "substantially limit[ed] the rights of [end users] compared to the rights they would enjoy as 'owners of copies' under the Copyright Act," and thus supported characterizing them as "non-owners."⁶³

Adobe Systems Inc. v. One Stop Micro, Inc.,⁶⁴ a district court case and the first case in the "Adobe Trilogy,"⁶⁵ invoked the "restrictive terms" rea-

fringes DSC's POTS-DI software copyright by copying the POTS-DI software from the Litespan into the resident memory of a Pulsecom POTS card.").

57. *Id.* at 1358-59.

58. *Id.* at 1359-61.

59. *Id.* at 1362.

60. *Id.* at 1360.

61. *Id.* at 1360.

62. *Id.* at 1361.

63. *Id.* at 1361-62. The court did not hold "owner" and "licensee" to be mutually exclusive categories. *Id.* at 1360 ("We therefore do not adopt the Ninth Circuit's characterization of all licensees as non-owners.").

64. *One Stop*, 84 F. Supp. 2d 1086.

65. The "Adobe Trilogy" refers to three district court actions brought by Adobe against intermediate resellers of its software in which district courts were tasked with determining whether Adobe's sales agreements with the resellers constituted a license or

soning of *DSC* and *MAI*.⁶⁶ In *One Stop*, a district court again faced the issue of whether the agreement between Adobe and an intermediate distributor of its software constituted a license or sale.⁶⁷ The court ultimately held that Adobe licensed rather than sold its software.⁶⁸ The key to the court's reasoning was the fact that the agreement possessed restrictions that conveyed less than ownership.⁶⁹ The court also found that other elements in the software agreement suggested a license rather than sale: the terms stated explicitly that end-users were only granted a license to use the software.⁷⁰ Though no mention was made of intermediate distributors, the court reasoned that "[i]t would be incongruous to conclude that educational resellers are owners of the Adobe educational versions, while the end users who the resellers distribute to are granted a mere license."⁷¹ The court also looked to industry practice, noting that even though the agreement used words like "sale" and "buy," the dominant practice in the software industry was to license the software.⁷²

An alternative means courts have used for determining whether a license exists is to look at the "economic realities" of the software transaction.⁷³ The economic realities test was established in *Microsoft Corp. v. DAK Industries, Inc.*, a Ninth Circuit case in which DAK Industries

sale. *Adobe Sys. Inc. v. One Stop Micro, Inc.*, 84 F. Supp. 2d 1086 (N.D. Cal. 2000); *SoftMan Prods. Co. v. Adobe Sys. Inc.*, 171 F. Supp. 2d 1075 (C.D. Cal. 2001); *Adobe Sys. Inc. v. Stargate Software Inc.*, 216 F. Supp. 2d 1051 (N.D. Cal. 2002). The three district court cases all featured similar fact patterns (that of a distributor reselling the software manufacturer's product in violation of the distribution agreement). In two of the three (*One Stop* and *Stargate*), the district court held that the agreement constituted a license rather a sale. *One Stop*, 84 F. Supp. 2d 1086; *Stargate*, 216 F. Supp. 2d 1051. *SoftMan* was the only case of the three to hold that the sales agreement constituted a sale rather than a license. 171 F. Supp. 2d 1075. For more on the Adobe Trilogy, see Nadan, *supra* note 3, at 604-22.

66. *One Stop*, 84 F. Supp. 2d at 1091 ("These numerous restrictions imposed by Adobe indicate a license rather than a sale because they undeniably interfere with the reseller's ability to further distribute the software.").

67. *Id.* at 1089-90.

68. *Id.* at 1092.

69. *Id.* at 1090-91.

70. *Id.*

71. *Id.* at 1091.

72. *Id.*

73. See, e.g., *Microsoft Corp. v. DAK Indus.*, 66 F.3d 1091, 1096 (9th Cir. 1995) ("For these reasons, the economic realities of this agreement indicate that it was basically a sale, not a license to use."); *SoftMan Prods. Co. v. Adobe Sys. Inc.*, 171 F. Supp. 2d 1075, 1085 (C.D. Cal. 2001) (holding that the economic realities of the transaction suggested a sale, even though it was labeled a "license"); cf. *LAW OF COMPUTER TECH.*, *supra* note 10, § 1.24[1], at 1-143 to 1-144.

("DAK"), a bankrupt software and hardware vendor, owed money to Microsoft for software it had procured and distributed under an agreement the two had entered.⁷⁴ DAK continued to distribute the software even after it filed for bankruptcy, which in turn prompted Microsoft to petition for administrative expenses as a result of these sales.⁷⁵ Whether or not DAK owed a debt to Microsoft for the software turned on whether the sales agreement could be categorized as a sale or license.⁷⁶ To determine this key question, the Ninth Circuit looked to the "economic realities of th[e] particular arrangement."⁷⁷ After an analysis of the circumstances of the transaction, the court ruled that the sales agreement constituted a sale, not a license.⁷⁸ The pricing structure of the agreement, the fact that DAK received full rights under the agreement when the term commenced, and the fact that the agreement granted DAK "a right to sell" the software rather than "permission to use" it were all features of the agreement that persuaded the court that the agreement constituted a sale.⁷⁹

Critics of software licenses have used the economic realities test to argue that software agreements constitute sales rather than licenses, despite even the existence of restrictive terms.⁸⁰ This reasoning was employed in the district court case *SoftMan Products Co. v. Adobe Systems Inc.*⁸¹ In *SoftMan*, a district court held that Adobe's agreement with SoftMan Products ("SoftMan"), a software reseller, constituted a sale rather than a license, and that consequently, SoftMan was an "owner" of Adobe's software.⁸² The court reached this conclusion principally by adopting the economic realities test in *DAK* as its primary paradigm for judging Adobe's agreement.⁸³ It also downplayed the express terms of the license, endorsing the view that "[o]wnership of a copy should be determined based on the actual character, rather than the label, of the transaction by which the user obtained possession. Merely labeling a transaction as a lease or li-

74. *DAK*, 66 F.3d at 1092-93.

75. *Id.* at 1093.

76. *Id.* at 1094-95.

77. *Id.* at 1095.

78. *Id.*

79. *Id.* at 1095-96.

80. See, e.g., LAW OF COMPUTER TECH., *supra* note 10, § 1.24[1], at 1-143 to 1-144 (arguing that in a situation where a copy of a software program is transferred for a single payment and for an unlimited term, the transferee should be considered an owner of the copy of the software program regardless of other restrictions on his use of the software).

81. *SoftMan*, 171 F. Supp. 2d at 1084-85. *SoftMan* was the second case in the Adobe Trilogy.

82. *Id.* at 1089.

83. *Id.* at 1084-85.

cense does not control.”⁸⁴ *SoftMan* explicitly rejected the analysis of *One Stop*, refusing to find that a given agreement constituted a license just because the agreement labels itself a license, and instead opted to focus on the “substance” of the agreement through the economic realities test.⁸⁵ A number of circumstances suggested to the court that the economic realities suggested a sale: Adobe’s agreement provided for the purchaser to obtain a single copy of the software for a single price, which the purchaser paid at the time of the transaction in exchange for possession of the software for an unlimited period of time.⁸⁶ Additionally, the agreement transferred Adobe’s software with title and “risk of loss,” features that the court believed characterized a sale.⁸⁷

DAK and *SoftMan*’s rulings that the economic realities of a license should be used to determine sale or license were disputed in subsequent cases.⁸⁸ The Federal Circuit in *DSC* downplayed the concept of economic realities (such as a single payment for perpetual right of possession), holding that even though the economic realities of a transaction might suggest a sale, it was not dispositive proof that the transfer was a sale, when “the software is heavily encumbered by other restrictions that are inconsistent with the status of owner.”⁸⁹ Additionally, the court in *Adobe Systems Inc. v. Stargate Software Inc.* drew a distinction between ownership of the “package” containing software (such as a CD-ROM), and ownership of the software itself, hinting that the economic reality might apply only to the media that contained the software.⁹⁰ Thus, even if *SoftMan* was correct

84. *Id.* at 1084-86 (citing LAW OF COMPUTER TECH., *supra* note 10, § 1.18[1], at 1-103).

85. *Id.* at 1084.

86. *Id.* at 1085-86; *cf.* LAW OF COMPUTER TECH., *supra* note 10, § 1.24[1], at 1-143 to 1-144.

87. *SoftMan*, 171 F. Supp. 2d at 1085.

88. *SoftMan* has also been criticized for a number of reasons other than its use of the “economic realities” doctrine. *See* *Nadan*, *supra* note 3, at 613-20.

89. 170 F.3d at 1362.

90. *Stargate*, 216 F. Supp. 2d 1051. *Stargate* was the third case in the Adobe Trilogy. The court stated:

The CD-ROM itself is worth not much more than a nominal amount, and it is the code that justifies the purchase price of the product. That being the case, the economic reality of this transaction is that a consumer is ultimately paying for the software contained on the CD-ROM, rather than the CD-ROM itself. Despite this fact, this case is still based on the ownership of each particular copy of software distributed by Adobe.

Id. at 1055.

Furthermore, this Court notes that, within the context of this case, when a ‘single payment’ is made for a particular copy of software, the pay-

in holding that the physical media was being sold under the agreement, it did not foreclose the possibility that the defendants would still need to license the software contained within it.

II. *WALL DATA INC. V. LOS ANGELES COUNTY SHERIFF'S DEPARTMENT*

Wall Data v. Los Angeles County Sheriff's Department provided the Ninth Circuit with its first chance to revisit the license versus sale debate since *Stargate*. The Ninth Circuit held that the Los Angeles County Sheriff's Department's ("LASD") use of hard drive imaging to install Wall Data's software on more computers than those for which it had purchased licenses exceeded the scope of its licenses, and thus violated Wall Data's copyright in the software.⁹¹ The court rejected the LASD's fair use defense, and ruled that it could not claim a § 117 essential step defense because it was not an "owner" of the software.⁹² This part explains the events leading to the dispute between the LASD and Wall Data, and the claims and defenses raised by each party in the initial suit. The Ninth Circuit's analysis will be discussed in further detail in Part III.

A. Background

In 1997, the LASD prepared to open the doors to its highly-anticipated Twin Towers Correctional Facility.⁹³ The facility housed various computer workstations connected to a central mainframe.⁹⁴ In order to allow the workstations to communicate with the mainframe, the LASD required a terminal emulation program.⁹⁵ Between December 1996 and February

ment is being made for the value of the objective code that is burned on the CD-ROM. Absent this 'valuable' information and intellectual property, a CD-ROM would be almost worthless. The true economic value of the product is derived from the intellectual property embodied within it.

Id. at 1058-59.

91. *Wall Data*, 447 F.3d at 777.

92. *Id.* at 785.

93. InfoWorld Gripeline by Ed Foster, *The Sheriff and Drive Imaging: A Case Study* (hereinafter "*The Sheriff and Drive Imaging*"), InfoWorld Gripeline, http://weblog.infoworld.com/gripeline/archives/2006/08/the_sheriff_and.html (last visited Aug. 1, 2006, 12:46 AM); see also Gale Holland, *No Escaping How High Tech the Place Is*, USA TODAY, Jan. 27, 1997, at 3A.

94. Foster, *The Sheriff and Drive Imaging*, *supra* note 93.

95. *Id.*

1999, the LASD purchased licenses for 3,663 copies of Wall Data's "Rumba Office" and "Rumba Mainframe" software.⁹⁶

Initially, the LASD installed the software on each individual workstation, but soon realized after 750 installations that this time-consuming process could delay the opening of the facility.⁹⁷ In order to speed up the installation, the LASD decided to install the Rumba software by means of hard drive imaging.⁹⁸ The image was uploaded to a central server connected to all the computers and Wall Data's software was quickly installed on every workstation in the facility.⁹⁹ This process saved time and eliminated potential errors that might occur during a nonuniform software installation.¹⁰⁰

Using the image-based installation, Rumba was installed on 6,007 workstations, at least 2,344 installations in excess of the Sheriff's Department's license.¹⁰¹ Rather than renegotiate the terms of the volume license with Wall Data, the LASD created its own solution; because Wall Data's software would only function on a computer when the computer had access to the main server, IT administrators planned to assign a unique identification number called a logical unit ("LU") to each computer accessing the central server.¹⁰² Software installed on computers without an assigned LU became "ghost copies" and were unusable.¹⁰³ Thus, by controlling which computers were assigned an LU, the LASD could control how many computers accessed the software. This system provided the added benefit of flexibility, since the software was potentially available on every workstation in the prison.¹⁰⁴ By the time the process was completed in mid-2001, the LASD had installed the software on every computer throughout the prison and, at least according to the LASD, assigned LUs

96. *Wall Data*, 447 F.3d at 773-74.

97. *Id.* at 774.

98. The imaging process involved installing the software (as a part of a larger suite of other operating system and application software) only onto a central server, which would then copy this "image" or collection of software programs onto every computer. This resulted in every computer in the facility having an identical installation of Wall Data's software. *See id.* at 774, 785; *see also* Foster, *The Sheriff and Drive Imaging*, *supra* note 93.

99. *Wall Data*, 447 F.3d at 774.

100. *Id.* at 779.

101. *Id.* at 774-75, 787.

102. *Id.* at 775 n.3.

103. *Id.*; *see also* Foster, *The Sheriff and Drive Imaging*, *supra* note 93.

104. *Wall Data*, 447 F.3d at 775 n.3.

to 3,663 of them—precisely the number of licenses it had purchased from Wall Data.¹⁰⁵

The LASD claimed Wall Data was fully aware of this installation process.¹⁰⁶ How much of the practice it disclosed to Wall Data was disputed, however, since the court excluded evidence from the LASD that purported to show that Wall Data was aware of the practice.¹⁰⁷ Nonetheless, the LASD's system did not come under scrutiny until 2000, when Wall Data, acquired by NetManage, Inc., demanded that the LASD pay a license fee for all ghost copies.¹⁰⁸ Settlement talks broke down and the LASD removed the ghost installations, but refused to pay for them.¹⁰⁹

In January of 2002, Wall Data filed suit in federal court alleging that the LASD's "over-installation" of its Rumba software violated its shrink-wrap, click-through, and volume licenses.¹¹⁰ The LASD argued there was no breach of contract because the terms of the click-through license permitted installation on "a single Designated Computer for which the software has been activated,"¹¹¹ and the ghost copies had not technically been "activated."¹¹² It also claimed affirmative defenses on the grounds that it was fair use to use Wall Data's software so long as the number of useable installations at any given time did not exceed the number of software licenses it purchased,¹¹³ and because the hard drive imaging was an "essential step" of installation within the meaning of § 117.¹¹⁴

The district court granted summary judgment to Wall Data as to the LASD's fair use defense,¹¹⁵ and after a four-day trial a jury found the LASD liable for copyright infringement and awarded Wall Data \$210,000

105. *Id.* at 774-75. Since the LU system was ultimately unverifiable, neither party was certain how many computers had access to the Rumba software. See InfoWorld Gripeline by Ed Foster, A Matter of Trust, http://weblog.infoworld.com/gripeline/archives/2006/08/a_matter_of_tru.html (Aug. 4, 2006, 09:02 AM).

106. Appellants' Reply Brief at 4, *Wall Data Inc. v. L.A. County Sheriff's Dept.*, 447 F.3d 769 (9th Cir. 2005) (No. 03-56559), 2004 WL 2085188 ("LASD was prohibited by the court's *in limine* rulings from introducing documents and testimony showing Wall's awareness and toleration of such practices.").

107. *Wall Data*, 447 F.3d at 782. The Ninth Circuit held that this exclusion was "not reversible error." *Id.* at 783.

108. Foster, *The Sheriff and Drive Imaging*, *supra* note 93.

109. *Wall Data*, 447 F.3d at 775.

110. *Id.*

111. *Id.* at 775 n.5.

112. *Id.* at 781.

113. *Id.* at 776.

114. *Id.*

115. *Id.*

in damages.¹¹⁶ On appeal, the LASD challenged the court's summary judgment ruling as well as the jury instructions regarding the essential step defense.¹¹⁷

B. The Ninth Circuit Decision

The Ninth Circuit unanimously affirmed the lower court's ruling.¹¹⁸ After applying a four-factor fair use analysis (including an unorthodox statement of the fair use standard),¹¹⁹ the Ninth Circuit held that there was no fair use.¹²⁰ The court determined that all four factors weighed against the LASD.¹²¹ The "purpose and character of the infringing use" was commercial because the software was installed on multiple computers to "save the expense of purchasing additional authorized copies."¹²² The "nature of [Wall Data's] copyrighted work" was not completely creative, but was a computer program protected by copyright law.¹²³ The "amount and substantiality of the portion used" weighed against the LASD because hard drive imaging created verbatim copies of the Rumba software.¹²⁴ The fourth fair use factor—"the effect on the potential market"—weighed

116. *Id.*

117. *Id.*

118. *Id.* at 774, 787.

119. As we balance these factors, we bear in mind that fair use is appropriate where a reasonable copyright owner would have consented to the use, i.e., where the custom or public policy at the time would have defined the use as reasonable. Subcomm. on Patents, Trademarks & Copyrights of the Sen. Comm. on the Judiciary, 86th Cong., 2d Sess., Study No. 14, Fair Use of Copyrighted Works 15 (Latman) (Comm. Print 1960).

Wall Data, 447 F.3d at 778. It is unclear why the court opted to cite a standard of fair use from the committee report of a Senate Subcommittee, given that it is a standard not commonly associated with the fair use doctrine. The Ninth Circuit's standard is also troubling because it appears to be at odds with a core principle underlying fair use: that certain uses of copyrighted material, though unauthorized by the copyright owner, ought to be protected regardless of the lack or even likelihood of permission. *See, e.g.*, *Campbell v. Acuff-Rose Music, Inc.*, 510 U.S. 569, 592 (1994). The *Campbell* court stated:

The market for potential derivative uses includes only those that creators of original works would in general develop or license others to develop. Yet the unlikelihood that creators of imaginative works will license critical reviews or lampoons of their own productions removes such uses from the very notion of a potential licensing market. "People ask . . . for criticism, but they only want praise . . ."

Id. (citations omitted).

120. *Wall Data*, 447 F.3d at 782.

121. *Id.* at 780-82.

122. *Id.* at 779.

123. *Id.* at 780.

124. *Id.*

against fair use because “[w]henver a user puts copyrighted software to uses beyond the uses it bargained for, it affects the legitimate market for the product.”¹²⁵

The Ninth Circuit rejected the LASD’s essential step defense on two grounds.¹²⁶ First, the defense was not applicable because it applied only to “owners” and not licensees of the software.¹²⁷ The Court reasoned that restrictions in the click-through and volume license agreements indicated that the LASD was not an “owner” for the purposes of § 117.¹²⁸ Furthermore, even if the LASD were deemed an “owner” of the software, the court reasoned that it still would not be entitled to the essential step defense because its system of installation through hard drive imaging was not “inherently necessary” but rather “a matter of convenience.”¹²⁹

III. *WALL DATA’S* ROLE IN THE LICENSE VERSUS SALE DEBATE

The Ninth Circuit’s decision in *Wall Data* appears to indicate that contract law will continue to play a vital role in the protection of computer software. In particular, the Ninth Circuit’s holdings that (1) the software agreement was a license, rather than a sale, such that the LASD was not an owner for the purposes of the essential step defense,¹³⁰ and (2) that the LASD could not claim fair use as a defense,¹³¹ implicated conventional licensing software rationales like market segmentation and price discrimination. The court’s most significant holdings can be found in its analysis of the essential step defense, in which it explicitly faced the issue of license versus sale, as well as in the analysis of the fair use defense, where an endorsement of the value of licenses in the realm of copyright permeates its analysis.¹³²

A. Limited Discussion of the Broader Debate

Wall Data presents a more straightforward question of software licensing than previous cases like *MAI* and *DAK*, which were complicated by a questions about whether RAM copies infringed copyright and by points of

125. *Id.* at 781.

126. *Id.* at 784-86.

127. *Id.* at 785.

128. *Id.*

129. *Id.*

130. *Id.*

131. *Id.* at 782.

132. *Id.* at 778, 784.

bankruptcy law, respectively.¹³³ Despite the fact that the issue of whether software agreements should be construed as sales or licenses is still very much a contentious issue (as evidenced by the cases noted in previous Sections), the Ninth Circuit made little effort to weigh in on the debate other than to acknowledge in a single footnote that its “decision in *MAI* has been criticized.”¹³⁴ Indeed, it cited *MAI* as support for a finding that the LASD was a licensee rather than an owner of the software.¹³⁵ While it noted the controversy surrounding *MAI* however, it declined to revisit its ruling, holding that the LASD’s essential step defense would have failed even if the department were assumed to be the “owner.”¹³⁶

The court’s lack of significant comment on the license versus sale debate continued through the opinion. Immediately following its mention of *MAI* in footnote nine, the court cited *One Stop* for the proposition that “the first sale doctrine rarely applies in the software world because software is rarely ‘sold.’”¹³⁷ The Court, however, did not balance this claim with citations to critics of software licensing—indeed, *SoftMan* was cited only once in the entire *Wall Data* opinion, and only as a means of explaining click-through licenses.¹³⁸ Rather, the court elaborated further the rationales for why software agreements should be interpreted as licenses rather than sales: “[B]y licensing copies of their computer programs, instead of selling them, software manufacturers maximize the value of their software, minimize their liability, control distribution channels, and limit multiple users on a network from using software simultaneously.”¹³⁹ Other than this footnote, discussion of the broader license versus sale debate, central to the Adobe Trilogy and related cases, was conspicuously absent.

By limiting the discussion of the sale versus licensing issue, the court pronounced a perhaps stronger endorsement of software licensing than it would have if it had elaborated on the existence of the debate and attempted to weigh in on it more substantially. The court sent the message that the debate over license versus sale was not significant enough to warrant an in-depth analysis.

The Court’s most striking blow to defenders of the view that agreements are sales occurred in its discussion of the LASD’s essential step de-

133. See *MAI Sys. Corp. v. Peak Comp.*, 991 F.2d 511 (9th Cir. 1993); *Microsoft Corp. v. DAK Indus.*, 66 F.3d 1091 (9th Cir. 1995).

134. *Wall Data*, 447 F.3d at 786 n.9.

135. *Id.* at 785.

136. *Id.* at 785-86.

137. *Id.* at 786 n.9.

138. See *id.* at 775 n.5.

139. *Id.* at 786 n.9.

fense. The court refused to find that the LASD was an “owner” within the meaning of § 117.¹⁴⁰ The court arrived at this conclusion in part by applying the “restrictive terms” test originally found in the *MAI* and *DSC* line of cases.¹⁴¹ The court noted that the licensing agreement included with the Rumba software “imposed severe restrictions on the Sheriff’s Department’s rights with respect to the software.”¹⁴² “Such restrictions,” it continued, “would not be imposed on a party who owned the software.”¹⁴³ The court announced this principle in broad terms: “*Generally*, if the copyright owner makes it clear that she or he is granting only a license to the copy of software and imposes significant restrictions on the purchaser’s ability to redistribute or transfer that copy, the publisher is considered a licensee, not an owner, of the software.”¹⁴⁴ This willingness on the part of the court to announce the pro-license “restrictive terms” rule (rather than the pro-sale “economic realities” paradigm) as a general rule when interpreting software license terms was a significant endorsement of the interpretation of software agreements as licenses.

B. Licensing Issues in the Fair Use Analysis

Much of the court’s analysis in *Wall Data* revolved around the consideration of the LASD’s fair use defense. Two key licensing issues played into the court’s decision that the LASD had no fair use defense for its hard drive imaging: (1) it could have negotiated for more flexible terms, (2) the manner in which it set up its imaging system prevented Wall Data from enforcing its license. At the same time, the court declined to explore the extent to which the imaging would have undermined licensing rationales such as market segmentation and price discrimination. It also accorded little or no weight to the apparent “good faith” on the part of the LASD.

1. LASD Could Have Negotiated For Better Terms

The Rumba license restricted the LASD’s use to “a single designated computer” and prohibited the LASD from using “the Software in any other multiple computer or multiple user arrangement.”¹⁴⁵ The Ninth Circuit observed these restrictions and acknowledged the LASD’s desire for flexibility and efficiency in installing the software: “By using hard drive imaging, the Sheriff’s Department saved man hours and eliminated possible errors associated with separately installing the individual software pack-

140. *Id.* at 785.

141. *Id.*

142. *Id.*

143. *Id.*

144. *Id.* (emphasis added).

145. *Id.* at 779.

ages onto each computer in the Twin Tower facility. Hard drive imaging also ensured that those users who needed to use Rumba would be able to access the software at whatever computer they were assigned to work.”¹⁴⁶

Despite these rationales, however, the court suggested that given that the LASD had engaged in the practice for almost ten years, it should have approached Wall Data to ask for more flexible terms.¹⁴⁷ This was relevant to the court’s first factor analysis, concerning the purpose and character of the use. The court ruled that the purpose and character of the LASD’s use was commercial because the copies made through hard drive imaging “were made to save the expense . . . of purchasing a more flexible license.”¹⁴⁸ It was also important in the fourth factor analysis, concerning harm to the market for the copyrighted work. The court ruled that the LASD’s failure to renegotiate harmed the potential market because “whenever a user puts copyrighted software to uses beyond the uses it bargained for it affects the legitimate market for the product.”¹⁴⁹

2. *Hard Drive Imaging Precluded Wall Data From Enforcing Its License*

The Sheriff’s Department also justified its infringement on the grounds of “efficiency.”¹⁵⁰ The LASD used hard drive imaging to copy Wall Data’s software onto more computers than they were permitted under the terms of the license in order to save time and open the Twin Towers prison on schedule.¹⁵¹ The Ninth Circuit made it clear that this use was not permitted however, since the fair use defense frowns upon purpose and character of use that is intended “to save the expense of purchasing authorized copies.”¹⁵² It reaffirmed the lower court’s finding that the LASD’s process of hard drive imaging was not “for a legitimate, essentially non-exploitative purpose.”¹⁵³

Despite its ruling, the court took pains to emphasize that its was not to be construed as a rejection of efficiency as a potential rationale for the fair

146. *Id.*

147. *Id.* (“Such flexibility could only have been achieved by purchasing licenses for each of the computers on which the software was loaded, or by negotiating with Wall Data for a less restrictive license.”).

148. *Id.*

149. *Id.* at 781.

150. *Id.* at 779 n.6 (“[I]f the Sheriff’s Department had saved time and money by hard drive imaging RUMBA software onto the number of computers for which it had licenses, its “efficiency” would not create a problem.”).

151. *Id.* at 774.

152. *Id.* at 779.

153. *Id.*

use defense: "To be clear, we do not hold that a fair use defense is not available simple because the infringer uses technology to make efficient use of its licenses."¹⁵⁴ Rather, the court was concerned with the manner in which the LASD attempted to accomplish it, and suggested that such efficiency had to be narrowly tailored: "The problematic aspect of the Sheriff's Department's use is that it took in excess of what it bargained for, not that it was technologically efficient."¹⁵⁵

The key problem for the LASD was that its hard drive imaging system was not "narrowly tailored," because it was unable to verify which of the prison's computers had been used to access the Rumba software and which ones had not.¹⁵⁶ The court expressed concern with the LASD's scheme of assigning Logical Units to terminals, suggesting that it amounted to a "sub-licensing" system where it, rather than Wall Data, granted users permission to use the software.¹⁵⁷ Since the system potentially made copyright infringement easier (since no physical installation was necessary) while also making detection of infringement "almost impossible,"¹⁵⁸ Wall Data was relegated to the position of having to "trust" that the LASD was not using the Rumba software in excess of its authorization under the license.¹⁵⁹ Worse yet, the LASD appeared unable to even keep track of how many computers were accessing the software at any given time; a Sheriff's Department employee admitted in an e-mail that he was not sure how to tell which computers had accessed Rumba.¹⁶⁰

Ultimately, the court took issue with the fact that the LASD's system threatened the ability of Wall Data to fully enforce and capitalize on its license. When the court ruled that Wall Data should not be expected to "trust" that the LASD was not using the software in excess of its authorization under the license,¹⁶¹ the court echoed the basic licensing principle that the copyright holder should be able to control subsequent transfers of its software and determine the extent and scope of exclusive rights that may accrue to subsequent transferees.¹⁶² Indeed, the court's concern that

154. *Id.* at 779 n.6.

155. *Id.*

156. *Id.* at 781.

157. *Id.*

158. *Id.*

159. *Id.*

160. *Id.*

161. *Id.*

162. The key principle underlying the right to control subsequent transfers is the concern that without the ability to contract out of the first sale doctrine that licenses provide, software copyright holders cannot control how software is duplicated and distributed. Without this fundamental ability, they are unable to profit off subsequent transfers of the

hard drive imaging “made detection of over-use more difficult” meshes well with the view that copyright holders should be able to control the use of their product in order to better facilitate market segmentation.¹⁶³

3. *The Unexplored Effect on Software Licensing Rationales*

The fourth factor of the fair use analysis requires that the court look at the “effect of the use upon the potential market.”¹⁶⁴ In considering the harm to the market for Wall Data’s product caused by the LASD’s hard drive imaging process, the Ninth Circuit had the opportunity to consider the effect on market segmentation, price discrimination, and other rationales associated with software licensing (and avoidance of the first sale doctrine). Though it hinted at some of these principles, it declined to engage in a direct discussion of the rationales. For example, the court expressed concern that “unrestricted and widespread conduct of the sort engaged in by the defendant would . . . lead to over-use of the software.”¹⁶⁵ Viewed in the context of market segmentation and price discrimination, such “over-use” is a bad thing when it prevents a software manufacturer like Wall Data from isolating segments of the market population and charging them different prices for different bundles of software. However, this sort of substantive reasoning about segmentation and discrimination is nowhere to be found in the court’s opinion.

The court did recognize the ease with which software can be reproduced could potentially lead to widespread unauthorized distribution,¹⁶⁶ a practice that if widespread, would undermine the ability of software companies to isolate segments of the market and charge accordingly. However, the court did not address this directly either, instead expressing concern that “software can be more readily and easily copied on a mass scale in an extraordinarily short amount of time and relatively inexpensively. . . .”¹⁶⁷ The court also noted that “widespread use of hard drive imaging in excess of one’s licenses could seriously impact the market for Wall Data’s product.”¹⁶⁸ Beyond this language however, it did not discuss in detail the impact of the LASD’s behavior on Wall Data’s ability to engage in price discrimination or market segmentation.

software. *Cf. Nadan, supra* note 3, at 558, 567-70 (discussing in further detail the market segmentation rationale of software licensing).

163. *Wall Data*, 447 F.3d at 781; *Nadan, supra* note 3, at 558, 567-70.

164. *Wall Data*, 447 F.3d at 780.

165. *Id.* at 781.

166. *Id.*

167. *Id.*

168. *Id.* at 781-82.

4. "Good Faith" as an Extra Fair Use Factor?

Though they installed the Rumba software on more computers than the license permitted, the LASD may have reasonably believed that its actions constituted a sort of "good faith" compliance with the spirit, if not the letter, of the software license. The extra copies were nothing more than "ghost copies," unusable until activated with an LU.¹⁶⁹ The LASD made an attempt to ensure that the number of activated copies was within the number of licenses purchased.¹⁷⁰ All of the extra copies were made on the LASD's own computers, and given that the software was intended to be used solely within the Twin Towers prison, there did not appear to be any intent on the part of the LASD to resell or distribute the software to a third party.¹⁷¹ Had it wished to do so, the Ninth Circuit could have considered the LASD's "good faith" as an extra factor, weighing in the LASD's favor. But it did not, and in fact reaffirmed the lower court's finding that the LASD's use was not "for a legitimate, essentially non-exploitative purpose."¹⁷²

IV. CONCLUSION

Given the backdrop of the license versus sale debate, in which the Ninth Circuit's ruling in *MAI* had been criticized and a split existed in California district courts, *Wall Data* presented the Ninth Circuit with an opportunity to make a strong statement in favor of either interpreting software agreements as either licenses or sales. Instead, the court managed to avoid delving into any substantial questions of software contract interpretation, and instead opted to focus on the issue of fair use and to a lesser extent, the essential step defense. The court declined to revisit *MAI* and scarcely recognized outlier cases like *SoftMan*, meaning a final authoritative voice on the issue of whether to interpret software contracts as licenses or sales remains in dispute. There were some occasional rays of insight in the opinion, however. Throughout its fair use and essential step

169. *Id.* at 775, 781; see also Foster, The Sheriff and Drive Imaging, *supra* note 93.

170. [T]he Sheriff's Department argued that, even though it had installed RUMBA Office onto 6,007 workstations, it had configured the software so that the software could only be accessed by 3,663 workstations at a time. The Sheriff's Department argued that this constituted a fair use under 17 U.S.C. § 107 because the number of "useable" copies of the software did not exceed the number of licenses held by the Sheriff's Department.

Wall Data, 477 F.3d at 776.

171. *Id.* at 774.

172. *Id.* at 779.

analysis, the court consistently cited precedent which was deferential toward licenses, meaning that the software industry and its supporters may seize upon *Wall Data* as further ground to argue for the continued existence of software licenses. The court's decision, however, seems compelled as much by pragmatic policy necessity (to avoid dismantling the industry's software model) as much as it was by a pro-licensing outlook, which lends hope to the idea that perhaps eventually a unified scheme to protect software that takes into account all of its unique features will emerge as a replacement for the current copyright and contract system. Whatever the case, it appears that in the meantime, the industry's business model will live to see another day.

BERKELEY TECHNOLOGY LAW JOURNAL

ADDITIONAL DEVELOPMENTS— COPYRIGHT

WB MUSIC CORP. v. RTV COMMUNICATION GROUP

445 F.3d 538 (2d Cir. 2006)

The United States Court of Appeal for the Second Circuit held that an unauthorized compilation of music copyrighted by several authors does not qualify as “one work” when calculating statutory damages under § 504(c)(1) of the Copyright Act.

17 U.S.C. § 504(c)(1) provides that copyright owners who prevail in a copyright action may elect awards of “statutory damages for all infringements involved in the action, with respect to any one work.” The defendants’ infringing compilation consisted of seven compact discs that included thirteen songs to which plaintiffs held copyrights. Applying § 504(c)(1)’s provision that “[f]or the purposes of this subsection, all the parts of a compilation or derivative work constitute one work,” the lower court granted plaintiffs only seven statutory damage awards, ruling that defendants had infringed by creating seven CD complications, each constituting “one work.”

The Second Circuit vacated the decision and remanded the case, holding that § 504(c)(1)’s limiting of damage awards for compilations applies only to compilations authorized or created by copyright owners, not unauthorized compilations created by defendants. Thus, statutory damage provisions applied to each separate copyrighted work, warranting thirteen statutory damage awards for each of the thirteen infringed songs on defendants’ illegal compilations.

LAWS V. SONY MUSIC ENTERTAINMENT, INC.

448 F.3d 1134 (9th Cir. 2006), cert. denied, 2007 WL 559894 (Feb. 26, 2007)

The United States Court of Appeal for the Ninth Circuit held that copyright claims of an artist based on California common law were preempted by the Copyright Act.

Debra Laws, a vocal artist and a member of Debra Laws and Spirit Productions (“Spirit”), entered into an agreement in 1979 with Elektra/Asylum Records (“Elektra”) to produce master recordings of Laws’s vocal performances for Elektra. The agreement included a sale of copyright interests to Elektra, with exclusive rights to “lease, license, convey, or otherwise use or dispose of” the recordings, and exclusive rights to permit others to use information pertaining to Laws in connection with the recordings. Laws, however, retained a right of first refusal for all future uses of her work. In 1981, under the Elektra label and subject to the terms of the above contract, Laws recorded the song “Very Special.”

Sony Music Entertainment, Inc. (“Sony”), a music entertainment company, purchased a license from Elektra’s agent to use samples of “Very Special” in the song “All I Have,” performed by Jennifer Lopez and L.L. Cool J. The agreement between Sony and Elektra required a credit attribution for use of the song; however, Elektra did not seek permission to use the work from Laws or Spirit, nor did Elektra compensate Laws or Spirit for the use of the samples.

In February 2003, Laws brought an action in the Superior Court of California, County of Los Angeles against Sony. Seeking injunctive and monetary relief, Laws claimed: (1) a common law invasion of privacy for misappropriation of Law’s name and voice, and (2) misappropriation of Laws’ name and voice for a commercial purpose under California Civil Code § 3344. Sony removed the case to the United States District Court for the Central District, which subsequently found that both misappropriation claims were preempted by the Copyright Act. The court granted Sony’s motion for summary judgment, and Laws appealed to the Ninth Circuit.

The Ninth Circuit panel affirmed, finding that Laws’s case met the two-part test for preemption: (1) the “subject matter” of the state law claim fell within the subject matter of § 102 of the Copyright Act, and (2) the rights asserted under the state law claim were equivalent to the exclusive rights found in § 106 of the Copyright Act. Under the first prong, the court made clear that although the sound of an artist’s voice, unfixed in a tangible medium, does not fall under the Copyright Act, the sound recording of an artist’s voice does, distinguishing it from *Midler v. Ford Motor Co.*, 849 F.2d 460 (9th Cir. 1988) and *Waits v. Frito-Lay, Inc.*, 978 F.2d 1093 (9th Cir. 1992), in which singers brought similar claims against mimicry.

Under the second prong, the court found that the additional element of “commercial use” under California Civil Code § 3344 was not sufficient to distinguish Laws’s claim from a copyright claim, since the underlying “nature of the claim” was still identical to the copyright claim. The court, however, explicitly noted that the ruling applied only to rights arising from the subject matter of copyright and did not extinguish causes of action arising from common law or statutory rights of privacy, publicity and trade secrets.

As to the violation of Laws’s right of first refusal, the court found that legal action, if taken at all, should be taken against Elektra as the party with whom Laws had established that right and not against Sony, the party who had purchased the license to the recording.

***TWENTIETH CENTURY FOX FILM CORP. V. ENTERTAINMENT
DISTRIBUTING***

*429 F.3d 869 (9th Cir. 2005), cert. denied sub nom.
Dastar Corp. v. Random House, Inc., 126 S. Ct. 2932 (2006)*

The United States Court of Appeal for the Ninth Circuit affirmed a district court's ruling that Dastar Corporation ("Dastar") was liable for copyright infringement. The work at issue, Dwight Eisenhower's book about World War II titled *Crusade in Europe*, was a work-for-hire that entitled its publisher Doubleday as well as its film assignee Twentieth Century Fox ("Fox") to copyrights in the work. Dastar, which had used large sections of the book without permission as part of the narration in its video "Campaigns in Europe," argued that the book was not produced as a work-for-hire because Eisenhower was an "independent contractor."

Despite Dastar's challenges to the record, the Ninth Circuit found no error in the lower court's findings of fact. The facts showed that President Eisenhower had been reluctant to write a book until Doubleday representatives convinced him to do so. Furthermore, Eisenhower desired special tax treatment for writing the memoir, so the parties did not sign an agreement, and Doubleday did not pay him, until after he had finished writing. Still, Eisenhower wrote the work at Doubleday's direction, with heavy supervision and editorial and financial assistance from Doubleday.

The court's standard for determining whether a work qualified as a work-for-hire required a showing that, "[i]n the absence of an express contractual reservation of the copyright in the artist... the mutual intent of the parties is that the title to the copyright shall be in the person at whose instance and expense the work is done." After determining that independent contractors could nonetheless create works-for-hire, the Ninth Circuit applied the "instance and expense" test and held that when the "motivating factor" for the author's decision to produce a work was the employer's "inducement," that author creates a work at the publisher's "instance." The court identified Eisenhower's situation as a "prototypical case" in which a reluctant author began writing only after being persuaded by the publisher, thus qualifying the book as a work-for-hire. The court also found little doubt that President Eisenhower created the work at Doubleday's expense, given that Doubleday shouldered almost all the expense for the publishing process.

Dastar also argued that the circumstances suggested that Eisenhower and Doubleday evinced no intent to create a work-for-hire. The court rejected this argument, ruling that though the "instance and expense" test was rebuttable by a showing of the parties' intent not to create a work-for-hire, the record included no evidence of such intent.

EGILMAN V. KELLER & HECKMAN, LLP*401 F. Supp. 2d 105 (D.D.C. 2005)*

The United States District Court for the District of Columbia ruled that accessing a computer through the unauthorized use of a valid username and password did not constitute circumvention of a technological measure within the meaning of the Digital Millennium Copyright Act of 1998 ("DMCA").

David Egilman, a medical doctor and associate professor at Brown University, served as an expert witness in a toxic tort case, *Ballinger v. Brush Wellman, Inc.* In that action, the court found that Egilman had posted "scurrilous and inflammatory statements" on his personal website, in violation of a court order not to make any out of court statements concerning the case, including on any website. As a result of this violation, the *Ballinger* court sanctioned Egilman. Mr. Egilman brought the present action after he discovered that Jones Day, the law firm representing the opposing party in *Ballinger*, obtained the information that led to Egilman's sanction through allegedly questionable means. According to Egilman, Mr. Douglas J. Behr, a partner at the law firm Keller & Heckman, LLP, obtained the username and password to Egilman's website without authorization, and disclosed this information to Jones Day. Egilman brought this action against Keller & Heckman, LLP, Behr, and Jones Day, claiming that they violated the DMCA by "circumvent[ing] the technical measures installed on his website to restrict access to his copyright protected work." Jones Day filed a motion to dismiss, as well as a motion for improper venue. Keller & Heckman LLP, and Behr filed a motion for judgment on the pleadings.

Under the DMCA, 17 U.S.C. § 1201(a)(1)(A), "[n]o person shall circumvent a technological measure that effectively controls access to a [protected work]." Section 1201(a)(3)(A) defines circumvention of a technological measure as a process to "de-scramble a scrambled work, to decrypt an encrypted work, or otherwise to avoid, bypass, remove, deactivate, or impair a technological measure, without the authority of the copyright owner." Based on this statutory definition, the court held that the unauthorized use of a valid username and the accompanying password, without more, does not constitute a violation of the DMCA.

The court relied on *I.M.S. Inquiry Mgmt. Sys., Ltd. V. Berkshire Info. Sys., Inc.*, 307 F. Supp. 2d 521 (S.D.N.Y. 2004), the only previous federal case to address the question of whether unauthorized use of a valid username and password constituted a violation of § 1201(a)(1)(A). Drawing a distinction between "circumvention" and merely bypassing permission, the *I.M.S.* court noted that "a cause of action under the DMCA does not accrue upon unauthorized and injurious access *alone*. . . rather, the DMCA targets. . . circumvention." The *I.M.S.* court held that the defendant's use of a third party's valid username and password did not constitute circumvention, as it "did not surmount or puncture or evade any technological measure. Finding that *I.M.S.* was not factually distinguishable from the present case, the *Egilman* court applied the *I.M.S.* analysis and held that though Jones Day and Keller & Heckman had, without authorization, used a password intentionally issued by Egilman to another user, they had not engaged in any form of circumvention. Thus, the court dismissed Egilman's DMCA claim.

Egilman also sought relief under the Computer Fraud and Abuse Act, the court concluded that the claim was time-barred, and dismissed the claim.

MACROVISION V. SIMA PRODUCTS CORP.

*No. 05 Civ. 5587(RO), 2006 WL 1063284 (S.D.N.Y., Apr. 7, 2006),
reh'g denied, 2006 WL 1472152 (May, 26, 2006)*

The United States District Court for the Southern District of New York granted Macrovision a preliminary injunction against Sima Products Corp. ("Sima") for manufacturing and trafficking a technology for circumventing Macrovision's technological protections in violation of the Digital Millennium Copyright Act 17 U.S.C. § 1201(a)(2)(A) (DMCA). Macrovision also claimed that Sima infringed its Analog Copy Protection (ACP) patents. The court held that the potential violation of the DMCA was sufficient to grant the injunction, and thus did not rule on Macrovision's patent infringement claims.

Macrovision produces and licenses ACP, a DVD copy prevention technology incorporated into DVDs and DVD players, that prevents them from being copied to videocassette. Sima Products Corp. makes devices that circumvent this protection, allowing a DVD protected with Macrovision's technology to be copied onto a videocassette. Sima's devices also provided auxiliary functions, such as the ability to convert between color and black and white, between NTSC and PAL television standards, and to perform color adjustments on the video being copied. Sima argued that its products were used primarily to make 'fair use' backup copies of DVDs from customers' private collections, and to transfer VHS movies and home videos onto DVDs.

The DMCA forbids circumventing technological measures that control access to copyrighted works. It also forbids manufacturing and trafficking devices the primary purpose of which is to circumvent such protection. The DMCA also states that it does not modify existing fair use principles of copyright law.

The court found that the primary purpose of Sima's devices was the circumvention of Macrovision's DVD-protection technologies because Sima marketed the devices explicitly as a means to copy protected DVDs, and because Sima could not show that the circumvention function was essential for the auxiliary functions. The court also rejected Sima's fair use argument on two grounds. First, the court noted that the DMCA provides no exception, fair use or otherwise, to its prohibition against the manufacture of anti-circumvention technology. Second, the court found no fair use right to make a backup copy of copyrighted DVDs for personal use.

Finally, the court held that an injunction was appropriate because Macrovision had a high likelihood of prevailing on the merits, and because Sima's devices presented a threat to Macrovision's business model, tilting the balance of hardships "decidedly" in Macrovision's favor.

NCR CORP. V. ATM EXCHANGE, INC.*81 U.S.P.Q. 2d 1216 (S.D. Ohio 2006)*

The United States District Court for the Southern District of Ohio denied a motion to dismiss copyright infringement claims because (1) the first sale doctrine was inapplicable because the first 'user' did not receive ownership but merely a license for the use of the copyrighted material; and (2) the "maintenance or repair" defense was unavailable because the copies of software in possession were not authorized copies.

NCR Corporation ("NCR") is a leading provider of automated teller machine (ATM) equipment, including systems with integrated hardware and software. NCR owns copyrights in several software programs installed on its ATMs. The ATM Exchange, Inc. ("ATM Exchange") resells and refurbishes used ATMs including ATMs manufactured by NCR. NCR sued ATM Exchange for copyright infringement, contributory copyright infringement, trademark infringement, trademark dilution, unfair competition, and violation of the Ohio Deceptive Trade Practices Act for refurbishing and reselling used ATMs containing NCR's copyrighted software.

In its motion to dismiss, ATM Exchange invoked the first sale doctrine, which allows the "owner" of a copy of a copyrighted work to transfer that copy without the copyright holder's permission. NCR responded that ATM Exchange was not an "owner" because NCR had merely licensed its software to ATM Exchange. Since the first sale doctrine only covers "owners," not "licensors," and since the license did not allow for sublicensing or transfer of rights to third parties, ATM Exchange's subsequent transfers were illegal. In evaluating the motion to dismiss, the district court assumed that NCR's software was licensed, and found that the first sale doctrine was inapplicable.

ATM Exchange also argued in its motion to dismiss that its refurbishing activities were permitted under the "maintenance or repair" provisions of 17 U.S.C. § 117(c). However, NCR alleged, and the court agreed, that § 117(c) was inapplicable to ATM Exchange went beyond the scope of these provisions by copying NCR's software while testing an upgrade of the software and that the copies of software ATM Exchange had in its possession were not "authorized copies" subject to the maintenance or repair provision.

PARKER V. GOOGLE, INC.

422 F. Supp. 2d 492 (E.D. Pa. 2006)

The United States District Court for the Eastern District of Pennsylvania dismissed all eleven of Gordon Roy Parker's claims against Google, Inc. ("Google"). Claims of copyright infringement, contributory copyright infringement, vicarious copyright infringement, defamation, invasion of privacy, negligence, Lanham Act violations, and abuse of process were dismissed with prejudice, pursuant to both the Federal Rules of Civil Procedure Rule 8(a) short and simple statement requirement and the Rule 12(b)(6) requirement to state a claim on which relief can be granted. Claims of racketeering and civil conspiracy were dismissed without prejudice, pursuant to the Rule 8(a) short and simple statement requirement.

Google is a popular search engine based in California. In the course of providing its search function, Google makes a copy of websites and stores this copy in "cache," or temporary storage. Links to this "cache" are then provided, sorted by relevance, in response to user queries. Google also maintains a "USENET," which is a "global system of online bulletin boards," allowing users to post and search messages on the system.

Parker, a writer, published on the internet under the name, "Snodgrass Publishing Group." Among Parker's published works is an e-book, "29 Reasons Not To Be A Nice Guy." At one point, Parker posted "Reason #6" from this book on Google's USENET bulletin board system.

Parker was not represented by counsel, and so his voluminous complaint made his arguments difficult to discern. Nonetheless, the court deduced that Parker's copyright claims arose from the fact that Google had copied "Reason #6" from USENET into cache. In addition, Google did not remove search results that included third party websites featuring information about and criticism of Parker, despite Google having been allegedly "put on notice" of the critical nature of these results. The court deduced this to be the grounds of the claims of defamation, invasion of privacy, and negligence. Parker's Lanham Act claim arose from a belief that Google was misrepresenting the origin of a critical website, and the abuse of process complaint arose from Parker's belief that he was being unfairly treated because Google alleged that Parker had "a history of vexatious litigation" in a prior pleading.

On the claim of direct infringement, the court reasoned that an "ISP automatically and temporarily stor[ing] data without human intervention" lacks "the necessary volitional element needed to constitute copyright infringement." The court thus held that Google's use of USENET did not violate Parker's copyright. The court also held that Google's use of caching was not a violation because Google was entitled to a safe harbor under 17 U.S.C. § 512(b).

The court determined that Parker's claims of vicarious copyright infringement failed because Parker did not allege any underlying infringement. Parker's claims of defamation, invasion of privacy, and negligence were also dismissed because Google was entitled to immunity under the Communications Decency Act, 47 U.S.C. § 230. The court dismissed Parker's Lanham Act claims, finding that there was no likelihood that people would confuse Parker for the creator of the website that criticized him and that Google was not a moving force in the criticism simply by reproducing the website. Finally, the court dismissed the claims of abuse of process because Google's prior pleading was in no way a "perversion of the legal process" to achieve unlawful ends.

*PERFECT 10 V. GOOGLE, INC.**416 F. Supp. 2d 828 (C.D. Cal. 2006)*

The United States District Court for the Central District of California held that “thumbnails” of copyrighted images created as part of Google’s Image Search likely directly infringed Perfect 10’s copyright in those images. However, the court also concluded that Perfect 10 would likely not succeed on its vicarious and contributory liability claims. The court granted in part Perfect 10’s motion for a preliminary injunction.

Perfect 10 alleged that Google directly infringed its copyright by displaying thumbnails and full-size images of Perfect 10’s copyrighted photographs as part of Google’s image search. The court considered whether “framing” content stored on other servers constituted a “display” for purposes of copyright law; the court employed the “server test” under which “display” is the act of serving content over the web. Accordingly, Google’s use of frames and in-line links was not a “display” of the full-size images because third-party websites stored and served the images. Nor did Google’s framing and in-line linking constitute “distribution” of the full-size photographs. Therefore, the court ruled that Perfect 10’s claims of direct infringement as to the full size images would likely fail.

Applying the server test, the court did find, however, that the thumbnails directly infringed Perfect 10’s copyrighted images because Google acknowledged that it created and stored those thumbnails on its own servers. Google, however, did not “distribute” these thumbnails by transferring them to the browser’s local internet cache. Acknowledging the point was moot in light of Google’s “displaying” the thumbnails, the court found that the caching process was automatic and likely constituted fair use.

When evaluating the purpose and character of Google’s use, the court found it to be commercial in nature, because Google profits from its AdSense program. Google’s use of thumbnails was “highly transformative” and not a substitute for the full size image. However, it found the thumbnails as a free substitute to images Perfect 10 licensed for distribution on cellular phones. The purpose and character of the use weighed slightly in Perfect 10’s favor.

The court found the “nature of the copyrighted work” weighed “only slightly” in favor of Perfect 10 because the images were “creative.” The images had been previously published both in print and on the web, which increased the probability of finding fair use because the first appearance of the artist’s expression already occurred.

The court found that the third factor, amount and substantiality of the portion used, favored neither party. The court ruled that Google’s use of infringing copies of Perfect 10’s images is no greater than necessary to provide an image search service.

The court found that Google’s use of thumbnails would likely not affect the market for full size images, but might harm the potential market for the downloading of reduced size images onto cell phones, so the fourth fair use factor weighed slightly in favor of Perfect 10. Because the first, second and fourth factors weighed slightly in favor of Perfect 10, and the third factor favored neither party, the court ruled that Google’s generation of thumbnails did not likely fall within the fair use exemption.

COPYRIGHT ENFORCEMENT ON THE INTERNET

BMG MUSIC V. GONZALEZ

430 F.3d 888 (7th Cir. 2005), cert. denied, 126 S. Ct. 2032 (2006)

VIRGIN RECORDS AM., INC. V. DOES 1-35

No. 05-1918, 2006 WL 1028956 (D.D.C., Apr. 18, 2006)

Two cases demonstrate the continuing success of the music industry in prosecuting those who have downloaded copyrighted music from the internet.

In *BMG Music v. Gonzalez*, the United States Court of Appeal for the Seventh Circuit affirmed a lower court's holding that neither downloading copyrighted songs that one already owns on CD, nor downloading copyrighted songs to sample before buying them, constitutes fair use under 17 U.S.C. § 107. Cecilia Gonzalez had appealed the Northern District of Illinois's ruling granting BMG's motion for summary judgment, enjoining Gonzalez from further infringement and awarding BMG \$22,500 in damages.

The court found that downloading copyrighted works to sample them before buying them at retail was not a form of time-shifting protected by *Sony Corp. v. Universal Studios, Inc.*, because the songs Gonzalez downloaded were posted in violation of copyright law, were obtained by her without paying a license fee to the broadcaster, and because Gonzalez retained the copies after she downloaded them onto her computer. The court also rejected Gonzalez's argument that downloading to sample before purchasing had a positive effect on the market for music, noting that record sales have dropped by approximately 30% during the rise of unauthorized downloading. The court found that music downloaded for free from the internet and retained on the computer was a "direct substitute" for the purchased copy, to the extent that it discouraged users from purchasing a legitimate copy. The court also enumerated several commercially licensed substitutes to Gonzalez's "try before you buy" method, such as radio, internet radio, and iTunes, all of which pay a fee to the copyright owner.

Finally, the court found that because BMG requested the minimum statutory damages of \$750 per work (rather than proving actual injury), and because the number of works infringed was not in dispute, Gonzalez was not entitled to a jury trial. The court also rejected Gonzalez's argument that the jury had the authority to deny a plaintiff recovery, even if the statute makes \$750 the minimum.

In *Virgin Records v. Does*, a coalition of major record labels brought an action against thirty-five John Doe defendants for copyright violations arising out of internet file sharing. John Doe Eighteen, citing lack of personal jurisdiction, moved to quash a subpoena on his ISP forcing it to reveal his IP address. The United States District Court for the District of Columbia denied the motion on the grounds that a personal jurisdiction ruling required knowledge of the defendant's identity, and thus it was premature to consider personal jurisdiction before the defendant's identity could be determined. The court also stated that it would be illogical to deny Virgin Records the means to obtain the basic identifying information they sought through their subpoena.

The court went on to rule that Virgin Records made a prima facie showing of personal jurisdiction for two reasons. First, it was undisputed that the defendant had con-

tracted with Verizon, a District of Columbia based ISP, and used its services to commit copyright infringement. As a result, the District of Columbia's long-arm statute conferred personal jurisdiction. Second, the defendant, irrespective of his place of residence, "directed tortious activity into the District of Columbia." The court cited a Third Circuit ruling holding that those who transmit copyrighted works nationwide "can anticipate that infringement may result at places remote from the place of origin."

DEVELOPMENTS— SEMICONDUCTOR CHIP PROTECTION ACT

ALTERA V. CLEAR LOGIC

424 F.3d 1079 (9th Cir. 2005)

The Ninth Circuit upheld a nearly \$37 million judgment and a permanent injunction against Clear Logic for infringing Altera's rights under the Semiconductor Chip Protection Act (SCPA) by inducing Altera's customers to breach Altera's software licensing agreement, and interfering with Altera's contractual relations with its customers.

Altera manufactures programmable logic devices ("PLDs"), which allow users to program chips to perform various logic functions, using Altera's software. Altera's chips allow customers to continue to reprogram the PLD until it meets their needs precisely; however, this optimization process can be expensive and can take months. Clear Logic provides an alternative type of chip, an Application Specific Integrated Circuit (ASIC) which performs only one specific function. Customers cannot program Clear Logic's ASICs themselves. Rather, Clear Logic creates an ASIC when customers send them "bitstream" that is generated from a customer's programming a PLD. Clear Logic's ASICs are smaller than PLDs, more energy efficient, and cheaper if a customer places a large order.

Altera sued Clear Logic for infringing its rights under the SPCA for copying its layout design for its registered mask works, to which Clear Logic asserted the defense of reverse engineering. In addition, Altera sued Clear Logic under state law claims for inducing its customers to violate their license agreement because Altera's licensing agreement stated that the customers could use the software only to program PLDs.

At trial, the jury found for Altera on both grounds, and Clear Logic appealed, contending that the trial judge misinterpreted the application of the SCPA to the chips, and improperly instructed the jury concerning the defense of reverse engineering. Clear Logic also contested liability under the state law claims.

The Ninth Circuit upheld the jury verdict. The court rejected Clear Logic's assertion that the groupings of transistors on chips were merely ideas (which would have made them exempt under the SCPA), because the transistors themselves were physically embodied on a chip. The Ninth Circuit also found that the legal issue was fairly presented to the jury to decide that Clear Logic did not fall within the reverse engineering scope of the SCPA. The Ninth Circuit also held that the trial court was correct to reject Clear Logic's contention that the Copyright Act preempted Altera's state law claims related to the software licensing agreement because state law protects against unauthorized *use* of software, while the Copyright Act only regulates unauthorized *copying* of software itself. Because Clear Logic's customers used the bitstream but did not copy Altera's software the Copyright Act did not apply.

BERKELEY TECHNOLOGY LAW JOURNAL

INITIAL INTEREST CONFUSION IN METATAG CASES: THE MOVE FROM CONFUSION TO DIVERSION

By Niki R. Woods

Initial interest confusion occurs in trademark law when a consumer is momentarily diverted to a competitor's product due to the competitor's use of a trademark. Current case law reveals that courts are loosely applying this doctrine to internet cases where a trademark is used in website metatags in a way that runs contrary to the purpose of trademark protection and is harmful to the market. Courts in these cases are overly focused on the misappropriation of goodwill when they should be focused on whether there actually exists a likelihood of confusion. In response to concerns about free-riding, courts have essentially turned initial interest confusion into a substitute test for likelihood of confusion, making it easier for trademark owners to prove trademark infringement in these cases.

Recently, initial interest confusion has been applied in the internet context including in metatag cases. The issue of trademark infringement arises in metatag cases when parties use a trademarked term in their website metatags to attract more customers by improving their ranking within search engine results.¹ Metatags are descriptive words embedded in HTML code that website owners use to describe the contents of the website.² These words are used to determine which websites should appear on keyword search engine results, based on how often the corresponding keyword appears in the metatags of the website.³ Currently, however, few search engines actually use metatags to determine the relevancy of websites.⁴ In fact, it is now more common for search engines to use content-based algorithms to rank websites.⁵ Despite this change in technology,

© 2007 Niki R. Woods

1. See, e.g., *Brookfield Commc'ns, Inc. v. West Coast Entm't Corp.*, 174 F.3d 1036, 1045 (9th Cir. 1999).

2. See *id.* at 1045; see also, World Wide Web Consortium, HTML 4.01 Specification § 7.4.4, <http://www.w3.org/TR/REC-html40> (last visited Jan. 25, 2007); Wikipedia, Meta element, http://en.wikipedia.org/wiki/Meta_element (last visited Dec. 20, 2006).

3. See World Wide Web Consortium, *supra* note 2, §§ 7.4.4, app. B.4; Wikipedia, *supra* note 2.

4. Zachary J. Zweihorn, Note, *Searching for Confusion: The Initial Interest Confusion Doctrine and its Misapplication to Search Engine Sponsored Links*, 91 CORNELL L. REV. 1343, 1362-63, n.142 (2006); see also Wikipedia, *supra* note 2.

5. See Zweihorn, *supra* note 4; see also Wikipedia, *supra* note 2.

courts are still addressing the use of metatags as though they matter a great deal to competition and marketing.⁶ Thus, some of the criticisms of initial interest confusion on the internet are not just legal analytic concerns, these criticisms also question the usefulness of the doctrine as applied to the internet.⁷

This Note argues against using initial interest confusion as a less stringent substitute test in the trademark infringement analysis and urges courts to revert to the traditional likelihood of confusion test. It does not argue for or against the doctrine of initial interest confusion as originally conceptualized in the brick-and-mortar world, but rather, argues against its broad application in the internet context. Part I gives background on trademark law and the doctrinal development of initial interest confusion from brick-and-mortar cases to internet cases. In particular, *Brookfield Communications v. West Coast Video* set in motion the expansion of the initial interest confusion doctrine into internet cases, leaving in its wake precedent for straying from the traditional Lanham Act evaluation. Part II follows the initial interest confusion doctrine through an analysis of several recent cases following *Brookfield* from 2002 to 2006, which represent a growing trend of misapplication and undue broadening of the doctrine. These cases illustrate a doctrinal change for the worse in trademark law by misinterpreting the interplay between the initial interest confusion doctrine and the internet, misapplying the doctrine, and broadening the scope of the doctrine. Part III discusses why the misguided evolution of initial interest confusion is of great policy concern. In particular, this doctrinal development is harmful to both consumers and competition. In Part IV, this Note urges courts to limit the application of initial interest confusion and instead apply the traditional likelihood of confusion analysis when dealing with trademark abuses on the internet.

I. FROM LIKELIHOOD OF CONFUSION TO INITIAL INTEREST CONFUSION

Trademarks identify goods and services. The Lanham Act protects trademarks by creating a private right of action by a trademark owner

6. Although abusing trademarks in domain names should have been adequately addressed by the Anticybersquatting Consumer Protection Act (ACPA), 15 U.S.C. § 1125(d) (2002), courts are still applying the initial interest confusion test in domain-name cases. *See SMC Promotions, Inc. v. SMC Promotions*, 355 F. Supp. 2d 1127, 1136 n.14 (C.D. Cal. 2005) (holding that because defendant's use of plaintiff's trademark in its registered domain name led to initial interest confusion, it constituted trademark infringement, thus finding it unnecessary to address ACPA claims).

7. *See infra* Part III.

against any person who, without the owner's consent, uses that trademark in commerce in a way that is likely to confuse potential consumers as to the source of the product associated with the trademark.⁸ Trademark protection serves two main functions: first, it prevents consumers from being confused as to the source of a product; and second, it protects the goodwill of the trademark owner.⁹ Eliminating consumer confusion reduces consumer searching and purchasing costs, which leads to efficiency in the marketplace. Protection of a trademark owner's goodwill provides an incentive to invest in business development.

A. Proving Trademark Infringement

A party alleging trademark infringement must prove that the defendant used the trademark in commerce in a way that is likely to confuse consumers as to the source of the product on which the mark is being used. The first threshold requirement is "use in commerce." Once this has been established, the main crux of an infringement claim is consumers' likelihood of confusion when encountering the allegedly infringing mark.¹⁰ Traditionally, courts look for whether the consumer was confused at the time of purchase. The Restatement (Third) of Unfair Competition delineates a number of factors that can be used by courts to evaluate the likelihood of confusion.¹¹ Each circuit employs a similar test. The Ninth Circuit, for example, employs the factors established in *AMF Inc. v. Sleekcraft Boats* (the "Sleekcraft factors").¹² The factors are:

- (1) Strength of the [trademark owner's] mark, (2) proximity of the goods, (3) similarity of the marks, (4) evidence of actual confusion, (5) marketing channels used, (6) type of goods and the degree of care likely to be exercised by the purchaser, (7) defendant's intent in selecting the mark, and (8) the likelihood of expansion of the product lines.¹³

In *Sleekcraft*, both plaintiff and defendant manufactured recreational boats.¹⁴ Plaintiff used the trademarked term "Slickcraft" and defendant used the term "Sleekcraft" for their respective boats.¹⁵

8. 15 U.S.C. §§ 1051-1127 (2006).

9. See, e.g., *Bosley Medical Institute, Inc. v. Kremer*, 403 F.3d 672, 677 (9th Cir. 2005); Lisa M. Sharrock, *Realigning the Initial Interest Confusion with the Lanham Act*, 25 WHITTIER L. REV. 53, 74-75 (2003).

10. See *Lamparello v. Fawell*, 420 F.3d 309, 314 (4th Cir. 2005).

11. RESTATEMENT (THIRD) OF UNFAIR COMPETITION § 21 (1995).

12. *AMF Inc. v. Sleekcraft Boats*, 599 F.2d 341 (9th Cir. 1979).

13. *Id.* at 348-49.

14. *Id.* at 346.

The Ninth Circuit ruled that there was a likelihood of confusion, and therefore trademark infringement, basing its finding on an analysis of the *Sleekcraft* factors.¹⁶ When examining the strength of an owner's mark, the more inherently distinctive—meaning arbitrary or fanciful—the mark is, the more deserving it is of trademark protection. If a mark is suggestive, on the other hand, it requires some acquired secondary meaning to warrant protection. In this case, the court found “Slickcraft” to be a suggestive mark because it connoted the image of its product, a boat.¹⁷ It had an acquired secondary meaning, but because it was a weaker mark than if it had been purely arbitrary or fanciful, it was only entitled to a more restricted scope of protection.¹⁸ On proximity of the goods, the court found that the products were not directly competing, but closely related in use and function, which increased the likelihood of confusion.¹⁹

Generally, when examining the similarity of trade or service marks, courts consider the marks as a whole and examine whether they look alike, sound the same and mean the same thing. The court in *Sleekcraft* found that the marks similar in appearance, sound, and meaning, which increased the likelihood of confusion.²⁰ The court also looked for evidence of actual confusion,²¹ but because this evidence is difficult to come by, its absence does not weigh significantly in defendant's favor.²² The evidence introduced in *Sleekcraft* was deemed negligible.²³ The court found the parties used similar marketing channels, which increased the likelihood of confusion because they were likely to both reach the same set of consumers.²⁴

On the degree of purchaser care, the court found the goods were high-quality and expensive, leading to a higher degree of purchaser care because consumers are more likely to pay attention to features of a product, such as the source, when the product is expensive.²⁵ This reduced the likelihood of confusion. The court then considered the defendant's intent because such intent to use another's mark can indicate an attempt to deceive the public.²⁶ In this case, no intent was established, which also decreased

15. *Id.*

16. *Id.*

17. *Id.* at 349.

18. *Id.* at 350.

19. *Id.*

20. *Id.* at 350-51.

21. *Id.* at 352.

22. *Id.* at 353.

23. *Id.* at 352.

24. *Id.* at 353.

25. *Id.* at 353-54.

26. *Id.* at 354.

the likelihood of confusion.²⁷ Upon examining the likelihood of expansion of either product line, the court found both product lines were likely to expand, which meant the goods were more likely to compete in the future, which also increased the likelihood of confusion.²⁸

B. Initial Interest Confusion in the Brick-and-Mortar World

Initial interest confusion is temporary, pre-sale confusion that occurs when a consumer is drawn to a product believing it to be affiliated with another company because the product somehow evokes that company's trademark.²⁹ The doctrine assumes that the consumer is no longer confused at the time of purchase, but the use of the trademark has drawn the consumer to the product and away from the trademark owner's product. The Second Circuit established this doctrine in *Grotrian, Helfferich, Schulz, Th. Steinweg Nachf. v. Steinway & Sons* by shifting the focus of the likelihood of confusion analysis from the time of purchase to earlier in the consumer's search for products.³⁰ *Grotrian* concerned the possibility of confusion as to the source of pianos by competing manufacturers.³¹ The dispute centered on the likelihood that consumers may have entered the Gotrian-Stenweg store, believing it to be affiliated with Steinway & Sons.³² The Second Circuit found it was unlikely that a potential customer would actually buy a Grotrian-Stenweg piano still believing it to be a Steinway, but it "decline[d] to hold . . . that actual or potential confusion at the time of purchase necessarily must be demonstrated to establish trademark infringement under the circumstances of this case."³³ Instead, the court turned to the idea of initial interest confusion, which it defined as

27. *Id.*

28. *Id.*

29. *See, e.g.,* *Eli Lilly & Co. v. Natural Answers, Inc.*, 233 F.3d 456, 464 (7th Cir. 2000) ("Such confusion, which is actionable under the Lanham Act, occurs when a consumer is lured to a product by its similarity to a known mark, even though the consumer realizes the true identity and origin of the product before consummating a purchase."); *Playboy Enters., Inc. v. Netscape Commc'ns Corp.*, 354 F.3d 1020, 1025 (9th Cir. 2004) ("Initial interest confusion is customer confusion that creates initial interest in a competitor's product. Although dispelled before an actual sale occurs, initial interest confusion impermissibly capitalizes on the goodwill associated with a mark and is therefore an actionable trademark infringement.").

30. *Grotrian, Helfferich, Schulz, Th. Steinweg Nachf. v. Steinway & Sons*, 523 F.2d 1331, 1342 (2d Cir. 1975).

31. *Id.* at 1334. The two disputed trademarks were similar because Steinweg was founded by the same family that later moved to the U.S., changed their names to Steinway and started Steinway & Sons.

32. *Id.*

33. *Id.* at 1342 (emphasis in original).

the initial attraction that draws a potential customer to a product based on the recognition of the trademark being used, even if that mistaken belief is corrected before the purchase is actually made.³⁴ The court considered even this temporary confusion to be misappropriation of the trademark owner's goodwill, a factor which it used to support a finding of trademark infringement.³⁵

After *Grotrian*, the initial interest confusion doctrine did not catch hold until *Mobil Oil Corp. v. Pegasus Petroleum Corp.*³⁶ In this case, the Second Circuit in this case relied on the initial interest confusion doctrine and ruled that the word "Pegasus" infringed Mobil's "flying horse" mark.³⁷ Mobil manufactured and sold petroleum products and used a "flying horse" symbol representing the mythological Pegasus as its trademark.³⁸ Pegasus Petroleum dealt in oil trading and did not sell directly to the general public.³⁹ Upon evaluation of the likelihood of confusion, the court noted Mobil and Pegasus were not direct competitors, but they did both compete in the petroleum industry.⁴⁰ Pegasus Petroleum did not actually use a pictorial symbol of a flying horse, but the court found that "the word 'Pegasus' evokes the symbol of the flying red horse and that the flying horse is associated in the mind with Mobil."⁴¹ The Second Circuit affirmed explaining that:

"[A] likelihood of confusion not in the fact that a third party would do business with Pegasus Petroleum believing it related to Mobil, but rather in the likelihood that Pegasus Petroleum would gain crucial credibility during initial phases of a deal. For example, an oil trader might listen to a cold phone call from Pegasus Petroleum—an admittedly oft used procedure in the oil trading

34. *Id.*

35. *Id.* at 1341.

Misled into an initial interest, a potential Steinway buyer may satisfy himself that the less expensive Grotrian-Steinweg is at least as good, if not better, than a Steinway. Deception and confusion thus work to appropriate defendant's good will [sic]. This confusion, or mistaken beliefs as to the companies' interrelationships, can destroy the value of the trademark which is intended to point only to one company.

Id. (citation omitted)

36. *Mobil Oil Corp. v. Pegasus Petroleum Corp.*, 818 F.2d 254 (2d Cir. 1987).

37. *See id.* at 255-56.

38. *Id.* at 255.

39. *Id.* at 256.

40. *See id.* at 257-58.

41. *Id.* at 257.

business—when otherwise he might not, because of the possibility that Pegasus Petroleum is related to Mobil”⁴²

Thus, the court’s concern over the possibility of free-riding led to a finding of trademark infringement based on initial interest confusion.

C. Initial Interest Confusion on the Internet

Brookfield Communications, Inc. v. West Coast Entertainment Corp., where the Ninth Circuit first applied the doctrine of initial interest confusion to the use of metatags on the internet, has been often criticized by the academic community.⁴³ In this case, Brookfield Communications alleged that West Coast Entertainment, a video rental store, was using its trademark in its metatags.⁴⁴ Brookfield offered a software database of the entertainment industry on the internet under its “MovieBuff” trademark.⁴⁵ West Coast used the domain name moviebuff.com to offer its own internet-based entertainment industry database and used the term MovieBuff in its website metatags.⁴⁶ Although the parties were not direct competitors because the products were not identical and there was no evidence of actual confusion, the Ninth Circuit found West Coast liable under the theory of initial interest confusion for both uses.⁴⁷ The court found that “by using ‘moviebuff.com’ or ‘MovieBuff’ to divert people looking for ‘MovieBuff’ to its website, West Coast improperly benefits from the goodwill that Brookfield developed in its mark.”⁴⁸ The court disapproved of what it perceived to be West Coast’s free-riding on Brookfield’s goodwill with consumers.⁴⁹ Even though consumers would no longer be mistaken as to the origin of the business, they might decide to remain on the site and shop there anyway due to the improper use of plaintiff’s trademark.⁵⁰

42. *Id.* at 259.

43. *Brookfield Commc’ns, Inc. v. West Coast Entm’t Corp.*, 174 F.3d 1036, 1045 (9th Cir. 1999); see, e.g., Jennifer Rothman, *Initial Interest Confusion: Standing at the Crossroads of Trademark Law*, 27 CARDOZO L. REV. 105, 117-18 (2005) (“The holding in *Brookfield* ignited a firestorm that has spread the initial interest confusion doctrine to nearly every federal circuit”); Zweihorn, *supra* note 4, at 1357-58 (2006) (lamenting the popularity of *Brookfield*’s holding despite criticism); Shannon N. King, Note, *Brookfield Communications, Inc. v. West Coast Entertainment Corp.*, 15 BERKELEY TECH. L.J. 313 (2000) (criticizing the *Brookfield* court’s misunderstanding of internet consumer behavior).

44. *Brookfield Commc’ns*, 174 F.3d at 1041.

45. *Id.* at 1042.

46. *Id.* at 1041-43.

47. *Id.* at 1050, 1056, 1062.

48. *Id.* at 1062.

49. *Id.* at 1064.

50. *Id.*

In *Playboy Enterprises v. Netscape Communications*, the Ninth Circuit also found trademark infringement under the initial interest confusion doctrine.⁵¹ In that case, the court held the defendants' "keying" its own internet banner advertisements to a trademarked term constitutes infringement.⁵² When consumers typed the words "playmate" or "playboy" into a search engine, two words trademarked by Playboy Enterprises, Inc. ("PEI"), the defendants' banner ads appeared next to the search engine results and looked as though they were sponsored by PEI.⁵³ The court found that consumers were likely to be confused as to the source or sponsorship of these ads.⁵⁴ While the court found initial interest confusion in this case, it also found other factors to weigh heavily in plaintiff's favor, such as strength of the marks, similarity of the marks, marketing channels used, type of goods being marketed and degree of consumer care, and defendant's intent in using the mark.⁵⁵

As indicated by the aforementioned cases, the Ninth Circuit laid the foundation for initial interest confusion on the internet. Since then, courts in other circuits have been relying on this doctrine as support for allowing the presence of initial interest confusion to assume undue influence over the outcome in metatag cases.

II. A DISTURBING TREND IN TRADEMARK LAW

Recent decisions evince a troublesome development in trademark infringement analysis. Despite criticisms of the *Brookfield* opinion, courts have continued to use the initial interest confusion doctrine. Courts have transformed initial interest confusion into a substitute test for the likelihood of confusion multifactor test, creating a much lower burden for trademark owners to establish trademark infringement. Through an analysis of cases from 2002 to 2006, this Part discusses the evolution of initial interest confusion in trademark law. Section II.A describes how courts misunderstand the workings of the internet and the types of possible intent behind metatag usage. Section II.B discusses ways in which courts are misapplying the doctrine by essentially allowing the existence of initial interest confusion to act as a de facto substitute for likelihood of confusion or by using initial interest confusion as a substitute for evidence of actual confu-

51. *Playboy Enters., Inc. v. Netscape Commc'ns Corp.*, 354 F.3d 1020 (9th Cir. 2004).

52. *Id.*

53. *Id.* at 1023.

54. *Id.*

55. *Id.*

sion. Section II.C describes how courts are broadening the scope of the doctrine by giving increased importance to the alleged misappropriation of a trademark owner's goodwill.

A. Misunderstanding the Internet

Courts have misunderstood the workings of the internet in two important ways. First, they have failed to recognize the substantial practical differences between shopping in the traditional sense and shopping online. These differences make the initial interest confusion doctrine a poor fit in the internet context. Second, they have characterized metatag usage of a trademark as necessarily indicative of intent to deceive the public. In doing so, they have failed to acknowledge legitimate reasons why a website owner might use trademarked metatags in her website. This opens up the possibility of inferring intent to deceive the public, lessening the burden of proof for trademark owners alleging infringement.

1. Misunderstanding How Web Browsing Works

Courts are failing to recognize the differences between shopping online and shopping in the brick-and-mortar world. This first became apparent with the oft-cited "*Brookfield* analogy."⁵⁶ The *Brookfield* court analogized initial interest confusion on the internet to a situation where a billboard along the freeway advertises a store, but it was the store owner's competitor who sponsored the billboard.⁵⁷ Consumers take the exit indicated and stop there only to find the store owned by the competitor.⁵⁸ Having stopped, customers may choose to shop at this store because getting back on the freeway and looking for the store they intended to shop at is less convenient than shopping where they are.⁵⁹ However, the court failed to acknowledge that the time and effort it takes to get back into the car, drive back to the freeway and drive around looking for the store they originally intended to go to is far greater than the little time and effort it takes to click on the "back" button when browsing the web.⁶⁰ In other words, the initial interest confusion doctrine makes more sense when applied in a brick-and-mortar case such as *Grotrian*, where a consumer might decide

56. *Brookfield*, 174 F.3d at 1064. This analogy has become well-cited in cases applying initial interest confusion in the internet context. See, e.g., *Eli Lilly & Co. v. Natural Answers, Inc.*, 233 F.3d 456, 465 (7th Cir. 2000).

57. *Brookfield*, 174 F.3d at 1064.

58. *Id.*

59. *Id.*

60. King, *supra* note 43, at 325 ("The court's analogy over-emphasizes the costs involved in getting off at the wrong 'cyber-exit' compared with a real highway exit. It takes just a few mouse clicks and a couple of seconds to 'go back' on the Internet.").

to purchase a Grotrian-Stenweg, even if she originally wanted a Steinway simply because she expended so much time and energy getting to the store and looking around. Searching is not nearly as costly on the internet, however, making the court's analogy unconvincing.

In *Nissan Motor Co. v. Nissan Computer Corp.*, the Ninth Circuit's reasoning punches a hole in the *Brookfield* analogy—the ease of navigating the internet—to support its finding of trademark infringement under the initial interest confusion doctrine. This was not a metatag case, but its outcome affected the development of the doctrine. In this case, Nissan Computer Corp., named after the business owner Uzi Nissan, had registered the domain “nissan.com” and used the website, in part, to sell advertising links to automobile-related products and services.⁶¹ Advertisers paid Nissan Computer per click on advertiser links.⁶² The Ninth Circuit held as a matter of law that initial interest confusion existed with regard to the initial interest of consumers to the website. Consumers, intending to visit Nissan Motors' website, instead arrived at the Computer Company website. This misdirection, coupled with the automobile-related advertisements on the site, provided sufficient grounds for the Court to hold Nissan Computer liable for trademark infringement.⁶³ The court found that although Nissan Computer was not offering the competing products itself, it was offering a remarkably easy way to access the competing products. Accordingly, “the ease of clicking on a link” was a sufficient reason for the court to find Nissan Computer liable.⁶⁴ However, this reasoning could be used to support an opposite finding: “the ease of clicking on a link” also means that it is far easier to hit the “back” button, making the links less significant to consumer choice than if an analogous situation had existed in the brick-and-mortar world.

The *Nissan* holding is also problematic because it relied on the *Brookfield* analogy—the idea that consumers, once diverted to a website other than the one they were looking for, will find it easier to remain and patronize there.⁶⁵ Thus, in one case the court failed to take into account the ease of navigating the internet in its analysis and in another case the court used that factor to support its finding of trademark infringement. This inconsistent reasoning is indicative of courts' poor understanding of how the internet works.

61. *Nissan Motor Co. v. Nissan Computer Corp.*, 378 F.3d 1002, 1006 (9th Cir. 2004).

62. *Id.*

63. *Id.* at 1007.

64. *Id.* at 1019.

65. *Brookfield*, 174 F.3d at 1064.

2. *Misunderstanding the Intent Behind Metatag Use*

Some courts consider the use of trademarks in metatags to evince intent to deceive the public. In doing so, courts are overlooking some legitimate reasons why a person might use a trademarked term in a metatag. This is problematic because inferring intent to deceive because a person used a trademark in a metatag sets up a presumption against that person before the analysis has begun, thereby weakening the traditional likelihood of confusion test in favor of trademark owners.

The Seventh Circuit found evidence of intent to deceive based on metatag usage of a trademark in *Promatek Industries, Ltd. v. Equitrac Corp.*⁶⁶ In this case, plaintiff Promatek and defendant Equitrac both offered cost-recovery equipment.⁶⁷ Equitrac used the word “Copitrak” in its metatags because Copitrak is a product commonly used in the cost-recovery business, and Equitrac serviced Copitrak equipment.⁶⁸ Promatek owns the Copitrak trademark and brought suit against Equitrac for trademark infringement.⁶⁹

The district court granted Promatek’s motion for a preliminary injunction, which required Equitrac to place on its website language disavowing any connection between its website and Copitrak and to provide information about where Promatek could be found online.⁷⁰ On appeal, Equitrac argued this would give Promatek an unfair advantage because providing this information would encourage consumers to go to Promatek’s website when they might not have done so before.⁷¹ Nevertheless, the Seventh Circuit affirmed the lower court’s holding and upheld the injunction based on a likelihood of initial interest confusion.⁷²

The Seventh Circuit considered the following factors: “similarity of the marks, similarity of the products, the area and manner of concurrent use of the products, the degree of care likely to be exercised by consumers, the strength of the plaintiff’s marks, any evidence of actual confusion, and the defendant’s intent.”⁷³ The court found a strong similarity in the

66. *Promatek Indus., Ltd. v. Equitrac Corp.*, 300 F.3d 808 (7th Cir. 2002).

67. *Id.* Cost-recovery equipment allows a company to charge the person using the relevant machine for the costs of using it; i.e., a user-pays company printer.

68. *Promatek*, 300 F.3d at 810.

69. *Id.* at 811.

70. *Id.*

71. *Id.*

72. *Id.*

73. *Id.* at 812. Equitrac admitted that it had intended to use the correct spelling of “Copitrak” in its metatags. *Id.*

marks.⁷⁴ The parties were also direct competitors.⁷⁵ Although there was no evidence of actual confusion, the court found the other factors weighed strongly in favor of a likelihood of confusion.

Upon considering Equitrac's intent in using the mark, the court found the fact that the mark was used in Equitrac's metatags strongly supported a finding of intent to deceive, indicating a likelihood of confusion.⁷⁶ The court determined that the fact that trademarks were used in metatags negated defendant's denial of intent to deceive the public stating: "[a]lthough Equitrac claims that it did not intend to mislead consumers with respect to Copitrak, the fact remains that there is a strong likelihood of consumer confusion as a result of its use of the Copitrack metatag."⁷⁷ The Seventh Circuit essentially held that unauthorized use of a trademark in a metatag creates an inference of intent to deceive.

The court in *Tdata Inc. v. Aircraft Technical Publishers* also considered the use of trademarks in metatags to show intent to deceive.⁷⁸ Tdata and ATP were direct competitors in the aircraft maintenance and repair software industry.⁷⁹ Tdata used ATP's aircraft maintenance-related trademarks in its metatags.⁸⁰ The *Tdata* court found that the unauthorized use of trademarks in metatags was evidence of intent to deceive, stating, "the hidden-from-public-eye use of the mark lends itself to an inference disfavoring Tdata."⁸¹ In other words, the fact that the metatags were not seen by the general public necessarily meant that they were used to deceive the general public.

These findings oversimplify the reasons a website owner might use a protected mark in its metatags. For example, someone offering a product similar to the downloadable music offered by Apple Computer's iTunes Music Store might want to use "iTunes" in her website's metatags, not to capitalize on the goodwill of Apple Computer's mark, but rather to aid in describing her product.⁸² A potential consumer looking for such a product, but not certain she wants to use iTunes, might type "iTunes" into a search

74. *Id.*

75. *Id.*

76. *Id.*

77. *Id.*

78. *Tdata Inc. v. Aircraft Technical Publishers*, 411 F. Supp. 2d 901, 910 (S.D. Ohio 2006).

79. *Id.* at 903.

80. *Id.*

81. *Id.* at 907 (noting that the Seventh Circuit in *Eli Lilly and Co. v. Natural Answers, Inc.* 233 F.3d 456, 465-66 (7th Cir. 2000) gave "significant weight to the inclusion of the mark in metatags as evidence of intent to deceive").

82. See Rothman, *supra* note 43.

engine simply because the phrase “digital media player” is not used by the average consumer.⁸³ In this way, a website owner could be using a trademark to provide information to potential consumers, which ultimately benefits the marketplace by reducing informational asymmetries.

Furthermore, metatags are not apparent to the general web browsing public because of the way websites are developed, not because the technology was necessarily created with deception in mind. By failing to acknowledge the possibility of a legitimate use of a trademark in a metatag, courts have exhibited a poor understanding of the use of this technology, which makes it difficult to have confidence in the body of law that arises out of these cases. Presuming that the use of trademarks in metatags constitutes intent to deceive creates an uphill battle for defendants who may have legitimate reasons for using those trademarks. This unduly weakens the traditional likelihood of confusion analysis in favor of trademark owners.

B. Misapplying the Doctrine

Courts have also been misapplying the doctrine by applying initial interest confusion not within the traditional likelihood of confusion framework but instead as a shortcut to finding trademark infringement. Some cases merely pay lip service to likelihood of confusion, while considering initial interest confusion a presumption in favor of trademark infringement. This effectively allows initial interest confusion to act as a substitute for the likelihood of confusion analysis. Other cases have modified the likelihood of confusion analysis by allowing initial interest confusion to substitute for evidence of actual confusion, which weakens the traditional test. Both of these misapplications of the doctrine serve to lower the bar for trademark owners in proving infringement.

1. Substituting Initial Interest Confusion for Likelihood of Confusion

Australian Gold, Inc. v. Hatfield, which relied heavily on *Promatek*, represents one of the latest in a line of cases misapplying the initial interest confusion doctrine in internet cases.⁸⁴ In this case, the defendants (collectively “Hatfield”) sold tanning products over the internet from Australian Gold, Inc. and Advanced Technology Systems, Inc. (“ATS”), despite not being authorized to sell those products.⁸⁵ Hatfield initially acquired those products from authorized distributors who had violated their distrib-

83. *See id.*

84. *Australian Gold, Inc. v. Hatfield*, 436 F.3d 1228 (10th Cir. 2006).

85. *Id.* at 1232.

utor agreements with Australian Gold and ATS by selling the products to the defendant.⁸⁶ Hatfield also used the Australian Gold and ATS trademarks within the plain text of its websites, in the metatags of its websites, and paid a search engine, Overture.com, for search engine result priority.⁸⁷ The Tenth Circuit found Hatfield liable for trademark infringement for all of its uses.⁸⁸

In its analysis of likelihood of confusion, the court looked at similarity of the marks, Hatfield's intent in using the marks, evidence of actual confusion, similarity of products and manner of marketing, the degree of care consumers were likely to exercise, and the strength of the marks.⁸⁹ Because the marks used by Hatfield were identical to the plaintiffs' marks, the first factor weighed heavily in favor of the plaintiffs.⁹⁰ Intent weighed in favor of plaintiffs as well because Hatfield deliberately used the marks to capture consumers.⁹¹ The court also found the parties to have similar products in that they were both tanning-related and there was a low degree of care likely to be exercised by consumers because of the low cost of the products.⁹² The strength of the plaintiffs' marks weighed in favor of the plaintiffs as well.⁹³ The plaintiffs did not offer any evidence of actual confusion.⁹⁴

Upon applying initial interest confusion to the case, the court found diversion to be inherently damaging. It considered "the original diversion of the prospective customer's interest to a source that he or she erroneously believes is authorized" to be a harm caused by initial interest confusion.⁹⁵ By considering "the original diversion of a prospective customer's

86. *Id.* at 1233.

87. *Id.* The trademarks on the websites were removed two years after the suit was brought.

88. *Id.* at 1246.

89. *Id.* at 1239-40.

90. *Id.* at 1240.

91. *Id.*

92. *Id.*

93. *Id.*

94. *Id.*

95. *Id.* at 1239. Specifically, the court delineated three types of potential damage from initial interest confusion:

(1) the original diversion of the prospective customer's interest to a source that he or she erroneously believes is authorized; (2) the potential consequent effect of that diversion on the customer's ultimate decision whether to purchase caused by an erroneous impression that two sources of a product may be associated; and (3) the initial credibility that the would-be buyer may accord to the infringer's products—customer consideration that otherwise may be unwarranted and that

interest” to be a type of damage in its own right, the court essentially proposed that initial interest is intrinsically damaging, even if no actual confusion is likely. This set up a presumption in favor of finding infringement when initial interest confusion is found, and thus lowered the bar from “confusion” to “diversion” in the infringement analysis. The issue was framed in such a way that initial interest confusion became a shortcut to a finding of trademark infringement while the likelihood of confusion analysis was merely paid lip service.

The court’s treatment of Hatfield’s disclaimers provide further evidence that the court believed that diversion is inherently damaging. Hatfield had placed disclaimers on its websites disavowing any connection with plaintiffs and clarifying the true source of the website.⁹⁶ The court found this irrelevant, however, because the “damage” done to plaintiffs through initial interest confusion—the diversion of consumers to defendant’s websites—could not be undone once consumers reached the website.⁹⁷ In other words, although the disclaimers had been put in place to clear up any consumer confusion, the court considered the original diversion, and not any actual confusion, to be actionable damage. This is problematic because it means a party alleging infringement can win based solely on the possibility of diversion, even if tools like disclaimers are used to make actual confusion unlikely.

The *Australian Gold* court did not need to rely on initial interest confusion to find trademark infringement. Because of the other factors that weighed heavily in the plaintiffs’ favor, including strength of the mark, the bad intent of defendants, the low degree of consumer care for these products and the identical appearance of the marks, the court may have found a likelihood of confusion at least in all the other uses of the trademark besides the metatag uses. Trademark infringement based on Hatfield’s metatag usage could have been dismissed without letting the defendants off the hook. By treating the initial interest confusion doctrine this way, the court allowed consumer diversion to act as a de facto substitute for likelihood of confusion. Although perhaps in *Australian Gold*, the defendants were infringing Australian Gold’s trademark in other ways, the misapplied reasoning will have more serious implications when a case arises in which a defendant is not necessarily using the metatags in a deceptive way and no

may be built on the strength of the protected mark, reputation and goodwill.

Id.

96. *Id.* at 1240.

97. *Id.*

actual confusion is likely, but the usage nevertheless causes a momentary diversion.

Playboy was another case where the court did not have to rely on initial interest confusion to reach its conclusion.⁹⁸ In that case, Judge Berzon criticized the outcome in *Brookfield* in her concurring opinion, urging the court to rely on a traditional likelihood of confusion analysis. It is quite likely that the outcome in *Playboy* would have been identical. A majority of the *Sleekcraft* factors, including strength of PEI's mark, the defendant's intent in using the mark, the proximity of the products, and the similarity of the products weighed heavily in PEI's favor.⁹⁹ The court found that consumers were likely to believe the websites were sponsored by PEI because the banner advertisements did not clearly identify their source and because of the way they were arranged on the search engine results page.¹⁰⁰ Judge Berzon criticized the use of the initial interest confusion doctrine in this case because it was unnecessary to reach the correct outcome based on a traditional likelihood of confusion analysis. Her concern was that by relying on the doctrine in cases like this, future cases would find trademark infringement under the initial interest confusion doctrine even if no actual confusion would be likely.¹⁰¹ This review of recent case law reveals that her concern was not unfounded.

Furthermore, some recent decisions have stood for the proposition that metatag usage is *prima facie* evidence of trademark infringement. For example, in *Horphag Research Ltd. v. Pellegrini*, the defendant advertised and sold the plaintiff's trademarked and patented pharmaceutical product on the defendant's website and used the mark in website metatags.¹⁰² In upholding the lower court's finding of trademark infringement, the Ninth

98. *Playboy Enters., Inc. v. Netscape Commc'ns Corp.*, 354 F.3d 1020 (9th Cir. 2004).

99. *Id.*

100. *Id.* at 1025 n.16 ("Note that if a banner advertisement clearly identified its source or, even better, overtly compared PEI products to the sponsor's own, no confusion would occur under PEI's theory.")

101. *Playboy Enters.*, 354 F.3d at 1034-35 (Berzon, J., concurring)

So read, the metatag holding in *Brookfield* would expand the reach of initial interest confusion from situations in which a party is initially confused to situations in which a party is never confused. I do not think it is reasonable to find initial interest confusion when a consumer is never confused as to source or affiliation, but instead knows, or should know, from the outset that a product or web link is not related to that of the trademark holder because the list produced by the search engine so informs him.

Id.

102. *Horphag Research Ltd. v. Pellegrini*, 337 F.3d 1036 (9th Cir. 2003).

Circuit stated, "Because [defendant] specifically admit[ted] to using Pycnogenol mark in the meta-tags [sic] for his websites, his use satisfie[d] the terms of trademark infringement in the first place."¹⁰³ In other words, the court set up a presumption of finding trademark infringement based solely on the use of trademarks in metatags. This is problematic because it cut short the likelihood of confusion analysis and unduly modified the traditional test.

2. *Substituting Initial Interest Confusion for Evidence of Actual Confusion*

Taking the doctrine of initial interest confusion even further than previous courts, the *Tdata* court actually used evidence of initial interest confusion as a substitute for evidence of actual confusion in its multifactor test for likelihood of confusion.¹⁰⁴ Because diversion is easier to prove than confusion, it follows that the likelihood of confusion test is now easier to prove, thereby weakening the initial interest confusion analysis in favor of trademark owners.

The *Tdata* court relied on the Sixth Circuit's decision in *Gibson Guitar Corp. v. Paul Reed Smith Guitars, LP* in adopting the initial interest confusion doctrine.¹⁰⁵ Specifically, the *Tdata* court used *Gibson* to support that initial interest confusion can serve as a substitute for evidence of actual confusion in the likelihood of confusion analysis. However, the court appears to have mischaracterized *Gibson*'s determination on initial interest confusion.

In *Gibson*, the court declined to find trademark infringement where defendant guitar manufacturer offered guitars with a design similar to plaintiff's guitar.¹⁰⁶ Plaintiff had trademarked a two-dimensional drawing of the guitar, but the court found the actual three-dimensional guitar to be merely trade dress and, therefore, not in dispute.¹⁰⁷ The court went on to conclude there was no likelihood of confusion resulting from the potential infringement of defendant's guitar on the trademarked drawing of the guitar shape.¹⁰⁸

103. *Id.* at 1040.

104. *Tdata Inc. v. Aircraft Technical Publishers*, 411 F. Supp. 2d 901, 908 (S.D. Ohio 2006).

105. *Id.* at 906.

106. *Gibson Guitar Corp. v. Paul Reed Smith Guitars, LP*, 423 F.3d 539 (6th Cir. 2005).

107. *Id.* at 546.

108. *Id.*

The *Tdata* court mischaracterized *Gibson's* determination of how initial interest confusion should be applied. The *Tdata* court, quoting the *Gibson* court, that "evidence of initial-interest confusion comes into the eight-factor [Sixth Circuit] test as a substitute for evidence of actual confusion."¹⁰⁹ However, the sentence was not cited in its entirety and actually reads: "To the extent we allow it to do so, evidence of actual confusion comes into the eight-factor [Sixth Circuit] test as a substitute for evidence of actual confusion."¹¹⁰ This statement in *Gibson* followed a lengthy discussion expressing concern over the extension of initial interest confusion beyond internet domain names.¹¹¹ Thus, the *Gibson* court was far more cautious about applying initial interest confusion in this context than the *Tdata* court interpreted. The Sixth Circuit in *Gibson* actually criticized the district court's reasoning in *Gibson* for using evidence of initial interest confusion to replace evidence of actual confusion:

Having made this substitution of 'initial interest confusion' for actual confusion at the point of sale, the district court went on to determine that summary judgment in favor of Gibson was appropriate on Gibson's claim that the PRS Singlecut infringed the LP Trademark. We disagree with the district court's conclusion that 'initial confusion' . . . can apply in this case.¹¹²

Thus, the Sixth Circuit exercised far more care in replacing initial interest confusion for actual confusion than the *Tdata* court exercised in following *Gibson*. The *Gibson* court ultimately made clear its holding did not intend to move away from the traditional likelihood of confusion analysis.¹¹³ The *Tdata* court, therefore, relied too heavily on *Gibson* for supporting the substitution of initial interest confusion for actual confusion because such a substitution changes the traditional analysis. Allowing evidence of initial interest confusion to substitute for evidence of actual confusion is problematic because it lessens the burden of proof for trademark owners alleging infringement. A momentary diversion is easier to show than actual confusion, which means one factor of the test is easier to prove under the *Tdata* decision. *Tdata's* analysis indicates a willingness to alter

109. *Tdata*, 411 F. Supp. 2d at 908 (citing *Gibson*, 423 F.3d at 550 n.15).

110. *Gibson*, 423 F.3d at 550 n.15 (emphasis added).

111. *Id.*

112. *Id.* at 549.

113. *Id.* at 551 ("Other circuits applying the initial-interest confusion doctrine have generally focused on that same issue: whether the consumer might be misled about the source of the relevant product or service.").

the traditional factors in order to fit initial interest confusion into the framework in a way that unduly favors trademark owners.¹¹⁴

C. Broadening the Scope of the Doctrine by Giving Goodwill too Much Importance

Courts are also broadening the scope of the initial interest confusion doctrine by giving undue weight to the misappropriation of goodwill in these types of cases. To be sure, the second goal of trademark law is the protection of an owner's goodwill associated with the mark.¹¹⁵ However, this protection of goodwill is intended to provide incentives for the development of business because it allows trademark owners to reap the rewards of and have some control over the use of their marks.¹¹⁶ This in turn is beneficial to consumers because it spurs production of goods (not trademarks), which means consumers have a broader range of choices and increases consumer welfare.

Some argue that trademarks themselves, and the goodwill associated with them, should be treated as property because this encourages business owners to invest in these marks.¹¹⁷ However, treating trademarks as property is not the same as treating copyrights or patents as property. Unlike the goal of copyright or patent law, which is to encourage the creation of more works, the goal of trademark law is not to foster the production of more trademarks.¹¹⁸ The primary goal of trademark law is to provide a system in which products are easily identifiable to consumers. This goal is not served by severely limiting the use of marks by granting property rights for them.¹¹⁹

Thus, the scope of trademark protection, and the protection of the goodwill associated with a mark, extends only as far as the point where a user suggests affiliation with that mark.¹²⁰ Unfortunately, courts have been applying initial interest confusion because of a concern over the mi-

114. See also *800-JR Cigar, Inc. v. GoTo.com, Inc.*, 437 F. Supp. 2d 273 (D.N.J. 2006) (establishing a multifactor test solely for determining initial interest confusion to be used alongside the likelihood of confusion analysis). This case was not discussed in this Note because it dealt only with the usage of a mark in a domain name.

115. Rothman, *supra* note 43, at 127.

116. *Id.*

117. See, e.g., Glynn S. Lunney, Jr., *Trademark Monopolies*, 48 EMORY L.J. 367, 371 (1999) (characterizing this notion as "property-based trademark").

118. Mark Lemley, *The Modern Lanham Act and the Death of Common Sense*, 108 YALE L.J. 1687, 1695-96 (1999).

119. *Id.* at 1696.

120. Rothman, *supra* note 43, at 127.

sappropriation of goodwill without any consideration as to the limits or rationale for such protection.

1. *Protecting Trademarks' Goodwill Rather Than Looking for Confusion*

The Seventh Circuit in *Promatek* considered capitalizing on goodwill to be of greater importance than consumer confusion in the likelihood of confusion analysis. In concluding there was trademark infringement due to a likelihood of initial interest confusion, the court stated, "What is important is not the duration of the confusion; it is the misappropriation of Promatek's goodwill."¹²¹ In doing so, the court heightened the misappropriation of goodwill above the requirement of consumer confusion in importance. This is doctrinally inappropriate because likelihood of confusion, and not the misappropriation of goodwill, is the "hallmark" of the trademark infringement analysis.¹²² Finding trademark infringement based on misappropriation of goodwill rather than because of consumer confusion broadens the scope of the Lanham Act.

Such an expansion also has serious implications for business developers. Because a consumer could potentially click on a link of a competitor due to the goodwill of the trademarked keyword typed into the search engine, this is enough to constitute trademark infringement, even if this diversion is momentary and no actual confusion is likely.

2. *Allowing the Misappropriation of Goodwill to Constitute Use*

Courts have also allowed the misappropriation of goodwill to evince use in commerce. In *Nissan Motor Co. v. Nissan Computer Corp.*, the Ninth Circuit found that use of the domain name *nissan.com* did not infringe on Nissan Motors' trademark because Nissan was defendant's last name.¹²³ Rather, the court focused on the indirect benefit Nissan Computer received through the automobile-related advertisements on its website. The court found customers to be initially interested in the website due to the goodwill of Nissan Motors, and because of this initial interest customers would then be likely to explore the website and choose to click on the automobile-related websites rather than continue looking for Nissan Motors. Ultimately, the court found that this activity financially benefited

121. *Promatek Indus., Ltd. v. Equitrac Corp.*, 300 F.3d 808, 812-13 (7th Cir. 2002).

122. *Lamparello v. Falwell*, 420 F.3d 309, 314 (4th Cir. 2005).

123. *Nissan Motor Co. v. Nissan Computer Corp.*, 378 F.3d 1002, 1019 (9th Cir. 2004). As mentioned earlier, this case was not a metatag case. However, its holding has implications for the initial interest confusion doctrine due to its treatment of the misappropriation of goodwill.

Nissan Computer.¹²⁴ The court found that although Nissan Computer did not sell automobiles on its website, it did capitalize on the goodwill of Nissan Motors.¹²⁵ Thus, the Ninth Circuit used the capitalization on the goodwill of the mark owner to indicate an actionable use of the mark. Rather than defining it as a damage to a mark owner, the court frontloaded the infringement analysis with a discussion of goodwill.

This is problematic in the context of the initial interest confusion doctrine because courts have previously used the misappropriation of goodwill to justify a finding of trademark infringement based on initial interest confusion.¹²⁶ If these two propositions were applied in conjunction, this would essentially create a test where one factor, the misappropriation of goodwill, could satisfy both the threshold use requirement and the second step likelihood of confusion requirement for trademark infringement. This would mean trademark owners alleging infringement would have a much easier case to prove.

III. INITIAL INTEREST CONFUSION AS CURRENTLY APPLIED RUNS CONTRARY TO THE PURPOSE OF TRADEMARK PROTECTION

A number of policy considerations call into question the current trend in initial interest confusion. The primary goal of trademark protection is to provide a tool for consumers to identify and distinguish the sources of goods and services.¹²⁷ The other goal is the protection of trademark owners' goodwill associated with the marks.¹²⁸ Both of these goals work to encourage fair competition. These objectives must be kept in mind when evaluating trademark infringement claims. As currently interpreted, the initial interest confusion doctrine is harmful to competition and harmful to consumers.

A. Harmful to Competition

Providing business owners and creators with a monopoly over the use of their product or identifying mark has never been the goal of trademark law.¹²⁹ Intellectual property is a legal device that functions to spur produc-

124. *Id.*

125. *Id.*

126. See discussion *infra* Section II.C.2.

127. Rothman, *supra* note 43, at 124-25.

128. *Id.* at 127.

129. *Int'l Order of Job's Daughters v. Lindeburg & Co.*, 633 F.2d 912, 918 (9th Cir. 1980).

tion.¹³⁰ Thus, the scope of control that a trademark owner is given is only intended to extend as far as is necessary to encourage other potential business owners to engage in business development.¹³¹ The misapplication of the initial interest doctrine exceeds this scope. In doing so, it gives certain business owners a monopoly over their trademarks that halt business development because competitors will become fearful of trademark infringement liability.¹³²

Proponents of the doctrine argue that a liability system for trademark infringement based on initial interest confusion increases incentives for business developers to continue producing and to invest in their business.¹³³ This may be true to some degree, but it does not outweigh the disincentives caused by the doctrine with regard to new business owners. Business owners, fearing liability, are likely to provide less information on their websites, or not put up websites at all.¹³⁴ This means less accurate websites and fewer listings through search engines, and thus less choice available to consumers, which impedes competition.

Defenders of initial interest confusion have also argued that the loss of internet consumers due to diversion will cause internet business owners to close their internet shops and do their business in the brick-and-mortar

[O]ur reading of the Lanham Act and its legislative history reveals no congressional design to bestow such broad property rights on trademark owners. Its scope is much narrower: to protect consumers against deceptive designations of the origin of goods and, conversely, to enable producers to differentiate their products from those of others.

Id.

130. See Kenneth M. Achenbach, *Grey Area: How Recent Developments in Digital Music Production Have Necessitated the Reexamination of Compulsory Licensing for Sample-Based Works*, 6 N.C. J. L. & TECH. 187, 192 (2004) (“Sanctioning a monopolistic protection should only occur when there is substantial certainty that the particular monopoly sanctioned is truly the most effective way to promote a specific policy.”).

131. *Int’l Order*, 633 F.2d at 918.

[The] protection accorded a trademark owner can only be understood in the context of trademark law and its purposes. A trademark owner has a property right only insofar as is necessary to prevent consumer confusion as to who produced the goods and to facilitate differentiation of the trademark owner’s goods.

Id.

132. Stacey L. Dogan & Mark A. Lemley, *Trademarks and Consumer Search Costs on the Internet*, 41 HOUS. L. REV. 777 (2004).

133. Harvard Law Review Association, Note, *Confusion in Cyberspace: Defending and Recalibrating the Initial Interest Confusion Doctrine*, 117 HARV. L. REV. 2387, 2401 n.81 (2004).

134. Bryce J. Maynard, Note, *The Initial Interest Confusion Doctrine and Trademark Infringement on the Internet*, 57 WASH. & LEE L. REV. 1303, 1343 (2000).

world.¹³⁵ This argument fails to take into account the low costs associated with conducting business online, especially compared to the costs of running a brick-and-mortar shop.¹³⁶ It is unlikely that the losses due to consumers being diverted to other websites would outweigh the costs of doing business offline, and thus cause business owners to close up their online shops.

Furthermore, this viewpoint overestimates the number of customers lost due to diversion.¹³⁷ It is unlikely that diversion alone would drive an internet business owner out of business. Most likely, other egregious acts of trademark infringement or unfair competition occurred if a business owner decided it was too costly to stay in business online. In *Australian Gold*, for example, Australian Gold put a considerable amount of money into marketing, business development and training, which they suffered as a loss when its trademark was used by Hatfield to lure customers to its website. However, Hatfield was not merely liable for confusing consumers, but was also held liable for trademark infringement based on other uses of the mark, as well as for trademark dilution and unfair competition. It was not simply the metatag usage that caused such a large loss to Australian Gold, but rather, the egregious unfair business practices undertaken by the defendant. Thus, courts can still find liability when appropriate, and protect business owners without resorting to relying on initial interest confusion.

To be sure, courts must strike a balance between spurring production by protecting trademarks from being used without permission and fostering a competitive market through low barriers to entry and freedom of expression. However, this balance has already been struck by giving trademark owners the right to enjoin trademark use in commerce when that use is likely to cause confusion.¹³⁸ Extending the reach of trademark law beyond the scope of the Lanham Act is unwarranted and unnecessary for healthy competition.

135. Harvard Law Review Association, *supra* note 133, at 2401.

136. Zweihorn, *supra* note 4, at 1365.

137. Harvard Law Review Association, *supra* note 133, at 2401-02 (describing a hypothetical situation in which Hertz Rent-A-Car loses one third of its customers to Budget due to metatag usage trademark infringement and arguing for the use of the initial interest confusion doctrine based on this hypothetical situation).

138. See Sharrock, *supra* note 9, at 61 (“Society continues to be concerned with protecting goodwill and preventing marketplace confusion, but these goals are specifically linked to the source identification function of trademarks and are already subsumed within the Lanham Act.”).

B. Harmful to Consumers

Trademark law's primary goal is to protect consumers by providing a system in which goods are easily identifiable.¹³⁹ A marketplace in which consumers can quickly and effortlessly determine the sources of goods and services reduces consumer decision-making costs. Finding trademark infringement based on a mere possibility of diversion will chill internet advertising and marketing activity, which ultimately leaves consumers with less choice and less information, thus raising consumer searching costs.¹⁴⁰

In *Promatek*, the court defined the harm to the plaintiff: "Consumers who are directed to Equitrac's webpage are likely to learn more about Equitrac and its products before beginning a new search for Promatek and Copitrac."¹⁴¹ Thus, according to the Seventh Circuit, increasing consumer knowledge about a product is damaging to a trademark owner when the information is about its competitor. The court should not have framed the damage to the plaintiff in this way because it proposes that giving owners complete control over their marks is the goal of trademark protection.

Courts also misunderstand the expectations consumers have when they enter terms into a search engine. They *may* be searching for the specific trademarked product correlating to the words entered, or they may be looking for a list of other products similar to the trademarked product.¹⁴² Consumers today are more computer savvy than courts give them credit for—they are likely aware that a list of search results does not necessarily detail all products affiliated with the trademarked product entered into the search engine.¹⁴³ Either way, it is unlikely a consumer would be offended by a list of websites with related products.

On the other hand, allowing unauthorized trademark usage to run rampant on the internet may result in information overload and inaccurate results, which could lead to confused consumers.¹⁴⁴ Consumers who are only searching for the specific trademarked product entered into the search engine may be confused and overwhelmed if bombarded with a slew of

139. Lemley, *supra* note 118, at 1688-89.

140. Rothman, *supra* note 43, at 129 ("One of the greatest dangers of initial interest confusion is that it is often used to deny consumers access to information about the goods and services offered by competing sellers."); Dogan & Lemley, *supra* note 132, at 782.

141. *Promatek Indus., Ltd. v. Equitrac Corp.*, 300 F.3d 808, 813 (7th Cir. 2002).

142. King, *supra* note 43, at 326.

143. Maynard, *supra* note 134, at 1335.

144. Harvard Law Review Association, *supra* note 133, at 2404 n.90 ("But not all users will forgo their initial searches in favor of these new options, and with respect to these users, the additional communications simply increase the transaction costs associated with reaching and benefiting from the sites initial sought.").

additional products. This proposition is paternalistic, however, because it suggests that courts, rather than the market, need to draw the line between ample choice and excessive information.¹⁴⁵ Furthermore, it does not take into account the fact that the website of the trademarked product entered into the search engine is usually the first website listed on the results page. Thus, consumers who are looking for a specific product should still be able to find it quickly and easily, even if a whole plethora of related products also result. Further, because consumer searching costs are, for the most part, inapplicable in the context of internet cases due to the ease of navigating the web, courts are not applying the doctrine to benefit consumers.¹⁴⁶ Accordingly, the doctrine is a poor fit for the purpose underlying trademark protection.

IV. FROM DIVERSION BACK TO CONFUSION

For a number of doctrinal and policy reasons, the initial interest confusion doctrine is inappropriate as currently applied to metatag cases. Accordingly, this Note urges courts to put the focus of the likelihood of confusion test back on confusion, and apply the traditional analysis in questions of initial interest confusion.

The fact that metatags have become less and less applicable to search engine results exemplifies the market's ability to address the potential problem of inaccurate searches and confused consumers. Following Google's lead, many search engines, including Ask Jeeves, Earthlink, AOL, Netscape, and Compuserve, are now using algorithms that determine how relevant a site is to a keyword search.¹⁴⁷ These search engine companies realized it would make poor business sense to offer a system where irrelevant websites could appear on a results page if they were simply stuffed with the "right" metatags by the website owners. Therefore, these companies switched to a more accurate valuation system. This is a good example of the market taking care of the potential problem without interference by the courts. Others have already made the case for allowing

145. Julie A. Rajzer, Comment, *Misunderstanding the Internet: How Courts are Overprotecting Trademarks Used in Metatags*, 2001 L. REV. M.S.U.-D.C.L. 427, 463 (2001) ("As Internet users become more experienced at 'surfing' the web, they become accustomed to sifting and sorting through the material found on the Internet to determine its value and truthfulness.").

146. Sharrock, *supra* note 9, at 64 (characterizing the infringement analysis based on initial interest confusion as "divorced entirely from its ultimate effect on purchasers").

147. Zweihorn, *supra* note 4, at 1362-63 n.142. Google, in fact, has never used metatags in its service of providing search engine results. *Id.*

the market to regulate trademark use on the internet.¹⁴⁸ It makes even less sense now for courts to continue regulating competition on the internet when the problem has already been solved by the industry. Situations like this clearly indicate it is the business owners, and not the courts, who best understand the technology to implement the right strategies to benefit competition.

Accordingly, courts need to focus on what they are best at: applying the traditional initial interest confusion analysis to these cases, without being swayed by bad actors or an outcry over the misappropriation of goodwill. The cases that clearly should have resulted in a finding of trademark infringement, like *Australian Gold* and *Playboy Enterprises*, would have most likely come out the same way if the initial interest confusion doctrine had not been used. Even if courts decide to characterize the type of confusion in a case as initial interest confusion, they should not be relying on its presence to find for plaintiff. Initial interest confusion should be used to inform the analysis, not engulf it. Courts should base trademark infringement findings on consumer confusion, and not on momentary diversion.

V. CONCLUSION

The initial interest confusion doctrine has been applied inappropriately in metatag cases. The combination of a poor understanding of the internet and an overemphasis of the misappropriation of an owner's goodwill without consideration of fair competition and consumer interests has led to the misapplication and broadening of this doctrine. By finding trademark infringement based on initial interest confusion before reaching a solid conclusion of likelihood of confusion, courts have chipped away at the requirements for finding trademark infringement in internet cases. This is harmful to competition and to consumers, which runs contrary to the purpose of trademark law. Accordingly, courts should carefully reconsider their reliance on initial interest confusion in cases of momentary diversion and instead rely on the traditional likelihood of confusion analysis.

148. King, *supra* note 43, at 326-27.

ADDITIONAL DEVELOPMENTS— TRADEMARK

CENTURY 21 REAL ESTATE CORP. v. LENDINGTREE, INC. 425 F.3d 211 (3rd Cir. 2005)

The United States Court of Appeal for the Third Circuit adopted a two-step approach in nominative fair use cases: (1) a plaintiff must first prove that confusion is likely; and (2) the defendant then has the burden to show that its nominative use is fair. Whether a use is fair under this second step depends upon a three-pronged test under which defendant must show: (a) the use of the mark is necessary to describe both the plaintiff's and defendant's product or service; (b) the defendant uses only so much of the mark as is necessary to describe the plaintiff's product; and (c) the defendant's conduct or language reflects the true and accurate relationship between the plaintiff and the defendant's products or services. In so doing, the Third Circuit expressly rejected the Ninth Circuit's nominative fair use test, because it did not require proof of confusion.

Century 21, Coldwell Banker, and ERA Franchise Systems ("CCE") alleged that LendingTree, Inc., which provides brokerage search and referral services, improperly referenced CCE's trademarked services. LendingTree used CCE's marks in print marketing materials and on its homepage, indicating that LendingTree's service covered "the nation's leading franchises, such as Coldwell Banker, Century 21 . . . and ERA," and was "affiliated with" brokers including CCE. After oral argument in the United States District Court for the District of New Jersey, LendingTree voluntarily modified its site and added some disclaimers, but the district court granted CCE a preliminary injunction, finding that LendingTree's use—even its modified use—was likely to cause confusion. LendingTree appealed.

Disagreeing with the Ninth Circuit, the Third Circuit found the difference between classic and nominative fair use insufficient to justify ignoring likelihood of confusion. Building on the Supreme Court's determination in *KP Permanent Make-Up, Inc. v. Lasting Impression I, Inc.*, 543 U.S. 111 (2004) that the burden to show likelihood of confusion lies with plaintiff in classic fair use cases, the Third Circuit found that the plaintiff must bear burden of showing likelihood of confusion even when a defendant alleges nominative fair use.

The Third Circuit remanded the case stating that if CCE could meet its burden of showing likelihood of confusion, the burden would then shift to LendingTree to prove fair use, which would require the district court to examine LendingTree's onsite disclaimer of any relationship with the realtors in its referral network, the relationship between LendingTree and CCE, and whether LendingTree could have efficiently referred to CCE's services without using the CCE's marks.

Dissenting from the reasoning of the majority, Judge Fischer found the majority's two-step approach impermissible and "unfair" because it shifted the burden on defendants to negate confusion.

***BRETTFORD MANUFACTURING, INC. V.
SMITH SYSTEM MANUFACTURING CORP.***

419 F.3d 576 (7th Cir. 2005)

The United States Court of Appeal for the Seventh Circuit ruled that failure to indicate the use of a competitor's components in a product design does not constitute reverse passing off.

Bretford Manufacturing, Inc. ("Bretford") designed and sold computer tables with a unique V-shaped height-adjustment system. Smith System Manufacturing Corporation ("Smith System") decided to use the same design for its own tables. Before accepting its first order, Smith System subcontracted to have the leg assemblies built by a metal fabricator. However, when the initial assemblies were unsatisfactory, Smith System was without any stock to use as a sales sample and instead attached a Bretford brand leg assembly to its own product. Unlike the sample, all delivered units included leg assemblies manufactured by Smith System.

Bretford filed suit in United States District Court for the Northern District of Illinois, alleging that Smith System had infringed its trade dress and had engaged in reverse passing off. The district court found that V-shaped legs did not signal Bretford as a source. With no customer surveys or other evidence of actual confusion, the district court held for Smith System on both claims.

The court defining reverse passing off or misappropriation as selling someone else's goods under your own mark, and noted that under *Dastar Corp. v. Twentieth Century Fox Film Corp.*, 539 U.S. 23 (2003) reverse passing off can violate the Lanham Act if a misdescription of goods' origin causes commercial injury. Citing the Supreme Court's definition of "origin" in *Dastar* as "the producer of the tangible product sold in the marketplace," Judge Easterbrook noted that as far as the customer was concerned, the table's "origin" was Smith System, no matter who made any component or subassembly, and thus there was no reverse passing off.

STENZEL V. PIFER

*2006 U.S. Dist. Lexis 32397, reb'g granted,
2006 U.S. Dist. Lexis 54812 (D. Wash. 2006)*

The United States District Court for the Western District of Washington held that a decision arising from arbitration under the Uniform Domain-Name Dispute Resolution Policy (“UDRP”) was not entitled to deference in court and that registering a domain-name does not constitute a “use in commerce” for purposes of trademark infringement claims under 15 U.S.C. § 1125(a).

Gary L. Pifer filed an application for a trademark of the name “Colchester” on May 20, 2005, which listed the first date of use as February 4, 2005. Marcel Stenzel registered the domain-name “Colchester.com” in 1999, but had not developed the website at any time since then. On October 27, 2005, Pifer submitted a complaint to the National Arbitration Forum alleging Stenzel had registered “colcehster.com” in bad faith and sought an involuntary transfer of the domain-name to himself. The arbitrator concluded Stenzel had been harboring the name in bad faith and ordered its transfer. In federal court, Stenzel sought a declaration that his registration and continued ownership of the domain-name were: (1) not in violation of the Anticybersquatting Consumer Protection Act (“ACPA”) and (2) not infringing Pifer’s trademark.

Stenzel alleged that Pifer’s ACPA claim was barred as a matter of law because the mark was not “distinctive” or “famous” at the time Stenzel registered the domain-name. Stenzel also alleged that Pifer admitted he had no rights to “Colchester” at the time Stenzel registered “colchester.com” and thus the mark could not have been “distinctive” or “famous.” Pifer moved to dismiss Stenzel’s ACPA the court was required to give deference to the UDRP ruling. The court, following the Second, Third, and Fourth Circuits, held that decisions under the UDRP were not entitled to deference.

Stenzel also argued that his use was non-infringing because (1) “Colchester” is not entitled to protection because it is a geographic location, and (2) Stenzel had not used the mark in commerce. Setting aside the secondary meaning question, the court ruled that Stenzel had made no “use” of the mark under the Lanham Act because “mere registration of a domain-name, without more, is not ‘commercial use’ of the trademark.” Pifer argued this was irrelevant because the Arbitration Panel’s decision would be unaffected. The court found, however, that Stenzel’s trademark infringement declaratory judgment claim was distinct from the ACPA claim and granted Stenzel’s declaratory judgment.

Stenzel sought reconsideration of the court’s refusal to dismiss the ACPA claim. During the second hearing, Stenzel cited sections of the Lanham Act which stated that a trademark cannot be “distinctive or famous” absent use, and that Pifer admitted its use did not begin until 2005, six years after registration of “Colchester.com.” The court granted Stenzel’s motion for reconsideration and ruled that Stenzel was entitled to a declaration that he did not violate Pifer’s rights under the “distinctive or famous” element of an ACPA claim.

BERKELEY TECHNOLOGY LAW JOURNAL

BURBANK GREASE SERVICES, LLC v. SOKOLOWSKI: **FRUSTRATING UNIFORMITY** **IN TRADE SECRET LAW**

By Sarah Gettings

Trade secret law, borrowed by American courts from the English courts of equity, has had a long and convoluted history. While Congress has chosen to legislate in the realm of patents and copyrights, it has mostly left the law of trade secrets to the states. Trade secret protection has thus developed, uneven and state-specific, through the common law system of case-by-case adjudication. In 1979, in an effort to unify the confused body of state trade secret common law, the National Conference of Commissioners on Uniform State Laws promulgated the Uniform Trade Secrets Act (UTSA). The UTSA's widespread adoption by state legislatures has provided the crucial first step toward uniformity and certainty in trade secret law.

The Supreme Court of Wisconsin's recent decision in *Burbank Grease Services, LLC v. Sokolowski* frustrates this goal.¹ The UTSA's uniformity provision bolsters certainty and uniformity in trade secret law: it mandates that the UTSA be "applied and construed to effectuate its general purpose."² In its interpretation of the Act, the *Burbank* majority disregarded this legislative directive, holding that the UTSA does not preempt common law claims based on confidential, but not "trade secret," information. This Note argues that the court's holding is misguided both as a matter of statutory interpretation and as a matter of policy.

Part I provides a background and history of trade secret law, from its common law roots to the Uniform Trade Secrets Act. Part II provides the facts and procedural posture of *Burbank* and outlines the reasoning of the majority and dissent. Part III discusses the legislative directive of the Uniform Trade Secrets Act, codified in the uniformity clause, and how that directive informs an analysis of the UTSA preemption provision.

© 2007 Sarah Gettings

1. 717 N.W.2d 781 (Wis. 2006).

2. UNIF. TRADE SECRETS ACT § 8 (1985).

I. BACKGROUND

A. What is a Trade Secret?

A trade secret is an unusual commodity,³ deriving its value not primarily from its inherent nature, usefulness, or advanced development, but rather from its secrecy.⁴ In short, a trade secret is information not generally known or accessible that gives its owner a competitive advantage in the market.⁵ Trade secret protection, developed under common law and justified alternatively under theories of contract, tort, and property, guards not the use of an idea but instead its disclosure.⁶

Legal protection for trade secrets, unlike that for patents and copyrights, is non-exclusive and potentially infinite in duration. Multiple people, even independent, competing innovators, may be entitled to trade secret protection over the same idea or information at the same time.⁷ A trade secret owner may enforce his ownership rights against those who breach a confidential relationship or otherwise acquire his secret through improper means,⁸ yet he has no rights against competitors who obtain his secret through independent research or reverse engineering.⁹ Provided that the trade secret retains its commercial value and, of course, remains a secret, trade secret protection can continue indefinitely.¹⁰ Once the secret is disclosed, however, all trade secrets rights are extinguished.

There is no general federal law for trade secrets. Rather, states have traditionally provided for trade secret protection.¹¹ Trade secret law has become a valuable supplement to federal intellectual property law, protecting and providing incentives for investment in unpatentable inventions and

3. See Paul A. David, *Intellectual Property Institutions and the Panda's Thumb: Patents, Copyrights, and Trade Secrets in Economic Theory and History*, in 3 *THE ECONOMICS OF INTELLECTUAL PROPERTY* 248 (Ruth Towse & Rudi Holzhauer eds., 2002) (discussing knowledge as a commodity, which "as a pure capital good yielding a stream of material benefits when combined with other kinds of assets, possesses an intrinsic value").

4. 1-1 MILGRIM ON TRADE SECRETS § 1.03 (2006).

5. See UNIF. TRADE SECRETS ACT § 1(4)(i) (1985).

6. 1-2 MILGRIM, *supra* note 4, § 2.01.

7. See 1-1 *id.* § 1.01.

8. See 1-3 *id.* § 3.03.

9. 1-1 *id.* § 1.03; see, e.g., *Bonito Boats, Inc. v. Thunder Craft Boats, Inc.*, 489 U.S. 141, 160-62 (1989).

10. 1-1 MILGRIM, *supra* note 4, § 1.03.

11. See *Kewanee Oil Co. v. Bicron Corp.*, 416 U.S. 470, 493 (1974) ("Congress, by its silence over these many years, has seen the wisdom of allowing the States to enforce trade secret protection.").

noncopyrightable works.¹² Unlike patents, trade secrets are immediate and, until litigation, free from bureaucratic delay.¹³ Trade secret rights may be set by agreement or simply by the conduct of interested parties. Further, trade secrets need not meet the stringent novelty and nonobviousness requirements of patent law nor the originality and fixation requirements of copyright law.¹⁴ Given the growing complexities of modern research efforts, protection of trade secrets remains crucial during intermediate steps in the research process, where seeking a patent would often prove difficult, if not impossible. Trade secret rights in this context encourage innovation and may provide the requisite protection for the development of more complex, research-intensive patents.¹⁵

B. History of Trade Secret Law: From Common Law to the *Restatement of Torts*

While some scholars argue that confidential business information was protected even under Roman law,¹⁶ American trade secret protection grew directly out of the common law of England's courts of equity.¹⁷ Early English trade secret decisions revolved primarily around the misappropriation of medicinal recipes.¹⁸ Later, in the wake of the Industrial Revolution, English courts noted the value of know-how and the problems inherent in employee mobility and began to recognize the importance of enforcing

12. J.H. Reichman, *Legal Hybrids Between the Patent and Copyright Paradigms*, 94 COLUM. L. REV. 2432, 2438 (1994) ("Legal theorists have particularly underestimated the important role of trade secret laws . . . in mediating between formal intellectual property regimes and free competition.").

13. MELVIN F. JAGER, TRADE SECRETS LAW § 1:1 (2006).

14. 1-1 MILGRIM, *supra* note 4, § 1.08.

15. *Kewanee Oil*, 416 U.S. at 485 ("Trade secret law will encourage invention in areas where patent law does not reach, and will prompt the independent innovator to proceed with the discovery and exploitation of his invention."); Steven N.S. Cheung, *Property Rights in Trade Secrets*, in 3 THE ECONOMICS OF INTELLECTUAL PROPERTY 225 (Ruth Towse & Rudi Holzhauer eds., 2002) ("Failure to protect [] emerging discoveries may jeopardize the advancement of socially valuable patents.").

16. *See, e.g.*, A. Arthur Schiller, *Trade Secrets and Roman Law: The Actio Servi Corrupti*, 30 COLUM. L. REV. 837, 844 (1930) (arguing that while *actio servi corrupti*, the action for corrupting a slave, was "undoubtedly conceived with no commercial aspects in mind," it had applications for unfair competition when brought against third parties who induced slaves to disclose their masters' confidential business secrets).

17. JAGER, *supra* note 13, § 2:3.

18. *Id.* § 2:2 ("The pressing issue of the day in Britain, at least according to the early trade secret decisions, was the misappropriation of the secret recipes for 'patent' medicines.").

duties of confidentiality, both express and implied.¹⁹ The courts' stated justifications for trade secret protection thus expanded from principles of property law to contract law and duties of confidence and trust.²⁰

In developing their own body of precedent, American courts drew on English common law principles to delineate the bounds of trade secret protection.²¹ American courts, along with their English counterparts, began to recognize a duty of confidence even in the absence of an express promise, and trade secret protection thus became a legal hybrid embodying principles of property, contract, and tort law.²² As trade secret law continued to develop piecemeal, states began to develop separate, and often conflicting, bodies of law.²³ While some courts emphasized the property justification for trade secret protection, others emphasized the tort theory, focusing on the confidential relationship or implied contractual duty implicated by the act of misappropriation more than on the property right granted by trade secret protection.²⁴

There were a number of practical implications descending from the particular theory of trade secret to which a jurisdiction subscribed, one of which was evidentiary. Under the tort theory, a plaintiff would have to prove that the defendant acquired his trade secret through a wrongful act.²⁵ The evidentiary value of the owner's precautions thus would go to proving the wrongfulness of the act: the more precautionary measures that the owner took, the more likely the defendant acquired the secret through wrongful means.²⁶ Under the property theory, however, the owner's precautions would go instead to proving that the secret had value.²⁷ As courts' views on the underlying theoretical basis for trade secret protection diverged, so too did the states' trade secret laws.

It was clear by 1938, in the wake of the Supreme Court's decision in *Erie Railroad v. Tompkins*, that uniformity in trade secret protection could not reside in the general federal common law.²⁸ Federal and state courts were bound by the substantive law of the states. Common law trade secret

19. JERRY COHEN & ALAN S. GUTTERMAN, TRADE SECRETS PROTECTION AND EXPLOITATION 5-6 (2000).

20. *Id.* at 6.

21. JAGER, *supra* note 13, § 2:3.

22. *See id.*

23. *Id.*

24. *Id.* § 1:3.

25. *Rockwell Graphic Sys., Inc. v. DEV Indus., Inc.*, 925 F.2d 174, 178-79 (7th Cir. 1991).

26. *Id.*

27. *Id.* at 179.

28. *See Erie R.R. v. Tompkins*, 304 U.S. 64 (1938).

protection varied widely on a state-by-state basis, and this lack of uniformity led some to seek unification of trade secret law. The American Law Institute (ALI) recognized the need for a uniform and coherent body of trade secret law.²⁹ In 1939, the ALI published the first *Restatement of Torts*.³⁰ In it, the ALI hoped to synthesize and clarify the divergent common law theories of trade secret misappropriation.³¹ In the *Restatement*, the ALI advanced the tort theory of trade secret law,³² unifying the theoretical basis for trade secret protection. The *Restatement* provided the most thorough definition of a trade secret at the time, a definition that was well-received and widely cited by courts across the country.³³ The *Restatement's* approach became, in effect, “the bedrock of modern trade secret law.”³⁴

However, despite its widespread use in the courts, the *Restatement* failed to unify state trade secret common law. Three factors prevented it from providing adequate guidance to the courts.³⁵ First, the *Restatement* was not binding authority and thus depended on the courts for its adoption.³⁶ Courts could accept or reject the *Restatement's* approach entirely or in part, as the *Restatement* was intended to preserve the common law system of case-by-case adjudication.³⁷ Second, while courts widely cited to principles in the *Restatement*, they often reached vastly different results in interpreting them.³⁸ For example, many states cited to the *Restatement* when determining what information rose to the level of a “trade secret,” yet courts often used different sets of mandatory factors in their analysis.³⁹

29. The ALI was founded in 1923 to “promote the clarification and simplification of the law” by “the production of a clear accurate statement of the common law in its various branches.” AMERICAN LAW INSTITUTE, THE RESTATEMENT IN THE COURTS 8 (1937) [hereinafter THE RESTATEMENT IN THE COURTS].

30. RESTATEMENT OF TORTS (1939).

31. JAMES POOLEY, TRADE SECRETS § 2:3 (2006).

32. RESTATEMENT OF TORTS § 757 cmt. a (1939) (“The suggestion that one has a right to exclude others from the use of his trade secret because he has a right of property in the idea has been frequently advanced and rejected.”).

33. *Id.* § 757 cmt. b; 1-1 MILGRIM, *supra* note 4, § 1.01[1].

34. POOLEY, *supra* note 31, § 2.02[1].

35. See Ramon A. Klitzke, *The Uniform Trade Secrets Act*, 64 MARQ. L. REV. 277, 282-84 (1980).

36. THE RESTATEMENT IN THE COURTS, *supra* note 29, at 9 (“The Restatement is not intended for adoption by legislatures as a code.”).

37. *Id.*

38. Klitzke, *supra* note 35, at 283.

39. In addition to offering a broad definition of a “trade secret,” comment b of the *Restatement* provided six factors to consider in determining what information constituted a trade secret. RESTATEMENT OF TORTS § 757 cmt. b (1939). Some courts address all six *Restatement* factors, others look to only three or four. Brandon B. Cate, Note, *Saforo &*

Third, the *Restatement* left certain procedural and remedial determinations under trade secret misappropriation unclear and failed to address others entirely.⁴⁰ The *Restatement* gave only cursory reference to possible remedies and courts widely disagreed over the appropriate measure of damages for misappropriation.⁴¹ The statute of limitations for trade secret actions was left completely to courts' discretion;⁴² courts applied different limitations periods in different jurisdictions.⁴³ More importantly, courts differed as to when the statute of limitations began to toll.⁴⁴ Some courts viewed a trade secret cause of action as commencing when the trade secret was first misappropriated, disclosed, or used.⁴⁵ Others viewed each new use of a trade secret as a new tort that gave rise to a new cause of action with its own limitations period.⁴⁶

C. The Uniform Trade Secrets Act

Trade secret law developed unevenly among the states, with economic centers developing convoluted bodies of common law and agricultural states developing little case law of their own.⁴⁷ In 1966, the Patent Section of the American Bar Association discussed a resolution supporting the enactment of a uniform state law on trade secrets.⁴⁸ The resolution was unsuccessful, yet it marked the recognition among the legal community that trade secret protection was state-specific, uneven, and in need of uniformity. In 1968, the Executive Committee of the National Conference of Commissioners on Uniform State Laws (NCCUSL) voted to appoint a Special Committee to investigate the drafting of a uniform act on trade secrets.⁴⁹ Recognizing that a statutory solution was essential to the syste-

Assocs., Inc. v. Porocel Corp.: The Failure of the Uniform Trade Secrets Act to Clarify the Doubtful and Confused Status of Common Law Trade Secret Principles, 53 ARK. L. REV. 687, 711 (2000).

40. Klitzke, *supra* note 35, at 283.

41. *See, e.g.*, *Telex Corp. v. Int'l Bus. Machs. Corp.*, 510 F.2d 894, 930 (10th Cir. 1975) (“[U]nfortunately the general law as to the proper measure of damages in a trade secrets case is far from uniform.”).

42. Klitzke, *supra* note 35, at 283 n.33.

43. *See, e.g.*, *Monolith Portland Midwest Co. v. Kaiser Aluminum & Chem. Corp.*, 407 F.2d 288 (9th Cir. 1969) (applying two-year statute of limitations); *Underwater Storage, Inc. v. U.S. Rubber Co.*, 371 F.2d 950 (D.C. Cir. 1966) (applying three-year statute of limitations).

44. *See M & T Chems., Inc. v. IBM*, 403 F. Supp. 1145, 1148 (S.D.N.Y. 1975).

45. *See, e.g.*, *Monolith Portland Midwest*, 407 F.2d at 301.

46. *See, e.g.*, *Underwater Storage*, 371 F.2d at 963.

47. UNIF. TRADE SECRETS ACT, Prefatory Note (1985).

48. *Id.*

49. *Id.*

matic and predictable treatment of trade secrets, the Committee drafted the Uniform Trade Secrets Act.

When the ALI published the *Restatement (Second) of Torts* in 1979, it omitted trade secrets, believing that the influence of tort law on misappropriation was “largely of historical interest.”⁵⁰ “[T]he law of Unfair Competition and Trade Regulation,” the ALI stated, “is no more dependent upon Tort law than it is on many other general fields of the law.”⁵¹ The *Restatement (Second) of Torts* thus abandoned trade secrets and left courts with no uniform guidance on how to resolve the interpretive and practical problems that arose in the application of the first *Restatement*.

NCCUSL approved the Uniform Trade Secrets Act in 1979, with minor amendments in 1985.⁵² Forty-five states, the District of Columbia, and the Virgin Islands have adopted the UTSA, either in its original or amended form, or in some variation.⁵³ In the UTSA’s prefatory note, the Commissioners described the need for a uniform law,⁵⁴ citing both to the ALI’s abandonment of trade secret misappropriation in the *Restatement (Second) of Torts* and to the “confused” status of state common law on trade secrets.⁵⁵ The contribution of the UTSA was a “substitution of unitary definitions of trade secret and trade secret misappropriation” and a uni-

50. RESTATEMENT (SECOND) OF TORTS, Division Nine, Introductory Note (1979).

51. *Id.*

52. UNIF. TRADE SECRETS ACT (1985).

53. UNIF. TRADE SECRETS ACT ANN. (West 2007). Five states—New York, Massachusetts, New Jersey, Texas, and Wyoming—do not follow any version of the UTSA. *Id.* Legal scholars, recognizing the disadvantages that non-UTSA states face in providing clear, uniform, and predictable trade secret protection, have proposed statutory reform modeled after the Uniform Trade Secrets Act. *See, e.g.,* Michael J. Hutter, *The Case for Adoption of a Uniform Trade Secrets Act in New York*, 10 ALB. L.J. SCI. & TECH. 1, 8 (1999) (arguing that without comprehensive UTSA-informed trade secrets legislation, “New York will be at a distinct disadvantage relative to the 45 other jurisdictions when providing a hospitable economic climate for firms and entrepreneurs”). The widespread acceptance of the Uniform Trade Secrets Act by state legislatures may suggest that uniformity in trade secret law is economically efficient. Larry E. Ribstein & Bruce H. Kobayashi, *An Economic Analysis of Uniform State Laws*, 25 J. LEGAL STUD. 131 (1996) (finding that “states efficiently sort between NCCUSL proposals in that they tend to adopt these proposals in which a cost-benefit analysis suggests that uniformity is efficient”).

54. Some legal scholars contend that national uniformity of trade secret protection can only be achieved through comprehensive federal legislation. *See, e.g.,* Rebel J. Pace, *The Case for a Federal Trade Secrets Act*, 8 HARV. J.L. & TECH. 427 (1995). For a general review of how state legislatures have deviated from the Act, see Linda B. Samuels & Bryan K. Johnson, *The Uniform Trade Secrets Act: The States’ Response*, 24 CREIGHTON L. REV. 49 (1990).

55. UNIF. TRADE SECRETS ACT, Prefatory Note (1985).

fied statute of limitations “for the various property, quasi-contractual, and violation of fiduciary relationship theories of non-contractual liability utilized at common law.”⁵⁶

The UTSA cured a number of defects in the *Restatement*. First, it was a legislative enactment and thus served as binding authority on the courts. Second, it settled some remedial and procedural issues left open by the *Restatement*. It more clearly outlined the available remedies for misappropriation⁵⁷ and explicitly provided a statute of limitations for trade secret actions.⁵⁸ The UTSA signaled a move toward the property theory and away from the tort theory of trade secret protection. A cause of action for misappropriation under the UTSA arises only once: when the misappropriation was discovered or should have been discovered by reasonable diligence.⁵⁹ Unlike a tort, “a continuing misappropriation constitutes a single claim.”⁶⁰

The goal of the UTSA was uniformity. Central to this goal were two key provisions of the Act, one that provided for uniformity of application and another that displaced conflicting common law claims.

1. *The Uniformity Provision*

Section 8 of the UTSA provides that the Act “shall be applied and construed to effectuate its general purpose to make uniform the law with respect to the subject of this [Act] among states enacting it.”⁶¹ Of all of the UTSA’s provisions, the uniformity provision has been least subject to alteration.⁶² Only three of the forty-five states adopting the UTSA chose not to adopt the provision; the remaining forty-two states adopted the provision without substantial modification.⁶³

56. *Id.*

57. *Id.* §§ 2-3. Comment e to the *Restatement* stated that four remedies should be available in the appropriate circumstances. RESTATEMENT OF TORTS § 757 cmt. e (1939). However, the *Restatement* did not specify what circumstances would trigger specific remedies. *See id.*

58. UNIF. TRADE SECRETS ACT § 6 (1985).

59. *Id.*

60. *Id.*

61. The uniformity provision was unchanged between the original (1979) and the amended (1985) Act. UNIF. TRADE SECRETS ACT § 8 (1985).

62. *See generally* BRIAN M. MALSBERGER, TRADE SECRETS: A STATE-BY-STATE SURVEY (2006).

63. Neither the Arizona nor the South Carolina statute incorporates the uniformity provision. *Id.* Pennsylvania’s version of the UTSA also lacks the uniformity provision. 12 PA. CONS. STAT. §§ 5301-5308 (2004).

2. *The Preemption Provision*

Section 7 provides that the UTSA “displaces conflicting tort, restitutionary, and other law providing civil remedies for misappropriation of a trade secret.”⁶⁴ Exempt from displacement by the UTSA are civil remedies not based upon trade secret misappropriation and contractual and criminal remedies “whether or not based upon misappropriation of a trade secret.”⁶⁵ All states adopting the UTSA have incorporated the preemption clause in some form. Some states have made insubstantial modifications, such as exempting public disclosures or exempting an individual’s duty to disclose information when expressly required by law.⁶⁶

II. *BURBANK GREASE*

The Wisconsin legislature adopted the amended version of the Uniform Trade Secrets Act (WUTSA) in 1985.⁶⁷ The legislature codified section 7 and section 8 of the UTSA, the preemption and uniformity clauses, without substantial modification in section 134.90(6) and section 134.90(7) of the Wisconsin Statutes.⁶⁸

A. *Facts & Procedural Posture*

Burbank Grease Services, LLC (“Burbank”) collected and processed used restaurant fry grease, trap grease, and industrial grease.⁶⁹ Larry Sokolowski worked at Burbank for over three years, resigning in April of 2001.⁷⁰ At the time of his resignation, Sokolowski had reached the level of “procurement/territory manager,” a position in which he oversaw sales, handled customer relations, and compiled sales data for Burbank’s accountant.⁷¹ After resigning from Burbank, Sokolowski began working for United Liquid, a waste hauling service for industrial, municipal, and commercial clients.⁷² In October of 2001, Sokolowski and United Liquid

64. UNIF. TRADE SECRETS ACT § 7(a) (1985).

65. *Id.* § 7(b). The preemption provision was substantially changed by the 1985 amendments to the UTSA. Prior to the amendments, UTSA preemption did not affect criminal or contractual liability not based upon trade secret misappropriation. POOLEY, *supra* note 31, § 2.03[6]. The amendments expanded the exemption to include criminal or contractual remedies “whether or not” based upon trade secret misappropriation. *Id.*

66. *See generally* MALSBERGER, *supra* note 62.

67. WIS. STAT. ANN. § 134.90 (West 2007).

68. *Id.* § 134.90(6)-(7).

69. Burbank Grease Servs., LLC v. Sokolowski, 693 N.W.2d 89, 91 (Wis. Ct. App. 2005).

70. *Id.*

71. *Id.*

72. *Id.* at 92.

formed United Grease, which began collecting and processing fry grease, trap grease, and industrial grease in direct competition with Burbank.⁷³

According to Sokolowski, sometime after United Grease was formed, he realized that he still possessed paper and digital copies of Burbank's customer information, including a customer list with contact and pricing information, a spreadsheet of Burbank's industrial clients, and a spreadsheet of Burbank's customers organized by driver route.⁷⁴ Sokolowski testified that he entered Burbank's customer information into United Liquid's computer system and that he used the industrial client spreadsheet to solicit industrial customers for United Grease.⁷⁵ Sokolowski estimated that United Grease acquired 80 fry grease customers, almost all of which were former Burbank customers, 157 grease trap customers, almost half of which were former Burbank customers, and one or two of Burbank's former industrial customers.⁷⁶

When it realized that Sokolowski was soliciting its customers, Burbank brought suit, alleging that Sokolowski misappropriated Burbank's trade secrets, that Sokolowski breached his fiduciary duty to Burbank, and that United Grease and United Liquid aided and abetted Sokolowski's breach of his fiduciary duty.⁷⁷ The trial court granted the defendants' motion for summary judgment, concluding that the customer information at issue did not constitute a trade secret: the information was generally known and readily ascertainable and, alternatively, Burbank did not take reasonable efforts to maintain the secrecy of the information.⁷⁸ Further, the trial court ruled that Burbank's breach of fiduciary duty claims against Sokolowski were preempted by the Wisconsin Uniform Trade Secrets Act.⁷⁹

The Court of Appeals affirmed the trial court's ruling that the information at issue was not a trade secret: it did not meet the statutory definition, because it was readily ascertainable by proper means.⁸⁰ The Court of Appeals also affirmed the trial court in holding that the breach of fiduciary duty claims were preempted by the WUTSA. The court reasoned that "the

73. *Id.*

74. *Id.*

75. *Id.* at 92-93.

76. *Id.*

77. *Id.*

78. *Id.* at 93.

79. *Id.*

80. *Id.* at 97 (finding that the pricing information at issue was not a trade secret because "[t]here is no evidence that Burbank's prices are based on information not known to the customers.").

majority of cases in other jurisdictions addressing this issue have decided that such claims are preempted” and that the purpose of the preemption provision was “to preserve a single tort action under state law.”⁸¹ Burbank appealed the court’s decision on the fiduciary claim, and the Supreme Court of Wisconsin selected the case for review.

B. Supreme Court of Wisconsin: The Majority

As the Supreme Court of Wisconsin framed the issue, the question before the court was whether the WUTSA preempted civil claims that were based on the misappropriation of confidential, but not “trade secret,” information.⁸² That is, are claims based on confidential information that does not meet the statutory definition of a trade secret preempted by the WUTSA?⁸³

In analyzing the issue of preemption, the court first turned to the text of the statute, focusing its attention on the UTSA preemption provision codified in section 134.90(6)⁸⁴ of the Wisconsin Statutes. Interpreting the statute from a “plain language” interpretive posture, the court focused its analysis on the term “trade secret.”⁸⁵ A “trade secret,” the court reasoned, is defined under the Act; therefore, the plain language of the preemption provision authorizes the WUTSA to displace only those civil claims based on the misappropriation of a statutorily-defined trade secret.⁸⁶ Further, the court reasoned, the dictionary definition of “any” bolsters such a plain language interpretation: “‘Any’ is a very broad term. Accordingly, we conclude that its use [in section 134.90(6)(b)2] evinces a broad range of

81. *Id.* at 98.

82. Whether the information qualified as a trade secret was not at issue before the Wisconsin Supreme Court because Burbank did not appeal on that point. *Burbank Grease Servs., LLC v. Sokolowski*, 717 N.W.2d 781, 788 (Wis. 2006).

83. *Id.* at 785.

84. Section 134.90(6) states:

Effect on other laws. (a) Except as provided in par. (b), this section displaces conflicting tort law, restitutionary law and any other law of this state providing a civil remedy for misappropriation of a trade secret.

(b) This section does not affect any of the following:

1. Any contractual remedy, whether or not based upon misappropriation of a trade secret.

2. Any civil remedy not based upon misappropriation of a trade secret.

3. Any criminal remedy, whether or not based upon misappropriation of a trade secret.

WIS. STAT. ANN. § 134.90(6) (West 2007).

85. *Burbank*, 717 N.W.2d at 789.

86. *Id.*

civil remedies that are not precluded by paragraph (6)(a).⁸⁷ The majority thus determined that section 134.90(6)(b)2 exempts from preemption all remaining civil remedies for the protection of confidential information.⁸⁸ This, the court stated, is the only reasonable interpretation of the statute.⁸⁹

The court then turned to the WUTSA uniformity clause.⁹⁰ The court concluded that according to its analysis of the preemption clause, particularly section 134.90(6)(b)2 and the “plain meaning” of uniformity clause itself, the uniformity provision related only to misappropriation of statutorily-defined trade secrets.⁹¹ This reading of the uniformity clause promoted the Act’s goal of uniformity because “the statutory definition of a trade secret is made uniform throughout the states [enacting UTSA].”⁹²

Confident in its statutory analysis, the court cited legislative history to “confirm a plain-meaning interpretation.”⁹³ Quoting a Staff Brief of the Special Committee on the UTSA that summarized the Commissioners’ comments, the court stated that the UTSA was not enacted to be an “exclusive remedy.”⁹⁴ Further, while cases from other jurisdictions may be useful as “extrinsic sources,” they “cannot substitute for [the court’s own] construction of the relevant Wisconsin statute.” The court concluded that its review of the legislative history of the Act and of the relevant case law of other jurisdictions supported its plain language interpretation.⁹⁵

C. Supreme Court of Wisconsin: The Dissent

In their dissent, Justices Bradley and Abrahamson criticized the majority for its narrow statutory interpretation.⁹⁶ “This court,” the dissent announced, “is not interpreting [the WUTSA] in a vacuum What is remarkable about the majority opinion is its disregard of the legislative directive that [WUTSA] be interpreted to ‘make uniform the law relating to misappropriation of trade secrets among the states.’”⁹⁷ The dissent con-

87. *Id.*

88. *Id.*

89. *Id.* at 791.

90. Section 134.90(7) states: “*Uniformity of application and construction.* This section shall be applied and construed to make uniform the law relating to misappropriation of trade secrets among states enacting substantially identical laws.” WIS. STAT. ANN. § 134.90(7) (West 2007).

91. *Burbank*, 717 N.W.2d at 790.

92. *Id.*

93. *Id.* at 791.

94. *Id.*

95. *Id.* at 793.

96. *Id.* at 798 (Bradley, J. dissenting).

97. *Id.* at 798-99.

cluded that while the majority listed preemption cases from other jurisdictions in support of its plain-meaning interpretation, such a listing is “no substitute for the mandated uniformity analysis.”⁹⁸

The dissent noted that an essential goal of the UTSA is to unify trade secret law in the states adopting it.⁹⁹ Agreeing with the court of appeals, the dissent determined that the majority’s reasoning would effectively render the preemption provision meaningless and would undermine the uniformity and clarity of the Act by allowing for the continued vitality of the varied common law claims for unauthorized use of confidential information.¹⁰⁰

III. ANALYSIS

This Note argues that the *Burbank* court’s understanding of the WUTSA preemption and uniformity provisions contradicts a “plain language” interpretation of the UTSA and is misguided as a matter of policy. The UTSA’s uniformity provision acts as a legislative directive, mandating that courts take into account the interpretations of other jurisdictions. Preemption of common law claims necessarily entails the application of the Act as a whole. Given the varied state common law claims for protection of confidential information, UTSA preemption is essential to the uniform application of the Act.

A. “Plain Meaning” Interpretation

A statute is not merely a random combination of words and phrases. A legislative enactment has an objective: to remedy a perceived defect in the law.¹⁰¹ Thus, for a statute to make sense, it must be interpreted in light of its purpose.¹⁰² “A statute merely declaring a rule, with no purpose or objective, is nonsense.”¹⁰³ Likewise, a court construing a legislative enactment without recognizing its clear and stated purpose is terribly, and dangerously, misguided.

98. *Id.* at 799.

99. *Id.*

100. *Id.* at 800.

101. See Harold P. Southerland, *Theory and Reality in Statutory Interpretation*, 15 ST. THOMAS L. REV. 1, 21 (2002).

102. See Karl N. Llewellyn, *Remarks on the Theory of Appellate Decision and the Rules or Canons About How Statutes Are to be Construed*, 3 VAND. L. REV. 395, 402-406 (1950). Karl Llewellyn was the principal draftsman of the Uniform Commercial Code, acting as Chief Reporter for the Code from its inception in 1940 until his death in 1962. John M. Breen, *Statutory Interpretation and the Lessons of Llewellyn*, 33 LOY. L.A. L. REV. 263, 267-68 (2000).

103. Llewellyn, *supra* note 102, at 402-406.

Wisconsin courts follow a “statutory meaning,” or “plain language,” approach to statutory interpretation.¹⁰⁴ A court interpreting a Wisconsin statute must give the enacted language “its common, ordinary, and accepted meaning.”¹⁰⁵ Extrinsic evidence of legislative intent is relevant only if the text itself is unclear.¹⁰⁶ As Justice Holmes famously summarized, under a statutory meaning interpretive posture, “[w]e do not inquire what the legislature meant; we ask only what the statute means.”¹⁰⁷ Yet the statutory language cannot be interpreted alone. Rather, the language of the statute must be “interpreted in the context in which it is used; not in isolation but as part of a whole.”¹⁰⁸

The objective of the Uniform Trade Secrets Act—namely, uniformity—is clear from its very title. Moreover, one finds the UTSA’s purpose in the text of its uniformity provision, which states that the UTSA “shall be applied and construed to effectuate its general purpose to make uniform the law with respect to the subject of this [Act] among states enacting it.”¹⁰⁹ The plain language of the UTSA directs that all of its provisions, including the preemption provision, be applied and construed to promote uniformity. Uniformity is not merely *one* goal of the UTSA draftsmen, rather it is the *principal* goal. Each UTSA state, in enacting the uniformity clause, endorsed this primary purpose. The uniformity clause thus serves as a legislative directive mandating that courts promote uniformity across jurisdictions in their interpretations of the UTSA.¹¹⁰ Notably, only three of

104. *State ex rel. Kalal v. Circuit Court for Dane County*, 681 N.W.2d 110, 123-24 (Wis. 2004).

105. *Id.* at 124.

106. *Id.*

107. Oliver Wendell Holmes, *The Theory of Legal Interpretation*, 12 HARV. L. REV. 417, 419 (1898-99). A number of considerations support a “plain language” interpretive posture. Cass R. Sunstein, *Interpreting Statutes in the Regulatory State*, 103 HARV. L. REV. 405, 416 (1989). Restricting courts to the language of the statute curbs unconstitutional judicial legislating. *Id.* Legislators enacted the statutory text, not statutory intent, through the constitutional legislative process. A focus on the text incentivizes legislators to be cautious and clear when wording a statute, as “[i]t is the enacted law, not the unenacted intent, that is binding on the public.” *Kalal*, 681 N.W.2d at 124. Statutes with clear and simple language ensure that citizens understand the law and can alter their behavior in accordance with it. Sunstein, *supra* at 416.

108. *Kalal*, 681 N.W.2d at 124.

109. UNIF. TRADE SECRETS ACT § 8 (1985). While the WUTSA uniformity provision states that “[t]his *section* shall be applied and construed . . .” (emphasis added) and replaces “the subject of this [Act]” with “misappropriation of trade secrets,” these insubstantial deviations from the UTSA language have no effect on the practical application of the provision. WIS. STAT. ANN. § 134.90(7) (West 2007).

110. Steve Borgman, *The Adoption of the Uniform Trade Secrets Act: How Uniform is Uniform?*, 27 IDEA 73, 118 (1987) (“Certainly, in those states in which section eight

the forty-five states adopting the UTSA chose not to adopt the uniformity provision.¹¹¹

Under this legislative directive, other courts' interpretations of the UTSA are not merely "useful extrinsic sources," as the *Burbank* majority claimed, but rather an integral component of the analysis.¹¹² In order to advance uniformity, courts' interpretations of the UTSA must necessarily entail an understanding of the UTSA's interpretive landscape. Simply put, a court cannot promote uniformity without viewing each UTSA case within a larger context. The plain language of the uniformity provision directs courts to consider the issue of uniformity prior to interpreting any other terms or provisions of the Act.

Courts have often turned to other states' construction of the UTSA to guide statutory interpretation.¹¹³ Just four years before *Burbank Grease*, the Supreme Court of Wisconsin explicitly recognized the persuasive authority of other UTSA jurisdictions in *World Wide Prosthetic Supply, Inc. v. Mikulsky*.¹¹⁴ Faced with interpreting the WUTSA phrase "actual loss," the court looked to the case law of other jurisdictions "for guidance."¹¹⁵ The court's analysis relied heavily on a Seventh Circuit case, *Micro Data Base Systems, Inc. v. Dharma Systems, Inc.*¹¹⁶ Recognizing that the provision at issue in *Micro Data*, a provision of the New Hampshire UTSA, was "materially the same" as the corresponding WUTSA provision, the court reasoned that, "[c]ourts are to construe the Uniform Act's provisions to make uniform the law among the states, and thus, *Micro Data* is highly persuasive."¹¹⁷

Yet while courts often look to the decisions of other UTSA states when interpreting a provision of the UTSA, they present the jurisdictional analysis as a matter of judicial discretion. In *Burbank*, a mere four years after *World Wide Prosthetic*, the Supreme Court of Wisconsin stated that other interpretations of the UTSA serve merely as "useful extrinsic

has been enacted, the courts appear to be *directed* to apply and construe the Act so as to make uniform the law with respect to trade secrets.").

111. *Supra* text accompanying note 53.

112. *Burbank Grease Servs., LLC v. Sokolowski*, 717 N.W.2d 781, 792 (Wis. 2006).

113. *See, e.g., Catalyst & Chem. Servs. Inc. v. Global Ground Support*, 350 F. Supp. 2d 1, 7 (D.D.C. 2004) ("[I]t is appropriate to consider how the courts in those states have interpreted their states' trade secret acts when interpreting the D.C. trade secrets statute."); *Dicks v. Jensen*, 768 A.2d 1279, 1282 (Vt. 2001) ("Thus, in interpreting [the Vermont UTSA] we draw from the decisions of our sister states.").

114. 640 N.W.2d 764 (Wis. 2002).

115. *Id.* at 767.

116. 148 F.3d 649 (7th Cir. 1998).

117. *World Wide Prosthetic*, 640 N.W.2d at 768 (citations omitted).

sources to assist in statutory construction, *if required*.”¹¹⁸ The *Burbank* majority is dangerously misguided. In enacting the uniformity provision, the Wisconsin legislature explicitly endorsed the UTSA’s goal of uniformity. Indeed, the plain language of the WUTSA’s uniformity clause *directs* the court to conduct a uniformity analysis. This analysis necessarily entails a review of the relevant UTSA case law and an examination of alternative statutory interpretations and the effect of each interpretation on the UTSA’s goal of uniformity.

B. Advancing Uniformity Through Preemption

The importance of uniformity in trade secret protection has grown in parallel with the rise of interstate commerce.¹¹⁹ State trade secret laws have the potential to create significant interstate externalities, making multi-state transactions unnecessarily complex.¹²⁰ Without uniformity, plaintiffs are free to forum-shop and subject defendants to strikingly different substantive trade secret laws. Uniformity allows businesses to predict litigation and act rationally.¹²¹ Without a reliable guide as to what information is protected under the law, businesses are unable to make efficient investments in innovation. Widespread adoption of the UTSA is the first step toward uniformity. Uniformity of application is the next necessary and logical step.

The *Burbank* majority claimed that its construction of the Act was “in accord with the promotion of uniformity” because “the statutory definition of a trade secret is made uniform throughout the states enacting a version of the Uniform Trade Secrets Act (UTSA), and our application of that definition has been in accord with other UTSA jurisdictions.”¹²² The court’s statement belies the severity of its misinterpretation of the UTSA’s purpose. The objective of the UTSA, as embodied in the uniformity clause, which guarantees “[u]niformity of application and construction,” is uniform application of the Act as a whole. A unitary definition of “trade secret” is merely one application of the UTSA.

Judges interpreting the UTSA will generally promote uniformity simply by sharing a uniform interpretation of the Act across jurisdictions. With most provisions of the UTSA, uniformity relies not on the substance of the

118. *Burbank Grease Servs., LLC v. Sokolowski*, 717 N.W.2d 781, 792 (Wis. 2006) (emphasis added).

119. For a discussion of the economic costs and benefits of uniform laws, see Ribstein & Kobayashi, *supra* note 53.

120. See POOLEY, *supra* note 31, § 2.03[7][c].

121. Ribstein & Kobayashi, *supra* note 53, at 138-40.

122. *Burbank*, 717 N.W.2d at 790.

interpretation but merely on the consistency of its application by the courts. An interpretation of a term or provision will promote uniformity so long as all judges apply the same interpretation. For example, in *World Wide Prosthetic*, the Supreme Court of Wisconsin was faced with interpreting the scope and meaning of “actual loss” under the WUTSA.¹²³ The court ultimately held, as the Seventh Circuit did in *Micro Data*, that “actual loss” may include lost profits.¹²⁴ Here, defining “actual loss” either to include or to exclude lost profits would have no effect on the general uniformity of trade secret law. It is consistency among the courts in interpreting the phrase that promotes uniformity.

Uniformity in the context of preemption, however, is more complex. The preemption clause is central to the UTSA’s application as a whole. It delineates the UTSA’s scope by defining its relation to existing law. In the world of common law trade secret protection, preemption of common law claims is inherently complicated. Each UTSA state enacts the Act with a different backdrop of trade secret common law. It is this convoluted common law that led to the drafting of the UTSA and to its widespread adoption by state legislatures. Here, a clear reading of the UTSA uniformity provision is of vital importance.

The majority of courts interpreting the preemption provision have found that the UTSA must preempt some claims involving the protection of confidential, but not trade secret, information.¹²⁵ Courts have generally found that only those common law claims that are based on allegations or factual showings that are solely dependent on trade secret misappropriation are preempted.¹²⁶ That is, courts have found that the UTSA preempts claims that are dependent on the same factual allegations as UTSA misappropriation and does not preempt claims that are based on allegations or facts that are separate from or in addition to those that form the basis for misappropriation under the Act.¹²⁷

123. *World Wide Prosthetic Supply, Inc. v. Mikulsky*, 640 N.W.2d 764, 768 (Wis. 2002).

124. *Id.*

125. Only a minority of courts have held that common law claims involving confidential information that does not meet the UTSA statutory definition of a trade secret are not preempted by the UTSA. *See, e.g.*, *Callaway Golf Co. v. Dunlop Slazenger Group Americas, Inc.*, 295 F. Supp. 2d 430, 437 (D. Del. 2003); *Stone Castle Fin., Inc. v. Friedman, Billings, Ramsey & Co.*, 191 F. Supp. 2d 652, 659 (E.D. Va. 2002).

126. *See, e.g.*, *Automated Techs., Inc. v. Eller*, 160 F. Supp. 2d 915 (N.D. Ill. 2001); *Paint Brush Corp. v. Neu*, 599 N.W.2d 384 (S.D. 1999).

127. *See, e.g.*, *Powell Prods., Inc. v. Marks*, 948 F. Supp. 1469 (D. Colo. 1996); *Smithfield Ham & Prods. Co. v. Portion Pac, Inc.*, 905 F. Supp. 346 (E.D. Va. 1995).

Such a reading makes good sense. It retains common law claims only where they are outside the scope of the UTSA and thus deals with the application of the UTSA as a unitary enactment. It promotes the UTSA's stated goal of uniformity while the *Burbank* majority's narrow reading of the preemption provision thwarts it. Retaining common law remedies for the misappropriation of confidential, but not "trade secret," information duplicates the remedies provided under the Act.¹²⁸ Under such a reading, the UTSA offers merely another form of recovery and trade secret law is reverted to its confused pre-UTSA state.

IV. CONCLUSION

The *Burbank* majority announced that, "[t]o adopt the court of appeals' interpretation, as the defendants advocate, would require us to expressly contradict the principle that it is the legislature that chooses the words of a statute."¹²⁹ Indeed, the language of the WUTSA was enacted by the Wisconsin legislature. The Wisconsin legislature adopted the uniformity provision, which mandates that the WUTSA be applied and construed to promote the UTSA's primary goal of uniformity. In *Burbank Grease Services, LLC v. Sokolowski*, the Supreme Court of Wisconsin narrowly interpreted the scope of the WUTSA and disregarded the legislative directive embodied in the uniformity clause. In doing so, it reverted trade secret law to its pre-UTSA state, leaving trade secret protection state-specific, uneven, and uncertain.

128. See Borgman, *supra* note 110, at 112.

129. *Burbank Grease Servs., LLC v. Sokolowski*, 717 N.W.2d 781, 790 (Wis. 2006).

ADDITIONAL DEVELOPMENTS— TRADE SECRET

DIOMED, INC. V. VASCULAR SOLUTIONS, INC.

471 F. Supp. 2d 137 (D. Mass. 2006)

The United States District Court of Massachusetts granted summary judgment to defendant Vascular Solutions, Inc. (“VSI”) as to breach of a non-disclosure agreement (NDA). The court denied summary judgment, however, on a claim of misappropriation of trade secret where the trade secret was protected by a NDA the court held had not been breached.

Diomed Inc. (“Diomed”) manufactures non-surgical laser treatment devices for varicose veins. VSI entered this same market in July 2003, prior to that it had only made vascular sealing devices. In April or May 2002 Diomed and co-defendant Nancy Arnold, entered into acquisition negotiations while Arnold was CEO of one of Diomed’s suppliers. As part of the negotiations Peter Klein, the CEO of Diomed, orally told Arnold about an improved laser treatment device, and Diomed’s marketing strategies for it. Prior to the negotiations, Arnold had signed an NDA that stipulated that all oral confidential information must have been confirmed in writing in order to fall under the agreement. No such written confirmation was made regarding the information Klein had given Arnold about the laser treatment device.

Negotiations between Diomed and Arnold fell through for unrelated reasons, and Arnold later went to work for VSI. VSI launched its first laser varicose vein treatment device before Diomed’s improved device hit the market. Diomed sued both Arnold and VSI, alleging claims of trade secret misappropriation and trademark infringement, unfair competition, breach of contract, and tort. The defendants counter-claimed alleging trademark invalidity and moved for summary judgment on all claims.

The district court granted the defendants’ motion for summary judgment on the claims of breach of non-disclosure agreement and tortious interference with contract. Because no written confirmation was ever made, the court held that the oral disclosure made to Arnold could not be protected by the NDA. However, the district court denied defendants’ motion for summary judgment on the claim of trade secret misappropriation. The court reasoned that issues of fact still existed as to whether Diomed’s product improvement plans were “trade secrets”; whether the parties had a confidential relationship; and whether the defendants had inappropriately used the disclosed information. The court held that although Diomed’s failure to comply with the NDA was relevant to the disclosure’s trade secret status it was not dispositive.

MANUEL V. CONVERGYS CORP.*430 F.3d 1132 (11th Cir. 2005)*

The United States Court of Appeal for the Eleventh Circuit upheld a judgment invalidating a non-compete agreement (“NCA”) and dismissing a tort claim of misappropriation of trade secrets under the Georgia Trade Secrets Act.

In 1999, William Manuel (“Manuel”) was hired by a subsidiary of Convergys Corporation (“Convergys”) where he specialized in outsourced human resources services. As a condition of a 2003 promotion, Manuel signed a NCA prohibiting him from working for a competitor of Convergys for two years following any termination of his employment. The NCA included choice-of-law and forum-selection clauses specifying that Ohio law would govern the agreement and that any disputes arising out of the NCA would be brought in state or federal court in Ohio.

In 2004, Mellon Financial Corporation, Convergys’ competitor, hired Manuel for a position relating to human resources outsourcing in Atlanta, Georgia. Manuel sought a declaratory judgment in Georgia that his NCA with Convergys was illegal, invalid, and unenforceable. Convergys removed the case to the United States District Court for the Northern District of Georgia and counter-claimed, alleging that Manuel had misappropriated trade secrets, including Convergys’ customer lists, prices, and other general business information. Convergys also filed a concurrent action in Ohio state court for breach of the NCA and misappropriation of trade secrets. The district court granted Manuel’s motion for summary judgment and dismissed Convergys’ counterclaim.

On appeal, the Eleventh Circuit affirmed the district court, holding that the district court had not abused its broad discretion to award declaratory judgment. Manuel’s filing in Georgia was not improperly anticipatory of the Ohio action. The district court’s application of Georgia law to the NCA was appropriate because Convergys sought to enforce the NCA against Manuel, who lived and worked in Georgia.

The court also upheld the district court’s dismissal of Convergys’ trade secret misappropriation claim. Under Georgia law, an employee is entitled to use personal knowledge of general customer and business information and thus Convergys had failed to state a claim upon which relief could be granted. The court reasoned that only Georgia law applied, since a federal court would apply the choice of law rules for the state in which it sits, and Georgia choice of law rules dictate that tort cases are governed by the law of the state in which the tort is committed.

ARCOR, INC. V. HAAS*842 N.E.2d 265 (Ill. App. Ct. 2005)*

The Appellate Court of Illinois ruled that customer lists, if not adequately guarded, were not protected as trade secrets under the Illinois Trade Secrets Act (765 ILCS 1065/1 *et seq.* (West 2002)). The court also vacated two non-compete covenants as overbroad.

Arcor, Inc. ("Arcor") is an Illinois corporation that manufactures metal tubes. These tubes, which are ultimately used as filtration devices, are made by using machines made by the Meltog company.

David Haas ("Haas") was an employee at Arcor from 1983 until his resignation in November of 2004. Haas signed an employment and confidentiality agreement designed to prevent him from disclosing or otherwise using the names of customers. Haas also signed two non-compete covenants, which prevented him from working anywhere within the United States or Canada for one year after leaving Arcor in any capacity where he might be "in competition" with Arcor. In addition, Haas signed a restrictive shareholder's agreement restricting competition for three years, with no specified geographic limitation.

In January 2005, Haas learned that Jonell (an Arcor customer) had purchased two Meltog machines in order to produce its own tubes, due in part to its concerns about Arcor's ability to supply the tubes. Haas formed Jadtis Industries ("Jadtis"), and was soon hired as manager for Jadtis's tube production project. Soon thereafter, Jadtis began selling tubes to Jonell and ten other companies who were previously Arcor customers. Arcor sued for misappropriated trade secret modifications and breach of the non-competition clauses.

In a June 2005 preliminary injunction hearing, the trial court found that Haas's use of customer information he had acquired while working for Arcor was a breach of trade secret, and enjoined defendants from "selling to, or soliciting sales of" tubes. The court also found that the non-competition covenants were overbroad, and thus unenforceable.

The appellate court reversed on the issue of trade secrets. By comparing the security measures taken by Arcor to protect its customer lists to that of companies in other Illinois cases, the court noted that for such lists to be deemed trade secrets a company could "not rest solely on the single step of a confidentiality agreement." The court construed "efforts that are reasonable" 765 ILCS 1065/2(d) as requiring some additional protection that Arcor did not exercise.

In its analysis, the court also carefully set forth the standards for a preliminary injunction, the statutory requirements for trade secret protection under the Illinois Trade Secrets Act, and six common law factors which courts may also consider in determining whether a trade secret exists.

However, the appellate court upheld the trial court's ruling invalidating the non-competition covenants. The court noted that blanket prohibitions against competition were generally unreasonable, and lacked geographic restrictions. Noting that restrictive covenants require a geographic scope as well as a time limitation the appellate court agreed that the covenants were overbroad.

BERKELEY TECHNOLOGY LAW JOURNAL

BERKELEY TECHNOLOGY LAW JOURNAL
ANNUAL REVIEW OF LAW AND TECHNOLOGY

CYBERLAW

BERKELEY TECHNOLOGY LAW JOURNAL

ARE GOOGLE SEARCHES PRIVATE? AN ORIGINALIST INTERPRETATION OF THE FOURTH AMENDMENT IN ONLINE COMMUNICATION CASES

By Jayni Foley

In the United States, about ninety-seven million adults use the internet at least once per day.¹ On a typical day, thirty-eight percent of all Americans use a search engine to find information, thirty-one percent read news online, and thirty percent browse the internet for entertainment or leisure.² During this online activity, users leave “digital footprints” with their internet service provider (ISP) or search engine, revealing their interests, hobbies, or agendas.³

Over the past decade, the amount of personal information collected, stored, and shared by private companies has skyrocketed due to the rise of internet communication, decreased cost of data storage, and the emergence of data brokerage companies.⁴ Increasingly, the government subpoenas private companies like America Online (AOL), eBay, and Google to access this information in order to fight and prevent crime.⁵ However, these subpoenas are increasingly opposed on privacy grounds.⁶

In *Gonzales v. Google, Inc.*, the U.S. District Court for the Northern District of California rejected a federal government request for thousands of search query strings entered by Google search engine users that the

© 2007 Jayni Foley

1. See, e.g., Pew Internet & Am. Life Project, Daily Internet Activities, http://www.pewinternet.org/trends/Daily_internet_Activities_7.19.06.htm (last visited Mar. 23, 2007) (“According to [the] February-April 2006 survey, 66% of American adult internet users, about 97 million people, use the internet on an average day.”).

2. *Id.*

3. See, e.g., Google Privacy Center: Privacy Policy, Google Privacy FAQ, http://www.google.com/intl/en/privacy_faq.html (last visited Nov. 8, 2006) (describing the information recorded and stored in Google’s server logs).

4. Nancy Libin, *Perspective: the anxious new dawn of cybersnooping*, CNET NEWS.COM, May 3, 2006, http://news.com.com/The+anxious+new+dawn+of+cyber+snooping/2010-1028_3-6067598.html.

5. In 2005, four government agencies—the Department of Justice (DOJ), State Department, Homeland Security Department, and the Social Security Administration—spent roughly \$30 million to purchase personal information from data brokers. *Id.*; see also Saul Hansell, *Online Trail Can Lead to Court*, N.Y. TIMES, Feb. 4, 2006, at C1.

6. See Fred von Lohmann, *Could Future Subpoenas Tie You to “Britney Spears Nude”?*, LAW.COM, Feb. 6, 2006, <http://www.law.com/jsp/article.jsp?id=1138961111185>.

government claimed it needed to test filtering software for online pornography.⁷ This incident exemplified the competing interests involved in government access to information about individuals held by third parties. While most internet users respect the government's need to fight terrorism and child pornography, they do not want to be wrongly flagged as terrorists or pornographers due to mischaracterizations of their digital footprints.⁸ How can society prevent privacy intrusions while allowing law enforcement appropriate access to relevant information?

This Note analyzes privacy protections currently in place for internet searches and the interplay between these protections and law enforcement access. Part I provides an overview of the technological and regulatory background for search engines and ISPs. This Note focuses on Google because it is the world's most widely-used search engine.⁹ Part II analyzes the constitutional and statutory framework for ISP and search engine privacy, focusing on the erosion of Fourth Amendment protection of information held by "third parties" such as Google. Additionally, it outlines statutory protections currently in place for ISP data under the Electronic Communication Privacy Act (ECPA). Part III examines the *Gonzales v. Google, Inc.* opinion as an example of the interplay among individual, business, and government interests. Part IV proposes that courts should adopt an originalist interpretation of the Fourth Amendment in deciding online communication cases. This interpretation is consistent with a reasonable expectation of privacy in information conveyed to third parties such as Google. Finally, Part V explores ECPA's statutory framework for electronic communications and advocates expanding its protections.

7. *Gonzales v. Google, Inc.*, 234 F.R.D. 674, 678, 688 (N.D. Cal. 2006).

8. Doug Henschen, *Q&A: Got Data? Beware Privacy Pitfalls, Big Brother*, INTELLIGENT ENTERPRISES, Mar. 2006, <http://www.intelligententerprise.com/showArticle.jhtml?articleID=177105304> (quoting Jim Dempsey of The Center for Democracy & Technology as stating, "I'm happy to fight pornography, but I'm unwilling to be wrongly labeled a pornographer. The issues have to do with inaccuracy, false positives, misinterpretation or misuse of data.").

9. Google's Opposition to the Government's Motion to Compel at 2, *Gonzales v. Google*, 234 F.R.D. 674 (N.D. Cal. 2006) (No. 5:06-mc-80006-JW) [hereinafter *Google Opp.*]; Google Corporate Information: Quick Profile, <http://www.google.com/corporate/facts.html> (last visited Jan. 17, 2006).

I. BACKGROUND: SEARCH ENGINES AND SUBPOENAS

A. Technological Background

As of early 2006, about seventy-three percent of Americans use the internet.¹⁰ Millions of internet users look to the web as their “information source of first resort,”¹¹ and more than seventy-three percent of American college students use the internet to gather information more than they use the library.¹² Google operates the world’s most widely-used search engine at www.google.com, receiving about a billion search requests per day.¹³ Google, like other search engines, functions by “crawling” the web and organizing content in a searchable web index.¹⁴ When a user types a query, Google’s proprietary technology produces a list of hyperlinks organized by relevance and reliability.¹⁵

Google treats information about its search queries and methods of indexing and returning URLs as confidential.¹⁶ That noted, Google has the technology to list every search query ever sent from a specific IP address.¹⁷ Google’s online privacy policy states, “Like most Web sites, our

10. MARY MADDEN, PEW INTERNET & AM. LIFE PROJECT, INTERNET PENETRATION AND IMPACT (April 26, 2006), http://www.pewinternet.org/pdfs/PIP_Internet_Impact.pdf.

11. Peter Lyman, Archiving the World Wide Web, <http://www.clir.org/pubs/reports/pub106/web.html> (last visited Mar. 23, 2007).

12. STEVE JONES, PEW INTERNET & AM. LIFE PROJECT, THE INTERNET GOES TO COLLEGE: HOW STUDENTS ARE LIVING IN THE FUTURE WITH TODAY’S TECHNOLOGY 3 (2002), http://www.pewinternet.org/pdfs/PIP_College_Report.pdf.

13. Google Opp., *supra* note 9, at 2; Google Corporate Information: Quick Profile, <http://www.google.com/corporate/facts.html> (last visited Jan. 17, 2006). This Note focuses on Google’s search engine because it is arguably the most well-known search engine in the United States.

14. Google Corporate Information, Technology Overview, <http://www.google.com/corporate/tech.html> (last visited Jan. 17, 2006); Searching the Google Directory, Excerpt from GOOGLEDIA: THE ULTIMATE GOOGLE RESOURCE, Aug. 28, 2006, <http://www.quepublishing.com/articles/article.asp?p=606600&rl=1>.

15. *Id.*

16. Google Opp., *supra* note 9, at 2 (citing Declaration of Matt Cutts, ¶ 6, *Gonzales v. Google*, 234 F.R.D. 674 (N.D. Cal. 2006) [hereinafter Cutts Decl.]).

17. Here is an example of a typical Google log entry where the search is for “cars,” followed by a breakdown of its parts:

123.45.67.89 - 25/Mar/2003 10:15:32 - <http://www.google.com/search?q=cars>- Firefox 1.0.7; Windows NT5.1-740674ce2123e969
“123.45.67.89” is the IP address assigned to the user by the user’s ISP;
“25/Mar/2003 10:15:32” is the date and time of the query;
“<http://www.google.com/search?q=cars>” is the requested URL, including the search query; “Firefox 1.0.7; Windows NT 5.1” is the browser and operating system being used; and; “740674ce2123a969” is the

servers automatically record . . . your web request, Internet Protocol address, browser type, browser language, the date and time of your request and one or more cookies that may uniquely identify your browser.”¹⁸ Google also records which links users click after inputting search queries.¹⁹ Google records this information in order to develop new products and services, display customized content and advertising, and ensure technical functionality.²⁰ Yahoo!, another leading search engine, has a similar privacy policy.²¹

Despite these companies’ claims that they use this information to produce more and better products,²² privacy advocates and users are concerned that this information may be increasingly targeted by law enforcement as well as private lawyers wielding subpoenas.²³ Google’s privacy statement asserts that Google will protect “personal information,” expressly defined to users as “information that you provide to us which personally identifies you, such as your name, e-mail address or billing information, or other data which can be reasonably linked to such information by Google.”²⁴ Google states that it shares this information in limited situations, including when Google has a “good faith belief” that disclosure,

unique cookie ID assigned to this particular computer the first time it visited Google.

Google Privacy Center, Google Privacy FAQ, http://www.google.com/intl/en/privacy_faq.html (last visited Nov. 8, 2006).

18. *Id.*

19. Google Privacy Center, Google Privacy FAQ, What information does Google receive if I click on a link displayed on Google?, http://www.google.com/intl/en/privacy_faq.html (last visited Nov. 8, 2006); *see also* Google Search Privacy Notice, <http://www.google.com/searchhistory/privacy.html> (last visited Nov. 8, 2006) (stating that Google’s “Personalized Search” feature records information including search queries, results clicked on, and the date and time of searches “in order to improve your search results and display your search history”).

20. Google Privacy Center, Google Privacy Policy, Information we collect and how we use it, <http://www.google.com/privacypolicy.html> (last visited Nov. 13, 2006).

21. Yahoo! Privacy Policy, <http://privacy.yahoo.com/privacy/us> (last visited Nov. 17, 2006) (“Yahoo! automatically receives and records information on our server logs from your browser, including your IP address, Yahoo! cookie information, and the page you request.”).

22. *See supra* notes 20, 21.

23. *See von Lohmann, supra* note 6. This Note focuses on government subpoenas only. Private subpoenas are beyond the scope of this Note.

24. *Gonzales v. Google, Inc.* 234 F.R.D. 674, 684 (N.D. Cal. 2006) (citing Second Declaration of Joel McElvain, Ex. C.); *see also*, Google Privacy Center, Google Privacy Policy, <http://www.google.com/pri-vacypolicy.html> (last visited Mar. 23, 2007) (stating that “personal information” is protected); Google Privacy Center, Google Privacy FAQ, http://www.google.com/privacy_faq.html (last visited Mar. 23, 2007).

access, use, or preservation of the information is “reasonably necessary” to:

- (a) satisfy any applicable law, regulation, legal process or enforceable governmental request, (b) enforce applicable Terms of Service, including investigation of potential violations thereof, (c) detect, prevent, or otherwise address fraud, security or technical issues, or (d) protect against imminent harm to the rights, property or safety of Google, its users or the public as required or permitted by law.²⁵

Google states that it obeys the law and complies with enforceable government requests for information.²⁶ Therefore, in order to know precisely what kind of information is protected, one must know what kind of information the government can legally access.

The following Section notes the increased use of subpoenas for government access to online communications. Part II then addresses constitutional and statutory protection for electronic communications.

B. Subpoenas of Search Engines and ISPs

1. Increasing Use of Third Party Subpoenas

In this era of omnipresent technology, companies like Google manage comprehensive networks that can track users’ activities. This practice has altered the way law enforcement approaches criminal investigations. Rather than search for discrete pieces of physical information, law enforcement can simply request bundles of information from private companies such as ISPs and search engines.²⁷ One high-profile example of using Google’s records occurred in the Scott Peterson murder case, where prosecutors presented evidence on websites Peterson visited prior to his wife’s death.²⁸

25. Google Privacy Center, Google Privacy Policy, <http://www.google.com/privacy/policy.html> (last visited Nov. 13, 2006).

26. *Id.*

27. See Michael D. Birnhack & Niva Elkin-Koren, *The Invisible Handshake: The Reemergence of the State in the Digital Environment*, 8 VA. J.L. & TECH. 6, 14-15 (2003).

28. The websites included maps of the San Francisco Bay, tidal charts, and fishing guides. Harriet Ryan, *Scott Peterson’s Lawyer Strives to Throw Doubt on Phone Evidence*, COURTTVNEWS.COM, Aug. 6, 2004, http://www.courttv.com/trials/peterson/082604_ctv.html. These records were subpoenaed for use in a criminal investigation, unlike the civil litigation in question in *Gonzales v. Google, Inc.* This distinction is important: ECPA allows court orders for information when the government shows “specific and articulable facts showing that there are reasonable grounds to believe” the information sought is relevant and material to an ongoing criminal investigation. 18 U.S.C.

The New York Times recently reported that AOL receives more than 1,000 subpoenas each month seeking information about its users.²⁹ Most large internet and telephone companies now have formal processes in place for “subpoena management.”³⁰ Information generally sought in subpoenas includes users’ names, residence, when they were online, and—if a court issued a search warrant—what users have written and read in their e-mail or typed into their web browser.³¹

Subpoenas are convenient methods to obtain information because ISPs and search engines retain massive amounts of data. E-mail programs such as Google’s Gmail advertise the benefit of users never having to throw anything away.³² Rather than limit this data storage, as many privacy advocates advise, both the federal government and state governments are encouraging it.³³ In 2006, Attorneys General of forty-nine states requested that Congress adopt a national data retention requirement to aid law enforcement.³⁴ Similarly, U.S. Attorney General Alberto Gonzales and FBI Director Robert Mueller have indicated that ISPs should retain customer records for two years.³⁵

2. *Subpoenas Require Only a Standard of Relevance*

In terms of information privacy, subpoenas afford weak protection; they are normally issued without prior judicial approval and are enforced on a mere showing of relevance.³⁶ The only limits on issuance of grand jury subpoenas are that they must seek relevant information and not be overbroad.³⁷ Government subpoenas for third-party information are gener-

§ 2703(d) (2006). Further, the Fourth Amendment “probable cause” standard was likely met when these records were subpoenaed.

29. Hansell, *supra* note 5.

30. *Id.*

31. *Id.*

32. See About Gmail, <http://mail.google.com/mail/help/intl/en/about.html> (last visited Oct. 28, 2006) (“over 2,600 megabytes of storage (and growing every day)”).

33. As Professor Tim Wu articulated, Starbucks might improve its coffee by recording every conversation that takes place in its café, but Starbucks customers would be appalled at the thought. von Lohmann, *supra* note 6.

34. Declan McCullagh & Anne Broache, *Gonzales: ISPs must keep records on users*, CNET NEWS.COM, Sept. 19, 2006, http://news.com.com/Gonzales+ISPs+must+keep+records+on+users/2100-1028_3-6117455.html.

35. *Gonzales Wants ISPs to Save User Data*, TOWNHALL.COM, Sept. 20, 2006, <http://www.townhall.com/News/NewsArticle.aspx?ContentGuid=202f0538-4011-4568-a902-ae69ddd51436>.

36. See *United States v. Morton Salt Co.*, 338 U.S. 632, 642-43 (1950); James X. Dempsey, *Digital Search & Seizure: Updating Privacy Protections to Keep Pace with Technology*, 865 PLI/PAT 505, 513 (June-July 2006).

37. Dempsey, *supra* note 36, at 540.

ally not protected under the Fourth Amendment, and thus do not require a showing of probable cause.³⁸

When a subpoena is served on the subject of the investigation, that person has notice and can make a motion to quash or modify the subpoena for privilege, burdensomeness, or irrelevance.³⁹ However, third parties holding “personal” information may have little or no incentive to challenge a government subpoena, and have little or no obligation to inform the record subject that his or her information is sought.⁴⁰

Because recent cases interpreting the Fourth Amendment do not extend protection to digital information such as internet searches or ISP subscriber information, most subpoenas are dictated only by a standard of relevance.⁴¹ Part II discusses the cases that led to this lack of Fourth Amendment protection for third-party information. It also addresses statutory protections for internet data under ECPA.

II. EROSION OF FOURTH AMENDMENT PROTECTION FOR THIRD-PARTY INFORMATION

The Fourth Amendment to the U.S. Constitution shields individuals from unreasonable government searches and seizures of their “persons, houses, papers, and effects.”⁴² In addition, federal law requires more stringent legal process to obtain certain types of information.⁴³ There are at

38. See *id.*; Susan W. Brenner & Leo L. Clarke, *Fourth Amendment Protection for Shared Privacy Rights in Stored Transactional Data*, 14 J.L. & POL’Y 211, 229-30 (2006).

39. See Christopher Slobogin, *Subpoenas and Privacy*, 54 DEPAUL L. REV. 805, 806 (2005).

40. Dempsey, *supra* note 36, at 527.

41. *Guest v. Leis*, 255 F.3d 325, 336 (6th Cir. 2001); *United States v. Kennedy*, 81 F. Supp. 2d 1103, 1110 (D. Kan. 2000); *United States v. Hambrick*, 55 F. Supp. 2d 504, 507 (W.D. Va. 1999); see also *infra* Parts II and IV. Some subpoenas are regulated by statutes governing the type of information sought. For example, under the Electronic Communications Privacy Act (ECPA), the government can obtain ISP user logs by a grand jury or an administrative subpoena if the records are “relevant and material to an ongoing criminal investigation.” 18 U.S.C. §§ 2703(c), (d) (2006); see *infra* Section II.B (explaining ECPA’s standards for government subpoenas of electronic information).

42. U.S. CONST. amend. IV.

43. Many state statutes require more stringent legal process. State law as it pertains to electronic data is beyond the scope of this Note. For more information, see 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).

least five federal legal standards for government access to electronic information. In order of descending stringency, these include:⁴⁴

- 1) The very high “probable cause plus” standard for wiretaps;
- 2) The Fourth Amendment probable cause standard for basic search warrants;
- 3) The “specific and articulable facts giving reason to believe” standard for court orders for access to certain stored records;⁴⁵
- 4) The certification of relevance standard for court orders for pen register and trap and trace devices; and
- 5) The relevance standard for subpoenas.

This Part first analyzes Fourth Amendment protections, focusing on Supreme Court cases decided prior to the internet. Second, it examines federal statutory protections for online information under ECPA.

A. Fourth Amendment Jurisprudence

Historically, the Fourth Amendment provided protection against unwarranted government intrusion into private property and information.⁴⁶ Yet today, the Fourth Amendment offers little protection for information in the hands of third parties, and therefore little protection to internet and search engine users. The Fourth Amendment provides:

The right of the people to be secure in their persons, houses, papers, and effects, against unreasonable searches and seizures, shall not be violated, and no Warrants shall issue, but upon probable cause, supported by Oath or affirmation, and particularly describing the place to be searched, and the persons or things to be seized.⁴⁷

In 1967, the Supreme Court interpreted the Fourth Amendment to protect “reasonable expectations of privacy” in the landmark case, *Katz v.*

44. Dempsey, *supra* note 36, at 513.

45. 18 U.S.C. § 2703(d). Section II.B of this Note describes Title II of ECPA, the Stored Communications Act (SCA), codified at 18 U.S.C. §§ 2701-2711.

46. In *Mapp v. Ohio*, 367 U.S. 643 (1961), the Court held that in all criminal proceedings, evidence obtained in violation of the Fourth Amendment is excluded from evidence in criminal trials.

47. U.S. CONST. amend. IV.

United States.⁴⁸ In *Katz*, the Court held that the government's act of electronically listening to and recording Katz's conversation in a public telephone booth violated Katz's "reasonable expectation of privacy," and therefore, violated the Fourth Amendment.⁴⁹ The Court stated, "the Fourth Amendment protects people, not places [W]hat [a person] seeks to preserve as private, even in an area accessible to the public, may be constitutionally protected."⁵⁰ Therefore, the government required a warrant supported by probable cause to access Katz's telephone conversation content because it constituted a "search" protected under the Fourth Amendment.

Justice Harlan's concurrence in *Katz* explained the circumstances in which one might "justifiably" have an expectation of privacy. Harlan described the appropriate inquiry as encompassing two questions: (1) whether the person exhibited an actual expectation of privacy (subjective prong); and (2) whether the expectation is one "that society is prepared to recognize as 'reasonable'" (objective prong).⁵¹ Harlan's two-pronged analysis has been adopted in a number of subsequent cases.⁵² In 2001, the Court in *Kyllo v. United States* used Harlan's test to hold that using sense-enhancing technology to obtain information about a home interior constituted a Fourth Amendment search and therefore required a warrant.⁵³

Notwithstanding the continued relevance of Harlan's test, the Supreme Court curtailed Fourth Amendment protection in 1976 in *United States v. Miller*, holding that the Fourth Amendment does not cover instances where information is given to, or gathered by, third parties.⁵⁴ In *Miller*, the Court held that no "reasonable expectation of privacy" attached to financial records shared with private banks.⁵⁵ The Court distinguished "private

48. *Katz v. United States*, 389 U.S. 347, 360 (1967) (establishing the doctrine of "reasonable expectation of privacy").

49. *Id.* at 359.

50. *Id.* at 351.

51. *Id.* at 361 (Harlan, J., concurring).

52. *See, e.g.*, *Bond v. United States*, 529 U.S. 334, 340-41 (2000) (using *Katz* legitimate expectation of privacy inquiry); *Minnesota v. Olson*, 495 U.S. 91, 95 (1990) ("Since the decision in *Katz v. United States*, 389 U.S. 347 (1967), it has been the law that 'capacity to claim the protection of the Fourth Amendment depends . . . upon whether the person who claims the protection of the Amendment has a legitimate expectation of privacy in the invaded place.'"); *United States v. Knotts*, 460 U.S. 276, 285 (1983) (using *Katz* legitimate expectation of privacy inquiry).

53. *Kyllo v. United States*, 533 U.S. 27, 40 (2001); *see also infra* Part IV.

54. *United States v. Miller*, 425 U.S. 435 (1976).

55. *Miller's* business record holding relied on an earlier case, *Couch v. United States*, 409 U.S. 322 (1973). *Id.* at 442 (citing *Couch*, 409 U.S. at 335). In *Couch*, the IRS issued a summons to compel an accountant to surrender records that Couch provided to the accountant for use in preparing Couch's tax return. The Court held that "there can be

papers” from “business papers,” finding bank records to fall into the latter category.⁵⁶ In addition to its “business record” holding, the *Miller* Court introduced an assumption-of-risk analysis, not previously addressed in the business records cases.⁵⁷ The Court reasoned that Miller voluntarily revealed his financial information to a third party, the bank, and therefore “assumed the risk” that the bank could reveal this information to the government.⁵⁸ Broadly interpreted, *Miller* suggests that conveying documents to a third party, without regard to the type of documents or the purpose for which they were provided, eliminates an expectation of privacy in those documents.⁵⁹

In 1979, in *Smith v. Maryland*, the Supreme Court followed *Miller*’s assumption-of-risk holding and held that monitoring dialed phone numbers did not implicate the Fourth Amendment.⁶⁰ The Court reasoned that people generally do not have privacy expectations in the phone numbers they dial because they know the phone company uses the numbers for a variety of legitimate purposes.⁶¹ As in *Miller*, the Court used broad language, stating “a person has no legitimate expectation of privacy in information he voluntarily turns over to third parties.”⁶² The Court concluded that because the numbers were captured at the phone company’s central offices, the police did not intrude into a “constitutionally protected area.”⁶³ The Court distinguished *Katz*, stating that the pen registers at issue in *Smith*, which capture numbers dialed, “do not acquire the ‘contents’ of communications,” such as the conversation at issue in *Katz*.⁶⁴

The *Miller* and *Smith* assumption-of-risk doctrine has been applied to ISP customer records to preclude Fourth Amendment privacy protection in this area. In *Guest v. Leis*, the Sixth Circuit held that ISP customers lacked a Fourth Amendment privacy interest in their ISP subscriber information “because they communicated it to the systems operators.”⁶⁵ Similarly, in

little expectation of privacy where records are handed to an accountant, knowing that mandatory disclosure of much of the information therein is required in an income tax return.” *Couch*, 409 U.S. at 335.

56. *Miller*, 425 U.S. at 440-41, 445.

57. Patricia L. Bellia, *Surveillance Law Through Cyberlaw’s Lens*, 72 GEO. WASH. L. REV. 1375, 1402 (2004).

58. *See Miller*, 425 U.S. at 443.

59. Bellia, *supra* note 57, at 1402.

60. *Smith v. Maryland*, 442 U.S. 735, 742 (1979).

61. *Id.*

62. *Id.* at 743-44.

63. *Id.* at 741.

64. *Id.* at 747-48.

65. 255 F.3d 325, 336 (6th Cir. 2001).

United States v. Kennedy, the court held that the defendant did not have a Fourth Amendment privacy interest in his ISP subscriber information because when he entered into an agreement for internet service, he knowingly revealed the information to the ISP.⁶⁶ However, two military courts have found a reasonable expectation of privacy in stored e-mail messages.⁶⁷

As the law currently stands, the broad “assumption-of-risk” language in *Miller* and *Smith* provides the basis for arguments that search engine users lack an expectation of privacy in communications held by search engines and ISPs.⁶⁸ Many legal scholars have criticized their application to online communications cases.⁶⁹ Part IV of this Note addresses the Fourth Amendment “legitimate expectation of privacy” as applied to search engine records and challenges the providence of applying *Miller* and *Smith* to online searches. First, Section II.B outlines the current federal statutory framework protecting electronic information.

B. Statutory Protection: Electronic Communications Privacy Act (ECPA)

In 1986, Congress passed ECPA to clarify federal privacy protections in new and emerging technologies.⁷⁰ Since its passage, opportunities for government surveillance have expanded in ways not contemplated when ECPA was written.⁷¹

66. 81 F. Supp. 2d 1103, 1110 (D. Kan. 2000); *see also* *United States v. Hambrick*, 55 F. Supp. 2d 504, 508 (W.D. Va. 1999) (finding no Fourth Amendment protection in ISP records because the user “knowingly revealed his name, address, credit card number, and telephone number to Mindspring and its employees”).

67. *United States v. Long*, 64 M.J. 57, 66-67 (C.A.A.F. 2006); *United States v. Maxwell*, 45 M.J. 406, 418 (C.A.A.F. 1996) (finding reasonable expectation of privacy in e-mail files held by AOL).

68. *See* *Guest v. Leis*, 255 F.3d 325, 336 (6th Cir. 2001); *United States v. Kennedy*, 81 F. Supp. 2d 1103, 1110 (D. Kan. 2000).

69. *See, e.g.,* *Bellia*, *supra* note 57, at 1397-1413; *Henderson*, *supra* note 43; *Slobogin*, *supra* note 39; *infra* Part IV.

70. Electronic Communications Privacy Act, 18 U.S.C. §§ 2510-2711 (2006). ECPA is structured in three sections: (1) Title I, the Wiretap Act; (2) Title II, the Stored Communications Act (SCA); and (3) Title III, the Pen Register Act. The Stored Communications Act is codified at 18 U.S.C. §§ 2701-2711 (2000 & Supp. II 2002). The Wiretap Act, codified at 18 U.S.C. §§ 2510-2522, and the Pen Register Act, codified at 18 U.S.C. §§ 3121-3127, are not covered in this Note.

71. ECPA also has a notable discrepancy in that it provides relatively strong protection to communications in transit, but much weaker protection to stored communications. Katherine A. Oyama, Note, *Email Privacy After United States v. Councilman: Legislative Options for Amending ECPA*, 21 BERKELEY TECH. L.J. 499, 508 (2006).

Title II of ECPA, the Stored Communications Act (SCA), applies to communication contents stored by third parties and is most applicable to internet searches, server logs, and stored e-mail.⁷² The SCA prohibits anyone from “intentionally access[ing] without authorization a facility through which an electronic communication service is provided.”⁷³ The SCA exempts providers of electronic or wire communications services, regardless of whether the provider acts in the normal course of business.⁷⁴ ECPA only constrains government access to data.⁷⁵ ISPs are not regulated by ECPA in accessing any customer stored data and need not obtain a subpoena to access stored customer records.⁷⁶

Under ECPA, the government must obtain a warrant supported by probable cause to access information stored 180 days or less.⁷⁷ For electronic communications stored more than 180 days, the government needs either a warrant, a subpoena and notice to the subscriber, or a § 2703(d) court order and notice to the subscriber.⁷⁸ Section 2703(d) orders are available when the government shows “specific and articulable facts showing that there are reasonable grounds to believe” the information sought is relevant and material to an ongoing criminal investigation.⁷⁹ This showing is far less than the Fourth Amendment’s “probable cause” standard. It is also less than would be required under ECPA’S Wiretap Act for real-time interception of phone and e-mail communications, which requires a warrant based on probable cause.⁸⁰

Whether search queries and URLs are protected “content information” under ECPA remains an open issue. This statutory issue is addressed further in Part V. First, the Google subpoena incident illustrates the interplay between user privacy, third-party record holders, and government access. It also exemplifies the user privacy issues at stake in this developing body of law.

72. See 18 U.S.C. §§ 2701-2711.

73. § 2701(a)(1).

74. See § 2702.

75. See § 2703.

76. See § 2703(c)(1).

77. § 2703(a).

78. § 2703(b).

79. § 2703(d).

80. § 2518(3). For an analysis of ECPA’s inconsistencies, see Oyama, *supra* note 71.

III. *GONZALES V. GOOGLE, INC.: RESISTANCE TO GOVERNMENT SUBPOENA*

In *Gonzales v. Google, Inc.*, the U.S. government subpoenaed Google to obtain thousands of search queries entered by its users and thousands of URLs produced by Google searches.⁸¹ The U.S. District Court for the Northern District of California held that trust in Google would be unnecessarily eroded if Google was forced to divulge the search queries entered by its users.⁸² The court compelled Google to provide a sample of 50,000 URLs but did not require Google to disclose any user search queries.⁸³

A. Facts and Procedural History

1. *Government Defense of the Child Online Protection Act*

The government requested Google's search queries and URLs to aid its defense of the Child Online Protection Act (COPA).⁸⁴ Congress enacted COPA in 1998 in order to prohibit making commercial communications by means of the internet, "available to any minor and that includes material that is harmful to minors."⁸⁵ The American Civil Liberties Union and other plaintiffs sought a preliminary injunction against COPA's enforcement, arguing that less restrictive means of filtering explicit content, including user-end software filters, were superior.⁸⁶ The United States District Court for the Eastern District of Pennsylvania granted the preliminary injunction, finding that COPA unduly burdened protected speech.⁸⁷

In *Ashcroft v. ACLU*, the Supreme Court affirmed the ruling that COPA likely violates the First Amendment.⁸⁸ The Court also held that there was an insufficient record before it by which the government could carry its burden to show that any less restrictive alternatives were less effective

81. *Gonzales v. Google, Inc.*, 234 F.R.D. 674, 679 (D. Cal. 2006).

82. *Id.* at 684.

83. *Id.* at 688.

84. *Id.* at 678-79.

85. 47 U.S.C. § 231(a)(1) (2006). COPA defines "material that is harmful to minors" as obscene material or material meeting each prong of a three-part test. *See* 47 U.S.C. § 231(e)(6) (2006).

86. *Google*, 234 F.R.D. at 678-79; Declan McCullagh, *Google to feds: Back off*, CNET NEWS.COM, Feb. 17, 2006, http://news.com.com/Google+to+feds+Back+off/2100-1030_3-6041113.html. COPA, if constitutional, is to be codified at 47 U.S.C. § 231.

87. *ACLU v. Reno*, 31 F. Supp. 2d 473, 497-98 (E.D. Pa. 1998).

88. *Ashcroft v. ACLU*, 542 U.S. 656 (2004). The Court of Appeals for the Third Circuit affirmed the grant of the preliminary injunction. *ACLU v. Reno*, 217 F.3d 162 (3d Cir. 2000).

than COPA.⁸⁹ Of these alternatives, the Court focused on blocking and filtering software programs which restrict speech at the receiving end, not universal restrictions on content at the source.⁹⁰ The Court remanded the case to allow the parties to supplement the record “to reflect current technological realities.”⁹¹

2. *Government Subpoena of ISP and Search Engine Information*

In August 2005, the federal government subpoenaed Google in support of its defense of COPA.⁹² The government contended that it was studying the effectiveness of blocking and filtering software for child pornography.⁹³ To provide data for its study, the government served subpoenas on Google, AOL, Yahoo!, and Microsoft.⁹⁴ The subpoena required the companies to produce a list of URLs available to users of their services, and to produce the text of users’ search queries.⁹⁵ While AOL, Yahoo, and Microsoft complied with the government’s request, Google objected.⁹⁶ The government then scaled back its request for Google to produce only 50,000 URLs and 5,000 search queries entered by users between June 1 and July 31, 2005.⁹⁷ When Google still refused to comply, the government moved to compel Google to comply with the subpoena on January 18, 2006.⁹⁸

B. U.S. District Court Opinion

The U.S. District Court for the Northern District of California allowed the government’s request for Google’s URLs only.⁹⁹ The court found that production of both the URLs and the search queries would unduly burden Google by potentially diminishing user trust or disclosing trade secrets.¹⁰⁰ The court also discussed user privacy issues.¹⁰¹

89. *Ashcroft*, 542 U.S. at 673.

90. *See id.* at 667.

91. *Id.* at 672.

92. *Google*, 234 F.R.D. at 678.

93. *Id.*

94. *Id.* at 679.

95. *Id.*

96. *Id.*

97. *Id.*

98. *Id.* at 678.

99. *Id.* at 688.

100. *Id.* at 686.

101. *Id.* at 687.

1. *Relevance and Undue Burden*

Under Federal Rule of Civil Procedure 26(b), the information sought by a subpoena must be “reasonably calculated to lead to admissible evidence.”¹⁰² Regarding the URL sample, the court was “able to envision” a study whereby the sample would be reasonably calculated to lead to admissible evidence by testing the filtering software.¹⁰³ Based on the broad definition of relevance in Rule 26 and the narrowed scope of the government subpoena, the court held that the 50,000 URLs were relevant to the issues in *ACLU v. Gonzales*.¹⁰⁴

The court also held that the search queries were reasonably calculated to lead to admissible evidence.¹⁰⁵ As defined in the government’s subpoena, “queries” included only the text of the search string entered by a user, not any information that would identify the person or the computer from which the string was entered.¹⁰⁶

Despite the finding of relevance under Rule 26(b), the court held that the burden on Google outweighed the government’s need for both the URLs and search queries, under Federal Rule of Civil Procedure 45(c)(3)(a).¹⁰⁷ Google argued that revealing users’ search queries would have a chilling effect on its business, because its success depends in part on the volume of users, many of whom are attracted to Google’s anonymity and privacy.¹⁰⁸

The court stated that neither URLs nor search strings with personal information redacted were reasonably “personal information” under Google’s stated privacy policy.¹⁰⁹ However, the court held that even if Google users *unreasonably* expected Google to prevent disclosure of their search queries, this expectation of privacy might have an appreciable impact on the way in which Google is perceived, and consequently on the frequency with which Google is used.¹¹⁰ The court concluded that many

102. FED. R. CIV. PRO. 26(b). This requirement is liberally construed to permit the discovery of information that ultimately may not be admissible at trial. *See, e.g., Moon v. SCP Pool Corp.*, 232 F.R.D. 633, 637 (C.D. Cal. 2005) (quashing subpoena seeking production of all purchasing information where underlying dispute was limited to a particular region).

103. *Google*, 234 F.R.D. at 681.

104. *Id.* at 686.

105. *Id.* at 682.

106. *Id.*

107. *Id.* at 686.

108. *Id.* at 683.

109. *Id.* at 684.

110. *Id.*

users do expect privacy, as over a quarter of all internet searches are for pornography.¹¹¹

Additionally, the court found the subpoena presented a burden from potential loss of trade secrets.¹¹² A narrow sample of Google's index and query log could lead to further disclosure of confidential information in the event more information was sought.¹¹³

Therefore, in balancing the government's need for the proprietary information against the claim of injury resulting from disclosure, the court held that the government did not demonstrate a substantial need for *both* the URL and search query information.¹¹⁴ It would be unreasonably cumulative and duplicative to compel Google to produce both sets of proprietary information.¹¹⁵ Thus, court granted the government's motion to compel only as to the URL sample, not for any search queries.¹¹⁶

2. *Google User Privacy*

The court also raised concerns about the privacy of Google's users. The government contended that its request for search queries raised no privacy issues because the text of the queries would not yield identifiable information.¹¹⁷ However, the court expressed concern that queries such as "bomb placement white house," or entry of users' own names presented privacy concerns.¹¹⁸

Moreover, the court was concerned about government use of information in unrelated investigations, stating it was "conceivable that the government may have an obligation to pursue information received for unrelated litigation purposes under certain circumstances"¹¹⁹ In footnote 7, the court quoted DOJ spokesperson Charles Miller as stating, "I'm assuming that if something raised alarms, we would hand it over to the prop-

111. *Id.*

112. FED. R. CIV. P. 45(c)(3)(B) provides protections where the party challenging the subpoena makes "a strong showing that it has historically sought to maintain the confidentiality of this information." *Google*, 234 F.R.D. at 684 (citing *Compaq Computer Corp. v. Packard Bell Elec., Inc.*, 163 F.R.D. 329, 338 (N.D. Cal. 1995)). This rule was intended to provide protections for the intellectual property of non-parties. *Google*, 234 F.R.D. at 685 (citing *Mattel, Inc. v. Walking Mountain Prod.*, 353 F.3d 792, 814 (9th Cir. 2003) (citing Rule 45 Advisory Committee notes)).

113. *Google*, 234 F.R.D. at 684.

114. *Id.* at 685.

115. *Id.*; FED. R. CIV. P. 26(b)(2)(i).

116. *Google*, 234 F.R.D. at 686.

117. *Id.* at 687.

118. *Id.*

119. *Id.*

er [authorities].”¹²⁰ Presumably, the government could serve Google with additional subpoenas, even to identify specific users, if it had reason to believe that such users posed a security threat.¹²¹ Ultimately, the court did not express an opinion on these privacy issues, as it denied the government’s request for search queries.¹²²

In the end, the court ordered Google to develop a protocol for random selection and production of only 50,000 URLs in Google’s database.¹²³ Nicole Wong, Google general counsel, stated, “What his ruling means is that neither the government nor anyone else has carte blanche when demanding data from internet companies.”¹²⁴

The *Google* case drew attention to the interplay between online user privacy rights, third-party data holders, and government access. However, it failed to answer the paramount question: to what degree, if any, are internet searches “private”? Part IV addresses the application of the Fourth Amendment to online searches, focusing on the *Katz*, *Miller*, and *Smith* precedents. It argues that the Fourth Amendment should be interpreted consistent with its original purpose, ensuring the “right of the people to be secure” in their “persons, houses, papers, and effects.”¹²⁵

IV. THE FOURTH AMENDMENT APPLIED TO ONLINE SEARCHES

For decades, courts have struggled to balance law enforcement’s legitimate need to capitalize on advances in electronic surveillance technology with individuals’ Fourth Amendment right to be secure against unreasonable searches and seizures. Although they predated the digital revolution, *Miller* and *Smith* continue to be cited for the proposition that individuals have no constitutionally protected privacy interest in records voluntarily disclosed to third parties, a category which presumably includes search engines like Google. As of today, the law is not settled on the issue of a legitimate expectation of privacy in modern electronic communications,

120. *Id.* at 688, n.7 (Decl. of Ashok Ramani, Ex. B.); Steven Levy, *Technology: Searching for Searches*, NEWSWEEK, Jan. 30, 2006, at 34; *see also* Posting by Kurt Opsahl, DOJ Gone Google-Fishin’, EFF Deep Links, <http://www.eff.org/deeplinks/archives/004341.php> (Jan. 22, 2006, 15:28 PST).

121. *See* Opsahl, *supra* note 120.

122. *See Google*, 234 F.R.D. at 688.

123. *Id.*

124. Posting by Nicole Wong, Associate General Counsel, Judge Tells DOJ “No” on Search Queries, Googleblog, <http://googleblog.blogspot.com/2006/03/judge-tells-doj-no-on-search-queries.html> (Mar. 17, 2006, 06:00 PM).

125. *See* U.S. CONST. amend. IV.

and no case has explicitly addressed the Fourth Amendment as applied to search terms.¹²⁶ This Note proposes that the Fourth Amendment should apply to online search content, consistent with an originalist interpretation.

A. *Miller* and *Smith*'s Assumption-of-Risk Paradigm Should Not Control Fourth Amendment Jurisprudence in Online Communications

Miller and *Smith* have long stood for the proposition that information voluntarily shared with third parties is not constitutionally protected under the Fourth Amendment.¹²⁷

Two arguments advanced in *Miller* and *Smith* arguably support a finding that internet search information is not constitutionally protected by the Fourth Amendment. First, once a user enters a Google query, he or she has no control over what Google does with the information. Google may store the search in its database or use it for business purposes like targeted advertising. Second, according to a narrow reading of *Miller* and *Smith*'s assumption-of-risk holdings, users do not have a legitimate expectation of privacy in information voluntarily disclosed to a third party such as Google.¹²⁸

However, *Miller* and *Smith* have been criticized as advancing an overly-broad conception of assumption-of-risk that equates any disclosure to a third party with a public disclosure.¹²⁹ The *Miller* Court quoted language from *Katz* that "what a person knowingly exposes to the public . . . is not subject to Fourth Amendment protection."¹³⁰ Yet in *Katz*, the Court explicitly held that the disclosure was protected under the Fourth Amendment because *Katz* did not *publicly* disclose information, but was talking with his friend and had no expectation that his conversation would be re-

126. *Bellia*, *supra* note 57, at 1408.

127. *See, e.g.*, *California v. Greenwood*, 486 U.S. 35, 41-42 (1988) (applying *Smith*'s assumption of risk analysis to hold it was not a search to fly over a backyard to discover marijuana plants); *S.E.C. v. Jerry T. O'Brien, Inc.*, 467 U.S. 735, 742-43 (1984) (following *Miller* to hold that respondents could not argue that "notice of subpoenas issued to third parties is necessary to allow a target to prevent an unconstitutional search or seizure of his papers").

128. *See Smith v. Maryland*, 442 U.S. 735, 740 (1979) (focusing on an objective inquiry of risk assumption); *United States v. Miller*, 425 U.S. 435, 442-43 (1976) (explaining that all the documents obtained "contain only information voluntarily conveyed to the banks and exposed to their employees in the normal course of business").

129. *See Miller*, 425 U.S. at 442; *Smith*, 442 U.S. at 740; *Brenner & Clarke*, *supra* note 38, at 257-58.

130. *Miller*, 425 U.S. at 442 (quoting *Katz v. United States*, 389 U.S. 347, 351 (1967)).

vealed.¹³¹ The third-party revelation to the phone company did not eliminate Katz's expectation of privacy against government interception.¹³²

The telecommunications carrier in *Katz* can be analogized to a search engine or ISP channeling electronic communications. While Google could potentially disclose searches to the government, following *Katz*, this does not necessarily eliminate one's expectation of privacy from government access to this information. Moreover, the *Katz* Court stated that a person placing a telephone call "is surely entitled to assume that the words he utters into the mouthpiece will not be broadcast to the world."¹³³ The Court emphasized the unique role telephones play in modern life, stating, "[t]o read the Constitution more narrowly is to ignore the vital role that the public telephone has come to play in private communication."¹³⁴ In much the same way, the internet plays a "vital role" in modern communication.¹³⁵ The internet would be fundamentally altered if every user's search was recorded, mapped to an IP address, and delivered to the government.

A further critique of *Miller* and *Smith* is that the assumption-of-risk paradigm is problematic as applied to many online communications.¹³⁶ Content disclosure to Google or other search engines is practically inevitable in order to participate in modern life.¹³⁷ Justice Marshall, dissenting in *Smith*, recognized the Court's error, stating, "It is idle to speak of 'assuming' risks in contexts where, as a practical matter, individuals have no realistic alternative."¹³⁸ Recognizing this unworkable doctrine, eleven states have rejected the federal "third party doctrine" in their privacy cases, and ten others have shown that they might reject it.¹³⁹

131. Katz made a call from inside a public telephone booth. Katz was held to have a reasonable expectation of privacy in that call. *Katz*, 389 U.S. at 351.

132. Bellia, *supra* note 57, at 1385-86.

133. *Id.* at 352.

134. *Id.*

135. In the United States, about sixty-six percent of adults use the internet at least once per day. Pew Internet & Am. Life Project, Daily Internet Activities, *supra* note 1.

136. See *Smith v. Maryland*, 442 U.S. 735, 740 (1979) (converting the inquiry into an objective inquiry of risk assumption); *United States v. Miller*, 425 U.S. 435, 442-43 (1976) (explaining that all of the documents obtained "contain only information voluntarily conveyed to the banks and exposed to their employees in the normal course of business").

137. See Brenner & Clarke, *supra* note 38, at 254.

138. *Smith*, 442 U.S. at 749-50 (Marshall, J., dissenting).

139. See, e.g., *People v. Sporleder*, 666 P.2d 135, 141-42 (Colo. 1983); *State v. Hunt*, 450 A.2d 952, 956 (N.J. 1982); see also Henderson, *supra* note 43, at 395 (listing the states that have rejected the federal third party doctrine).

Given these difficulties, it is unsurprising that courts have not developed a uniform approach in online communication privacy cases. The following Section summarizes the current state of the law.

B. Courts Evaluating Fourth Amendment Jurisprudence Could Conclude Search Engine Users Lack a Legitimate Expectation of Privacy in Search Queries

Current caselaw does not resolve whether users retain an expectation of privacy in queries entered into a search engine or in electronic communications stored on a service provider's system.¹⁴⁰ Thus far, two military courts have found a reasonable expectation of privacy in stored e-mail messages.¹⁴¹ In *United States v. Maxwell*, the United States Court of Appeals for the Armed Forces held that a user possessed a reasonable expectation of privacy in e-mail messages he sent and received on AOL.¹⁴² The court stated that when an individual sends letters, messages, or other information on the computer, the Fourth Amendment expectation of privacy diminishes incrementally.¹⁴³ The more open the method of transmission, such as through an online chat room, the less privacy one can reasonably expect.¹⁴⁴

Other courts have held that users retain a legitimate expectation of privacy in e-mail in transmission, but not once it has been opened by the recipient.¹⁴⁵ In *United States v. Charbonneau*, the court held that defendant had a limited reasonable expectation of privacy in the e-mail messages he sent and received on AOL.¹⁴⁶ The court stated, "Email is almost equivalent to sending a letter via the mails."¹⁴⁷ However, because defendant sent his messages through an open chat room, his reasonable expectation of privacy diminished. The court held there was no reasonable expectation of privacy in messages sent to others in internet chat rooms.¹⁴⁸ Courts have

140. Bellia, *supra* note 57, at 1408.

141. See *United States v. Long*, 64 M.J. 57 (C.A.A.F. 2006); *United States v. Maxwell*, 45 M.J. 406, 412, 419 (C.A.A.F. 1996) (finding reasonable expectation of privacy in e-mail files held by AOL).

142. *Maxwell*, 45 M.J. at 417.

143. *Id.*

144. *Id.*

145. See *United States v. Charbonneau*, 979 F. Supp. 1177, 1184 (S.D. Ohio 1997); *Smyth v. Pillsbury*, 914 F. Supp. 97, 101 (E.D. Pa. 1996).

146. *Charbonneau*, 979 F. Supp. at 1184.

147. *Id.*

148. *Id.* at 1185; see also *State v. Moller*, No. 2001-CA-99, 2002 WL 628634, at *5 (Ohio App. Apr. 19, 2002) (holding that defendant had no expectation of privacy in communications in chat room, where undercover officer posing as fourteen-year-old girl was among message recipients).

also held that users retain no expectation of privacy in subscriber information supplied to an ISP.¹⁴⁹

One could argue that the contents of search queries conveyed to Google are more private than messages sent in chat rooms. They are not open to outside viewing and are processed by the search engine automatically, much as ISPs transmit and store e-mail.¹⁵⁰ However, one could also analogize search queries to the phone numbers dialed in *Smith* or the bank records at issue in *Miller*, voluntarily revealed to a service provider for use in their business operations.¹⁵¹ However, there is a qualitative difference between search query entries and other kinds of transactional data routinely provided to third parties in the course of business. A phone number is “content neutral” and does not give law enforcement any means to reconstruct the conversation itself.¹⁵² By contrast, search terms contain precise language that reveals topics researched. This allows government access to types of information it never had when *Katz*, *Miller*, and *Smith* were decided.¹⁵³

There are several possible analogies one could draw between online searches and other communication methods. No case has decided whether there is a constitutional right to privacy in queries entered into a search engine.¹⁵⁴ The following Section proposes that the Fourth Amendment’s traditional protection of “papers and effects” should extend to analogous online communications, potentially including search queries.¹⁵⁵

C. Courts Should Interpret the Fourth Amendment Consistent with Original Intent to Ensure the “Right to be Secure”

The Fourth Amendment protects the “right of the people to be secure in their persons, houses, papers, and effects, against unreasonable searches

149. See *Guest v. Leis*, 255 F.3d 325, 336 (6th Cir. 2001) (finding no expectation of privacy in subscriber information communicated to online bulletin board operators); *United States v. Kennedy*, 81 F. Supp. 2d 1103, 1110 (D. Kan. 2000) (finding no expectation of privacy in subscriber information communicated to internet service provider).

150. See *Maxwell*, 45 M.J. at 417 (finding a reasonable expectation of privacy in e-mail stored on AOL’s servers).

151. *Bellia*, *supra* note 57, at 1408; Gavin Skok, *Establishing a Legitimate Expectation of Privacy in Clickstream Data*, 6 MICH. TELECOMM. TECH. L. REV. 61, 78 (2000).

152. *Bellia*, *supra* note 57, at 1403 (“Neither *Miller* nor *Smith* involved the substance of personal communications.”); Skok, *supra* note 151, at 78 (distinguishing the more revealing clickstream data from “content neutral” phone numbers).

153. *Bellia*, *supra* note 57, at 1457; Skok, *supra* note 151, at 79 (describing information officers can obtain from clickstream data as exceeding that available from library records).

154. *Bellia*, *supra* note 57, at 1408.

155. See U.S. CONST. amend. IV.

and seizures”¹⁵⁶ In drafting the Fourth Amendment, the Framers intended to curb indiscriminate searches by law enforcement officers and protect citizens’ “right to be secure.”¹⁵⁷ In deciding modern communication privacy cases, courts should advance an interpretation of the Fourth Amendment that upholds a meaningful right to be secure.¹⁵⁸

Today, many citizens’ most personal papers and records are held and conveyed by third parties. E-mail services and digital record holders provide ways to conveniently store and access personal information such as letters, academic and business papers, music, and photos.¹⁵⁹ Many storage activities that once took place privately in the home have moved into the digital realm. The Fourth Amendment protection of “persons, houses, papers, and effects” should arguably apply to this online information.¹⁶⁰

The Framers of the Fourth Amendment sought to prohibit forms of physical intrusion upon “persons” or “houses” as well as unreasonable intrusion into “papers and effects” caused by surveillance and indiscriminate general warrants.¹⁶¹ The specific invasion of privacy they sought to eliminate was “not that of intrusion per se, but of a general, exploratory rummaging in a person’s belongings.”¹⁶²

In 1886 in *Boyd v. United States*, the government tried to compel a merchant to produce documents in a civil forfeiture proceeding.¹⁶³ The

156. *Id.*

157. Thomas Y. Davies, *Recovering the Original Fourth Amendment*, 98 MICH. L. REV. 549, 556 (1999).

158. *Id.* at 741.

159. Record Nations is an example of one such service. See Record Nations, http://www.recordnations.com/services/landing-storage.php?utm_source=google&utm_medium=ppc&gclid=CI6E5eTMzIgCFRL-YAodYXknBQ (last visited Nov. 16, 2006) (record storage service).

160. In 1878, in *Ex Parte Jackson*, the Supreme Court held that the Fourth Amendment prohibited government officials from opening letters without a warrant: “The constitutional guaranty of the right of the people to be secure in their papers against unreasonable searches and seizures extends to their papers, thus closed against inspection, wherever they may be.” 96 U.S. 727, 733 (1878). Today, e-mail subsumes the role of many personal letters.

161. Davies, *supra* note 157, at 555 (stating that James Madison, who proposed the draft that ultimately became the Fourth Amendment, viewed his proposal as a ban against “general” warrants, including warrantless searches of offices); Thomas K. Clancy, *The Role of Individualized Suspicion in Assessing the Reasonableness of Searches and Seizures*, 25 U. MEM. L. REV. 483, 528 (1995) (“The core complaint of the colonists was not that searches and seizures were warranted, warrantless, or unauthorized actions; it was the general, suspicionless nature of the searches and seizures.”).

162. *Coolidge v. New Hampshire*, 403 U.S. 443, 467 (1971) (citing *Boyd v. United States*, 116 U.S. 616, 624-30 (1886)).

163. *Boyd v. United States*, 116 U.S. 616, 635 (1886).

Court held that the documents could not be compelled, based on the Fourth Amendment.¹⁶⁴ The Court's warning is particularly relevant today:

[I]llegitimate and unconstitutional practices get their first footing in that way, namely, by silent approaches and slight deviations from legal modes of procedure. This can only be obviated by adhering to the rule that constitutional provisions for the security of person and property should be liberally construed It is the duty of courts to be watchful for the constitutional rights of the citizen, and against any stealthy encroachments thereon.¹⁶⁵

Subpoenas for thousands of search queries entered by Google, Yahoo!, or other search engine users fail to discriminate between lawful and unlawful activity and expose intimate details of Americans' lives. This "exploratory rummaging" is precisely what the Framers sought to eliminate in passing the Fourth Amendment.¹⁶⁶ As the court stated in *Gonzales v. Google, Inc.*, revealing search query content, even when this information pertains to lawful activity, may prompt additional government subpoenas for "suspicious information."¹⁶⁷ Allowing the government to expose the conduct of the innocent in the course of pursuing the guilty contradicts the purpose of the Fourth Amendment.¹⁶⁸

Moreover, internet searches are more akin to the "private papers" traditionally protected by the Fourth Amendment than "business records" at issue in *Miller and Smith*.¹⁶⁹ In *Miller and Smith*, the Court noted that the content intercepted was not "personal," but "business records."¹⁷⁰ When the government obtains bank records, as in *Miller*, it learns what transac-

164. *Id.* at 638.

165. *Id.* at 635.

166. *Id.*

167. *Gonzales v. Google, Inc.*, 234 F.R.D. 674, 687 (N.D. Cal. 2006); *Id.* at 687 n.7 (Decl. of Ashok Ramani, Ex. B.); Levy, *supra* note 120 (quoting Department of Justice spokesman Charles Miller: "I'm assuming that if something raised alarms, we would hand it over to the proper [authorities]."); *see also* Opsahl, *supra* note 120.

168. Skok, *supra* note 151, at 85 (citing *United States v. Rabinowitz*, 339 U.S. 56, 82 (1950) (Frankfurter, J., dissenting) ("By the Bill of Rights the founders of this country subordinated police action to legal restraints, not in order to convenience the guilty but to protect the innocent.")).

169. *See United States v. Miller*, 425 U.S. 435, 439 (1976) (distinguishing bank records from "compulsory production of a man's private papers," traditionally protected by the Fourth Amendment (quoting *Boyd*, 116 U.S. at 622)).

170. *Id.* at 440-41, 445 (noting that bank records were integral to the bank's business); *Smith v. Maryland*, 442 U.S. 735, 742 (1979) ("the phone company has facilities for making permanent records of the numbers they dial . . . [callers] see a list of their long-distance (toll) calls on their monthly bills.").

tions were made and by whom, but not the underlying subjects and circumstances of the transactions.¹⁷¹ By contrast, a Google search query reveals content, allows the government to research responsive URLs, and may prompt subpoenas to obtain a user's IP address and identity.¹⁷² Roughly twenty-five percent of all web searches are for pornography, and others reveal various private interests.¹⁷³ The "content" of these queries is more closely aligned with the phone conversation in *Katz* than to digits dialed on a phone or bank records one knows a human teller might read, at issue in *Smith* and *Miller*.¹⁷⁴

D. Fortifying Fourth Amendment Protection for Online Communications

Google's terms of service state that it will disclose personally-revealing information to third parties "in limited circumstances," including when "complying with legal process," preventing imminent harm, or ensuring the security of the network.¹⁷⁵ If search information is not currently protected under the Fourth Amendment, probable cause is not required in order to access personal searches.¹⁷⁶ Indeed, AOL, Yahoo, and Microsoft complied with the government's request for URLs and search queries, without requiring a warrant.¹⁷⁷ Therefore, the "legal process" required for government access to search query information should be better defined by the courts so companies and the public know exactly what is "private," and what is not.

Because users' personal ideas, "papers, and effects" are now conveyed to third party companies like AOL and Google, the *Miller-Smith* paradigm is inadequate and should not foreclose Fourth Amendment protection.

171. Skok, *supra* note 151, at 78.

172. See *Google*, 234 F.R.D. at 687 n.7 (Decl. of Ashok Ramani, Ex. B.); Levy, *supra* note 120; see also Opsahl, *supra* note 120.

173. See Supplemental Declaration of Phillip B. Stark, Ph.D., at 4 (Feb. 24, 2006), *Gonzales v. Google*, 234 F.R.D. 674 (N.D. Cal. 2006) (No. MC-80006-22).

174. The *Miller-Smith* approach also ignores the societal benefits of well-placed trust in third party information gatherers and services. Many businesses provide efficient methods of record-keeping, research, and completing transactions. Recognizing this trust as legitimate enables companies to offer these services at a lower price, as consumers need not negotiate for additional privacy protections, which are potentially costly. See Brenner & Clarke, *supra* note 38, at 258.

175. See Google Privacy Center, Google Privacy Policy Highlights (Oct. 14, 2005), <http://www.google.com/privacy.html>.

176. See U.S. CONST. amend. IV ("no Warrants shall issue, but upon probable cause"); Bellia, *supra* note 57, at 1402 ("Read broadly, *Miller* suggests that the mere fact that documents are conveyed to a third party . . . eliminates any expectation of privacy.").

177. *Google*, 234 F.R.D. at 679.

Consistent with the original intent of the Fourth Amendment, personal records that society recognizes as private should require a warrant and probable cause to access, whether held by an individual or by a private company.¹⁷⁸ Courts should assess whether online communications, like search queries, contain the type of information the Fourth Amendment was intended to protect.¹⁷⁹

Some legal scholars suggest that obtaining “privately-held,” “personal records” should require a warrant and probable cause.¹⁸⁰ Others suggest that First Amendment values are implicated in the Fourth Amendment “right to be secure,” and should factor into this calculus.¹⁸¹ This Note does not evaluate the merits of these various proposals. However, it suggests that search queries contain content and ideas traditionally expressed as “papers” and “effects” protected by the Fourth Amendment.¹⁸² In deciding future cases, courts should consider the original intent of the Framers of the Fourth Amendment in evaluating whether society should recognize a legitimate expectation of privacy in such communications.

In addition to constitutional protection, federal statutes protect the privacy of some electronic communications.¹⁸³ Part V addresses ECPA’s

178. See U.S. CONST. amend. IV; *Katz v. United States*, 389 U.S. 347, 350-52 (1967) (“[The Fourth] Amendment protects individual privacy against certain kinds of governmental intrusion, but its protections go further, and often have nothing to do with privacy at all.”).

179. See Skok, *supra* note 151, at 83 (“Net users should retain an expectation of privacy in clickstreams because this data is precisely the type of information the Framers sought to protect against arbitrary government intrusion.”).

180. See Slobogin, *supra* note 39, at 182-83.

181. Some academics have argued that when First Amendment values are threatened by government access to private information, this should militate in favor of a Fourth Amendment “reasonable expectation of privacy.” A complete analysis of this issue is beyond the scope of this note. For insightful work on First Amendment privacy issues in electronic information, see Akhil Reed Amar, *Fourth Amendment First Principles*, 107 HARV. L. REV. 757, 806 (1994); Neil M. Richards, *Essay: The Information Privacy Law Project*, 94 GEO. L.J. 1087, 1118-19 (2006); Daniel J. Solove, *The First Amendment as Criminal Procedure*, 82 N.Y.U. L. REV. (forthcoming 2007) (on file with author).

182. *Ex Parte Jackson*, 96 U.S. at 733 (holding that the Fourth Amendment prohibited government officials from opening letters without a warrant); Clancy, *supra* note 161, at 528 (“The core complaint of the colonists . . . was the general, suspicionless nature of the searches and seizures.”); Davies, *supra* note 157, at 555 (describing the Fourth Amendment as intended to ban “general” warrants, including warrantless office searches); Skok, *supra* note 151, at 83 (“Net users should retain an expectation of privacy in clickstreams because this data is precisely the type of information the Framers sought to protect against arbitrary government intrusion.”).

183. See 18 U.S.C. § 2701.

Stored Communications Act (SCA) and standards for government access to electronic communications.

V. FEDERAL STATUTORY PROTECTIONS: ECPA AND THE STORED COMMUNICATIONS ACT (SCA)

Title II of ECPA, the Stored Communications Act (SCA), sets the standard for government access to electronic communications.¹⁸⁴ Whether search queries fall under the definition of “contents of communications” protected under ECPA is an open question.¹⁸⁵ Expanding and clarifying federal statutory protections for electronic information held by third parties could both increase procedural safeguards and strengthen the reasonable expectation of privacy in online communications.¹⁸⁶

When the Supreme Court in *Miller* found no constitutional protection for bank records, Congress responded with statutory protection for bank records.¹⁸⁷ After the *Smith* Court found no privacy in dialed telephone numbers, Congress again established statutory protection.¹⁸⁸ Today, the “reasonable expectation of privacy” in online records is uncertain, and some courts have held that ISP users’ information is not constitutionally protected.¹⁸⁹ Statutory measures could potentially fill this void left by uncertain constitutional protection.

Statutory measures are also important because data holders like Google and AOL may have little incentive to resist government subpoenas for information used to fight crime or fraud. When Google resisted the subpoena last year, it resisted alone.¹⁹⁰ One cannot be certain how many

184. *Id.*

185. Detailed discussion of whether Google searches are currently covered under ECPA is beyond the scope of this Note. For more information, see Amicus Brief of Center for Democracy & Technology in Support of Google’s Opposition to the Motion to Compel of Attorney General Gonzales, *Gonzales v. Google*, 234 F.R.D. 674 (N.D. Cal. 2006) (No. CV-06-80006-MISC JW), 2006 WL 733757 [hereinafter CDT Amici Curie Brief].

186. The Supreme Court has never squarely addressed the extent to which statutory or common law protection of a communication contributes to the reasonableness of an expectation of privacy. See *Bellia*, *supra* note 57, at 1387.

187. See Right to Financial Privacy Act of 1978, 12 U.S.C. §§ 3401-22 (2000), amended by 12 U.S.C.A. §§ 3401-22 (West Supp. 2005).

188. See 18 U.S.C. §§ 3121-27 (2000 & Supp. 2002).

189. See, e.g., *United States v. Kennedy*, 81 F. Supp. 2d 1103, 1110 (D. Kan. 2000); *United States v. Hambrick*, 55 F. Supp. 2d 504, 508 (W.D. Va. 1999) (finding no Fourth Amendment protection in ISP records because the user “knowingly revealed his name, address, credit card number, and telephone number” to his ISP).

190. *Google*, 234 F.R.D. at 679.

requests search engines and ISPs have already complied with.¹⁹¹ Data brokering companies now aggregate information on individuals and sell it to both government and private litigants.¹⁹² These practices implicate new privacy concerns not addressed in ECPA.¹⁹³

One effective solution is to implement more stringent criterion for government access to third party-held personal information. If search queries were covered by ECPA, the government would be required to follow the procedures outlined in the SCA: obtain a warrant issued in compliance with Federal Rules of Criminal Procedure, or provide notice to the customer if the government uses an administrative subpoena authorized by statute or federal or state grand jury, or obtains a court order for such disclosure.¹⁹⁴

One district court has held that Google search terms are protected “contents of communications” within the meaning of ECPA.¹⁹⁵ In an amicus brief opposing the government subpoena in *Gonzales v. Google*, the Center for Democracy and Technology (CDT) argued that Google searches should be regulated under ECPA.¹⁹⁶

If Google searches were covered under ECPA, the pre-trial discovery subpoena issued to Google for its search queries would have been inade-

191. AOL receives more than 1,000 subpoenas each month seeking information about its users. See Hansell, *supra* note 5.

192. In 2005, four government agencies—the Department of Justice (DOJ), State Department, Homeland Security Department, and the Social Security Administration—spent roughly \$30 million to purchase personal information from data brokers. Nancy Libin, *Perspective: The anxious new dawn of cybersnooping*, CNET NEWS.COM, May 3, 2006, http://news.com.com/The+anxious+new+dawn+of+cybersnooping/2010-1028_3-6067598.html. Choicepoint is one example of data aggregation. See ChoicePoint, <http://www.choicepoint.com> (last visited Nov. 26, 2006).

193. See Bellia, *supra* note 57, at 1413 (“The legislative reports accompanying ECPA suggest conflicting views of whether subscribers retain an expectation of privacy in communications held by third-party service providers.”).

194. 18 U.S.C. §§ 2701-03.

195. *In re United States for an Order Authorizing the Use of a Pen Register & Trap*, 396 F. Supp. 2d 45, 49 (D. Mass. 2005).

196. See CDT Amici Curie Brief, *supra* note 185. CDT argued that Google is an out-sourcer of search functions, and therefore is a provider of a “remote computing service” and should be covered under ECPA. *Id.* at 3-5. CDT also argued that search queries are “contents of a communication” under ECPA. *Id.*; see 18 U.S.C. § 2510(8) (defining “contents” of a communication as including “any information concerning the substance, purport, or meaning of that communication”). In *Gonzales v. Google*, Judge Ware declined to discuss the ECPA issue. *Google*, 234 F.R.D. at 688. Google raised the issue at the end of its brief, stating, “there is good reason to believe they are [covered by ECPA] . . .” Google Opp., *supra* note 9, at 18-19.

quate.¹⁹⁷ However, the government could still compel disclosure by grand jury subpoena, administrative subpoena, or trial subpoena plus notice to the subscriber.¹⁹⁸ This individual notice can be delayed for up to ninety days.¹⁹⁹

ECPA is not determinative of user privacy issues, as the restrictions it imposes are usually less than those required by the Fourth Amendment. Furthermore, its protections are more fragile, as Congress could vote to remove them.²⁰⁰ However, a new statute or amendment to ECPA could provide more privacy protection for electronic communications—including search queries—to the extent Congress clarified the relevant provisions.²⁰¹

VI. CONCLUSION

Advances in information and communication technologies have outpaced constitutional and statutory privacy protection. Search engines and ISPs now retain massive amounts of data, much of which is intended for private use only.

At the same time, law enforcement agencies increasingly subpoena private companies such as Google and AOL to access this data. In 2006, *Gonzales v. Google, Inc.* marked a collision among individual, business, and government interests in online communications. While illuminating individual privacy dangers, it ultimately failed to address the larger constitutional and statutory issues.²⁰²

The Fourth Amendment has provided little protection for this third-party information, due to *Miller* and *Smith*'s arguably flawed assumption-of-risk paradigm. Moreover, ECPA's statutory protections for digital

197. See *FTC v. Netscape Commc'ns. Corp.*, 196 F.R.D. 559 (N.D. Cal. 2000) (holding that pre-trial discovery subpoena did not fall within the meaning of "trial subpoena").

198. 18 U.S.C. § 2705(a)(1)(B)-(a)(4).

199. § 2705(a)(1)(B) and § 2705(a)(4) permit notice to be delayed for up to ninety days "upon the execution of a written certification of a supervisory official that there is reason to believe that notification of the existence of the subpoena may have an adverse result"

200. See Brenner & Clarke, *supra* note 38, at 219 n.20.

201. For example, after the *Miller* decision Congress passed the Right to Financial Privacy Act of 1978. See 12 U.S.C. §§ 3401-22 (2000), amended by 12 U.S.C.A. §§ 3401-22 (West Supp. 2005). Congress passed the Video Privacy Protection Act (VPPA), 18 U.S.C. § 2710 (2002), in response to a highly publicized incident of a video store disclosing a politician's rental records. Electronic Privacy Information Center, The Video Privacy Protection Act (VPPA), Aug. 6, 2002, <http://www.epic.org/privacy/vppa/>.

202. *Gonzales v. Google*, 234 F.R.D. 674 (N.D. Cal. 2006).

third-party information are less stringent than Fourth Amendment protections and arguably do not apply to search queries and other data.

This Note proposes that these issues are best addressed by an originalist interpretation of the Fourth Amendment. Such an interpretation would meaningfully protect the “right to be secure” in online communications. Courts should reject an assumption-of-risk analysis in favor of an approach that acknowledges the vital role internet technology plays in American life. Finally, expanding and clarifying ECPA to cover “content” disclosures such as search queries could also protect the “right to be secure” guaranteed by the Fourth Amendment.

BERKELEY TECHNOLOGY LAW JOURNAL

LOG ME IN TO THE OLD BALLGAME: *C.B.C. DISTRIBUTION & MARKETING, INC. v. MAJOR LEAGUE BASEBALL ADVANCED MEDIA, LP*

By Dana Howells

On January 19, 2005, the vice president of a large-scale fantasy sports provider known as C.B.C. Distribution and Marketing (“CBC”) received an unwelcome e-mail from the senior vice president of Major League Baseball’s interactive media arm. The e-mail informed CBC that earlier the same morning, Major League Baseball Advanced Media (“Advanced Media”) became the exclusive licensee and sublicensor of major league baseball players’ identities as used in fantasy baseball. Accordingly, the e-mail stated, CBC must immediately stop using the ballplayers’ names and performance statistics in its fantasy baseball league.

Less than a month later, CBC filed a complaint for declaratory judgment and injunctive relief to prevent Advanced Media from obstructing CBC’s use of the ballplayers’ names and statistics. Advanced Media, joined by Major League Baseball Player’s Association (“the Player’s Association”), counterclaimed that CBC’s unlicensed use of the players’ names and statistics violated the players’ rights of publicity. The District Court for the Eastern District of Missouri held that CBC’s use of the ballplayers’ names and statistics did not violate the right of publicity.¹ The court reasoned that CBC’s use did not demonstrate intent to gain a commercial advantage, and names and statistics do not symbolize the players’ identities.² Advanced Media and the Players’ Association (collectively “MLB”) have appealed the district court’s decision.³

A closer look at the dispute reveals that MLB’s claim is not merely a purported right of publicity violation. Rather, at the core of the dispute is the issue of control—specifically, control over the statistical data that ballplayers generate during every batting and pitching performance. This Note suggests that MLB’s right of publicity claim falls under the category of data protection, and explains the impropriety of such protection. Part I

© 2007 Dana Howells

1. *C.B.C. Distrib. & Mktg., Inc. v. Major League Baseball Advanced Media, L.P.*, 443 F. Supp. 2d 1077, 1091 (E.D. Mo. 2006).

2. *Id.* at 1088-89.

3. See Maury Brown, *MLBAM and MLBPA: Formal Appeals in the Fantasy Stats Case*, THE BIZ OF BASEBALL, Dec. 18, 2006, http://www.bizofbaseball.com/index.php?option=com_content&task=view&id=540&Itemid=42.

provides background about the right of publicity and data protection. Part II explains the district court's decision with special attention to the purported right of publicity violation. Finally, Part III explains why MLB's claim is better understood as an attempt to assert ownership over statistical data, sets forth the public policies underlying publicity rights, and suggests that in light of these policies and other countervailing concerns, MLB should not be allowed to claim ownership over the ballplayers' performance statistics.

I. BACKGROUND

Modern courts consider the right of publicity to impart an assignable and potentially descendible property right over an individual's identity.⁴ As such, the right of publicity effectively gives individuals the ability to control public uses of the marketable identities they create.⁵ On the other hand, the United States rarely allows an individual to prevent others from using statistical data, even if he has invested resources in creating a compilation of data.⁶ This Part expands on the distinction between publicity rights and data protection. First, it sets forth the origins of publicity rights in the United States legal system. Second, this Part explains the limited circumstances under which a plaintiff can assert ownership over data in the United States, contrasting U.S. law with the European Union's more generous approach.

A. The Right of Publicity

The right of publicity grew out of judges' and commentators' recognitions of privacy rights in the early twentieth century. In 1905, the Georgia Supreme Court recognized the individual's "legal right 'to be let alone' . . . which can only be properly termed his right of privacy."⁷ By the

4. 4 J. THOMAS MCCARTHY, MCCARTHY ON TRADEMARKS AND UNFAIR COMPETITION §§ 28-46 (4th ed. 2006); RESTATEMENT (THIRD) OF UNFAIR COMPETITION § 46 cmt. g (1995); *see also* RESTATEMENT (SECOND) OF TORTS § 652C cmt. a (2006); CAL. CIV. CODE § 3344.1(b) (2005).

5. *See* *Zacchini v. Scripps-Howard Broad. Co.*, 433 U.S. 562, 575-76 (1977).

6. *See, e.g., Feist Publ'ns, Inc. v. Rural Tel. Serv. Co.*, 499 U.S. 340, 359-60 (1991) (holding that a work must be original to receive protection).

7. *Pavesich v. New England Life Ins. Co.*, 50 S.E. 68, 71-72 (Ga. 1905). The seminal New York case of *Roberson v. Rochester Folding Box Co.* provides one notable exception to the trend towards recognizing privacy rights. 64 N.E. 442, 447 (1902). In *Roberson*, the New York Court of Appeals found no common law right of privacy to preclude unauthorized use of a child's photograph in flour advertisements. The court expressed sympathy towards the plaintiff, but stated that to find for the plaintiff would overstep judicial bounds. *Id.*

1940s, most state courts recognized that individuals have privacy interests in their names and likenesses,⁸ and a small number of states enacted statutes protecting that interest.⁹ In 1960, Dean Prosser's influential article "Privacy" took privacy rights to a new level by defining privacy invasion as four separate torts.¹⁰ The fourth tort, which Prosser called "appropriation," served as the immediate predecessor to the right of publicity.¹¹ Like the right of publicity, Prosser's definition of appropriation does not encompass all uses of another's name or likeness. Rather, Prosser determined that appropriation occurs if and only if a defendant uses a plaintiff's name as a "symbol of [the plaintiff's] identity."¹²

Though willing to attach tort liability for misappropriations of identity, prior to the articulation of the right of publicity authorities split over whether an individual owned a property interest in his identity.¹³ In *Hanna Manufacturing Co. v. Hillerich Bradsby Co.*, for example, the Fifth Circuit held that descendants of famous baseball players could not prevent a baseball bat company from using the ballplayers' names and likenesses in marketing.¹⁴ The court determined that public policy, business concerns, and the fate of "sportsmanship" in general precluded recognizing full-fledged descendible and vendible property rights in a ballplayer's name and likeness.¹⁵

The first articulation of the right of publicity appeared in the Second Circuit case *Haelan Labs., Inc. v. Topps Chewing Gum*.¹⁶ In *Haelan*, the court held that New York common law protected a baseball player's right to profit from the public display of his photograph.¹⁷ Prior to *Haelan*, some courts suggested that by becoming famous, an individual forfeits his

8. J. THOMAS MCCARTHY, THE RIGHTS OF PUBLICITY AND PRIVACY § 1:18 (2d ed. 2006) [hereinafter MCCARTHY PUBLICITY].

9. The year following the controversial *Roberson* case, New York became the first state to pass a privacy law. Virginia and Utah followed suit in 1904 and 1909, respectively. MCCARTHY PUBLICITY, *supra* note 8, § 6:8.

10. Briefly, the four torts are: (1) intrusion, (2) disclosure, (3) false light, and (4) appropriation. William Prosser, *Privacy*, 48 CALIF. L. REV. 383, 403. (1960). Commentators call Prosser's approach the "gospel" of privacy law. *See, e.g.*, MCCARTHY PUBLICITY, *supra* note 8, § 1:19 ("Anyone who refuses to talk in Prosser's language will meet blank stares of incomprehension.").

11. MCCARTHY PUBLICITY, *supra* note 8, § 1:23.

12. Prosser, *supra* note 10, at 403 (emphasis added).

13. MCCARTHY PUBLICITY, *supra* note 8, § 1:23.

14. 78 F.2d 763, 767 (5th Cir. 1935).

15. *Id.* at 766-67.

16. 202 F.2d 866, 868 (2d Cir. 1953).

17. *Id.*

right to privacy.¹⁸ The *Haelan* court not only recognized the plaintiff's privacy right "not to have his feelings hurt" by publication of a photograph, but also stated that the famous plaintiff was entitled to receive money for all public uses of his photograph.¹⁹ The court termed the latter the plaintiff's "right of publicity,"²⁰ and the following year Professor Melville Nimmer rearticulated and refined the term in his seminal law review article.²¹

In the decades since *Haelan* and Nimmer's article, more than half of the states have judicially acknowledged the right of publicity²² and a handful of states have enacted statutes to this effect.²³ Courts also expanded the amount and type of protection afforded by the right of publicity. *Haelan* may have hinged on misappropriation of a celebrity's photograph, but subsequent state courts gave right of publicity protection to artistic sketches of celebrities,²⁴ vocal mimicry,²⁵ famous phrases or slogans,²⁶ and a variety of other unauthorized appropriations of identity.

The United States Supreme Court recognized the right of publicity in 1977.²⁷ In *Zacchini v. Scripps-Howard Broadcasting Company*, plaintiff Hugo Zacchini brought suit after a broadcasting company replayed his human cannonball act without his permission.²⁸ The Court acknowledged that the right of publicity was separate and distinct from the right to privacy, and that the First Amendment did not automatically entitle the broadcasting company to broadcast matters of public interest that would other-

18. *Compare* Corliss v. E.W. Walker Co., 57 F. 434, 435 (D. Mass. 1893) (suggesting that a public man waives his privacy rights in his image) with *Atkinson v. John E. Doherty & Co.*, 121 Mich. 372, 379 (1899) ("[W]e are loath to believe that the man who makes himself useful to mankind surrenders any right to privacy thereby, or that because he permits his picture to be published . . . he is forever thereafter precluded from enjoying any of his rights.").

19. *Haelan*, 202 F.2d at 868.

20. *Id.*

21. See generally Melville Nimmer, *The Right of Publicity*, 19 LAW & CONTEMP. PROBS. 203 (1954).

22. MCCARTHY PUBLICITY, *supra* note 8, § 6:3.

23. For an overview of current state statutes recognizing publicity and privacy rights, see *id.* §§ 6-8.

24. *Comedy III Prods., Inc. v. Gary Saderup, Inc.*, 25 Cal. 4th 387 (2001) (finding violation of right of publicity in T-shirts bearing sketch of the Three Stooges).

25. *Midler v. Ford Motor Co.*, 849 F.2d 460 (9th Cir. 1988) (finding violation of right of publicity in mimicry of plaintiff's singing style in television commercials).

26. *Carson v. Here's Johnny Portable Toilets, Inc.*, 698 F.2d 831, 836 (6th Cir. 1983) (finding violation in use of plaintiff's famous tag-line, "Here's Johnny!").

27. *Zacchini v. Scripps-Howard Broad. Co.*, 433 U.S. 562, 565 (1977) (recognizing existence of Ohio's "state-law 'right of publicity'").

28. *Id.*

wise be protected under the right of publicity.²⁹ Although the Court allowed Ohio state law to dictate the parameters of Zacchini's right of publicity, the Court's decision reflected the principle that in some instances, a plaintiff may have a right to prevent others from profiting financially from the marketable identity he has built.

B. Data and Data Protection

In contrast to the right of publicity, which allows individuals to control and profit from commercial uses of their identities, courts in the United States are generally unwilling to recognize an individual's right to control and profit from factual data such as statistics. Even if an individual invests substantial resources in order to compile data, and thereby creates a valuable product, he generally cannot prevent unauthorized uses of the data under U.S. law. On the other hand, the act of putting data together into a "database" does confer ownership rights in the European Union (E.U.).³⁰ This Section sets forth the U.S. approach to data and database protection under copyright law and the common law tort of misappropriation. The Section then describes the E.U.'s rules under the 1996 Database Directive.

1. Limited Data Protection in the United States

The American intellectual property regime offers limited protection to data and databases. Under the federal Copyright Act, protection exists for original works of authorship,³¹ however, because facts are neither original nor "authored," facts are not copyrightable.³² Further, in *Feist Publications, Inc. v. Rural Telephone Service Co.*, the Supreme Court established the principle that a compilation of factual information, such as a database, receives only a thin layer of copyright protection.³³ Under the oft-cited *Feist* rule, to receive copyright protection the compiler of data must demonstrate a "minimal degree of creativity" in his selection and arrangement of the data. But this copyright only protects the way the data are arranged—not the data themselves.³⁴ Thus, one telephone company can copy the names, addresses, and telephone numbers that another company meticulously compiled, so long as it does not duplicate the creative way the first company selected or arranged the data, and non-creative databases receive

29. *Id.* at 578.

30. Council Directive 1996/9 1996 O.J. (L 77) 20 (EC). [hereinafter Database Directive].

31. 17 U.S.C. § 102(a) (2006).

32. *Feist Publ'ns, Inc. v. Rural Tel. Serv. Co.*, 499 U.S. 340, 344-45, 349-50 (1991).

33. *Id.*

34. *Id.* at 348.

no protection at all.³⁵ This rubric holds true even if the first company invested time and money in compiling data.³⁶ Under *Feist*, evidence of hard work alone is not enough to merit copyright protection. In other words, copyright does not reward mere “sweat of the brow.”³⁷

The Second Circuit applied a variation of the *Feist* rule in *Kregos v. Associated Press*, in which the court upheld Mr. Kregos’ copyright protection over a form that organized certain pitching statistics in order to predict a pitcher’s future performance.³⁸ The court determined that out of the “thousands of combinations of data” he could have chosen, Kregos chose a select category of statistics.³⁹ Thus, by selecting which statistics to use, Kregos demonstrated the requisite level of creativity to receive copyright protection for a compilation.⁴⁰ In keeping with the *Feist* principle, however, the Second Circuit determined that the scope of Kregos’s copyright protection was thin. Although his selection of statistics was creative, his arrangement of the data into columns was typical and obvious.⁴¹ Thus, Kregos could only prevent reproduction of his own, specific, selection of data: he could not preclude others from making pitching forms using a different selection of statistics; he had no claim over the statistics themselves.⁴²

Unlike federal copyright law, the common law tort of misappropriation may entitle an amasser of data to some protection over that data.⁴³ In the intellectual property context, misappropriation occurs when a defendant uses a plaintiff’s uncopyrightable information or ideas to compete unfairly with that plaintiff.⁴⁴ Thus, under the common law a plaintiff may recover for unauthorized uses of data she has compiled even though the traditional intellectual property systems of patent, trademark, and copyright would

35. *Id.* at 349.

36. *Id.* at 349-50.

37. *See, e.g., id.* at 359-60 (stating that Congress clearly intended originality, not sweat of the brow, to receive copyright protection); Charles C. Huse, Note, *Database Protection in Theory and Practice: Three Recent Cases*, 20 BERKELEY TECH. L.J. 23, 25 (2005). On the other hand, scholars on the other side of the debate contend that copyright *should* reward “sweatworks,” because doing so will not only promote development of compilations of facts, but also prevent third parties from being unjustly enriched by the original compiler’s work. ROBERT P. MERGES, PETER S. MENELL & MARK A. LEMLEY, *INTELLECTUAL PROPERTY IN THE NEW TECHNOLOGICAL AGE* 328 (3d ed. 2003).

38. 937 F.2d 700, 703-04 (2d Cir. 1991).

39. *Id.*

40. *Id.*

41. *Id.* at 709.

42. *Id.*

43. *See Huse, supra* note 37, at 30-32.

44. BLACK’S LAW DICTIONARY 1019 (8th ed. 2004).

not protect the data.⁴⁵ In order to prevail, however, a plaintiff must usually prove that a defendant's use unfairly competes with her ability to earn a profit. For example, in *National Basketball Association v. Motorola, Inc.*, Motorola made SportsTrax pagers that used a data feed supplied by STATS, Inc. ("STATS"), to report real-time information from professional basketball games.⁴⁶ The NBA claimed that the SportsTrax pagers misappropriated "hot news" that belonged to the NBA.⁴⁷ The Second Circuit read the "hot news" claim in light of *International News Service v. Associated Press*, in which the Supreme Court held that the International News Service's ("INS") gathering of news from its direct competitor before Associated Press publicized the news constituted misappropriation.⁴⁸ Drawing from *INS* and the 1976 amendments to the Copyright Act,⁴⁹ the Second Circuit held that only a narrow version of the "hot news" misappropriation claim survived copyright preemption.⁵⁰ The court framed the required elements as follows:

We hold that the surviving *INS*-like "hot news" claim is limited to cases where: (i) a plaintiff generates or gathers information at a cost; (ii) the information is time-sensitive; (iii) a defendant's use of the information constitutes free riding on the plaintiff's efforts; (iv) the defendant is in direct competition with a product or service offered by the plaintiffs; and (v) the ability of other parties to free-ride on the efforts of the plaintiff or others would so reduce the incentive to produce the product or service that its existence or quality would be substantially threatened.⁵¹

The court did not deny that the NBA incurred a cost when it put on a basketball game.⁵² Unlike the *INS*, which culled breaking news directly

45. *Id.* (citing *U.S. Golf Ass'n v. St. Andrews Sys.*, 749 F.2d 1028, 1034-35 (3d Cir. 1984)).

46. *Nat'l Basketball Ass'n v. Motorola, Inc.*, 105 F.3d 841, 843-44 (2d Cir. 1997). The SportsTrax pager displayed six categories of information about live basketball games: (1) the names of the teams competing, (2) the quarter of the game, (3) the amount of time remaining in the quarter, (4) the name of the team in possession of the ball, (5) whether a team was in the free-throw bonus, and (6) changes in score. *Id.* at 844.

47. *Id.* at 843.

48. *Int'l News Serv. v. Associated Press*, 248 U.S. 215, 240 (1918).

49. In 1976, Congress passed legislation that gave copyright protection to live broadcasts or performances that are simultaneously recorded under the author's authority. In addition, Congress' 1976 amendments provided that federal copyright law preempts state law claims that enforce "equivalent" rights to copyright and fall within the area of copyright protection. *NBA*, 105 F.3d at 845; see also 17 U.S.C. §§ 101, 301 (2006).

50. *NBA*, 105 F.3d at 845.

51. *Id.*

52. See *id.* at 853-54.

from Associated Press,⁵³ Motorola and STATS used their own resources to gather and transmit the statistics rather than free-ride on NBA's efforts.⁵⁴ Further, the court distinguished the expected harm to NBA from the expected harm to Associated Press. INS' conduct would have rendered Associated Press's primary business, news reporting, "profitless" or "cost prohibitive."⁵⁵ Because it enabled statistics reporting rather than a competing basketball game product, the court found that the SportsTrax pager did not threaten the NBA's primary business.⁵⁶ Thus, the court determined that the SportsTrax pagers met neither the third element (free-riding) nor the fifth element (threatening NBA's product).⁵⁷

Feist and *NBA* demonstrate that a plaintiff claim ownership over data in the United States in extremely narrow instances. Under copyright law, a U.S. plaintiff receives copyright protection over the selection or arrangement of data in a compilation or other copyrightable work, but cannot prevent others from copying the facts themselves. Under the tort of misappropriation, a U.S. plaintiff can only prevent defendants from uses of data that free-ride on, or directly compete with, the plaintiff's primary business.

2. *Another Approach to Data Protection: The European Union*

The E.U. offers much broader protection for data and databases than the United States. In 1996, the E.U. enacted its Database Directive in order to harmonize levels of legal protections offered to databases in E.U. member states, and to create an incentive for capital investment in database production.⁵⁸ The final version of the Database Directive was a response to the U.S. Supreme Court's *Feist* ruling, which leading member states thought provided too little protection to databases.⁵⁹ However, a few member states protected some "sweat of the brow" works prior to *Feist*: the United Kingdom and Ireland granted strong protections to the products

53. See *INS*, 248 U.S. at 238-40.

54. *NBA*, 105 F.3d at 854.

55. *Id.* at 852.

56. *Id.* (quoting *INS*, 248 U.S. at 241).

57. *Id.*; see also *Feist Publ'ns, Inc. v. Rural Tel. Serv. Co.*, 499 U.S. 340, 353-54 (1991) (stating that the *INS* Court intended to offer protection over Associated Press's original expression of factual happenings or news, not the facts themselves).

58. Mark Schneider, Note, *The European Union Database Directive*, 13 BERKELEY TECH. L.J. 551, 552-53 (1998).

59. John Edwards, *Has the Dreaded Doomsday Arrived?: Past, Present, and Future Effects of the European Union's Database Directive on Database and Information Availability in the European Union*, 39 GA. L. REV. 215, 224 (2004).

of newspaper and broadcasting industries; and Scandinavian countries expressly prohibited explicit reproductions of non-creative databases.⁶⁰

While its most direct implications are for electronic databases, the Database Directive explicitly states that its principles extend to non-electronic databases as well.⁶¹ Indeed, the E.U.'s statutory and judicial definitions of the term "database" are quite broad. Article 1(2) of the Directive defines a database as "a collection of independent works, data or other materials arranged in a systematic or methodical way and individually accessible by electronic or other means."⁶² European courts have applied the term to telephone directories, collections of laws, listings of the times and locations of horse races, encyclopedias, card catalogues, and selections of websites.⁶³

The Database Directive affects copyright law in European Union member states in two main ways. First, the Database Directive regularizes the amount and type of copyright protection available for databases in member states.⁶⁴ Like the U.S. Supreme Court's *Feist* decision, the Database Directive extends copyright protection to compilations of data if the selection or arrangement of data indicates "the author's own intellectual creation."⁶⁵ The creator's rights over his database parallel the exclusive rights of U.S. copyright owners: the creator can prevent temporary or permanent reproduction, adaptation, distribution (subject to the first-sale doctrine), public display, or performance of his selection or arrangement.⁶⁶ Second, the Database Directive offers *sui generis* protection for databases above and beyond copyright law, and in this way departs significantly from United States law.⁶⁷ Under the Database Directive, a database creator can prevent others from copying a "substantial part" of the contents of his database if he made a "substantial investment" in "obtaining, verif[ying] or present[ing]" the data.⁶⁸ The Database Directive does not define substantial investment or substantial copying, and member states apply the

60. *Id.* at 223.

61. Database Directive, *supra* note 30, pmbl. ¶ 14.

62. Database Directive, *supra* note 30, art. 1(2).

63. Edwards, *supra* note 59, at 241 n.177.

64. Database Directive, *supra* note 30, art. 3.

65. *Compare id. with Feist Publ'ns v. Rural Tel. Serv. Co.*, 499 U.S. 340, 348 (1991).

66. Database Directive, *supra* note 30, art. 5. *Compare id. with* 17 U.S.C. § 106 (2006) (listing exclusive rights of U.S. Copyright owners).

67. Database Directive, *supra* note 30, art. 7.

68. Database Directive, *supra* note 30, art. 7(1). The creator may be an individual or a corporation; he does not have to demonstrate that he made a financial investment in creating the database so long as the investment was "substantial." *Id.*

terms differently.⁶⁹ The Directive also prohibits any extraction or activity that conflicts with the creator's financial or other interests.⁷⁰ The *sui generis* right might be violated by actions as simple as viewing data on one's computer screen (which constitutes "extraction" of data), or distributing the data to others in electronic or hard copy format (which constitutes "re-utilization" of the data).⁷¹

II. CASE SUMMARY

This Part first gives background information about both fantasy baseball and the specific dispute between CBC and MLB. Then, the Part describes the reasoning Judge Medler of the District Court for the Eastern District of Missouri applied to reach the conclusion that CBC's use of player names and statistics in fantasy baseball games does not violate the players' rights of publicity.

A. Facts and Procedural History

The Players' Association controls all group licensing of players' names and likenesses for such uses as trading cards, posters, clothing, and video games, but allows baseball clubs to take and use players' photographs for publicity purposes.⁷² The Players' Association has sued violators of publicity rights in the past, but prior to 2005, the Players' Association had never brought suit against a fantasy baseball provider.⁷³

1. *The Fantasy Baseball Industry*

With the rise of the internet in the 1990s, fantasy baseball became a multi-million dollar industry with over 15 million players worldwide.⁷⁴

69. Edwards, *supra* note 59, at 236-42. German courts set a low standard for substantial investment, while Dutch courts only protect business information and databases created for business-related purposes. *Id.* In addition, even copying insubstantial amounts of data is prohibited if such copying is "repeated and systematic." Database Directive, *supra* note 30, art. 7(5).

70. Exceptions exist for private use of non-electronic databases, extractions of data for teaching or scientific research, and extractions for use of public security or administrative and judicial procedures. Database Directive, *supra* note 30, art. 9.

71. Schneider, *supra* note 58, at 559.

72. C.B.C. Distrib. & Mktg., Inc. v. Major League Baseball Advanced Media, L.P., 443 F. Supp. 2d 1077, 1079-80 (E.D. Mo. 2006).

73. Robert T. Razzano, *Intellectual Property and Baseball Statistics: Can Major League Baseball Take its Fantasy Ball and Go Home?*, 74 U. CIN. L. REV. 1157, 1163-64 (2006).

74. Matthew G. Massari, *When Fantasy Meets Reality: The Clash Between On-Line Fantasy Sports Providers and Intellectual Property Rights*, 19 HARV. J.L. & TECH. 443, 445 (2006).

Fantasy sports offer avid fans a chance to participate in their favorite sports vicariously through the manipulation of athletes' actual batting and pitching statistics.⁷⁵ As one commentator put it, creating, recording, and processing data provide the "lifblood" of the fantasy baseball industry.⁷⁶ Interestingly, fantasy baseball's roots predate the widespread availability of baseball statistics. Prior to the late 1970s, fans' only source for baseball statistics besides daily newspaper boxscores was a company called Elias Sports Bureau.⁷⁷ Elias Sports Bureau generally kept its information private and gave its statistical findings to Major League Baseball, not baseball fans.⁷⁸ As a result, when avid sports fan Bill James wrote and published *1977 Baseball Abstract: Featuring 18 Categories of Statistical Information That You Just Can't Find Anywhere Else*, he struggled to amass the statistics he needed.⁷⁹ To solve this problem, James asked his readers to serve as "volunteer scorekeepers" by attending games and keeping track of certain categories of data.⁸⁰ In 1985, James's immensely successful volunteer project joined with a small business called STATS, Inc. ("STATS").⁸¹ STATS thereby turned its marketing focus from baseball clubs to baseball fans, who showed bottomless interest in finding out "how good [their favorite players] are."⁸²

Then, the burgeoning internet age transformed fantasy baseball into the billion-dollar industry it is today.⁸³ Putting fantasy sports online made the onerous task of manually manipulating data unnecessary, thereby heightening fantasy baseball's appeal to the public at large and allowing

75. Fantasy baseball players act as faux-team managers by running baseball teams composed of real-life ballplayers. Most leagues begin with a "draft" in which each fantasy manager uses a limited budget to pick the athletes he wants on his team. As the actual baseball season progresses, the company running the league computes each team's success based on the performance statistics of each player. Over the course of a season, fantasy managers can continually monitor their team's status and update their rosters by moving players from the managers' starting lineups to their benches, trading players, adding unclaimed players, and releasing unwanted players. See Complaint for Declaratory Judgment ¶¶ 9, 10, *C.B.C. Distrib. & Mktg., Inc. v. Major League Baseball Advanced Media*, 443 F. Supp. 2d 1077 (E.D. Mo. 2006) (No. 4:05CV252MLM), 2005 WL 433742 [hereinafter *CBC Complaint*].

76. Jack F. Williams, *Who Owns the Back of a Baseball Card? A Baseball Player's Rights in His Performance Statistics*, 23 *CARDOZO L. REV.* 1705, 1708 (2002).

77. Razzano, *supra* note 73, at 1161-62.

78. *Id.*

79. *Id.*

80. *Id.*

81. *Id.*

82. *Id.* at 1162, 1162-63 (quoting MICHAEL LEWIS, *MONEYBALL: THE ART OF WINNING AN UNFAIR GAME* 82 (2003)).

83. See, e.g., Massari, *supra* note 74, at 445.

fantasy managers to obtain fresh data during ongoing ballgames rather than wait for the next day's newspaper.⁸⁴ The internet also gave consumers access to a wide variety of fantasy sports leagues regardless of physical proximity between team managers—a significant departure from “table-top” fantasy leagues of the 1980s.⁸⁵ Currently, dozens of websites offer fans the ability to manage fantasy baseball teams, either free of charge or, for more serious fantasy managers, as part of paid leagues that allow managers to customize play.⁸⁶ Online fantasy league providers run the gamut from large-scale enterprises hosted by Yahoo!, CBS, and ESPN, to small leagues of 5,000 players or fewer.⁸⁷ All fantasy baseball leagues use names and statistics of real baseball players. Until 2005, however, only a few fantasy baseball providers held licenses from the Players' Association to use that information.⁸⁸

2. *The Dispute*

CBC was one of the few companies that held a license from the Players' Association prior to 2005.⁸⁹ From 1995 to the end of 2004 CBC licensed from the Players' Association: (1) the ballplayers' names, nicknames, likenesses, signatures, playing records, and biographical data (Players' Rights); and (2) the Players' Association's logo, name, and symbol (Trademarks).⁹⁰ By the time its license expired, CBC offered 14 different fantasy baseball games and ran fantasy sports games for such companies as USA Today, MSNBC, and the Sporting News.⁹¹

In contrast, prior to 2005, Advanced Media belonged to the set of a majority of fantasy providers who did not take licenses from the Players'

84. *Id.*

85. Sports Illustrated writer Dan Okrent and his friends started one of the first fantasy baseball leagues. Making heavy use of statistics obtained from USA Today, they monitored their players' progress across a table at their favorite restaurant. Razanno, *supra* note 73, at 1159.

86. For example, Yahoo! offers a free league and a “Plus” league that requires payment depending on number of teams. Yahoo! also offers fantasy managers the option of customizing play by controlling, for example, who enters the league. *Id.* at 1160.

87. Neil DeMause, Fantasy Firefight: When IP Meets WHIP (Feb. 16, 2005), <http://www.baseballprospectus.com/article.php?articleid=3763>.

88. *Id.*

89. *Id.*

90. *Id.* (referring to CBC under its trade name, CDM Fantasy Sports); see also C.B.C. Distrib. & Mktg., Inc. v. Major League Baseball Advanced Media, L.P., 443 F. Supp. 2d 1077, 1080 (E.D. Mo. 2006) (explaining relationship of acronyms “CBC” and “CDM”).

91. CBC Complaint, *supra* note 75, ¶ 4. Clients can access CBC's services by logging on to its website, <http://www.CDMsports.com>. *Id.* ¶ 12.

Association. On January 19, 2005, less than a month after CBC's license expired, Advanced Media obtained an exclusive license to use "players' rights with respect to interactive media Fantasy Baseball Games."⁹² Advanced Media reportedly planned to implement a selective licensing scheme wherein it would offer sublicenses to the "Big 3" fantasy providers, CBS, ESPN, and Yahoo!.⁹³ In addition, Advanced Media planned to offer sublicenses to small fantasy sports providers who agreed to cap their membership at fewer than 5,000 players each.⁹⁴

Unfortunately, Advanced Media's scheme left no room for companies like CBC, which was neither big enough to match the Big 3 providers nor small enough to qualify as a sub-5000 member provider.⁹⁵ On February 4, 2005, Advanced Media offered CBC a license to promote Advanced Media's fantasy baseball games on its website,⁹⁶ but stated that in no way would CBC receive "a license to promote *its own* MLB fantasy game for the 2005 season."⁹⁷ On February 7, 2005 CBC filed a complaint for declaratory judgment and injunctive relief to prevent Advanced Media from interfering with CBC's use of the Players' Rights and Trademarks in its fantasy games.⁹⁸ The parties then entered a Stipulation Agreement, which disposed of all the issues except for those concerning the right of publicity.⁹⁹ All parties moved for summary judgment regarding the purported right of publicity violation.¹⁰⁰

92. *Id.* ¶ 16; Expert Report of Rodney Douglas Fort ¶ 5, C.B.C. Distrib. & Mktg., Inc. v. Major League Baseball Advanced Media, 443 F. Supp. 2d 1077 (E.D. Mo. 2006), 2006 WL 157248.

93. Razzano, *supra* note 73, at 1164. Some sources report that Advanced Media might extend licenses to AOL and the Sporting News as well. See Neil DeMause, *supra* note 87.

94. Razzano, *supra* note 73, at 1164.

95. See DeMause, *supra* note 87.

96. In exchange for using its website to promote Advanced Media's fantasy baseball games, CBC would receive 10% of related revenue. *CBC*, 443 F. Supp. 2d at 1081.

97. *Id.* (emphasis added); see also DeMause, *supra* note 87.

98. *CBC*, 443 F. Supp. 2d at 1081. Advanced Media counterclaimed, alleging that CBC's use of Players' Right and Trademarks violated the Lanham Act, state trademark law, state unfair competition laws, and state false advertising laws. The Players' Association also intervened against CBC, alleging breach of contract and violation of the players' rights of publicity. Joined by Advanced Media, The Players' Association sought injunctive relief and exemplary and punitive damages from CBC.

99. See *id.* at 1082-83.

100. *Id.* at 1079. Following the parties' Stipulation Agreement and a court-mandated teleconference wherein the three parties clarified the scope of their dispute, five issues remained before Judge Medler of the District Court for the Eastern District of Missouri. First, did the ballplayers have a right of publicity in their names and performance records as CBC used this information in fantasy baseball games? Second, if the players do hold

B. The District Court's Analysis

The district court held that CBC's fantasy games did not violate the players' claimed right of publicity in their names and performance records.¹⁰¹ Drawing from the Restatement (Third) of Unfair Competition as applied to right of publicity actions by the Missouri Supreme Court, the district court described the elements of a right of publicity action as: (1) defendant uses an individual's name or likeness with intent to obtain a commercial advantage; (2) defendant makes use of plaintiff's name or likeness as a symbol of plaintiff's identity; and (3) plaintiff did not consent to defendant's use.¹⁰² Although the Players' Association did not consent to CBC's use of the players' names and performance records after December 31, 2004, the court granted summary judgment to CBC because it found no triable issue of fact to suggest that CBC had violated the first or second elements of the three-part test.¹⁰³

The court found no evidence to suggest that CBC used the players' names and records with the intent to obtain a commercial advantage, because CBC's use did not convey the impression that the ballplayers endorsed or were associated with its games.¹⁰⁴ Indeed, the court compared CBC's listing of the players' names and performance records to a newspaper boxscore and stated that a reasonable person would not believe that baseball players endorsed or were associated with newspaper boxscores.¹⁰⁵ The court drew a narrow but important distinction between merely using a celebrity's name, as CBC did, and using a celebrity's picture or likeness.¹⁰⁶ The court proposed that products making use of a celebrity's name but not likeness are unlikely to convey a false impression of endorse-

legitimate publicity rights in their names and performance records, had CBC violated this right? Third, did copyright law preempt this right of publicity? Fourth, if the players did have a right of publicity in their names and performance records, did the First Amendment apply and did it prevail over the right of publicity? Finally, had CBC breached the 2002 licensing agreement? *Id.* at 1082-83. Although its holding that CBC did not violate the right of publicity made the remaining issues irrelevant, the court proceeded to discuss *arguendo* copyright preemption, the First Amendment, and the breach of contract claim. *See id.* at 1092-1107. The following Section deals with only the first and second issues.

101. *Id.* at 1091. The phrase "performance records" refers to each player's personal performance statistics, including batting and pitching statistics.

102. *Id.* at 1084-85; *see also* *Doe v. TCI Cablevision*, 110 S.W.3d 363 (Mo. 2003) (en banc), *cert denied*, 540 U.S. 1106 (2004); RESTATEMENT (THIRD) OF UNFAIR COMPETITION § 46 (2005).

103. *CBC*, 443 F. Supp. 2d at 1085, 1086-89.

104. *Id.* at 1086.

105. *Id.*

106. *Id.* at 1087.

ment.¹⁰⁷ Further, the court found no evidence that CBC used the players' names and records to draw attention away from any other fantasy provider, so as to obtain a commercial advantage.¹⁰⁸ Judge Medler pointed out that all fantasy game providers use ballplayers' names and performance records in the same way, so CBC's use did not draw extra attention to its fantasy products.¹⁰⁹

Regarding the second element of Missouri's right of publicity test, the court found no triable issue of fact to suggest that CBC used the ballplayers' names and performance records as a symbol of the players' identities.¹¹⁰ In *Doe v. TCI Cablevision*, the Missouri Supreme Court stated that, when establishing this element, "it is appropriate to consider 'the nature and extent of identifying characteristics used by defendant, the defendant's intent, the fame of the plaintiff, evidence of actual identification made by third persons, and surveys or other evidence indicating the perceptions of the audience.'"¹¹¹ In the present case, the district court ultimately concluded that the deciding factor in determining a right of publicity violation was how CBC used the players' names, not the mere fact that CBC used the players' names.¹¹² Unlike the Missouri Supreme Court, the district court concentrated only on the first clause of the test—the nature and extent of distinguishing characteristics used.¹¹³ Judge Medler reasoned that performance records are "historical facts about the baseball players" and "do not involve the character, personality, reputation, or physical appearance of the players."¹¹⁴

107. *Id.* In support of its proposition, the court listed a number of recent decisions in which defendants were found liable for using a plaintiff's name and likeness in commercial contexts, including the Supreme Court's decision in *Zacchini. Id.* (citing *Abdul-Jabbar v. Gen. Motors*, 85 F.3d 407 (9th Cir. 1996); *Cardtoons, L.C. v. Major League Baseball Players' Ass'n*, 95 F.3d 959, 968 (10th Cir. 1996); *Toney v. L'Oreal USA*, 406 F.3d 905, 910 (7th Cir. 2005); *Newcombe v. Adolf Coors Co.*, 157 F.3d 686, 692-93 (9th Cir. 1998)).

108. *Id.* at 1085-87 (applying *Henley v. Dillard Dep't Stores*, 46 F. Supp. 2d 487 (N.D. Tex. 1999)).

109. *Id.*

110. *Id.* at 1089-90.

111. *Id.* at 1088 (quoting *Doe v. TCI Cablevision*, 110 S.W.3d 363, 375 (Mo. 2003)).

112. *Id.* at 1089.

113. Compare *id.* with *TCI*, 110 S.W.3d at 370. Elsewhere in the *CBC* opinion, the court makes clear that where the *TCI Cablevision* approach differs from the approach followed by federal right of publicity cases, the district court must adopt the latter. *CBC*, 443 F. Supp. 2d at 1095-96 (discussing First Amendment balancing test).

114. *CBC*, 443 F. Supp. 2d at 1089.

Finally, the court found MLB's reliance on *Palmer v. Schonhorn Enterprises, Inc.* and *Uhlaender v. Henricksen* unpersuasive.¹¹⁵ In *Palmer*, a New Jersey court awarded relief to twenty-three professional golfers after the defendant used their names and pictures to enhance the sale of board games.¹¹⁶ In *Uhlaender*, a Minnesota district court found that defendant misappropriated professional baseball players' identities by using the players' names, uniform numbers, and statistical information in its board games.¹¹⁷ CBC argued that *Palmer* and *Uhlaender* were distinguishable from the present case because the *Palmer* and *Uhlaender* defendants "singled out" certain famous athletes so as to draw attention to their products.¹¹⁸ In contrast, CBC argued that its fantasy games used "comprehensive player statistics" about all ballplayers, rather than using certain players' fame to attract attention.¹¹⁹ Judge Medler agreed, and also stated that both *Palmer* and *Uhlaender* were decided early in the development of the common law right of publicity and conflicted with the Supreme Court's decision in *Zacchini*.¹²⁰

III. ANALYSIS

In *CBC*, MLB used the right of publicity as a vehicle to assert ownership over professional baseball players' batting and pitching statistics. MLB argued that when CBC listed these data alongside the players' names in fantasy games, CBC misappropriated the players' identities.¹²¹ The Missouri District Court properly determined that public policies underlying the right of publicity do not justify offering baseball players ownership over statistical data.¹²²

The origins of the right of publicity are rooted in public policy considerations. Moral justifications for publicity rights arise from a perception that individuals are morally entitled to reap financial rewards from their

115. *Id.* at 1087-88.

116. 72 N.J. Super. 72, 77 (1967).

117. 316 F. Supp. 1277, 1282-83 (D.C. Minn. 1970).

118. C.B.C.'s Answering Memorandum in Opposition to MLB PA's Motion for Summary Judgment and Memorandum in Support of C.B.C.'s Motion for Summary Judgment at 31, C.B.C. Distrib. & Mktg., Inc. v. Major League Baseball Advanced Media, 443 F. Supp. 2d 1077 (E.D. Mo. 2006) (No. 4:05CV252MLM) [hereinafter *CBC Answer*].

119. *Id.*

120. *CBC*, 443 F. Supp. 2d at 1088-89, 1088 n.12.

121. *Id.* at 1082.

122. *See id.* at 1091.

property and industry.¹²³ Economic justifications for the right of publicity suggest that publicity rights promote efficient resource allocation on a broad, social level.¹²⁴ In essence, the right of publicity exists to prevent harmful and excessive commercial uses of a person's identity that could dilute the identity's pecuniary value.¹²⁵ Courts award publicity rights on a case-by-case basis if, and only if, defendant uses plaintiff's identity in a way that contravenes the policies behind the right of publicity.¹²⁶ For example, the right of publicity might prevent people from imitating the distinctive singing style of a famous vocalist on the grounds that imitations will reduce both the singer's ability to profit from her industry and the commercial value of her voice.¹²⁷ In contrast, American courts award data and database rights in narrow, strictly regulated situations only. As described previously, decisions like *Feist*¹²⁸ and *NBA*¹²⁹ demonstrate that neither copyright law nor the common law tort of misappropriation offer most data compilers grounds on which to control public uses of data or databases.¹³⁰ In addition, scholars suggest that data protection might inhibit, rather than promote, database industries and poses a threat to the public domain.¹³¹ If so, then the policy-driven analysis that determines recognition of publicity rights provides the wrong means for opening the door to data protection.

Section III.A explains why granting MLB's right of publicity claim would result in data protection, and then explains the anticipated goals and actual results of data protection. The remaining Sections set forth the mor-

123. See generally MCCARTHY PUBLICITY, *supra* note 8, §§ 2:1-2:5. In contrast to privacy rights, which protect an individual's right "to be let alone," moral justifications for the right of publicity rest on the issue of economic fairness—allowing people to profit from that which they own and create. See *Pavesich v. New Eng. Life Ins. Co.*, 50 S.E. 68, 70-72 (1905). In *Pavesich*, the court tied privacy rights to long-standing equitable doctrines such as "a man's house is his castle" and constitutional protections against searches and seizures. *Id.*

124. See MCCARTHY PUBLICITY, *supra* note 8, § 2:7.

125. *E.g.*, *CBC*, 443 F. Supp. 2d at 1090; *Zacchini v. Scripps-Howard Broad. Co.*, 433 U.S. 562, 575 (1977).

126. See *Zacchini*, 443 U.S. at 576; *CBC*, 443 F. Supp. 2d at 1090.

127. See *Midler v. Ford Motor Co.*, 849 F.2d 460 (9th Cir. 1988).

128. *Feist Publ'ns, Inc. v. Rural Tel. Serv. Co.*, 499 U.S. 340, 349 (1991) (explaining that data compiler can prevent only the reproduction of his own creative arrangement or selection of data, not the data themselves).

129. *Nat'l Basketball Ass'n v. Motorola, Inc.*, 105 F.3d 841, 845 (2d Cir. 1997) (stating that data misappropriators are liable only if they use time-sensitive and costly information to free-ride and directly compete with plaintiff's primary business).

130. See *supra* Section I.B.

131. *Edwards, supra* note 59, at 224-25; J.H. Reichman & Pamela Samuelson, *Intellectual Property Rights in Data?*, 50 VAND. L. REV. 51, 113-37 (1997).

al and economic policies typically used to justify the right of publicity, applies these policies to fantasy baseball, and concludes that court properly refused to give extend the players' publicity rights to encompass performance data.

A. MLB's Call for Recognizing Publicity Rights Amounts to Data Protection, and Data Protection Comes With Risks

Following the parties' Stipulation Agreement and a court-mandated teleconference, MLB stated that it did not challenge CBC's right to use the players' biographical data or playing records.¹³² Rather, it purportedly sought to protect the players' *names* in fantasy games, "because the identities of players are represented by their names."¹³³ MLB did not seek to prohibit CBC from merely mentioning the ballplayers' names on CBC's website, however. MLB only tried to prevent CBC from using the players' names in conjunction with fantasy baseball games: that is, alongside a listing of each player's batting and/or pitching statistics.

Although every right of publicity statute¹³⁴ and the common law¹³⁵ both affirm that uses of a name can potentially violate the right of publicity, the deciding factor in right of publicity actions is how a defendant uses plaintiff's name, not the mere fact of use.¹³⁶ Use of a person's name only violates his publicity rights if the use represents that person's identity. Practically speaking, professional baseball players' names appear in electronic and print media on a regular basis, particularly during the baseball season. MLB did not dispute this point, but nonetheless argued that using the players' names *in fantasy baseball*—that is, alongside data—represented the players' identities. Therefore, what MLB really sought to control was not the players' publicity rights in their names, but the players' rights over statistical data associated with their names.¹³⁷

In the years since the Supreme Court refused protection to "the sweat of the brow" in *Feist*,¹³⁸ courts and commentators in the U.S. and abroad have debated whether data protection serves a useful purpose. As previously explained, U.S. courts generally abide by the *Feist* principle and refuse to grant copyright protections to pieces of data, although compilers

132. C.B.C. Distrib. & Mktg., Inc. v. Major League Baseball Advanced Media, L.P., 443 F. Supp. 2d 1077, 1082 (E.D. Mo. 2006).

133. *Id.*

134. See MCCARTHY PUBLICITY, *supra* note 8, § 6:8 (providing a chart summarizing state statutes).

135. *Id.* § 3.7.

136. CBC, 443 F. Supp. 2d at 1089.

137. See CBC Complaint, *supra* note 75, ¶ 19.

138. *Feist Publ'ns v. Rural Tel. Serv. Co.*, 499 U.S. 340, 352 (1991).

of data can copyright the original and creative aspects of their databases.¹³⁹ U.S. courts also limited plaintiffs' recourses under the common law for data misappropriation by narrowing the application of *INS* to the specific facts of that case through *NBA* and other decisions.¹⁴⁰ In contrast, the E.U. falls on the pro-data protection side of the debate, and in 1996 passed its Database Directive granting *sui generis* protections to compiled data.¹⁴¹

Proponents of data protection typically advance three arguments in favor of recognizing private ownership over data. The first argument holds that without protection, individuals will not invest in creating valuable databases.¹⁴² This argument was the main force behind the E.U.'s Database Directive.¹⁴³ In the 1990s, the database market¹⁴⁴ grew into a billion dollar industry, but far fewer valuable database makers resided in Europe than the United States.¹⁴⁵ The E.U. thought that by promising property-like rights to database creators who resided in member states, related industries would profit and Europe might also attract new database creators.¹⁴⁶

The second argument in favor of data protection suggests that the need to prevent copying of electronic data justifies data protection. This argument implicitly rests on a desire to prevent unfair competition and unjust

139. *E.g.*, *Key Publ'ns, Inc. v. Chinatown Today Pub. Enters., Inc.*, 945 F.2d 509, 512 (2d Cir. 1991).

140. *See Cheney Bros. v. Doris Silk Corp.*, 35 F.2d 279, 280 (2d Cir. 1929) (stating that *INS*'s holding only applied to substantially similar situations, and does not set forth a general precedent); *see also* Reichman & Samuelson, *supra* note 131, at 140 (citing "widespread skepticism [the *INS*] extend[ed] this misappropriation doctrine too far afield").

141. *See supra* Section I.C.2.

142. *See, e.g.*, Edwards, *supra* note 59, at 224-25 (explaining E.U.'s motivations for enacting Database Directive); Reichman & Samuelson, *supra* note 131, at 117-18 (explaining then rebutting argument that data protection encourages science and education).

143. The other main purpose of the Database Directive was to harmonize discrepancies between member states' treatment of databases. Edwards, *supra* note 59, at 225-26.

144. Commentators say the "database market" affects:

[the] publishing industry and related services, newspapers, books and magazines, data processing and network services, business information supplier[s], data processing and preparation, electronic information industr[ies], database revenues of business information, electronic information services, electronic delivery of business information (primarily online and CD-ROM), information retrieval services and commercial non-physical research.

John Tennesohn, *The Devil's in the Details: The Quest for Legal Protection of Computer Databases and the Collections of Information Act*, H.R. 2652, 38 IDEA 439, 441 n.5 (1998).

145. Edwards, *supra* note 59, at 224-25.

146. *Id.* at 219.

enrichment.¹⁴⁷ Unfair competition concerns underlie the Court's 1918 holding in *INS*¹⁴⁸ and foreign courts have also invoked unfair competition law to prohibit free-riding that would destroy a plaintiff's ability to earn a profit.¹⁴⁹ A proponent of data protection could rightfully argue that the contemporary technological age entices free-riding. In the current age, "second comers" can copy and manipulate public electronic databases easily and inexpensively, and devices like scanners allow free-riders to convert non-electronic databases to an easy-to-copy electronic form.¹⁵⁰ Thus, in recent years commercial database-makers have become increasingly vulnerable to free-riding and less likely to make a profit from their work absent legal protections.¹⁵¹

The third argument states that database creators are morally entitled to profits they might make from licensing data.¹⁵² This reasoning likely derives from European common law. Before the Database Directive, European countries that followed the common law approach based copyright protection on the amount of effort an author expended, rather than the amount of creativity the author showed.¹⁵³ The principle of awarding hard work with copyright persists in E.U. today. In contrast, the prevailing American rule has long been that intangibles are freely appropriable absent a compelling need to prevent appropriation. While the American system views promoting invention and creativity as compelling needs, the general goal of rewarding hard work deserves no IP protection.¹⁵⁴

The main argument against granting data protection is that privatizing data poses a significant threat to the public domain—that is, it hinders the free flow of information that rightly belongs to the public, not to a single individual.¹⁵⁵ American courts have determined that the free flow of certain ideas and information must be promoted even at the expense of private licensors.¹⁵⁶ Giving a person who compiles data the right to prevent

147. See, e.g., Reichman & Samuelson, *supra* note 131, at 137.

148. *Int'l News Serv. v. Associated Press*, 248 U.S. 215, 234 (1918).

149. Reichman & Samuelson, *supra* note 131, at 139.

150. *Id.* at 66-68.

151. See *id.*

152. Edwards, *supra* note 59, at 229 (explaining initial motivations of E.U.).

153. *Id.* at 222-23.

154. Michael Madow, *Private Ownership of Public Image: Popular Culture and Publicity Rights*, 81 CALIF. L. REV. 125, 201-02 (1993).

155. See Reichman & Samuelson, *supra* note 131, at 84-90.

156. See, e.g., *Lear, Inc. v. Adkins*, 395 U.S. 653, 670 (1968) ("Surely the equities of the licensor do not weigh very heavily when they are balanced against the important public interest in permitting full and free competition in the use of ideas which are in reality a part of the public domain.").

unauthorized uses of that data allows the compiler to control who gets to see and use information: only those who are granted licenses and are willing to pay licensing fees can use the compiled information.¹⁵⁷ A third party who wants to use compiled data to create a new, more valuable database might not be able to get a license to use that data.¹⁵⁸ As a result, third parties would create fewer value-added databases and the caliber of information generated would decline.¹⁵⁹ In the context of academic and scientific research, this might impede scientific development and innovation.¹⁶⁰ In the context of entertainment data like fantasy baseball statistics, this might force fantasy baseball enthusiasts to pay higher prices for a more limited quantity of fantasy games.¹⁶¹

In addition to posing a threat to the public domain, an analysis of the E.U. database industry after the Database Directive issued suggests that data protection fails to encourage database creation.¹⁶² Although some E.U. officials say that the Directive incited enormous growth in the E.U. database industry,¹⁶³ a study performed by Stephen Maurer calls these assertions into question.¹⁶⁴ Maurer's study suggests that the Directive caused a one-time rise in the number of companies entering database industries in the E.U., which directly followed the Directive's implementation in these countries.¹⁶⁵ Almost immediately, however, the number of database companies returned to their initial pre-Directive levels.¹⁶⁶ In contrast, the United States, which never enacted data protection legislation, has continued to experience a steady rise in number of database companies.¹⁶⁷

Maurer's study indicates that data protection might not encourage database development; if this is true then data protection poses an unnecessary and uncompensated threat to the public domain. In light of this uncer-

157. See Edwards, *supra* note 59, at 231; Reichman & Samuelson, *supra* note 131, at 88-89 (stating that a compiler can arbitrarily prevent a third party from reusing his data, thus unilaterally retarding value-added applications).

158. Reichman & Samuelson, *supra* note 131, at 88-89.

159. *Id.* at 89.

160. *See id.*

161. Expert Report of Rodney Douglas Fort ¶¶ 6, 7, C.B.C. Distrib. & Mktg., Inc. v. Major League Baseball Advanced Media, 443 F.Supp.2d 1077 (E.D. Mo. 2006), 2006 WL 1587248.

162. Edwards, *supra* note 59, at 232-33. According to Edwards, most of the results of the Database Directive have been kept confidential. *Id.*

163. Stephen M. Maurer, P. Bernt Hugenholtz & Harlan J. Onsrud, *Europe's Database Experiment*, 294 SCI. 789, 790 (2001).

164. *Id.* at 789.

165. *Id.* at 790.

166. *Id.*

167. *Id.*

tainty, any foray into the realm of data protections must proceed deliberately, under the guidance of formal rules. If the United States decides to explore certain types of data protection, then the right of publicity would present a poor vehicle for this exploration because it is determined on a case-by-case basis rather than by formal rules. Further, as the following Section indicates, protecting data is at odds with the moral and economic goals of the right of publicity.

B. Protecting Data Does Not Serve “Moral” Purposes of The Right of Publicity

In his leading treatise on the rights of privacy and publicity, J. Thomas McCarthy suggests that fairness requires society to recognize an individual’s “natural [property] right” over identifiable aspects of his persona.¹⁶⁸ McCarthy argues that unlike ideas, which receive no protection, circulation of a celebrity’s identity is not necessary to promote literary development, technology, or informed discussion.¹⁶⁹ Because an individual’s identity belongs to him, McCarthy argues that allowing unpermitted use by third parties promotes unjust enrichment.¹⁷⁰ Similarly, some commentators state that every individual is morally entitled to recover “the fruits of his labors” unless a countervailing public policy prevents this, and one’s marketable public persona is one of these fruits.¹⁷¹

Even assuming that fairness demands recognition of publicity rights in certain cases, the unjust enrichment and fruits of labor justifications become problematic when stretched too far.¹⁷² For example, stretching these arguments might deprive the public of its First Amendment rights to freedoms of speech (e.g., parody) and of the press.¹⁷³ Granting MLB ownership over statistical data will also overstretch the moral arguments behind publicity rights. First, CBC’s use of statistics that it computes and generates on its own does not equate to unjust enrichment, so to grant MLB rights over these data would effectively discontinue CBC’s fair business practice. Second, although one might argue that performance statistics

168. MCCARTHY PUBLICITY, *supra* note 8, § 2:2.

169. *Id.*

170. *Id.*

171. *Id.* § 2.5.

172. *See, e.g.,* Madow, *supra* note 154, at 179-205 (discussing moral arguments), 220-228 (discussing economic justifications).

173. *See, e.g.,* Gionfriddo v. Major League Baseball, 94 Cal. App. 4th 400, 409 (2001) (“The First Amendment requires that the right to be protected from unauthorized publicity be balanced against the public interest in the dissemination of news and information consistent with the democratic processes under the constitutional guaranties of freedom of speech and of the press.”).

represent the fruits of ballplayers' labors, fantasy baseball statistics are too far removed from the players' identities to award publicity rights over these data in light of First Amendment concerns and the intent requirement.

1. *CBC Not Unjustly Enriched*

Allowing CBC to use the players' names and performance records in its games without a license does not amount to unjust enrichment as the term is commonly understood. Unjust enrichment occurs when one party retains an unjustifiable benefit at another's expense.¹⁷⁴ The benefit CBC retains from its fantasy games is entirely justified because these games make use of statistical data that CBC computed using its own resources and ingenuity.¹⁷⁵ CBC's games use the performances of baseball players as a starting point, but it is CBC's compilation and arrangement of performance statistics that attract consumers to CBC's fantasy games. While CBC's ingenuity arguably deserves protection, the statistical data do not. In *Kregos v. Associated Press*, the Second Circuit gave Kregos rights over statistics he had amassed on the theory that out of "scores of available statistics" he could have calculated, Kregos selected the best data and decided what math to apply.¹⁷⁶ This ingenuity deserved protection, although the numbers generated did not. Similarly, CBC not only decided what mathematics to apply, but also took the initial step of collecting the data after a live performance. Thus, CBC did not "reap" what ballplayers have "sown"—CBC did "sowing" of its own.¹⁷⁷

Further, CBC's games are akin to the SportsTrax pagers at issue in *NBA*, which disseminated updated facts about ongoing games to the public.¹⁷⁸ The *NBA* court stated that the NBA's claim "compress[ed] and confus[ed]" the primary business of the NBA—producing sports events for public viewing—with SportsTrax pagers.¹⁷⁹ Providing fantasy games is not MLB's primary business, much as the NBA's Gamestats service (which might directly competes with SportTrax pagers) is not NBA's primary business.¹⁸⁰ MLB supplied a venue for CBC to collect data for CBC's own primary business: providing fantasy games. Allowing CBC to

174. BLACK'S LAW DICTIONARY 1573 (8th ed. 2004).

175. See Razzano, *supra* note 73, at 1179.

176. *Kregos v. Associated Press*, 937 F.2d 700, 704 (2d Cir. 1991).

177. See Madow, *supra* note 154, at 204.

178. See *Nat'l Basketball Ass'n v. Motorola, Inc.*, 105 F.3d 841, 843-44 (1997).

179. *Id.* at 853.

180. *Id.* Nor is providing fantasy games the primary business of Advanced Media, which oversees multiple forms of interactive media for MLB, including operating all facets of MLB's main website, MLB.com.

profit from its own business creation does not amount to unjust enrichment.

2. *CBC Does Not Capitalize on the Fruits of Ballplayers' or Teams' Labor*

The preceding Section argued that CBC expends its own resources to make use of the ballplayers' statistics, and that because this use does not threaten the ballplayers' or ball clubs' primary business, CBC is not enriched at MLB's expense. One might still contend, however, that CBC's profits are morally untenable because they consist of the "fruits of [the ballplayers' and teams'] labors." Certainly, ballplayers expend considerable personal and financial resources to develop their talent. In addition, MLB teams expend considerable financial resources in identifying and training talented players and hosting sporting events. Through this outpouring of resources and effort, MLB players and teams create a marketable commodity: popular sporting events. In return for this effort, players and teams profit from the public's interest in the form of ticket sales, broadcasting licensing, merchandising, and other subsidiary endeavors. Why then should MLB not profit from the particular subsidiary activity in question: fantasy baseball?

The answer must be that there is a line beyond which it is unfair to reward MLB for its product. In the context of publicity rights, courts draw this line using a fact-dependent analysis, and consider, among other factors, First Amendment freedoms and a defendant's intent to capitalize on a plaintiffs' fame.¹⁸¹

In *Gionfriddo v. Major League Baseball*, major league baseball players alleged that unauthorized uses of their names and career statistics violated their rights of publicity.¹⁸² The California Court of Appeal stated that during an ongoing baseball season, "the First Amendment will protect mere recitations of the players' accomplishments."¹⁸³ The court determined that the public is entitled to benefit from entertainment sources, just as the public is entitled to benefit from a free press.¹⁸⁴ In light of the popularity of major league baseball, the court reasoned that it would be unfair to deprive the public of knowing the history of professional baseball.¹⁸⁵ The First Amendment entitles the public to be updated about, and entertained by, professional baseball, and this entitlement takes precedence

181. *Gionfriddo v. Major League Baseball*, 94 Cal. App. 4th 400, 409-10 (2001).

182. *Id.* at 405-06.

183. *Id.* at 410.

184. *Id.*

185. *Id.* at 410-11.

over a baseball player's right to profit from any and all uses of his name and statistics during an ongoing baseball season.

Further, as Judge Medler pointed out, the defendant's intent to capitalize on the fame of a particular individual determines liability in right of publicity actions.¹⁸⁶ CBC does not intend to capitalize on the famous identity of a player or players by using player statistics. Rather, CBC amasses statistics from every individual who participated in every ballgame so as to profit from the popularity of the sport of baseball, and the popularity of the fantasy baseball industry. CBC "borrows" from the popularity of baseball in general—not the popularity of particular baseball players' identities. In sum, to argue that CBC's use of the ballplayers' names and statistics capitalizes on the fruits of the ballplayers' and MLB franchises' labors is nonsensical. First, the First Amendment gives the public a broad right to be informed about and entertained by major league baseball and baseball players, so MLB has no grounds to stop the flow of this information. Second, CBC does not single out famous players with an intent to capitalize on their identities.

C. Protecting Data Does Not Serve Economic Purposes of Right of Publicity

In addition to moral purposes, the right of publicity could serve economic purposes in certain contexts. Advocates of publicity rights argue that recognizing these rights promotes efficiency through resource allocation.¹⁸⁷ Under this theory, treating a celebrity's identity as property creates an "artificial scarcity" around his identity, which allows it to be purchased or licensed at a market price.¹⁸⁸ In general, society receives a financial benefit when buyers know the market price and can purchase goods for this price.¹⁸⁹ Without publicity rights, however, the identity has no market price because the celebrity's identity falls into the public domain, where anyone can use that good as much as he desires.¹⁹⁰ Some economists say that the public tends to over-consume goods in the public domain, result-

186. C.B.C. Distrib. & Mktg., Inc. v. Major League Baseball Advanced Media, L.P., 443 F. Supp. 2d 1077, 1085 (E.D. Mo. 2006) ("The *intent* must be to obtain a commercial advantage.") (emphasis added).

187. MCCARTHY PUBLICITY, *supra* note 8, § 2:7; Mark F. Grady, *A Positive Economic Theory of the Right of Publicity*, 1 UCLA ENT. L. REV. 97, 98 (1994).

188. MCCARTHY PUBLICITY, *supra* note 8, § 2:7.

189. Grady, *supra* note 187, at 99 ("[C]ost-based prices are ordinarily indispensable to social welfare.").

190. MCCARTHY PUBLICITY, *supra* note 8, § 2:7; Grady, *supra* note 187, at 102-03.

ing in economic waste as each person uses as much as he desires without considering long-term effects of overuse.¹⁹¹

Along these lines, Professor Mark Grady argues that a celebrity's identity will likely encounter overuse if it falls into the public domain.¹⁹² Intense use tires the public of the celebrity's identity, and the celebrity becomes unable to make a profit on his likeness.¹⁹³ Thus, the profitability of being a movie star or professional athlete decreases as the celebrity's identity slides towards the public domain.¹⁹⁴ In turn, Grady argues, society loses valuable financial assets when famous singers become auctioneers,¹⁹⁵ or famous baseball players become college batting coaches.

Like the moral rationale for publicity rights, the economic rationale does not justify imposing property rights over statistical data for several reasons. First, privatizing ballplayer's statistics would not promote economic efficiency in the way that privatizing a celebrity's photograph or singing style might promote efficiency. Second, privatizing ballplayer statistics might prove to be economically *inefficient* by imposing an unjustified deadweight loss on consumers and depressing development in the fantasy baseball industry.

1. *Privatization of Statistics Does Not Promote Economic Efficiency*

Economic efficiency demands that society privatize goods if, and only if, the social benefits of private use outweigh the social costs of enforcing private use.¹⁹⁶ Like many types of goods, an individual's identity falls into the grey area between "private" goods and "public" goods. Two elements characterize pure public goods: (1) non-excludability (the inability to exclude others from using the good) and (2) non-rivalrous consumption (the ability of one person to use the good as much as he desires without affecting another's use).¹⁹⁷ The "identities" that courts and statutes protect, under the guise of the right of publicity, are not pure public goods because (1) society can exclude certain uses these identities and (2) consumption is not entirely non-rivalrous.¹⁹⁸ For example, if anyone and everyone can

191. Grady, *supra* note 187, at 102.

192. *Id.* at 101-02.

193. *Id.*

194. *Id.*

195. *Id.* at 102.

196. *See, e.g., id.* at 100-02.

197. *Id.* at 98-99. Grady offers "air for breathing" as an example of a purely public good. *Id.* at 99.

198. *Id.* at 101.

freely use Bette Midler's singing style in television commercials,¹⁹⁹ the public might grow tired of Midler's singing or her style might become commonplace—especially if, as Grady suggests, goods in the public domain tend to fall prey to intensive over-use.²⁰⁰ If this happened, low-valued imitations might crowd out Midler's own, more expensive, product and Midler's business might suffer as fewer people buy her music and attend her concerts.²⁰¹

The benefits of privatization outweigh the costs of privatization and justify giving Midler publicity rights in her voice when Midler's singing voice becomes independently valuable enough to offset the cost of privatization. Unlike Midler's singing voice, the "commodities" at issue in *C.B.C.* (the ballplayers' performance statistics as used in CBC's baseball games) do not have independent value. Fantasy baseball statistics only have value if one of two things happens: (1) a fantasy provider such as CBC manipulates and catalogues the data in a certain way, or (2) alternatively, if someone owns and licenses the performance records. Because the statistics are not the core of the ballplayers' identities, CBC's use does not threaten the business of baseball or the ballplayers' ability to earn a profit from their identities, such that CBC's games would negate the value of the players' performances.²⁰² The ability of ballplayers to earn a profit is not tied to licensing revenue, so privatizing statistics does not enrich society as a whole. As the following Section explains, privatizing statistics might *deplete* society of economic resources.

2. Privatization of Statistics is Economically Inefficient

As explained in the previous Section, intellectual property rights create the pretense of scarcity around types of goods—inventions, secret knowledge, art, symbols used in trade, a celebrity's identity—whose very nature protect them from true scarcity. Scholars argue that we justify creating "artificial scarcity" in order to both promote innovation and creativity (because a competitive market will not return research and development

199. See *Midler v. Ford Motor Co.*, 849 F.2d 460, 461 (9th Cir. 1988).

200. Grady, *supra* note 187, at 100-02 (discussing another "singing style" right of publicity case, *Waits v. Frito-Lay, Inc.*, 978 F.2d 1093 (9th Cir. 1992), *amended and superseded in part*, 1992 U.S. App. LEXIS 24838 (9th Cir. Aug. 5, 1992), *cert. denied*, 114 S.Ct. 1047 (1993)).

201. See *id.*

202. See *C.B.C. Distrib. & Mktg., Inc. v. Major League Baseball Advanced Media, L.P.*, 443 F. Supp. 2d 1077, 1089 (E.D. Mo. 2006).

costs) and protect the integrity of the marketplace.²⁰³ According to Professors Peter Menell and Suzanne Scotchmer, the problem inherent in intellectual property rights is that this artificial scarcity creates a deadweight loss to consumers from being forced to pay licensing fees.²⁰⁴ In other words, consumers pay too much money when they are forced to pay for goods like data or ideas that already fall in the public domain. Thus, Menell and Scotchmer argue that intellectual property protection should only adhere to “works that are new and would not be readily forthcoming without legal protection. Works already in the public domain should not be protectable.”²⁰⁵

The data MLB seeks to control does not only appear on CBC’s website. Statistics are published in newspaper boxscores, flashed across television screens, referenced in print and internet articles and used in other fantasy games. Thus, one might fairly argue that the players’ names and performance records are already in the public domain. If this is the case, creating artificial scarcity around fantasy baseball statistics—and thus forcing CBC to pay licensing fees—is economically inefficient. Privatization creates an unnecessary deadweight loss to consumers.

Furthermore, privatizing baseball statistics might depress innovation and development in the fantasy baseball industry. Currently, the fantasy baseball industry is a highly competitive market due to the vast number of companies that offer fantasy sports.²⁰⁶ In contrast, in the early- and mid-1990s, few fantasy providers existed.²⁰⁷ As a result, fantasy team managers in the 1990s paid two to three times current prices to join leagues and paid higher “transaction” fees to change their rosters.²⁰⁸ Competition in the market not only reduced prices, but also resulted in broader choices for play. Now, strictly regimented and more expensive leagues exist for the serious fantasy team manager, while newcomers can join inexpensive or even free leagues.²⁰⁹ Advanced Media’s proposed licensing scheme would

203. See Peter S. Menell & Suzanne Scotchmer, *Intellectual Property*, in HANDBOOK OF LAW AND ECONOMICS 1, 3 (A. Mitchell Polinsky & Steven Shavell, eds.) (forthcoming 2007).

204. *Id.* at 4.

205. *Id.* at 9.

206. Expert Report of Rodney Douglas Fort ¶ 6, *C.B.C. Distrib. & Mktg., Inc. v. Major League Baseball Advanced Media*, 443 F. Supp. 2d 1077 (E.D. Mo. 2006), 2006 WL 1587248.

207. *Id.* ¶ 13.

208. *Id.*

209. See Razzano, *supra* note 73, at 1160.

dramatically reduce the number of fantasy providers, thereby raising costs and reducing options available to consumers.²¹⁰

Finally, allowing a private party to assert ownership over any type of data might be economically inefficient in itself. Maurer's study, showing that the U.S. database industry outperforms the E.U. database industry even without protections, casts doubt on the propriety of data protection in principle.²¹¹ Because data protection might hinder development and inhibit the public domain, any step towards data protection must be deliberate. The IP systems provide better vehicles than publicity rights, because they closely regulate duration and breadth of protection so as to minimize deadweight loss to consumers.²¹² In contrast, courts determine publicity rights on a case-by-case basis using a broad policy analysis rather than discrete time and breadth limitations.²¹³ The lack of clear-cut directives in the realm of publicity rights suggests that the right of publicity is a poor vehicle for implementing intellectual property rights in data.

IV. CONCLUSION

MLB's attempt to preclude CBC from using player statistics in its fantasy games is not a straightforward purported right of publicity violation. Rather, MLB's claim amounts to a call for data protection, and the Missouri District Court properly denied MLB's claim.

The policy-driven analysis that leads courts to recognize publicity rights in certain cases fails to justify privatizing fantasy baseball statistics. A fantasy provider like CBC, which uses its own resources and ingenuity to compute statistics, is not unjustly enriched when it collects a profit from these endeavors. Nor does CBC capitalize on the labors of MLB players or teams when it uses data from major league baseball games. The right of publicity protects the fruits of an individual's labors to the extent that he has built a marketable identity. CBC draws from the popularity of baseball in general, not fame of a player or players.

In addition, creating artificial scarcity around baseball players' statistics does not serve any useful economic purpose. CBC's games do not threaten the ability of MLB teams or players to earn a profit. Because baseball player data arguably already belongs to the public domain, priva-

210. Expert Report of Rodney Douglas Fort ¶ 7, *C.B.C. Distrib. & Mktg., Inc. v. Major League Baseball Advanced Media*, 443 F. Supp. 2d 1077 (E.D. Mo. 2006), 2006 WL 1587248.

211. See Maurer, *supra* note 163, at 789.

212. See Menell & Scotchmer, *supra* note 203, at 7.

213. MCCARTHY PUBLICITY, *supra* note 8, § 2.4.

tization would create a deadweight loss to consumers. Further, data protection poses a significant threat to the public domain, and at least one study suggests that data protection does not encourage database creation. In light of these issues, courts should not open the door to data protection using the policy-driven analysis that guides right of publicity cases.

TALES OF THE (VIRTUAL) CITY: GOVERNING PROPERTY DISPUTES IN VIRTUAL WORLDS

By Bobby Glushko

Since its creation, the internet has radically changed the lives of millions of people.¹ Arguably, the spread of the internet and corresponding advances in technology are among the most important events in the last decade. These technological advances include revolutionary improvements in video gaming, with single-player games being replaced with dynamic, networked games, particularly, virtual worlds.

Virtual worlds have developed into a serious economic force.² Economists have estimated that the total gross domestic product of virtual worlds exceeded seven billion dollars this year alone, comparable to the gross domestic product of Estonia or *Cote d'Ivoire*.³ Unsurprisingly, at least one government is showing interest in virtual economies; the U.S. Congressional Joint Economic Committee has launched an investigation into the possibility of taxing income derived from the sale of virtual prop-

© 2007 Bobby Glushko

1. Pew Internet & Am. Life Project, Daily Internet Activities, http://www.pewinternet.org/trends/Daily_Internet_Activities_7.19.06.htm (last visited Mar. 23, 2007); see also JOHN HERRIGAN & LEE RAINIE, PEW INTERNET & AM. LIFE PROJECT, THE INTERNET'S ROLE IN MAJOR LIFE MOMENTS, Apr. 19, 2006, http://www.pewinternet.org/pdfs/PIP_Major%20Moments_2006.pdf (showing survey data that the internet had been very important in major life events, such as coping with illness, purchasing a car or real estate, or finding employment).

2. Discussing the economy of Norrath, the setting of the virtual world of Everquest, economist Edward Castronova remarks that:

[t]he nominal hourly wage is about USD 3.42 per hour, and the labors of the people produce a GNP per capita somewhere between that of Russia and Bulgaria. A unit of Norrath's currency is traded on exchange markets at USD 0.0107, higher than the Yen and the Lira. The economy is characterized by extreme inequality, yet life there is quite attractive to many.

Edward Castronova, *Virtual Worlds: A First-Hand Account of Market and Society on the Cyberian Frontier 2* (Ind. Univ. Bloomington, Dept. of Telecomms., CESifo Working Paper Series No. 618, 2001), available at <http://ssrn.com/abstract=294828>.

3. *Id.* Julian Dibble, a prominent commentator on virtual economies, agrees with this theory and comments on it frequently in his blog, Terra Nova. See Posting of Julian Dibble to Terra Nova, *MMO GDP, QED (WTF?)*, http://terranova.blogs.com/terra_nova/2005/04/h1mmo_gdp_qed_w.html (Apr. 22, 2005).

erty.⁴ Excluded from these financial figures is the emotional energy and time that players expend on their virtual creations.⁵ Based on these investments, virtual worlds could prove to be a powerful social and economic force. However, conflicts regarding ownership of the property rights in these virtual creations are on the rise and could dampen this promise.

This Note examines multiple virtual property disputes and suggests that although end user licensing agreements (EULAs) that govern the virtual worlds provide a method for resolving disputes, their unenforcement and uncertainty regarding their terms do not provide an adequate framework to protect players' investments. As currently drafted, most EULAs contain disclaimers that seemingly allow developers to escape liability for negligence. These EULAs allow too much developer discretion in enforcing their terms, preventing players from predicting what they can or cannot do and endangering player investments in time and money. These EULAs also fail to conform to players' reasonable expectations surrounding their rights in virtual property. To tap the potential of virtual worlds, developers should create EULAs that strike a better balance between their own needs and player expectations.

This Note begins with a primer on the nature of virtual worlds, virtual property, and EULAs, focusing on the relationships between the players, what they consider to be their virtual property, and the developers of the worlds themselves. Part II examines three recent incidents in virtual worlds that exemplify conflicts over virtual property and demonstrate the inadequacy of standard EULAs to govern these growing new worlds. Part III explains in greater detail the problems with most virtual world EULAs

4. Adam Reuters, *US Congress launches probe into virtual economies*, REUTERS SECOND LIFE NEWS CENTER, Oct. 15, 2006, <http://secondlife.reuters.com/stories/2006/10/15/us-congress-launches-probe-into-virtual-economies>.

5. Current scholarship, such as the work of Nicholas Yee, seems to indicate that for many users, their membership in a virtual world was one of, if not the most, satisfying experiences in their lives.

When respondents were asked whether the most positive experience they had experienced over the period of the past 7 days or the past 30 days occurred in an MMORPG or in real-life, 27% of respondents (n = 2170) indicated that the most satisfying experience over the past 7 days occurred in the game, and 18% of respondents indicated the same when the wording was changed to "over the past 30 days."

Nicholas Yee, *The Psychology of Massively Multi-User Online Role-Playing Games: Motivations, Emotional Investment, Relationships and Problematic Usage*, in AVATARS AT WORK AND PLAY: COLLABORATION AND INTERACTION IN SHARED VIRTUAL ENVIRONMENTS 187, 193 (Ralph Schroder & Ann-Sofie Axelsson eds., 2006).

and makes a normative argument for revising them. Finally, the Note offers suggestions on how EULAs could better govern virtual worlds.

I. A PRIMER ON VIRTUAL WORLDS, VIRTUAL PROPERTY, AND END USER LICENSING AGREEMENTS

Although multi-user online worlds have existed for quite some time, virtual worlds as they exist today—persistent, graphical, multi-user games—are a far cry from their video game ancestors. The following Section explains the nature of these new worlds, what “property” exists within them, and how the EULAs that govern these worlds function.

A. What Are Virtual Worlds?

Unlike the majority of video games, which exist solely where and when they are being played, virtual worlds allow users to interact in a shared, online environment. Virtual worlds come in many forms,⁶ but they share commonalities. Generally, virtual worlds possess the following characteristics: they are *shared*, allowing multiple users to access the space at a given time; they have some sort of *graphical user interface*, enabling the user to navigate the world; they are *immediate*, making all interactions take place simultaneously; they are *persistent*, meaning the world continues to exist whether or not there are users present; and they *allow for social interaction*, letting users communicate or otherwise interact with each other.⁷ Interactions in virtual worlds take place with the assistance of avatars, graphical representations of the players,⁸ and are mediated by the virtual world’s developers through their control of the operating software and the underlying computer code.

Some worlds emphasize problem-solving and adventuring, typically containing quests to complete and monsters to kill.⁹ Others are less task-

6. For example, some virtual worlds focus on gaming and social interaction, such as Everquest, EVE Online, or Second Life, while others focus on political discussion or education, such as AgoraXchange, or the online law school in There.com. For more on the types of virtual worlds, see Virtual Worlds Review, What is A Virtual World?, <http://www.virtualworldsreview.com/info/whatis.shtml> (last visited Jan. 28, 2007).

7. *Id.*

8. The term Avatar is derived from Sanskrit Hindu texts, where it is used to refer to the form a god takes when he or she descends to the earth. Avatars come in many forms, from simple ASCII icons, to idealized versions of the player, to grotesque monsters. Merriam-Webster Online Dictionary, Definition of Avatar, <http://www.m-w.com/dictionary/avatar> (last visited Feb. 28, 2007).

9. This is the traditional “game” instance of virtual worlds. Popular examples of this type of game are Everquest and World of Warcraft.

oriented, focusing more on interpersonal relationships and goals that are less tangible than slaying monsters and gaining power.¹⁰ There are also hybrids like EVE Online where players focus on gaining power and acquiring treasure, but player interaction remains paramount, either through trade, resource collection, piracy, or some combination thereof. Regardless of the focus of the game, all virtual worlds share the characteristics outlined above, and as players spend more time in them, they tend to develop meaningful relationships with the world, their avatar, and other players.¹¹

Virtual worlds feature substantial economies of trade in goods that exist solely within the online space.¹² The institutions inside these economies mirror the real world, with exchange brokers and currency trading houses,¹³ which exist either with or without the explicit approval of the developers.¹⁴ For example, Sony Online Entertainment, the developer of EverQuest, responded to player sales of virtual property by creating a website devoted to the sale of such goods.¹⁵ Other developers have taken a different approach by banning such sales, at least in name. However, even in games where the sales are “banned,” there are thriving black markets for virtual currencies, objects, and characters.¹⁶

Sales of virtual property break down into three categories: sales of “gold,” or whatever currency the world uses; sales of items, such as weapons, clothing, or even houses and land; and sales of accounts, that is, the password and login information to play a specific avatar. These sales take place in a variety of ways. Some sellers of virtual goods simply place an

10. The games *There* and *Second Life* fall into this category. In these games, players choose their own goals and set out to achieve them.

11. See Yee, *supra* note 5.

12. See Castronova, *supra* note 2, at 3-5 (discussing some early instances of these virtual economies, providing extensive evidence of their robustness and projected growth).

13. Game USD is often considered to be the “gold standard” of the going values for virtual currency. See GameUSD.com, Game Currency Price Research, <http://www.gameusd.com> (last visited Jan. 28, 2007) [hereinafter Game USD].

14. Blizzard, the developer of the virtual world “World of Warcraft,” for example, takes a dim view of players selling virtual property and has made public statements that it will punish and expel offenders. See World of Warcraft, Terms of Use Agreement, <http://www.worldofwarcraft.com/legal/termsofuse.html> (last visited Jan. 28, 2007) [hereinafter Warcraft ToU]. However, there still remains a thriving black market for virtual property in the World of Warcraft. See GameUSD, *supra* note 13.

15. Sony Online Entertainment runs Station Exchange, a website that facilitates virtual property transactions in the popular virtual world of EverQuest. See Sony Station Exchange, <http://stationexchange.station.sony.com> (last visited Jan. 28, 2007).

16. *Id.*

auction on a website like eBay.¹⁷ Others meet in-game and engage in transactions using third-party services like PayPal, although this practice has declined due to rampant fraud and sellers' failure to deliver goods.¹⁸

Consumers spend significant amounts of time and money in virtual worlds,¹⁹ and with advances in personal computing, the underlying technologies upon which the worlds run have become more powerful and easier to implement. As the virtual world experience becomes more fulfilling, and as people become invested in their experience, they often begin acquiring property.²⁰ Much like in the physical world, acquiring and trading property leads to a need for legal regulation.

B. A Comparison of Virtual and Physical Property

Black's Law Dictionary defines property generally as "the right to possess, use, and enjoy a determinable thing."²¹ This definition focuses on the "bundle of rights" notion of property, and encompasses real property, personal property, and even intellectual property.²² Like physical property, virtual property is persistent, interconnected, and rivalrous. Virtual property does not disappear when the player turns off her computer, much like a house does not simply disappear when its owner leaves for work. Within the virtual world an object can interact with other objects.²³ A player can

17. Hundreds of auctions for money, items, and accounts in EVE Online were ongoing at the time of this writing. While this practice is ostensibly in violation of Crowd Control Production's terms of service, they do not seem to be policing eBay too vigorously. However, eBay has recently banned the sale of much virtual property. It remains to be seen if another auction site will step in to fill the gap. Daniel Terdiman, *eBay bans auctions of virtual goods*, CNET NEWS.COM, Jan. 29, 2007, http://news.com.com/2100-1043_3-6154372.html.

18. This problem is compounded by the fact that since most sales are "illegal," that is, violations of the terms of service of the virtual world, the buyer has little recourse. For an anecdote about fraud in online transactions, see LawGuru.com, *Fraud Over Virtual Property*, <http://www.lawguru.com/cgi/bbs/mesg.cgi?i=90544755> (last visited Feb. 27, 2007).

19. Many video games set in virtual worlds have a multi-tier pricing structure, with the consumer acquiring the software to run the world, and then a membership fee to continue playing. World of Warcraft, *Frequently Asked Questions*, http://www.blizzard.com/wow/faq/faq_realms.shtml (last visited Feb. 27, 2007). Sometimes the software is offered for free, and then different levels of membership are available. For example, Second Life offers both free and pay levels of access. Second Life, *Membership, Land, & Pricing*, <http://secondlife.com/whatis/pricing.php> (last visited Feb. 27, 2007).

20. See Castronova, *supra* note 2, at 22-24.

21. BLACK'S LAW DICTIONARY 1252 (8th ed. 2004).

22. *Id.*

23. See Joshua Fairfield, *Virtual Property*, 85 B.U. L. REV. 1047, 1054 (2005) ("[C]ode can be made interconnected, so that although one person may control it, others

restrict access by others to a piece of virtual property,²⁴ like how a real property owner can physically and/or legally exclude others from accessing their land.²⁵ And although simple computer code itself can easily be replicated, virtual property is nearly always treated as a rivalrous commodity.²⁶

Using the same categories as above, however, one can see how virtual property is also substantially different from physical property. For example, virtual property persists in multiple states, as a collection of ones and zeros that a machine reads and converts to an image and also as that perceivable image.²⁷ Although it makes sense to consider virtual property persistent, its persistence is contingent upon there being some meaningful way to render it. That is, while virtual property may *exist* in some sense on its own, if there is no way to interact with that property (for example, if the world in which the property is located ceases to exist), then the existence of the property is tenuous at best. This is important because developers almost universally retain the right to cease maintaining and running their virtual worlds. Therefore, the continued existence of the property is dependent on the developer's actions.²⁸

The interconnectedness and rivalrousness of virtual property also depends on its existence on the server of the virtual world. For example, a player cannot simply take her spaceship from EVE Online and fly around

may experience it. The value of a URL or an email address is not solely that the owner can control it; the value is that other people can connect to it, and can experience it.”).

24. *See id.* at 1053-54 (“By design, we make code that can only be possessed by one person. Thus, rivalrousness exists also in code. If one person controls rivalrous code, nobody else does. For example, no one but the owner of an internet address (or those the owner permits) can post content to that address.”).

25. For further examination of the similarities between virtual and physical property, see Fairfield, *supra* note 23, at 1052-55.

26. For a particularly striking counter-example of this claim, see LambdaMOO, a formerly popular virtual world. Felis Rex, LambdaMOO: An Introduction, <http://www.lambdamoo.info> (last visited Jan. 28, 2007). However, some say that the reason LambdaMOO did not have more users was the very non-rivalrousness of its property. *See also* Gregory Lastowka & Dan Hunter, *The Laws of the Virtual Worlds*, 92 CALIF. L. REV. 1, 11 (2004).

27. This can be analogized to music in MP3 format as opposed to a vinyl record; the MP3 exists both as a physical, transmittable file as well as a “song” when it is played by a computer program.

28. Section 2.6 of Second Life's ToS states: “Linden Labs may terminate or suspend your account at any time, without refund or obligation to you.” Second Life, Terms of Service, <http://secondlife.com/corporate/tos.php> (last visited Feb. 27, 2007).

Second Life.²⁹ Similarly, the rivalrousness of virtual property is limited in the sense that the rivalrousness of other digital goods is limited. It is easy to make a copy of the code that creates a piece of virtual property, much like it is easy to copy an MP3 or a DVD.³⁰ While each copy of the property is exclusive, the ease with which such copies are made undermines its exclusivity.

Defining virtual property has been the subject of much debate in recent scholarship. A number of scholars contend that players should hold some sort of a property right in virtual objects.³¹ Other scholars would have the law treat virtual property as purely fictional and with no economic value.³² They argue that the difficulties in negotiating virtual property disputes outweigh virtual property's largely speculative value and that generally, where property disputes arise, they can be resolved by adherence to applicable contracts or EULAs.³³

Other scholars argue that the law should not differentiate between the property rights attributed to a plot of land in Kansas and a plot of land in Second Life.³⁴ These strong protectionists make several arguments. First, they invoke the Lockean conception of property rights, arguing that the substantial investment players put into creating virtual property grants

29. This is a very important point. Since players cannot freely transfer virtual property between worlds, substantial "lock-in" issues arise. One of the critiques of greater player rights in the EULAs that govern virtual worlds is that the market will correct for bad bargains; that is, players will leave worlds that have bad EULAs for worlds that have good EULAs. This makes a degree of sense, but it fails to take into account the fact that a player will lose a substantial amount of time and money in the move.

30. Linden Labs has been struggling with a program that allows players to make unauthorized copies of property within Second Life. See Daniel Terdiman, 'Second Life' faces threat to its virtual economy, CNET NEWS.COM, Nov. 15, 2006, http://news.com.com/2100-1043_3-6135699.html.

31. See, e.g., Fairfield, *supra* note 23, at 1101; Michael Meehan, *Virtual Property: Protecting Bits in Context*, 13. RICH. J.L. & TECH. (forthcoming), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=908924, at 47; Andrew D. Schwarz & Robert Bullis, *Rivalrous Consumption and the Boundaries of Copyright Law: Intellectual Property Lessons from Online Games*, 10 INTELL. PROP. L. BULL. 28, 29 (2005), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=927475.

32. RICHARD A. BARTLE, PITFALLS OF VIRTUAL PROPERTY, <http://www.themis-group.com/uploads/Pitfalls%20of%20Virtual%20Property.pdf> (on file with author).

33. *Id.*

34. See Fairfield, *supra* note 23, at 1101-02; see also Lastowka & Hunter, *supra* note 26, at 43-50.

some moral rights to it.³⁵ Second, they argue that players believe that virtual property belongs to them, and that belief puts normative pressure on the law to respect that property interest.³⁶ Third, they suggest there is a need for strong property rights to accommodate the existing market for virtual property, which encompasses thousands of dollars of virtual property available for sale at any given time with a variety of resellers.³⁷ Overall, the strong virtual property rights viewpoint argues that since there is a real value to the property, people believe that they own the property, and people work to create the property, it is more fair to have ownership vest in the creator of the property than in the hands of the developers of the virtual worlds.³⁸

Currently, property rights in these virtual worlds are defined by end user license agreements (EULAs) that players agree to when they first log on to the game. Nearly every virtual world has a clause in their EULA requiring that players assign the rights of all property created in-game to the developers of that world. For example, the EULA for World of Warcraft reads:

All title, ownership rights and intellectual property rights in and to the Game and all copies thereof (including without limitation any titles, computer code, themes, objects, characters, character names, stories, dialog, catch phrases, locations, concepts, artwork, character inventories, structural or landscape designs, animations, sounds, musical compositions and recordings, audio-visual effects, storylines, character likenesses, methods of operation, moral rights, and any related documentation) are owned or licensed by Blizzard.³⁹

While there are notable exceptions, such as Second Life, the norm is total developer ownership of all virtual property created in virtual worlds. How

35. Lastowka & Hunter, *supra* note 26, at 46 (citing JOHN LOCKE, TREATISE OF CIVIL GOVERNMENT AND A LETTER CONCERNING TOLERATION 32 (Charles L. Sherman ed., 1937) (1689)).

36. *Id.* at 48.

37. *Id.* at 50.

38. For an in-depth discussion of the rights which should be accorded to virtual property, see Cory R. Ondrejka, *Living on the Edge: Digital Worlds Which Embrace the Real World* (June 5, 2004) (unpublished paper, on file with Linden Research), available at <http://ssrn.com/abstract=555661>; see also Meehan, *supra* note 31, at 34; Schwarz & Bullis, *supra* note 31, at 24.

39. See World of Warcraft, End User License Agreement, <http://www.worldofwarcraft.com/legal/eula.html;jsessionid=FDE9F275AD70B33A5CB30301D9083F63.app05> (last visited Jan. 28, 2007) [hereinafter Warcraft EULA].

though, do these EULAs function, and what role do they play in adjudicating disputes over virtual property?

C. The Role of End User Licensing Agreements

Software programs come with a EULA that sets the terms of acceptable use of the program. In the context of virtual worlds, the EULAs ostensibly govern the world, with terms ranging from banning racism⁴⁰ to placing limits on the ownership of property.⁴¹ The game developer writes the EULA, and it accordingly tends to favor developer interests.⁴² As this Note will argue, the ways in which EULAs are drafted and enforced have strong implications for how disputes over virtual property rights are resolved.

First though, what is a EULA? A EULA is a type of software licensing agreement that serves to create a contract between a software developer and the purchaser of the software. The EULA is generally presented as a graphical computer window that pops up when the purchaser of the software begins running the program.⁴³ The purchaser is then presented with the terms of the license, and must click a button indicating that she has read and accepted those terms.⁴⁴ The software will only begin running if the user agrees to the EULA.⁴⁵

Although there is a split among the circuits, courts generally hold EULAs enforceable against the users of the software. For example, in *ProCD, Inc. v. Zeidenberg*, the Seventh Circuit held that the terms contained in a “clickwrap”⁴⁶ EULA that accompanied a software program were enforce-

40. EVE Online, for example, prohibits players from “be[ing] a member of any corporation or group within EVE Online that is based on or advocates any anti-ethnic, anti-gay, anti-religious, racist, sexist or other hate-mongering philosophies.” EVE Online, Terms of Service, <http://www.eve-online.com/pnp/terms.asp> (last visited Jan. 28, 2007) [hereinafter EVE ToS].

41. Warcraft ToU, *supra* note 14.

42. See, e.g., EVE Online, End User License Agreement, <http://www.eve-online.com/pnp/eula.asp> (last visited Jan. 28, 2007) (containing indemnification clauses and clauses allowing the developer to terminate EVE Online accounts) [hereinafter EVE EULA].

43. See EULA, The Free Dictionary, <http://computing-dictionary.thefreedictionary.com/EULA> (last visited Jan. 28, 2007).

44. *Id.*

45. EULAs that appear as pop-up windows when a computer program is run are commonly referred to as “clickwrap” contracts.

46. See Clickwrap, The Free Dictionary, <http://thefreedictionary/clickwrap> (last visited Mar. 19, 2007).

able.⁴⁷ However, in *Specht v. Netscape Communications Corp.*, the Second Circuit ruled that clickwrap EULAs required the assent of both parties to be enforceable, and that merely clicking “I Accept” did not necessarily indicate the assent of the purchasing party.⁴⁸ For the purpose of this Note, the general trend of enforceability will be presumed.

Some scholars and commentators have argued that software EULAs should not be enforceable when they contain provisions that allow the developer to change the terms of the licensing agreement at any time without informing the purchaser, requiring assent, or providing any consideration for the change.⁴⁹ This freedom to alter the terms of the EULA at any time allows the software developer to potentially change the terms of the contract every time the purchaser runs the program, with the only “assent” required being the player’s continued use of the program.⁵⁰ And since many times the purchaser has never read the terms of the EULA, or is unaware that terms have changed, this can lead to a substantial disconnect between the terms of the agreement and purchaser’s understanding of those terms.⁵¹

In virtual worlds, EULAs function as a mix between a constitution and a holy book.⁵² Game developers create the EULAs with almost no player

47. *ProCD, Inc. v. Zeidenberg*, 86 F.3d 1447, 1449 (7th Cir. 1996).

48. *Specht v. Netscape Comm’ns Corp.*, 306 F.3d 17, 20 (2d Cir. 2002).

49. See Nicholas Aldrich, *Unplugged: The Music Industry’s Approach to Rolling Contracts on Music CDs* (Nov. 8, 2006) (unpublished paper, on file with University of Washington Law School), available at <http://ssrn.com/abstract=943607> (discussing this issue in the music industry); see also Research at Penn: Internet Games’ Virtual Goods Inspire a Real World Market, *In Norrath, Tattoine and Rubi-ka, Just What Are Your Legal Rights?*, Sept. 24, 2003, <http://www.upenn.edu/researchatpenn/article.php?725&tch;WarcraftToU>, *supra* note 14.

50. *Warcraft ToU*, *supra* note 14.

51. A humorous example of this can be found in the following EULA:

Should you fail to register any of the evaluation software available through our web pages and continue to use it, be advised that a leather-winged demon of the night will tear itself, shrieking blood and fury, from the endless caverns of the nether world, hurl itself into the darkness with a thirst for blood on its slaving fangs and search the very threads of time for the throbbing of your heartbeat. Just thought you’d want to know that. Alchemy Mindworks accepts no responsibility for any loss, damage or expense caused by leatherwinged demons of the night.

Alchemy Mindworks, Details, <http://www.mindworkshop.com/alchemy/alchemy6.html> (last visited Jan. 28, 2007).

52. For further discussion of the “gods” of virtual worlds, see Lastowka & Hunter, *supra* note 26, at 51-59.

input.⁵³ These EULAs establish the basic principles that govern virtual worlds and the interactions within them. For example, most EULAs have clauses regarding ownership of intellectual property, clauses immunizing developers against suit, and clauses setting out billing rates with provisions stating that those rates can change at any time.⁵⁴ They also regulate the interactions between players. Frequently, the EULAs of virtual worlds have clauses forbidding theft, harassment, or sexist and homophobic speech.⁵⁵

EULAs are largely enforced at the developers' discretion, with many containing clauses indicating that while the developers "reserve the right to take any necessary measures for the purpose of preventing and acting against frauds and Non-Approved Transactions," they are not liable for any damages that "arise from a breach of this agreement or are made by other participants related to your use of the [virtual world] or the internet, or in connection with your transmission of any content using the [virtual world]."⁵⁶ The line between the two is fine; in this instance, the game developer reserves the right to take action to resolve disputes when it chooses, but does not warrant that it will. This flexible enforcement gives the developers the greatest leeway in administering their virtual worlds.⁵⁷

Not surprisingly, because EULAs potentially immunize developers from liability, grant developers sole discretion over enforcement, and do not require meaningful agreement from players, conflicts arise between players and the game developers particularly where virtual property is involved. Players often feel these conflicts are inadequately resolved, and these unresolved conflicts suggest that the EULAs could be constructed to better address this dissatisfaction. Part II of this Note examines particular instances of these conflicts.

II. A TALE OF THE VIRTUAL CITIES: PROPERTY ISSUES IN VIRTUAL WORLDS

As noted above, the landscapes of virtual worlds are shaped by their EULAs and the conflicts that arise within and around them. Players inte-

53. Notable examples of this, like Lambda MOO, are so rare as to prove the point.

54. See, e.g., Warcraft EULA, *supra* note 39.

55. *Id.*

56. Entropia Universe End User License Agreement, <https://account.entropiauniverse.com/pe/en/rich/5185.html> (last visited Jan. 28, 2007) (emphasis omitted) [hereinafter Entropia EULA].

57. That is, developers can maintain the right to enforce rules while having no obligation to do so.

ract with each other and the world itself, engaging in a multifaceted experience mediated by the software code provided by the developers of the world. In the course of these interactions, however, complex issues of ownership and property rights inevitably arise. The following Section examines three recent disputes over virtual property and illustrates the complexities of the legal relationships and the inadequacy of EULAs to mediate those relationships.

A. **Missing: Virtual Weapons of Mass Destruction. Legal Recognition of Property Rights in Virtual Worlds**

Li Hongchen had, for years and at significant expense in time and money, diligently pursued an illicit military research program, ultimately producing a fine stockpile of biochemical weapons.⁵⁸ With these weapons and the requisite technologies with which to deploy them, his global prestige increased substantially, and his ability to recruit other players and to intimidate the rest of the world would soon make him a global player.⁵⁹ That is, he would have had a hacker not stolen his weapons by exploiting a security flaw in the computer code running the virtual world.⁶⁰

Naturally, Li was upset when these weapons were stolen.⁶¹ He contacted Beijing Arctic Ice Technology Development Company, the developer of the online computer game Hongyue, or Red Moon, which Li was playing.⁶² Arctic Ice refused to return the weapons or to release the personal information of the player Li believed to have stolen them.⁶³ Li next went to the local police, who were unable to help return the weapons, pos-

58. Jay Lyman, *Gamer Wins Lawsuit in Chinese Court Over Stolen Virtual Winnings*, TECHNEWSWORLD, Dec. 19, 2003, <http://www.technewsworld.com/story/32441.html>.

59. *Id.*

60. *Id.*

61. It is important to understand the time and energy players invest in their avatars and property in virtual worlds. For example, in a recent case, the theft of a virtual sword in the game Legends of Mir 3 led to a real world murder. See *'Game Theft' Led to Fatal Attack*, BBC NEWS, Mar. 31, 2005, <http://newsvote.bbc.co.uk/1/hi/technology/4397159.stm>. While cases like this are, fortunately, extremely rare, the emotional and monetary value attributed to virtual property and the trend towards intense conflicts over those virtual assets are likely to increase, rather than diminish, over time. For an excellent discussion on the increasing relevance of virtual worlds, see Castronova, *supra* note 2, at 21-24.

62. *Court Grants Online Chinese Gamer Virtual Property*, CHINATECHNEWS.COM, Dec. 23, 2003, <http://www.chinatechnews.com/2003/12/23/628-court-grants-online-chinese-gamer-virtual-property>.

63. Will Knight, *Gamer wins back virtual booty in court battle*, NEWS SCIENTIST.COM, Dec. 23, 2003, <http://www.newscientist.com/article.ns?id=dn4510>.

sibly because they failed to understand the situation.⁶⁴ Li filed suit in the Beijing Chaoyang District People's Court against Arctic Ice, alleging that Arctic Ice was negligent in securing their servers against attack, causing Li's property to be stolen.⁶⁵

Li's suit resulted in the first judicial recognition of virtual property rights in the world.⁶⁶ The Beijing Chaoyang District People's Court ordered the game developers to return the weapons to Li, valuing them at twelve hundred dollars.⁶⁷ The court found that Arctic Ice was negligent in securing its servers against attack, and that negligence was directly responsible for the loss of Li's property.⁶⁸ The court rejected Arctic Ice's argument that it was immune to liability for negligent acts because Li had agreed to immunize Arctic Ice by accepting its EULA. The court recognized a property right in the virtual goods, ruling that the right of the owner to control them was good against the world.⁶⁹

Li's case illustrates the inadequacies of both the EULAs and the developers' response to player-on-player theft. Software developers have long attempted to avoid liability through immunity clauses.⁷⁰ Game developers are not wrong to want to limit their liability. However, the relationship that they have with the players of their games is different than the relationship between licensees of most consumer software and the developers of that software. Players within virtual worlds have an ongoing relationship with the game developer, other players, and virtual property within those worlds. As noted above, players also invest considerable time and money into the virtual world, a virtual world that continues to be under the control of the game developer. Because of this continuous and close relationship, developers of virtual worlds have a greater responsibility to their customers than most software developers. As the Chinese court found, because of this ongoing contractual relationship, and the property rights implicated in it, game developers cannot contract out of this responsibility.

64. *Court Grants Online Chinese Gamer Virtual Property*, *supra* note 62.

65. *See* Fairfield, *supra* note 23, at 1084-85.

66. Lyman, *supra* note 58.

67. *Id.*

68. *Id.*

69. *Li v. Beijing Arctic Ice Tech. Dev. Co.* (Beijing Chaoyang Dist. People's Ct., Dec. 18, 2003), available at <http://www.chinacourt.org/public/detail.php?id=143455>. For a full discussion of the court's reasoning, see Fairfield, *supra* note 23, at 1084-87.

70. *See, e.g.* Warcraft EULA, *supra* note 39.

B. The EVE Investment Bank Scandal: Uncertainty in EULA Enforcement

EVE Online is a massively multiplayer online game (“MMOG”) set in an outer space, science-fiction-based, persistent world. Players take the role of spaceship pilots seeking fame, fortune, and adventure in a huge, exciting, and sometimes hostile galaxy.⁷¹ There are many virtual worlds set in a wild-west-style space opera, but the world of EVE online is unique in two ways. First, unlike most virtual worlds, EVE Online does not “shard,” that is, all players in the entire universe exist on the same server, and all players of the game exist in the same world.⁷² This is significant because this makes EVE Online larger than games with more total players. It also means that every player of EVE Online is able to interact with every other player.

The second difference between EVE Online and other MMOGs is that EVE Online is primarily based upon interactions with other players but is more hostile and competitive than other relationship-oriented games like Second Life. Relationships in EVE Online can be cooperative, such as in trading resources or building ships, or hostile, such as pirating other players’ resources, cheating them in business deals, or destroying their ships and bases in combat.⁷³ Players form alliances, or corporations, and pool their resources.⁷⁴ These corporations often have significant assets, with large amounts of virtual property. While player groups are common in

71. See EVE Online, Frequently Asked Questions, http://www.eve-online.com/faq/faq_01.asp (last visited Jan. 28, 2007) [hereinafter EVE FAQ].

72. A shard is an instance of a world, realm, or playground in some massively multiplayer online games. In MMOGs, the term shard is often associated with Ultima Online and Silkroad Online; other MMOGs call them servers instead, although their function is the same. The usage originated with the Ultima Online story, where each of the game’s servers were said to be different images of the world, trapped in the shattered shards of a mystic gem. See Wikipedia.org, Shard, <http://en.wikipedia.org/wiki/Shard> (last visited Jan. 28, 2006). The lack of sharding in EVE Online is important, as a scam of the magnitude described above would be extremely difficult to attempt if it were necessary to create an individual bank for every instance of the server.

73. The basic role-playing and space simulation aspects of EVE are really just the tip of the iceberg. When players band together to form factions and alliances, the game progresses to a more grand-scale strategic level. Political intrigue, corporate espionage and the very essence of Darwinism bring dimension and depth to the game as the struggle for fame and fortune ebbs and flows with each new day in EVE.

EVE FAQ, *supra* note 71.

74. See EVE Online, Corporation Guide, <http://www.eve-online.com/guide/en/g12.asp> (last visited Jan. 28, 2007).

many online games,⁷⁵ the scope of EVE Online is massive, with over one hundred thousand players potentially online at any given time.⁷⁶ The size of the virtual world makes it important for players to band together to avoid being overpowered by more powerful players. Furthermore, since EVE Online attracts a sophisticated player base, the level of competition can be higher than in virtual worlds targeted at younger audiences.⁷⁷ Real world corporations even sell stock in speculative business ventures to players in the game.⁷⁸ It was within this setting that a player, whose avatar went by the name of Cally, created the Eve Investment Bank, a corporation that took deposits of players' in-game money for safekeeping.⁷⁹

For half a year, Cally had accepted in-game transfers of Inter Stellar Credits ("ISK") and paid interest on those deposits.⁸⁰ The interest rates were so high that some players appeared to be converting dollars to ISK through online currency traders just to earn a greater return than would be available in real-world dollars.⁸¹ Large-scale investors were guaranteed nearly a nine percent return on their money.⁸² During the nine months it was operating, the bank took in hundreds of billions of ISK, or nearly \$125,000.⁸³

Cally's avatar then left for uncharted in-game space with the depositors' money. He was frank in his closing statements: he was a pirate, and

75. For a look at how many of these groups there are in the World of Warcraft, see Warcraft Realms, <http://www.warcraftrealms.com/census.php> (last visited Jan. 28, 2007).

76. Press Release, EVE Online, EVE Online Reaches the 100,000 Subscriber Mark (Feb. 7, 2006), available at <http://www.gamespot.com/pc/rpg/evethesecondgenesis/news.html?sid=6143803>.

77. Games which primarily emphasize personal interaction tend to draw older audiences than games which focus on the acquiring of property and experience through accomplishing tasks, generally hunting monsters. Also, players tend to react negatively to having their property taken or their character killed by another human, as opposed to the game itself.

78. Mark Wallace, *EVE Online Mega-Corporation Goes Public*, 3POINTD.COM, Dec. 14, 2006, <http://www.3pointd.com/20061214/eve-online-mega-corporation-goes-public/#more-962>.

79. EVE Online is a dangerous place. A safe place to keep money would have been attractive to many players.

80. Tudor Stefanescu, *EVE Online Economy Suffers 700 Billion ISK Scam*, SOFTPE-DIA, Aug. 24, 2006, <http://news.softpedia.com/news/Eve-Online-Economy-Suffers-700-billion-ISK-Scam-33737.shtml>.

81. See EVE Online, EVE Insider Forums, <http://myeve.eve-online.com/ingameboard.asp?a=topic&threadID=347657> (last visited Jan. 28, 2007).

82. *Id.*

83. *Id.*

everyone foolish enough to trust him with their money got “owned”.⁸⁴ The removal of so much capital from circulation all at once sent shockwaves through the virtual economy and threw the EVE Online community into chaos.⁸⁵ As one commentator observed, “it might have been a scene out of some movie about the Great Depression; hundreds of frantic people tearing their hair out as they mob the doors to a bank, only to realize that the bank’s owners, along with their money, had vanished into thin air.”⁸⁶

In the successive days and weeks, the outcry prompted Crowd Control Productions (“CCP”), the makers of Eve Online, to release a statement in a virtual press conference, saying that while they recognized that the money stolen represented a huge investment in players’ time and money, they would not delete Cally’s account.⁸⁷ CCP indicated though that they would be closely watching the account to ensure that the ISK would not be converted to real-world currency.⁸⁸

The EVE Online community was upset by CCP’s response.⁸⁹ Even though most players understood that the game incorporated elements of deception and theft, the EVE Investment Bank scam went far beyond any previous scam and at least some players felt that CCP should intervene.⁹⁰ Furthermore, it is likely that some players had acquired ISK through online currency traders to invest in the EVE Online Bank.⁹¹ Until the scam, CCP had turned a blind eye to many violations of their restrictions on purchasing or selling ISK online, and this complacency contributed to the size of the players’ loss. While CCP has indicated that it will be closely watch-

84. Cally’s “confession” is available for download at <http://dl.qj.net/Cally-s-EVE-Online-Confession-Video-Movie-PC-Gaming-MMORPG-Other-Games/pg/12/fid/9542/-catid/476>. The term “owned” is used by gamers to “acknowledge a form of superiority through the downfall of another entity, be it another gaming clan, or a single user. This can be in the context of winning an online game, a debate on a forum, or attaining a successful hacking” Wikipedia.org, Owned, <http://en.wikipedia.org/wiki/Owned> (last visited Mar. 23, 2007).

85. At the time of this writing, Cally’s location is unknown. Presumably the avatar and the money he stole are off in some unknown area of EVE Online, or more likely, merely inactive.

86. Peter Pollack, *Online ‘banker’ runs off with cash, avatars cry foul*, ARSTECHNICA, Aug. 28, 2006, <http://arstechnica.com/news.ars/post/20060828-7605.html>.

87. Charles Husemann, *All about the ISK*, GAMING NEXUS, Sept. 9, 2006, <http://www.gamingnexus.com/Default.aspx?Section=Article&I=1181>.

88. *Id.*

89. Julian “rabbit” Murdoch, *612 Lawns*, GAMERS WITH JOBS, Aug. 29, 2006, <http://www.gamerswithjobs.com/node/26703>.

90. *Id.*

91. The large amount of ISK traded on the open market nearly assures that some of it ended up in the vaults of the EVE Investment Bank.

ing currency transactions to prevent Cally from converting his stolen ISK into real world currency, there are billions of ISK for sale through online currency traders, indicating that it is possible to sell ISK on the black market and that there is an incentive for similar scams.

CCP's laissez-faire attitude towards the EVE Investment Bank scandal does not reflect the rules set out in its terms of service ("ToS").⁹² The EULA bans many types of fraudulent behavior, including impersonating CCP staff, soliciting for "pyramid schemes and chain letters,"⁹³ and "violating any local, state, national, or international laws or regulations."⁹⁴ CCP retains an extensive right to control the importation of physical world material into the virtual world,⁹⁵ and has wide latitude to take action against players in the virtual world, such as suspending service, confiscating property, or terminating accounts.⁹⁶ Although it seems clear that CCP could take action in this case, return the stolen ISK to its owners, and hopefully deter future scams of this type, the ToS does not state that CCP *will* (or *must*) regulate such behavior.⁹⁷

The EVE Online banking scandal demonstrates the limitations that arise from governing virtual worlds through an agreement that can only be enforced by the game developer. Unfortunately for the players, the terms of the EVE Online EULA do not require game developers to assist players, and the game developers have incentives *not* to get involved in disputes among players; involvement would only have increased CCP's workload or potential for liability. The inability of players to enforce

92. See EVE ToS, *supra* note 40.

93. *Id.* This is a particularly interesting element, as the EVE Investment Bank was a classic pyramid scheme. Given their comments about the nature of EVE Online, perhaps CCP means this solely in a physical world context.

94. *Id.*

95. See *id.*

96. See *id.* CCP reserves the right to "close, temporarily or permanently, any user's account without advance notice" and "to delete all user accounts or inventory of characters as warranted." *Id.*

97. See *id.* CCP's ToS states rather dramatically:

YOU ACKNOWLEDGE THAT TERMINATION OF YOUR ACCOUNT BY CCP OR ONE OF ITS AUTHORIZED REPRESENTATIVES MAY RESULT FROM FAILURE TO ABIDE BY THESE RULES. SUCH TERMINATION WILL NOT ENTITLE YOU TO A REFUND OF ANY FEES PAID BY YOU FOR THE USE OF THE EVE ONLINE CLIENT, SERVERS OR WEB SITE. YOU WILL FORFEIT ANY UNUSED GAME TIME REMAINING AT THE TIME OF TERMINATION.

Id.

property rights in their virtual property is a key failing of the EULA as a tool to govern virtual worlds as they continue to grow.

C. Property Dispute in Second Life: What Does Ownership Mean?

Marc Wobegone, the online avatar of Mark Bragg, a Pennsylvania attorney, was a moderately successful nightclub owner and inventor in Second Life, a virtual world operated by Linden Labs.⁹⁸ The virtual world of Second Life is primarily designed for player interaction, with no set quests to complete. Instead, players interact with each other, form relationships, and design and market products.⁹⁹ Second Life is unique in that it advertises that players retain applicable rights in their property; what you create in second life, you own.¹⁰⁰ This policy has drawn thousands of users, with players spending and making substantial amounts of money.¹⁰¹ It also has spurred traditional business to take an active role within Second Life, with big brands selling products such as clothing and even automobiles.¹⁰²

Bragg began to accumulate capital in Second Life, eventually developing an interest in virtual real estate speculation, a growing and potentially lucrative field.¹⁰³ Within the Second Life world, Linden Labs sells parcels

98. Kathleen Craig, *Second Life Land Deal Goes Sour*, WIRED NEWS, May 18, 2006, <http://www.wired.com/news/culture/0,70909-0.html>.

99. Second Life's creator, Linden Labs, explicitly rejects calling Second Life a "game."

100. *Second Life* takes a very different approach [than other games], recognizing residents' intellectual property rights to their creations, allowing them to generate real-world income. . . . As a user-created digital world, the ultimate success of *Second Life* is coupled to the innovation and creativity of its residents, not to ownership of their intellectual property. This is also a practical decision, as MMOGs establish economic links to the real world independent of the wishes of the developers or world operators.

Cory R. Ondrejka, *Aviators, Moguls, Fashionistas and Barons: Economics and Ownership in Second Life 1* (Nov. 7, 2004) (unpublished paper) (on file with Linden Research), available at <http://ssrn.com/abstract=614663>.

101. In January 2006 "inside Second Life alone, people spent nearly \$5 million in some 4.2 million transactions buying or selling clothes, buildings, and the like." Robert D. Hof, *My Virtual Life*, BUSINESSWEEK ONLINE, May 1, 2006, http://www.businessweek.com/magazine/content/06_18/b3982001.htm.

102. Wagner James Au, *Adidas, Toyota, come to Second Life*, GIGAOM, Aug. 20, 2006, <http://gigaom.com/2006/08/20/adidas-toyota-come-to-second-life>.

103. See Julian Dibbell, *The Unreal Estate Boom*, WIRED MAGAZINE, Jan. 2003, available at http://www.wired.com/wired/archive/11.01/gaming.html?pg=1&topic=&topic_set=.

of land through online auctions, where registered users bid against other users for parcels of land, which they can then subdivide and re-sell.¹⁰⁴ Interested in learning more about land auctions, Bragg began reading online discussion forums on how to successfully speculate on land in Second Life.¹⁰⁵ One source indicated that a player could take advantage of the online auction interface by going to unlinked URLs and prematurely starting land auctions that would not be visible to players who did not know how to access them.¹⁰⁶ This allowed the player who initiated the auction to purchase land without having to face competing bids, allowing her to pay a significantly lower price.¹⁰⁷ Despite the likely illegality of this practice under the laws of Second Life,¹⁰⁸ Bragg self-initiated a land auction and became the owner of a parcel of land named “Taessot” for which he paid Linden Labs three hundred U.S. dollars.¹⁰⁹

Linden Labs took action as soon as they learned about the practice of users starting land auctions prematurely.¹¹⁰ Linden Labs froze Bragg’s account, deleted his avatar, and denied him access to all of his virtual property, including his nightclub.¹¹¹ Two months later, Linden Labs removed Bragg’s name from the title to “Taessot” and his nightclub without compensating him, and prepared them for future resale.¹¹²

After attempting to negotiate with Linden Labs for the return of his nightclub and his Second Life bank account, Bragg retained counsel and sued Linden Labs in a Pennsylvania state court asserting a number of causes of action including violation of consumer protection statutes, fraud, and breach of contract.¹¹³ Bragg alleged that he relied upon statements made by the owners of Linden Labs, which indicated that property rights in Second Life were inviolable.¹¹⁴ In particular, Bragg cited to a Linden Labs press release where Linden Labs altered its ToS to “allow[] subscrib-

104. *Id.*

105. Complaint at 9-10, *Bragg v. Linden Res., Inc.*, No. 06-08711 (Pa. Ct. Com. Pl. 2006) [hereinafter *Bragg Complaint*].

106. Craig, *supra* note 98.

107. *Id.*

108. It is unclear from Second Life’s ToS and EULA if the practice was illegal.

109. *Bragg Complaint*, *supra* note 105, at 20.

110. Craig, *supra* note 98.

111. *Id.*

112. White and Williams LLP, *Virtual Land Lawsuit Reveals Dark Side of Second Life*, YUBANET.COM, Oct. 6, 2006, <http://www.yubanet.com/cgi-bin/artman/exec/view.cgi/22/43381>.

113. *Bragg Complaint*, *supra* note 105, at 31-46.

114. *Id.*

ers to retain full intellectual property protection for the digital content they create."¹¹⁵ In the same release, Linden Labs' CEO, Phillip Rosedale said:

We believe our new policy recognizes the fact that persistent world users are making significant contributions to building these worlds and should be able to both own the content they create, and share in the value that is created. The preservation of users' property rights is a necessary step toward the emergence of genuinely real online worlds.¹¹⁶

According to Bragg's complaint, this statement, and others like it,¹¹⁷ were made primarily to attract players to the game by promising them rights in their virtual property, and that those statements induced Bragg to invest in Second Life.¹¹⁸

Bragg's dispute with Linden Labs illustrates the limitations of EULAs to adjudicate property disputes occurring in virtual worlds. The terms of Second Life's EULA seem at odds with Linden Labs' public statements regarding player ownership of content.¹¹⁹ While Linden Labs claims the right to confiscate and sell property owned by a player, this, in light of its public statements, may run contrary to player expectations. If EULAs are used by developers to manipulate player expectations, the EULAs should be written in a way so as to fairly govern all property disputes within virtual worlds.

The examples above illustrate that there are and likely will continue to be disputes over virtual property in virtual worlds, and EULAs have not provided an adequate framework for adjudicating those disputes. According to the EULAs governing Red Moon, EVE Online, and Second Life, the developer retains discretion and control over disputes that arise in their virtual world. Under that framework, developers are conceivably free to ignore any consequences for their negligent in-game behavior, to enforce rules at their discretion, and to take, sell, or destroy any property. This is

115. Press Release, Linden Lab, Second Life Residents to Own Digital Creations (Nov. 14, 2003), available at http://lindenlab.com/press/releases/03_11_14 (on file with author) [hereinafter Linden Press Release].

116. *Id.*

117. For example, Mr. Rosedale commented to Guardian United: Gamesblog, "we started selling land free and clear, and we sold the title, and we made it extremely clear that we were not the owner of the virtual property." Bragg Complaint, *supra* note 105, at 7-8 (emphasis omitted).

118. See *Virtual Online Worlds*, THE ECONOMIST, Sept. 30, 2006, at 62, available at http://www.economist.com/business/displaystory.cfm?story_id=7963538.

119. Linden Press Release, *supra* note 115.

an inadequate basis upon which to ground the growing interest and participation in virtual worlds.

III. THE INADEQUACY OF EXISTING EULAS TO GOVERN VIRTUAL WORLDS

The inadequacy of existing EULAs to govern virtual worlds will become apparent as virtual worlds grow in size and economic importance. The prevalence of property disputes and a failure to address those disputes will harm the economic and social potential of those worlds. The following Sections examine specific problems with current EULA drafting and construction for many current virtual worlds. In particular, EULAs fail to adequately protect player interests, permit inconsistent enforcement, and do not conform to player expectations about their rights. Finally, this Part offers a series of suggestions as to how EULAs could better govern virtual worlds.

A. As Currently Constructed, EULAs Do Not Provide Adequate Protections for Players

As one might expect, the developer-drafted EULAs generally protect developer interests over player interests. In particular, virtual world EULAs generally contain clauses that allow the developers to terminate a user account for any reason at any time without compensation,¹²⁰ clauses that immunize the developer from any legal liability,¹²¹ clauses that allow the

120. From the Second Life EULA:

Linden has the right at any time for any reason or no reason to suspend or terminate your Account, terminate this Agreement, and/or refuse any and all current or future use of the Service without notice to you. Upon request from Linden, you agree to delete any electronic or printed copies of information or software programs that you received from Linden. In the event that Linden suspends or terminates your Account or this Agreement, you understand and agree that: (a) you shall receive no refund or exchange for any unused time on a subscription, any Land Use Fees, any Linden Dollars (L\$) that you hold, or for anything else . . .

SL Modifies Terms of Service and EULA (sort of), SECOND LIFE HERALD, Oct. 6, 2004, http://www.secondlifeherald.com/slh/2004/10/sl_modifies_ter.html.

121. From the EVE Online EULA:

In no event shall CCP, its affiliates, licensors or suppliers be liable to you or to any third party for any special, indirect, incidental, consequential, punitive or exemplary damages (including without limitation, lost profits or lost data), arising out of or in connection with your Account, the System, Software, Game, Game Content, User Content, EULA, or any other services or materials provided in connection there-

developers to alter the EULA at any time for any reason,¹²² and clauses that allow enforcement of the EULA terms at the developer's discretion.¹²³ The amount of leeway these clauses grant the developers leads to issues similar to those raised in Part II.

1. *Substantive Unfairness of Current EULAs*

In the cases of Li Hongchen, the EVE Online scandal, and Mark Bragg, the ways in which the virtual worlds' EULAs were constructed offered the developers great protection. For example, had Arctic Ice prevailed in the Chinese court, they would have been immunized from their negligence in maintaining their server security. This would have been unfair to Li and players like him, and would have provided poor incentives for Arctic Ice and other developers to take adequate steps to protect players. In the case of the EVE Online scandal, the fact that CCP chose not to take action against Cally provided players with little redress for their losses and allowed Cally to escape punishment.¹²⁴ In Bragg's dispute with Linden Labs, the terms of Second Life's EULA, apparently in contradiction with its CEO's public statements and advertising, would conceivably allow Linden Labs to take Bragg's virtual property at any time with no compensation.¹²⁵ In all of the above instances, the developers of the virtual worlds could terminate the accounts of any player at any time, providing a disincentive for players to seek redress for their grievances.¹²⁶

Additionally, these above examples illustrate that EULAs were written solely for the benefit of the developer and do not take into account player expectations of fairness. After investing substantial amounts of time and

with, whether based on warranty, contract, tort or any other legal theory, and whether or not CCP is advised of the possibility of such damages, and even if any stated remedy fails of its essential purpose.

EVE EULA, *supra* note 42.

122. From the World of Warcraft EULA:

Blizzard reserves the right, at its sole discretion, to change, modify, add to, supplement or delete any of the terms and conditions of this License Agreement when Blizzard upgrades the Game Client. . . . Blizzard may change, modify, suspend, or discontinue any aspect of the Game at any time.

Warcraft EULA, *supra* note 39.

123. See Entropia EULA, *supra* note 56.

124. See Pollack, *supra* note 86; see also *Don't Bank on It!*, TENTIONHAMMER, Sept. 9, 2006, <http://eve.tentionhammer.com/index.php?module=ContentExpress&file=index&func=display&ceid=11&meid=32>.

125. See *SL Modifies Terms of Service and EULA (sort of)*, *supra* note 120.

126. See *id.*; see also EVE EULA, *supra* note 42.

money into creating or purchasing virtual property, players begin to form expectations about the value of their virtual property.¹²⁷ This trend is furthered by the fact that the game developers themselves often approve, or at least turn a blind eye to, the sale and transfer of virtual property. The presence of so many third-party sellers of virtual property even in games where it is ostensibly banned makes it appear that developers are not aggressively enforcing their rules. EULAs of most games do not adequately guard against the ability of developers to destroy, confiscate, or even sell property that players reasonably believe belongs to them. Bragg's dispute is particularly illuminating. Linden Labs made public statements indicating that players would retain interests in any property they purchase or create in Second Life.¹²⁸ Linden Labs' EULA, however, contradicts these statements.¹²⁹ Regardless of the ultimate enforceability of the EULA or the outcome of Bragg's case, it seems unfair for players to have to choose between relying on a developer's public statements or its EULA.¹³⁰

Within the property "bundle of sticks" there is a presumption that property will persist, and that no third party can delete it at any time for any reason. However, most virtual world ToS and EULAs contain this language.¹³¹ While there are real-world counterparts to this, such as eminent domain, the government is required to compensate property owners for their loss.¹³² This is not generally so in virtual worlds. The potential damages that could be incurred by a developer deleting a player's virtual property could be so extreme that justification solely based on a clickwrap EULA raises questions of procedural or substantive unconscionability.¹³³ Regardless, it seems unlikely that there will be a reversal in the trend of courts finding no procedural unconscionability in clickwrap EULAs.¹³⁴ However, with players spending and keeping significant amounts of money in virtual worlds, courts should closely examine whether enforcing a EULA that allows a developer to delete nearly a million dollars in virtual

127. See Lastowka & Hunter, *supra* note 26, at 48-49.

128. Second Life Residents to Own Digital Creations, *supra* note 115.

129. *SL Modifies Terms of Service and EULA (sort of)*, *supra* note 120.

130. Bragg Complaint, *supra* note 135, at 11-12.

131. See *SL Modifies Terms of Service and EULA (sort of)*, *supra* note 120.

132. *Id.*

133. Procedural unconscionability fundamentally deals with whether both contracting parties were sufficiently aware of the terms of the contract into which they were entering, while substantive unconscionability deals primarily with whether the terms of a contract are so manifestly unfair that it seems impossible that a party could have willingly assented to them. For a far more detailed explanation of procedural and substantive unconscionability in virtual worlds, see Meehan, *supra* note 31, at 13-20.

134. *Id.* at 16.

assets (which support a twenty-five person corporation) is substantively unconscionable.¹³⁵

2. *Uncertainty of Enforcement*

The idea that developers can use their EULA to selectively enforce their rules, as in the case of Bragg's dispute with Linden Labs and the EVE Online scandal raises another issue about the inadequacy of current EULAs. If developers can enforce the terms of their EULAs selectively or escape liability for non-enforcement, players may develop different expectations about the range of permitted behavior.

B. Recommendations for Good Governance of Virtual Worlds

If the ways in which current EULAs are constructed are less than optimal, how should they be constructed? First, EULAs should be drafted substantively better: they should meet player expectations regarding their rights to virtual property and game developers should not be able to escape liability for injuries caused by their actions by placing clauses in their EULAs immunizing them from liability. Second, developers should pledge to enforce their EULAs consistently.

EULAs should match player expectations. This principle is consistent with basic fairness; given the generous attitude of the courts towards the enforceability of EULAs,¹³⁶ it seems only reasonable that developers should be required to make those EULAs reflect what players believe they do. Where players have reasonable expectations that they possess some property right in their virtual goods, or that the game developers will stop illegal activity inside their virtual worlds, the EULAs of those virtual worlds should match those expectations. For example, Bragg's expectations about the ownership of his nightclub was presumably reasonable because they were based upon the statements of Linden Labs.¹³⁷ Linden Labs should have had to compensate Bragg in some way for his property, perhaps by giving him some or all of the revenues generated by the sale of that property.

As argued above, virtual worlds possess many differences from other types of software or games. These differences are important, because if players are investing substantial sums of money into virtual worlds, they

135. Anshe Chung, a Second Life real estate developer, recently announced that she had acquired one million dollars in virtual assets. Akela Talamasca, *Anshe Chung: Millionaire*, SECOND LIFE INSIDER, Nov. 25, 2006, <http://www.secondlifeinsider.com/2006/11/25/anshe-chung-millionaire>.

136. See, e.g., *ProCD, Inc. v. Zeidenberg*, 86 F.3d 17, 20 (2d Cir. 2002).

137. *Second Life Residents to Own Digital Creations*, *supra* note 115.

will need greater protections than those provided by most EULAs. For example, if a player has a piece of property, and the developer of the virtual world simply chooses to delete it, the player has little or no recourse. Because they control the software upon which the virtual world runs, game developers hold most of the power with respect to that virtual world and the virtual property within it.

One of the most problematic elements of most virtual world EULAs are clauses immunizing game developers from liability for injuries proximately caused by their actions.¹³⁸ In the Li's dispute with Arctic Ice, it stands to reason that if the game developer did not believe itself to be immune from liability, then it would have taken greater steps to secure Li's property. Furthermore, for example, if Linden Labs were to negligently destroy a player's virtual property, it would also likely claim that they were immunized from liability under their EULA.¹³⁹ This is problematic because if players cannot expect any sort of stability in their property, or rely on game developers to refrain from destroying or confiscating their property, it will severely damage the ability of virtual worlds to grow as a place for economic and social activity. Developers should recognize the shortsightedness of blanket immunizations from liability for their actions, and incorporate limited liability into their EULAs. To do this they could pledge good-faith efforts to act consistently with their public statements, and with established legal doctrines, such as negligence.

Furthermore, the rules laid out inside those virtual worlds should be enforced consistently. This will enable players to predict what they can and cannot do, which is important because players invest substantial amounts of money and time into virtual worlds. For example, had CCP consistently enforced the terms of their EULA with regard to the EVE Online scandal, players would have likely lost less money to Cally, and they would have been able to seek redress from CCP for their losses.¹⁴⁰ Consistency in enforcement will also ensure adequate redress for conflicts inside those worlds.

IV. CONCLUSION

It is clear that most EULAs, as they are currently drafted, do not provide adequate protections for game players. Arctic Ice sought refuge in the

138. See, e.g., Warcraft EULA, *supra* note 39.

139. See *SL Modifies Terms of Service and EULA (sort of)*, *supra* note 120.

140. Had CCP taken action against Cally, it presumably could have returned the stolen ISK.

terms of their EULA when facing suit for negligently allowing Li's property to be stolen. Had the Chinese court not found for Li, Arctic Ice would have had less incentive to secure their systems to ensure that valuable virtual property was not stolen. In the EVE Investment Bank scandal, CCP, by choosing not to enforce their EULA, allowed substantial transfers of real-world assets into the game. Then, by not cracking down on Cally after the scam, CCP caused players to incur losses in excess of what they would have had CCP enforced the terms of its EULA. And in Bragg's dispute with Linden Labs, Linden Labs' EULA contradicted its public statements as well as its own terms in saying that individuals have ownership interests in virtual property that Linden Labs could destroy at any time.

The ability of players and developers to resolve conflicts surrounding virtual property in virtual worlds is an important issue. While there is a sense that developers of these virtual worlds feel that the terms of the EULA should govern disputes, recent issues illustrating the inadequacy of EULAs to fairly govern virtual worlds suggest that a better solution is needed. Player expectations about the alienability, value, and inviolability of their property should be backed up by reality. Developers should enforce the terms of their EULAs consistently and developers should not be able to shield themselves from liability for their actions. If these steps are taken, virtual world governance will be more in harmony with player interests, and the potential of virtual worlds will blossom.

CLICKS AHOY! NAVIGATING ONLINE ADVERTISING IN A SEA OF FRAUDULENT CLICKS

By Sajjad Matin

Except for black-and-white television, no medium has penetrated fifty percent of U.S. households as quickly as the internet.¹ As a means of communication, entertainment, and commerce, the internet has helped to shape the modern global economy.² Advertisers have recognized the internet's capacity to target specific consumers.³ The history of the internet, however, has also been fraught with privacy concerns and a bevy of technological nuisances including viruses, spyware, and denial of service attacks.⁴ The latest of these concerns, and the subject of this Note, stems from the misuse of a seemingly innocuous "click" to generate excessive costs for online advertisers.

Click fraud arises from an exploitation of a common online advertising price model: cost per click. Under this pricing model, an advertiser pays the host of her displayed ad only when a user clicks on that advertisement.⁵ An advertiser's rival might generate significant costs for its competitor by repeatedly clicking on that competitor's ad. With absolutely no intention of purchasing its competitor's goods or services, the rival has committed click fraud. Internet advertising is a multi-billion dollar industry and fraudulent clicking accounts for an estimated ten percent of that revenue.⁶

© 2007 Sajjad Matin

1. Assuming the internet became publicly accessible with the introduction of the Mosaic web browser in 1993, the internet and the black-and-white television took eight years to reach 50% of Americans. That compares to nine years for the radio, 10 for the VCR, 17 for personal computers, 39 for cable television, and 70 for the telephone. See RICK E. BRUNER, *THE DECADE IN ONLINE ADVERTISING, 1994-2004* 3 (2005), available at http://www.doubleclick.com/us/knowledge_central/documents/RESEARCH/dc_deca_derinonline_0504.pdf.

2. 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, 1364 (2005).

3. Menell, *supra* note 2, at 1369-70.

4. *Id.* at 1364-65. See generally Liying Sun, Note, *Who Can Fix The Spyware Problem?*, 22 *BERKELEY TECH. L.J.* 555 (2007).

5. See *infra* Section I.B

6. Brian Grow, Ben Elgin & Moira Herbst, *Click Fraud: The Dark Side of Online Advertising*, *BUSINESSWEEK*, Oct. 2, 2006, http://www.businessweek.com/print/magazine/content/06_40/b4003001.htm?chan=g1.

Part I of this Note describes the evolution of the internet as a medium for marketing and describes innovations that enabled advertisers to target ads to specific consumers.⁷ Part II explores the anatomy of click fraud, its growing sophistication, and its impact on the advertising industry. Part III considers possible legal, regulatory, and market-based solutions to mitigate the effect and prevalence of click fraud.

I. ONLINE ADVERTISING

Just as the early twentieth century saw the proliferation of billboards targeting captive consumers driving along the nation's highways,⁸ advertisers in the twenty-first century have found potential in the information superhighway. Prior to the advent of the internet, advertisers targeted consumers based largely on demographic surveys and preconceived social dispositions.⁹ Such advertising lacked the ability to target particular individuals or recognize idiosyncratic behavior. The internet, however, has allowed advertisers to track user surfing activity using cookies and other technology and infer certain consumer behavior and predilections from that behavior.¹⁰

Online advertising began as simple banner ads displayed at the top of webpages.¹¹ The online advertising industry expanded rapidly, and following a brief downturn in revenues during the late 1990s, has grown into a \$12.5 billion industry.¹² With revenue projected to reach \$29 billion by

7. See generally P.K. Kannan & Praveen K. Kopalle, *Dynamic Pricing on the Internet: Importance and Implications for Consumer Behavior*, 5 INT'L J. ELEC. COMMERCE 63 (2001).

8. See Charles R. Taylor & Weih Chang, *The History of Outdoor Advertising Regulation in the United States*, 15 JOURNAL OF MACROMARKETING 47 (1995).

9. Menell, *supra* note 2, at 1369 (providing an example that feminine hygiene producers would not likely purchase advertising during a football game although female consumers are likely to watch football games).

10. See *id.* at 1370.

11. By most accounts these banner ads, named due to their rectangular shape (60 pixels tall by 468 pixels wide), were first introduced in October 1994 by HotWired, which advertised brands like Zima, Club Med, and AT&T. The shape of banner ads remain the market standard even today. BRUNER, *supra* note 1, at 3.

12. An industry survey conducted by PricewaterhouseCoopers LLC and sponsored by the Interactive Advertising Bureau showed a 30.3 % increase in online advertising revenue between 2004 and 2005. The industry earned \$ 267 million in revenue for 1996, experienced negative growth during the dot com years and immediately following the dot com burst. Over the past few years, the industry has experienced double-digit growth. PRICEWATERHOUSECOOPERS LLC, IAB INTERNET ADVERTISING REVENUE REPORT (2006), available at http://www.ameinfo.com/pdf/iab/IAB_PwC_2005full.pdf.

2010,¹³ online advertising has quickly climbed the ranks among the leading advertising markets.¹⁴

The largest revenue shares within internet advertising are generated by display-based and search-based advertising.¹⁵ Display-based advertising includes a mixture of sophisticated rich media technology,¹⁶ as well as the older, lower tech banner ads. Search-based advertising utilizes the internet user's search engine query to determine which advertisements are displayed.¹⁷ Search-based advertising accounted for approximately \$5.1 billion in 2005, forty-one percent of total internet advertising revenue.¹⁸

Google and Yahoo!, leaders in the search-based advertising market, allow advertisers to bid on specific keywords. When a user types in that keyword, ads from the highest bidders are displayed prominently on the same page as the search-query results.¹⁹ The ability to target consumers with specific, sometimes eccentric, interests has made search-based online advertising flourish.²⁰

A. Targeted Advertising and Real-time Metrics

The internet has grown significantly since banner ads first appeared. This growth, along with the burgeoning popularity of online marketing, has led to an increase in ad publishers, which are websites willing to sell ad space. Middlemen soon arrived to mitigate the increasing transaction costs between advertisers and countless publishers by organizing the latter

13. Grow et al., *supra* note 6.

14. In 2005, internet advertising accounted for nearly 4.7% of the roughly \$ 267 billion spent on domestic advertising. The Internet has surpassed both outdoor marketing (e.g., billboards, street furniture, etc.) and business magazines for market share in domestic advertising. *See* PRICEWATERHOUSECOOPERS LLC, *supra* note 12, at 11.

15. *Id.* at 8.

16. "Rich media" is a term used to describe a variety of online advertising media experiences, including high-quality animation, streaming audio and video, and software-like features that can be embedded in relatively small ad files, such as games, registration forms and detailed marketing information. A user can explore all of those features in the ad unit without ever leaving the content page on which the ad appears.

BRUNER, *supra* note 1, at 9-10.

17. *See* Welcome to AdWords, <https://adwords.google.com> (last visited Jan. 27, 2007); *see also* Pay-Per-Click Ads from Yahoo! Search Marketing (formerly Overture), <http://searchmarketing.yahoo.com/srch/pricing.php> (last visited Jan. 27, 2007).

18. PRICEWATERHOUSECOOPERS LLC, *supra* note 12, at 8.

19. *See* Welcome to AdWords, *supra* note 17; *see also* Pay-Per-Click Ads from Yahoo! Search Marketing, *supra* note 17.

20. *See* PRICEWATERHOUSECOOPERS LLC, *supra* note 12, at 3.

into collective bargaining units. Ad networks,²¹ as these consortia are known, categorized their client websites based on content, theme, and other demographic criteria similar to traditional media. By pooling together similar websites, ad networks provided advertisers with better opportunities to target likely consumers. In exchange for their efforts, ad networks share in the fees charged to advertisers for displaying ads with affiliate publishers.

Unlike traditional media, online advertising provides an advertiser with real-time information of an advertisement's efficacy. The click-through-rate (CTR) of an advertisement, the number of times an advertisement is clicked compared to the number of times that advertisement has been displayed, is a standard real-time metric.²² This provides a simple analysis of an advertisement's performance. Low CTRs might result from the failure to interest potential customers or because the publishing website failed to provide prominent, visible locations for the ad.²³

Among the many advertising networks, search engines earn the majority of advertising revenue. Search engines provide advertisers with access to large affiliate networks as well as opportunities for display-based and search-based advertising. For search-based advertising, the search engine reaps all the profit by acting as both ad network and publisher.

In addition to keyword-based advertisements, advertisements can be delivered based on geographical data contained in a consumer's IP address. For example, a user with an IP address originating from Baltimore might receive an offer to purchase Baltimore Ravens tickets while visiting a football-related website. Visiting the same website at the same time, a user from Philadelphia might instead receive an ad for Philadelphia Eagles tickets.

B. Payment Models

As internet advertising has grown more sophisticated, so too have the methods to handle pricing and payment. Payments for the first generation

21. Prominent ad networks include search engines, media companies, and technology vendors such as Google (AdWords and AdSense), Yahoo! (Yahoo! Search Marketing), Microsoft (Microsoft adCenter), 24/7 Real Media, Gorilla Nation, Tribal Fusion, Undertone Networks, and ValueClick.

22. ALEXANDER TUZHILIN, *THE LANE'S GIFT V. GOOGLE REPORT 7* (2005), available at http://googleblog.blogspot.com/pdf/Tuzhilin_Report.pdf.

23. See Google AdWords Help Center: Tips for Success, <http://adwords.google.com/support/bin/static.py?page=tips.html> (last visited Feb. 12, 2007). A variety of online sources provide a range of values for average CTRs for 468 x 60 banner ads, all less than 1%. See, e.g., Online Advertising Glossary, <http://www.internetadsales.com/modules/-glossaire/glossaire-comm.php?sid=9> (last visited Apr. 9, 2007).

of online advertising were based on a *cost per impression* or *cost per mille* (CPM) method.²⁴ Adopted from older, less interactive advertising markets, bulk rates were set for the display of a predetermined number of advertisements. For example, an advertiser might pay an ad network \$X for every Y times the advertisement was displayed on an affiliate's site. The norm across the advertising industry has been to set Y at 1,000, whence *mille* derives.²⁵

A major drawback of the CPM payment method is that the advertiser is forced to pay for all displayed advertisements regardless of whether they were actually seen by the consumer or not.²⁶ Online ads, just like advertising in traditional media, often go unnoticed. Thus, an advertiser may find it unfair to pay for ads that were displayed but never seen or clicked. Even those that are noticed must pique sufficient interest to overcome the inertia of consumer complacency. CPM is a useful and efficient tool for media that lack accurate, real-time measurement of consumer behavior like newspapers and magazines.²⁷ Internet advertising, however, does provide such real-time metrics to instantly measure consumer activity.²⁸

As the number of sites willing to publish ads steadily increased, so too has the bargaining power of advertisers. Advertisers were soon provided with a performance-based payment method, the *cost per click* (CPC).²⁹ The CPC method only charges the advertiser when a user clicks on an ad. The per-click charge is determined by the ad network and is based on the reputation of the ad network, the traffic generated by the ad network's affiliated sites, the ad's CTR,³⁰ and other related economic factors.³¹ Adver-

24. TUZHILIN, *supra* note 22, at 8.

25. *Id.*

26. *Id.*

27. Menell, *supra* note 2, at 1369.

28. *Id.* at 1370.

29. See TUZHILIN, *supra* note 22, at 8.

30. Generally, a higher CTR results in a lower the price charged by the ad network to the advertiser for each click on an advertisement. A low CTR, however, requires a greater price charged for each time a user clicks on the ad. The price difference is meant to generate similar cash flows for the ad network regardless of the displayed ad's efficacy. See Google AdWords Help Center: What's the lowest amount I can pay per click?, <http://adwords.google.com/support/bin/answer.py?answer=21374&topic=10265> (last visited Jan. 27, 2007).

31. Seasonal effects, like the time period prior to the Christmas shopping season, yield significant increases in the rates charged per click. See Watch for Seasonal Variations in Your PPC Metrics, <http://www.knowthis.com/internet-marketing-insights/report-summary/watch-for-seasonal-variations-in-your-ppc-metrics.htm>. (last visited Jan. 27, 2007); see also Wendy Davis, *Keyword Costs Show Seasonal Spike*, ONLINE MEDIA DAILY, Feb. 22, 2006, <http://publications.mediapost.com/index.cfm?fuseaction=Articles>.

tising networks will often give advertisers flexibility in their billing by offering CPM, CPC, or a combination of both.³²

Payment models for search-based advertising require advertisers to bid on the per-click charge for a specific keyword, with higher premiums for popular keywords.³³ Higher bids give the advertiser priority in the ranking of ads.³⁴ This hierarchy dictates the prominence and order of ads displayed alongside search-query results.³⁵

Many ad networks incrementally debit per-click charges from an advertiser's account.³⁶ If an advertiser's account is depleted, the ad network will stop displaying the ad with the results of the keyword search.³⁷ As discussed below, this billing policy promotes inequitable behavior among advertising competitors through click fraud.

C. Click Fraud, The Shortfall of CPC

Although the CPC model was designed to address the concerns of advertisers weary of wasted advertising budgets, the CPC model suffers a major drawback: it encourages fraudulent clicking. Google has defined

san&s=40109&Nid=18603&p=223422. CPC rates can vary greatly, from \$ 0.01 to \$ 0.05 for low-scale networks, up to \$0.35 or more for more reputable ad networks. Online Advertising Glossary, <http://www.internetadsales.com/modules/glossaire/glossaire-comm.php?sid=10> (last visited Jan. 27, 2007).

32. TUZHILIN, *supra* note 22, at 8.

33. Yahoo! and Google use advertiser bids to determine a maximum per-click charge. The actual per-click charge, which depends on certain factors including ad quality, relevancy to users and CTR, might be lower than this bid price, but is never greater. *See Pay-Per-Click Ads from Yahoo! Search Marketing*, *supra* note 17; Ask Yahoo! Search Marketing Help: How is cost/PPC determined in the new ranking system?, http://help.yahoo.com/l/us/yahoo/ysm/sps/faq/adrank/moreclicks//cost_ppc.html; Google Adwords Help Center: How do I choose my maximum CPC, <https://adwords.google.com/support/bin/answer.py?answer=6385> (last visited Jan. 27, 2007); Google Adwords Help Center: What's the lowest amount I can pay per click? <https://adwords.google.com/support/bin/answer.py?answer=21374&ctx=sibling> (last visited Feb. 14, 2007).

34. Yahoo! and Google determine the positions of keyword-targeted ads through a dynamic ranking order based on the per-click bid and some qualitative scoring of each advertisement. Google's "Quality Score" measures the quality and relevance of the ad determined by the ad's CTR, ad text relevance, keyword popularity, and target site operability. *See Google Adwords Help Center: Quality Score*, *supra* note 33; *see also* How is my ad's placement on the page determined?, http://help.yahoo.com/l/us/yahoo/ysm/sps/faqs/presignup/ad_placement.html (last visited Jan. 27, 2007).

35. *See Google Adwords Help Center: What is position preference?*, *supra* note 33.

36. *See How do I pay/how am I billed*, http://help.yahoo.com/l/us/yahoo/ysm/sps/faqs/presignup/payment_billing.html (last visited Jan. 27, 2007).

37. *See Google Adwords Help Center: Why can't I see my ad?*, <https://adwords.google.com/support/bin/answer.py?answer=6105&topic=7036> (last visited Jan. 27, 2007).

click fraud as the intentional clicking of an online advertisement for a reason “other than to view the underlying content.”³⁸ In recent litigation, to be discussed in Part III, click fraud was noted as an industry term used to describe a click on an advertisement with no intention of doing business with the advertiser.³⁹

The perpetrators of click fraud knowingly exploit the nature of the CPC model to force an advertiser to pay for a click with no possibility of completing a sale. There are two common forms of click fraud, one committed by individual publishers and another by business competitors. Individual publishers—the owners of websites affiliated with the ad network—abuse the system for their own financial gain while business competitors attempt to exact monetary punishment on rivals.⁴⁰

An advertiser is charged by the ad network every time its ad is clicked. As reward for participating in the network, a portion of that payment is given to the affiliate website featuring the clicked ad. An underhanded publisher might accumulate significant revenues from these residual payments by repeatedly clicking every ad displayed on *her own* site.⁴¹ The publisher generates income from the fraudulent clicks while artificially inflating the CTRs of ads appearing on her site. The publisher, and her ad network, might thereafter demand advertisers pay an increased premium for the opportunity to display future ads on such a “popular” site.

Click fraud by business competitors similarly imposes significant charges on an advertiser for clicks without any prospective return.⁴² Such fraudulent clicking might deplete a company’s entire advertising budget within a few days and force the ad network to stop displaying those ads.⁴³ Furthermore, the pricing policy for search-based advertising creates an incentive for a competitor to commit click fraud. By depleting the funds in an advertiser’s account, a competitor might remove a business rival’s ads

38. GOOGLE ANNUAL REPORT 28 (2005), available at http://investor.google.com/pdf/2005_Google_AnnualReport.pdf.

39. Complaint at 7, *Click Defense, Inc. v. Google, Inc.*, No. 5:05-cv-02579-PVT, 2005 WL 1813081, at *7 (N.D. Cal. filed June 24, 2005).

40. See *Google, Inc. v. Auction Expert Int’l*, No. 1-04-CV-030560, 2004 WL 2826489 (Cal. Sup. Ct. Nov. 15, 2004) (asserting claim that affiliate website owner breached contractual agreement against committing fraudulent clicks); see also TUZHILIN, *supra* note 22, at 18.

41. Although a monetary valuation of time might make such a brute force method seem inefficient, many individuals are willing to perform such tedious tasks. N. Vidyasagar, *India’s Secret Army of Online Ad “Clickers,”* TIMES OF INDIA, May 3, 2004, <http://timesofindia.indiatimes.com/articleshow/msid-654822,curpg-1.cms>.

42. TUZHILIN, *supra* note 22, at 18.

43. See Google Adwords Help Center: Why can’t I see my ad?, *supra* note 37.

from the hierarchy of ads displayed for a keyword. The unscrupulous rival's own ads would then jump in priority and receive more prominent display.

Although defining click fraud may seem simple, the ability to recognize every single fraudulent click would require the ability to read the perpetrator's mind. How should a click committed without the requisite intent, yet without any possibility of conversion into a sale, be interpreted? For example, a user might accidentally double-click on an ad without any perceivable malicious intent. Should an advertiser pay for such a non-fraudulent, yet nonetheless "invalid," click?⁴⁴ Questions like these are greatly relevant to the scope of click fraud detection.⁴⁵

II. SCOPE OF THE PROBLEM

The current system of advertisement pricing provides little incentive for advertising networks and publishers to deter fraudulent clicking. An advertising network is paid and the publisher earns a commission regardless of whether a click is fraudulent. Deterring click fraud would reduce the overall revenue generated from online advertising, forcing ad networks and publishers to forgo profits. In terms of such lost profits, fraudulent clicks cost advertisers an estimated \$800 million in 2005.⁴⁶ An estimated 14.1% of online sale referrals generated by clicks on text advertising links were fraudulent.⁴⁷ Nearly 12.8% of the clicks generated from the two leading search engines, Yahoo! and Google, were found to be fraudulent.⁴⁸

Because there is no industry-accepted definition for an "invalid click,"⁴⁹ estimates for the prevalence of click fraud vary. The findings by ad networks and third-party auditors are rough estimates,⁵⁰ ranging from a

44. Until March 2005, Google's answer to that question would have been "yes." Google's policy had been to charge double-clicks as two distinct, chargeable actions. The change in policy had "non-trivial financial implications for Google." TUZHILIN, *supra* note 22, at 30.

45. *See infra* Section II.A.

46. Verne Kopytoff, *Click Fraud a Huge Problem: Study Finds Practice Widespread; Many Cut Back Online Ads*, SAN FRANCISCO CHRONICLE, July 5, 2006, at C-1 (referring to a study of 407 online advertisers conducted by Outsell, Inc.).

47. Press Release, Click Forensics, Industry Average Click Fraud Rate Climbs in Second Quarter 2006 (July 17, 2006), available at <http://www.clickforensics.com/news/pressreleases/07-17-06.htm>.

48. *Id.*

49. *See* TUZHILIN, *supra* note 22, at 15-18.

50. *Id.*

few percent to more than twenty percent of all clicks.⁵¹ Although critical of the methodology and rigor of these third-party auditors, Google has recognized that click fraud is a problem under the current system.⁵² In its 2005 Annual Report, Google acknowledged the potential harm of click fraud:

If we fail to detect click fraud or other invalid clicks, we could lose the confidence of our advertisers, thereby causing our business to suffer . . . If invalid clicks are not detected, the affected advertisers may experience a reduced return on their investment in our advertising programs because the invalid clicks will not lead to potential revenue for the advertisers. This could lead the advertisers to become dissatisfied with our advertising programs, which has led to litigation, could lead to further litigation, [and] could lead to a loss of advertisers and revenues.⁵³

Google has every right to be concerned. In 2005, 99% of its \$6.1 billion revenue was derived from advertising.⁵⁴ Similarly, 87% of Yahoo!'s \$5.3 billion revenue was generated from its marketing services.⁵⁵ With total revenues for both companies so strongly dependent upon online advertising and the satisfaction of advertisers, fraudulent clicks could jeopardize future earnings and organizational viability.

Google's CEO, Eric Schmidt, however, did little to assuage advertisers' fears. Schmidt insisted that the situation was self-correcting—that the “perfect economic solution” to click fraud would be to “let it happen.”⁵⁶ If ad networks chose not to rectify the problems with click fraud, Schmidt reasoned, the natural economic result would be a decrease in what advertiser's would pay.⁵⁷ The resulting decrease in ad costs would slowly balance the lost revenues created by fraudulent clicks. Schmidt, however, recognized the short-term effects of click fraud as deleterious to advertisers and said Google engineers were developing click fraud detection algo-

51. See Clickfraudreport.com, How prevalent is click fraud?, <http://www.clickfraudreport.com/2.html> (last visited Jan. 27, 2007).

52. See CLICK QUALITY TEAM, GOOGLE, INC., HOW FICTITIOUS CLICKS OCCUR IN THIRD-PARTY CLICK FRAUD AUDIT REPORTS (2006), available at <http://www.google.com/adwords/ReportonThird-PartyClickFraudAuditing.pdf>.

53. GOOGLE ANNUAL REPORT, *supra* note 38.

54. *Id.* at 22.

55. YAHOO!, ANNUAL REPORT 17 (2005), available at <http://www.shareholder.com/shared/dynamicdoc/YHOO/1183/YHOO.pdf>.

56. Donna Bogatin, *Google CEO on click fraud: 'let it happen' is perfect economic solution*, ZDNET, July 9, 2006, <http://blogs.zdnet.com/micro-markets/index.php?p=219>.

57. *Id.*

gorithms.⁵⁸ Nevertheless, Schmidt's nonchalance has led some to ask whether click fraud has simply become a cost of doing business with Google.⁵⁹

Although ad networks do indeed profit as unwitting benefactors of click fraud, these companies have much more to lose in the long-term. The valuation of an ad network is based almost wholly on its ability to maintain a successful relationship with advertisers. One ad network's failure to address the concerns of advertisers would be met with several rival ad networks rushing to fill any voids in the service. Google's engineers are tackling click fraud not out of beneficence, but economic necessity.

A. Invalid Click Detection.

Advertising networks and third-party auditors utilize many different, often proprietary, methods to identify invalid clicks. One common method involves defining an invalid click as any substantial deviation from the past clicking history for a specific ad.⁶⁰ This method assumes previous activity as a standard baseline and anything that deviates from this norm is considered invalid.⁶¹

Rules-based algorithms, which define specific conditions or a series of conditions which may be defined as an invalid click, represent another method to identify invalid clicks.⁶² Every click generated through the advertising network is filtered through this algorithm. Should a click match the set of conditions defined for invalidity, that click is marked invalid and any charges are credited back to the advertiser. These rules are created by individuals whose quality assurance experience allows them to define what conditions should be utilized in parsing clicks as either valid or invalid.⁶³

These two methods identify invalid clicks based upon specific identification procedures. The underlying definition of an invalid click remains essential to detection. Thus, the scope of click fraud detection is constrained by the definition of an "invalid click." Advertisers would prefer an expansive definition, with an over-inclusive ambit, to capture even valid clicks that were likely, but not definitively committed without the intention of a conversion. Advertising networks, on the other hand, prefer a

58. *Id.*

59. *Id.*

60. TUZHILIN, *supra* note 22, at 19.

61. *Id.*

62. *Id.* ("An example of such a rule is 'IF Doubleclick occurred THEN the second click is Invalid.'").

63. *Id.* ("These experts can be either local experts from [the advertising network] or some globalization committees that collectively develop rule-based standards of invalid clicks."). This will be discussed in Part III.

narrower definition that maximizes their profits by limiting the number of invalid, unchargeable clicks.

Another method of invalid click detection is based upon statistical models which recognize invalid clicks based on an individual's previous clicking activity.⁶⁴ As the database of click history grows, it is possible to define appropriate clicking behavior without defining an invalid click.⁶⁵ This method rests upon the assumption that past clicking behavior is free from invalid, or fraudulent, clicking. The method also assumes that an individual's past clicking behavior is indicative of her future behavior.

Adequate detection of invalid clicks, fraudulent or not, has been a major source of contention between advertisers and ad networks, the latter claiming reasonable steps have been adopted, the former skeptical that such steps amount to little more than an under-inclusive system of capturing only grossly fraudulent clicking.⁶⁶ Advertisers are demanding greater transparency over operational definitions and the right to know why a particular click was marked valid, and therefore chargeable.⁶⁷ Advertising networks, however, refuse to disclose operational definitions, proprietary algorithms, and per click analyses to their advertisers out of fear that an advertiser might divulge information to click fraudsters or otherwise use it to circumvent its invalid click detection system.⁶⁸

B. The Arms Race

As detection of invalid clicks has become more sophisticated so, too, has click fraud itself. Unscrupulous users can now use programs developed to automatically generate clicks.⁶⁹ Such evolving techniques have been countered by ever vigilant ad networks and advertisers who can log each visitor's IP address. Repeated clicks from the same IP address within a short period of time are *per se* invalid, and the subjective intent of the visitor, although unknown, is inferred as malicious.⁷⁰

To counter such detection, IP addresses can be masked through anonymous proxy servers and the automation of clicks staggered to resemble natural web traffic.⁷¹ However, advertisers can implement scripts that re-

64. *Id.* at 20.

65. *Id.* at 19-20.

66. *Id.* at 14-15.

67. *Id.*

68. *Id.*

69. Burt Helm, *Click Fraud Gets Smarter*, BUSINESSWEEK ONLINE, Feb. 27, 2006, http://www.bebusinessweek.com/technology/content/feb2006/tc20060227_930506.htm.

70. TUZHILIN, *supra* note 22, at 15-16.

71. See Living On The Edge, About Clicking Agent, <http://www.clickingagent.com/cacamore.html> (last visited Feb. 14, 2007) (describing Clicking Agent, a tool used to

quest information from a visitor's internet browser prior to loading the webpage.⁷² A forged IP address is not likely to provide such information and can therefore be detected as an invalid click.⁷³ Similar scripts can detect how long a visitor spends viewing the target site's content and can track cursor movement as well.⁷⁴ An insignificant amount of time on the site with little or no activity could be construed as an invalid click.⁷⁵

The latest generation of click fraud also raises online privacy concerns⁷⁶ by using unsuspecting individuals to inflate traffic and CTR on affiliate websites.⁷⁷ Networks of computers infected with hidden scripts and programs can be controlled remotely without arousing concern from the individual computer users.⁷⁸ Such programs, known as bots, are designed to virally self-propagate onto unaffected computers and thereby increase the size of the network.⁷⁹ These networks, or botnets, have been successfully utilized in the past for e-mail spamming as well as mounting denial of service attacks. Botnets have recently been used by affiliate publishers to generate chargeable clicks and inflate the CTRs for their own site.⁸⁰ Because the clicks are generated from valid IP addresses and can be programmed to fire at reasonable time intervals, this form of click fraud proves difficult to detect.

III. POSSIBLE SOLUTIONS

The growing sophistication, prevalence, and impact of click fraud have engendered concern for the future of online advertising.⁸¹ Frustrated ad-

generate fraudulent clicks). *See generally*, Vinod Anupam et al., *On the Security of Pay-Per-Click and Other Web Advertising Schemes*, 31 *COMPUTER NETWORKS* 1091, 1093 (1999), available at <http://www.ece.cmu.edu/~reiter/papers/1999/CN.pdf>.

72. *See* Anupam et al., *supra* note 71, at 1097.

73. *Id.*

74. *Id.*

75. *Id.*

76. *See, e.g.*, Eve Caudill & Patrick Murphy, *Consumer Online Protection: Legal and Ethical Issues*, 19 *J. PUB. POL'Y & MARKETING* 7 (2000).

77. LURHQ, Threat Intelligence Group. Pay-Per-Click Hijacking, <http://www.lurhq.com/ppc-hijack.html> (last visited Jan. 27, 2007).

78. *Id.*

79. The size of such herds can be staggering. Dutch officials recently discovered a botnet comprising over 1.5 million computers. Greg Keizer, *Dutch Botnet Suspects Ran 1.5 Million Machines*, *TECHWEB*, Oct. 21, 2005, <http://www.techweb.com/wire/security/172303160>.

80. John Leyden, *Botnet Implicated in Click Fraud Scam*, *THE REGISTER*, May 15, 2006, http://www.theregister.co.uk/2006/05/15/google_adword_scam.

81. Grow et al., *supra* note 6.

vertisers have reacted by bringing suit against large ad networks.⁸² Although limited, the effect of these suits has been to publicize the problem and force conciliatory settlements from the ad networks. Any lasting solution to click fraud, however, cannot be formulated solely through litigation but must address the definition, detection, and control of click fraud. Ad networks must work with advertisers to properly identify the characteristics of a fraudulent click. Defining click fraud allows for the industry-wide adoption of detection protocols through industry self-regulation or governmental oversight to ensure an acceptable baseline for controlling invalid clicks.

A. Legal Action

Click fraud detection is a reactive step; it is a response to a fraudulent click already committed that will likely harm an advertiser if undetected. Click fraud prevention, however, attempts to proactively eradicate click fraud. Preventative solutions must remove the incentives to commit click fraud by making penalties outweigh any potential benefits.

Google recently took to task a former AdSense affiliate partner, Auction Experts, for inequitable behavior, claiming breach of contract, breach of an implied covenant of fair dealing, and fraud.⁸³ The California Superior Court awarded Google \$75,000 including compensation for an estimated \$50,000 in fraudulent clicks.⁸⁴ By hiring individuals to repeatedly click on ads appearing on its website, Auction Experts breached its advertising affiliation contract with Google. The victory highlighted Google's efforts to control click fraud through new policies and detection systems.⁸⁵

That victory was muted, however, by two recent lawsuits brought against major ad networks by, or on behalf of, advertisers.⁸⁶ The complaint in *Lane's Gifts & Collectibles LLC v. Yahoo! Inc.* questioned the motivations and efforts of ad networks in detecting invalid clicks in the face of lost profits. The claims for breach of contract, unjust enrichment, and civil

82. *Lane's Gifts & Collectibles LLC v. Yahoo! Inc.*, No. CV-2005-52-1 (Ark. Cir. Ct. filed Feb. 17, 2005); *Click Defense, Inc. v. Google, Inc.*, No. 5:05-cv-02579-PVT, 2005 WL 1813081 (N.D. Cal. filed June 24, 2005).

83. *Google, Inc. v. Auction Expert Int'l*, No. 1-04-CV-030560, 2004 WL 2826489 (Cal. Sup. Ct. Nov. 15, 2004).

84. Nathan Weinberg, *Google Wins Click-Fraud Case Vs Auction Experts*, WEB-PRONews, July 5, 2005, <http://www.webpronews.com/insidesearch/insidesearch/wpn-56-20050705GoogleWinsClickFraudCasevsAuctionExperts.html>.

85. *Id.*

86. *Lane's Gifts and Collectibles LLC v. Yahoo! Inc.*, No. CV-2005-52-1 (Ark. Cir. Ct. filed Feb. 17, 2005); *Click Defense, Inc. v. Google, Inc.*, No. 5:05-cv-02579-PVT, 2005 WL 1813081 (N.D. Cal. filed June 24, 2005).

conspiracy asserted a belief by the advertisers that the ad networks, including Yahoo!, Ask Jeeves, and Google, had knowingly charged for and profited from invalid clicks.⁸⁷ According to the plaintiffs, the duty to detect fraudulent clicks arose out of contractual agreements under which the ad networks promised to refund charges for invalid clicks.⁸⁸

Under a settlement agreement in *Lane's Gifts*, Google was required to credit any overcharges towards the purchase of future advertisements.⁸⁹ The total settlement was not to exceed \$90 million, which included \$30 million in attorneys' fees.⁹⁰ Google further agreed to an independent assessment of its anti-fraud policies and systems by Professor Alexander Tuzhilin of the Stern School of Business at New York University.⁹¹ The settlement has been criticized as inequitably favorable to Google and plaintiff's attorneys at the expense of the plaintiff class.⁹²

Under a settlement to similar litigation claiming breach of contract and unfair business practices,⁹³ Yahoo! agreed to allow the plaintiffs' counsel and experts to scrutinize the company's Clickthrough Protection (CTP) system and speak with its engineers.⁹⁴ Although there was no fixed amount to the settlement, Yahoo! agreed to pay plaintiffs' legal fees estimated at \$4.95 million.⁹⁵ In promising to settle advertiser claims dating as far back as January 2004, Yahoo! has assured advertisers full cash refunds, as opposed to Google's advertising credits.⁹⁶ In addition, Yahoo! agreed to dedicate personnel to address advertiser inquiries about fraud and traffic quality.⁹⁷

Click Defense, Inc., a click fraud consulting firm, also filed a class action suit in the Northern District of California against Google.⁹⁸ After hav-

87. Complaint at 10-11, *Lane's Gifts and Collectibles LLC v. Yahoo! Inc.*, No. CV-2005-52-1 (Ark. Cir. Ct. filed Feb. 17, 2005).

88. *Id.*

89. Final Order and Judgment Approving Settlement at 7, *Lane's Gifts and Collectibles LLC v. Yahoo! Inc.*, No. CV-2005-52-1 (Ark. Cir. Ct. 2005).

90. *Id.*

91. See TUZHILIN, *supra* note 22.

92. Kevin Ryan, *The Big Yahoo! Click Fraud Settlement*, IMEDIA CONNECTION, July 5, 2006, <http://www.imediaconnection.com/content/10294.asp>.

93. See *Checkmate Strategic Group, Inc. v. Yahoo!, Inc.*, No. 2:05-CV-04588-CAS-FMO (C.D. Cal. preliminary settlement approved June 28, 2006).

94. Yahoo! and Click Fraud: Our Commitment to Protecting Advertisers (2006), <http://yahoo.client.shareholder.com/press/ReleaseDetail.cfm?ReleaseID=202354>.

95. Ryan, *supra* note 92.

96. *Id.*

97. *Id.*

98. *Click Defense Inc. v. Google, Inc.*, No. 5:05-cv-02579-PVT, 2005 WL 1813081 (N.D. Cal. filed June 24, 2005).

ing contracted with Google to display its ads whenever a user queried the term “click fraud,” Click Defense claimed that it was a victim of click fraud. The complaint addressed Google’s conflicting interests between preventing click fraud and maximizing profits, as well as concerns similar to those raised in *Lane’s Gifts*, namely Google’s alleged failure to track, prevent, or warn advertisers about the prevalence of fraudulent clicks.⁹⁹ The plaintiffs alleged breach of contract, negligence, unjust enrichment, and unfair business practices in violation of California’s Business & Professions Code Section 17200.¹⁰⁰ Click Defense was later replaced by Advanced Internet Technologies, Inc. (“AIT”) as the lead plaintiff and proceedings were stayed pursuant to the disposition of the *Lane’s Gift* settlement.¹⁰¹ The court has yet to rule on the effect of that settlement on the disposition of this current suit or future suits.

The plaintiffs in *Lane’s Gifts*, *Checkmate Strategic Group*, and *Click Defense* asserted common law breach of contract claims.¹⁰² Future click fraud litigation is also likely to include such claims. The contractual agreements between ad networks and advertisers or between ad networks and affiliates regularly contain limitations and prohibitions on click fraud and make payments contingent upon validation of clicks.¹⁰³ In addition, broad state unfair competition laws provide another route by which advertisers might contest the acts of ad networks or rivals who perpetrate click fraud. The *Click Defense* and *Checkmate Strategic Group* complaints included such a claim under California’s broad unfair competition statute.¹⁰⁴

Finally, search engine ad networks may be able to enlarge the scope of contractual obligations to include any internet user through Terms of Service agreements required from visitors to their sites. Currently, any member of the general public, who is neither an advertiser’s rival, an ad network, nor an affiliate publisher, can click on an advertisement with abso-

99. Complaint at 10, *Click Defense Inc. v. Google, Inc.*, No. 5:05-cv-02579-PVT, 2005 WL 1813081 (N.D. Cal. filed June 24, 2005).

100. *Id.* at 11-14.

101. *Advanced Internet Techs., Inc. v. Google, Inc.*, 2006 WL 889477 (N.D. Cal. Apr. 5, 2006).

102. Complaint at 10, *Lane’s Gifts and Collectibles LLC v. Yahoo! Inc.* (No. CV-2005-52-1); Complaint at 11-12, *Click Defense Inc. v. Google, Inc.*, No. 5:05-cv-02579-PVT, 2005 WL 1813081; Order Preliminarily Approving Class Action Settlement at 2, *Checkmate Strategic Group, Inc. v. Yahoo!, Inc.*, No. 2:05-CV-04588-CAS-FMO.

103. *See, e.g.*, Google AdSense Online Standard Terms and Conditions, ¶ 11, <https://www.google.com/adsense/localized-terms> (last visited Jan. 27, 2007).

104. Complaint at 13, *Click Defense Inc. v. Google, Inc.*, No. 5:05-cv-02579-PVT, 2005 WL 1813081 (N.D. Cal. filed June 24, 2005). Complaint, *Checkmate Strategic Group, Inc. v. Yahoo!, Inc.*, No. 2:05-CV-04588-CAS-FMO (C.D. Cal. preliminary settlement approved June 28, 2006).

lutely no intention to complete a sale without fear of civil or criminal liability. By including anti-click fraud obligations in Terms of Service, click fraud by anyone visiting such a website could become actionable. The success of such contracts, however, remains uncertain.¹⁰⁵

B. Let the Market Decide

The very structure of the CPC model is its ultimate detriment. This underlying weakness has allowed the click fraud arms race to mature and established click fraud as a billion dollar industry.¹⁰⁶ Bill Gross, an early innovator of the CPC model, believes the next evolutionary step for online advertising is the *cost per action* (CPA) model.¹⁰⁷ Gross recently started Snap.com, which provides search-based advertising, and charges advertisers only when a user performs some specified action on the advertiser's website.¹⁰⁸ This conversion action could be an actual purchase, manual registration with the advertiser, or some other action such as placing items in a virtual shopping cart suggesting the user's genuine intent to make a purchase.¹⁰⁹ The advertiser, therefore, is less likely to be affected by accidental clicks and click fraud.

The growing appeal of CPA has led other ad networks, most notably Google, to begin testing this payment model.¹¹⁰ CPA would complement, not supplant, other forms of advertising in recognition of advertisers' different needs. Although CPA benefits those advertisers whose main goal is to generate online sales, others might only hope to generate name recognition, improve branding, educate consumers, or direct consumers to retail stores.¹¹¹ A combination of CPA, CPC, and CPM models would adequately address advertisers' diverse goals while reducing the overall effect of click fraud.

CPA shifts the risk of fraud from the advertiser to the ad network and affiliate sites. The specified conversion action might be dependent upon

105. For a review of the current status of clickwrap contracts, see Nathan J. Davis, Note, *Presumed Assent: The Judicial Acceptance Of Clickwrap*, 22 BERKELEY TECH. L.J. 577 (2007).

106. Grow et al., *supra* note 6.

107. In 1998, Gross began GoTo.com, which was the first to utilize the CPC model for search-based advertising. GoTo.com was later renamed as Overture.com and then bought by Yahoo!. Paul Bruemmer, *Snap.com: Even Better than Google?*, iMEDIA CONNECTION, Aug. 4, 2006, <http://www.imediaconnection.com/content/10625.asp>.

108. *Id.*

109. *Id.*

110. TUZHILIN, *supra* note 22, at 8.

111. It is this diversity of marketing goals which has maintained the popularity of the CPM payment method for online advertising. CPM accounted for 46% of the \$12.5 billion revenue generated in 2005. PRICEWATERHOUSECOOPERS LLC, *supra* note 12, at 10.

factors wholly outside the ad network's control. Operability, or user-friendliness, of the advertiser's website will remain largely at the discretion of the advertiser, who might also have discretion in how ad networks are notified about conversion events.¹¹² This shift in control could place the ad network at the behest of the advertiser for information transparency. An unscrupulous advertiser could then hide completed conversion actions and short-change the ad network, constituting reverse click fraud.

Transaction costs of dealing with each advertiser to define specific conversion events might be prohibitive to some ad networks. Google, for example, has recently introduced Google Checkout, an online payment processing service designed to simplify online purchasing.¹¹³ After saving shipping and billing information with Google, users are able to purchase items directly from Checkout-affiliated merchants with a simple click.¹¹⁴ Google intends to charge merchants for each Checkout-related purchase and has not ruled out using data derived from the Checkout system to track sales performance of keywords, to modify its AdWords auctions or bid prices, or combine the data with its new CPA pricing model.¹¹⁵

CPA promises advertisers a near-perfect use of their advertising dollars to attract legitimate consumers.¹¹⁶ These chargeable conversion events, however, will occur less often than chargeable clicks under the CPC model. To ensure profitability under decreased chargeable actions, ad networks will likely increase the rates for each CPA transaction.¹¹⁷ Smaller advertisers, unable to afford these costs, may be forced to continue advertising under the CPC model thereby perpetuating the click fraud problem among those least capable of handling it. While large advertisers have the budget to pay for third party auditors or maintain in-house IT specialists, small advertisers will remain subject to the unsubstantiated assurances of ad networks.

C. Regulation

Advertising, including internet advertising, has long been subject to both private and public regulatory constraints.¹¹⁸ In the face of growing

112. Bruemmer, *supra* note 107.

113. See Google Checkout, <http://checkout.google.com> (last visited Jan. 27, 2007).

114. Elinor Mills, *Google Checkout checks in*, CNET NEWS.COM, June 29, 2006, http://news.com.com/2100-1038_3-6089351.html.

115. *Id.*

116. Bruemmer, *supra* note 107.

117. Elinor Mills, *Google tests new ads*, CNET NEWS.COM, June 22, 2006, http://news.com.com/Google+tests+new+ads/2100-1024_3-6086846.html.

118. See Peter S. Menell & Suzanne Scotchmer, *Intellectual Property*, in HANDBOOK OF LAW AND ECONOMICS (A. Mitchell Polinsky & Steven Shavell eds., forthcoming

public concern and possible legislative intrusion, industry associations attempt to self-regulate by codifying and enforcing standards, acceptance of which is required for membership in the association.¹¹⁹ These associations, better suited than the government to promulgate nuanced performance guidelines, provide cost effective public policy functions. The government is then able to focus on implementing broad policies without concerns of stifling the market with over-regulation.¹²⁰

1. *Industry Self-Regulation*

Self-regulation may help balance the information disparity between ad networks and advertisers with respect to click fraud definition, detection, and control. A collective association of the online advertising community could establish a set of best practices for, or issue mandatory directives to, ad networks, third-party auditors, publishers and advertisers.¹²¹ The guidelines would only establish “acceptable” baseline parameters. Competitive ad networks wishing to capture greater shares of the market could always provide a better service by implementing additional proprietary algorithms to refine their detection methods. Establishing a threshold of acceptable practices simply permits advertisers to understand the limitations of click fraud detection.

The Interactive Advertising Bureau (IAB) created the Global Internet Ad Impression Measurement Guidelines to measure impressions in display advertising.¹²² The IAB is an organization that works to increase interactive media’s share of advertising and marketing dollars.¹²³ The ad impression guidelines address long-standing concerns about the need for a standardized method of measuring interactive advertising as well as simplifying the transaction process between advertisers, ad networks, and affili-

2007) (discussing the range of private and public institutions governing the advertising industry).

119. See J.J. Boddewyn, *Advertising Self-regulation: True Purpose and Limits*, 18 J. ADVERTISING 19 (1989).

120. See *id.*

121. See Neil Gunningham & Joseph Rees, *Industry Self-Regulation: An Institutional Perspective*, 19 LAW & POLICY 363, 366 (1997).

122. IAB Standards and Guidelines—Ad Campaign Measurement and Audit Guidelines, <http://www.iab.net/standards/measurement.asp> (last visited Jan. 27, 2007).

123. The IAB represents over 250 companies responsible for selling over eighty-six percent of online advertising in the United States, including AOL, CNET, Google, MSN, Walt Disney Internet Group, Yahoo! and other interactive leaders. Donna Bogatin, *Interactive advertising bureau CEO on click fraud in ‘real deal’ exclusive interview*, ZDNET, Oct. 2, 2006, <http://blogs.zdnet.com/micro-markets/?p=497>.

ates.¹²⁴ These guidelines are intended to hasten the growth of internet advertising spending.¹²⁵

The IAB has also formed the industry-wide Click Measurement Working Group to develop a set of Click Measurement Guidelines.¹²⁶ The working group will gather many of the largest ad networks, including Ask.com, Google, LookSmart, Microsoft Corp., and Yahoo!,¹²⁷ to derive a common definition for “click” and a standard for invalid click detection.

In order to address its wide constituency and promote its public relations, a self-regulating organization must remain publicly accessible. An unintended consequence of the wide distribution of such detection protocols is their increasing susceptibility to circumvention.¹²⁸ Because of organizational inertia, any reactive decision made by the organization would likely be outpaced by advances in fraud-enabling technology.

2. Proxy Representation

Ad networks must make a difficult choice between appeasing advertiser demands for transparency and keeping proprietary detection methods safe. Such proprietary systems define the usefulness and reliability, and therefore ultimate success, of the ad network. Ad networks might be more willing to divulge proprietary detection methods to large, established advertisers, like large retail or automotive firms, whose deep pockets and fear of litigation would deter breaches in confidentiality. If these few, pre-selected advertisers had access to each ad network’s detection process, it would be possible to objectively grade the effectiveness of each network. These few large corporations would, therefore, represent the larger community of online advertisers. In this way, detection methods would remain confidential and advertisers would be provided with an up to date accounting of each ad network’s capabilities.

One major drawback of this system is the assumption that large advertisers can adequately represent the interests of small advertisers. Large advertisers tend to diversify their online marketing campaigns with display ads, search-based advertising, and rich media to promote brand recognition and ad recall as well as for generating online sales.¹²⁹ Smaller advertisers are more likely to rely on online advertising to generate revenue, and

124. IAB Standards and Guidelines, *supra* note 122.

125. *Id.*

126. Bogatin, *supra* note 123.

127. Notably absent from the list of members in this formative working group are advertisers and third-party auditors. *See id.*

128. *See* TUZHILIN, *supra* note 22, at 15.

129. *See* BRUNER, *supra* note 1, at 10-15.

don't have the resources to internalize click fraud. Similarly, the system assumes that large advertisers would adequately represent the concerns of the smaller advertisers when evaluating ad networks.¹³⁰ In a competitive market, such an arrangement almost assures rent seeking by the larger advertisers.

3. *"Let it Happen:" The Status Quo as the Perfect Economic Solution?*¹³¹

The solutions described above assume the concerns of the individual advertisers are strong enough to compel collective bargaining. Advertisers, however, may find the initial costs of such organizing prohibitive, believe that the costs outweigh any possible benefits, or simply eschew change. For example, local television advertising is still priced according to the archaic, artificially inflated "sweeps week" rating system because of an inability, or apathy, of local advertisers to unite.¹³² Click fraud, then, becomes another variable in the valuation of advertisements, or, simply put, a cost of doing business.¹³³

4. *Government Regulation*

A valid skepticism of the self-regulation panacea questions the motives and ability of self-interested, profit-maximizing businesses to safeguard the public. When the market fails to adequately reign in its members or address public concerns, the government often responds.¹³⁴ Failure to properly self-regulate has led to the adoption of legislation as diverse as

130. Recent litigation has pitted advertisers against print media for inflating circulation estimates, and therefore inflating advertising rates. One such aggrieved advertiser has shown collusion by the Audit Bureau of Circulations, the self-regulatory agency overlooking proper circulation estimates by all U.S. print media outlets. Interestingly, corporate advertisers (e.g., Target, Pfizer, J.C. Penny, L'Oreal, Walgreen's, Sears, and Kraft) compose a large portion of the ABC's board of directors. The failure of these large advertisers to adequately represent the needs of other advertisers casts doubt on the effectiveness of such an organizational structure. See Nat Ives, *Audit Bureau of Circulations Hit with Fraud Lawsuit*, ADAGE, Apr. 19, 2006, <http://chicagobusiness.com/cgi-bin/news.pl?id=20264>; see also Jack Shafer, *Ghost Readers: Is Everybody in the Newspaper Business Inflating Circulation?*, SLATE, Aug. 18, 2004, <http://www.slate.com/id/2105344>.

131. Bogatin, *supra* note 56 (statement by Google CEO Eric Schmidt).

132. See Sean Rocha, *How Does Sweeps Week Work?: Why Networks Roll Out the Big Guns—and Why Advertisers Put Up with It*, SLATE, Feb. 16, 2004, <http://www.slate.com/id/2095577> (noting that modern technology can provide real-time statistics about television viewership, but commenting about local television advertising, sweeps and lack of collective bargaining).

133. See Bogatin, *supra* note 56.

134. See generally Daniel F. Spulber, *Regulation and Markets* (1989).

the Highway Beautification Act,¹³⁵ the Cigarette Labeling and Advertising Act,¹³⁶ and Utah's Spyware Control Act.¹³⁷ The latter state legislative initiative raises federalism concerns, which inhere in many internet-based concerns due to the borderless, expansive nature of the internet.¹³⁸

A federal regime regulating click fraud would best serve the public interest. Recent click fraud litigation has included state unfair competition claims along with other contract based causes of action.¹³⁹ On the whole, however, advertiser concerns are not likely to differ over state boundaries and the federal government is in a better position to deal with the global nature of the internet than individual states. Regulation according to decentralized state legislation would ultimately lead to a *de facto* national policy with advertisers and ad networks forced to adopt the policy of the most restrictive state.¹⁴⁰

A similar concern, however, can be raised regarding the effect of any federal regulation on foreign nations and the global economy.¹⁴¹ The international business community would essentially adopt the click fraud regulations of the most restrictive national regime to ensure *de facto* international compliance.¹⁴² Barring formation of an international standard for defining, detecting, and controlling click fraud, a federal system of regulation might prove satisfactory.

IV. CONCLUSION

Click fraud is merely the latest in a long laundry list of undesirable consequences from the growing dependence on the internet for communi-

135. The Highway Beautification Act, 23 U.S.C. § 131 (1965) (allowing billboards in commercial and industrial areas, mandating a state compliance program, requiring the development of state standards, promoting the expeditious removal of illegal signs, and requiring just compensation for takings).

136. The Federal Cigarette Labeling and Advertising Act, 15 U.S.C. §§ 1331-1340 (1970) (prohibiting cigarette advertising on any medium of electronic communication subject to the jurisdiction of the FCC and requiring conspicuous "Surgeon General's Warnings" to be placed on all packages of cigarettes and on all cigarette advertisements and billboards).

137. UTAH CODE ANN. §§ 13-40-101 (2006).

138. See Menell, *supra* note 2, at 1373.

139. See Click Defense, Inc. v. Google, Inc., No. 5:05-cv-02579-PVT, 2005 WL 1813081 (N.D. Cal. filed June 24, 2005).

140. See Menell, *supra* note 2, at 1373.

141. See Zhihong Gao, Harmonious Regional Advertising Regulation? A Comparative Examination of Government Advertising Regulation in China, Hong Kong, and Taiwan, 34 J. ADVERTISING 75 (2005) (analyzing advertising regulations in China, Hong Kong, and Taiwan and concluding that a balance of interests is possible).

142. See Menell, *supra* note 2, at 1415-17.

cation, entertainment, and commerce. The online advertising industry has recognized the scope of the problem and has adopted policies aimed at reducing that threat. Transparency between advertisers and ad networks, however, remains elusive.

Although litigation has brought greater attention to the issue, it has yet to provide lasting control over click fraud. The evolving nature of the internet has offered a possible solution in the form of innovative pricing models, but this, alone, is insufficient. Proper regulation of the industry, private or public, in coordination with these market-based remedies, and judicial intervention, would allow for improved communication and consensus building between ad networks, advertisers, and affiliates. The complexity of the market demands the adoption of baseline standards and industry best practices to provide clarity in the definition, detection, and control of click fraud.

WHO CAN FIX THE SPYWARE PROBLEM?

By Liying Sun

The term “spyware” encompasses a wide range of software that monitors computer usage without a user’s knowledge or consent.¹ Some versions of spyware spawn pop-up ads while others track online activity, steal passwords, or even take control of a user’s computer.² Spyware has grown to be an epidemic on the internet, infecting nearly 60% of household computers and causing an estimated \$2.6 billion in damages in 2006.³ Lawmakers and regulatory agencies confronting the spyware problem face two significant challenges: (1) various intermediaries in the spyware industry dampen accountability for spyware distribution and implementation; and (2) a precise and effective regulatory definition of “spyware” is virtually impossible to create.⁴ Despite these difficulties, federal and state legislatures, the Federal Trade Commission (FTC), and private litigants have attempted to either create or enforce several mechanisms to combat the spyware epidemic since 2004. This Note provides a survey of these developments and assesses their overall effectiveness given the two significant challenges regulators face.

Part I of this Note describes the common types of spyware and the tactics they employ. In addition, Part I describes the layers of intermediaries within the industry that make enforcement of anti-spyware laws complex

© 2007 Liying Sun

1. FEDERAL TRADE COMMISSION STAFF REPORT, SPYWARE WORKSHOP: MONITORING SOFTWARE ON YOUR PC: SPYWARE, ADWARE, AND OTHER SOFTWARE 1 (2005), <http://www.ftc.gov/os/2005/03/050307spywarerpt.pdf> [hereinafter FTC REPORT].

2. *Id.* at 2.

3. Alongside viruses, spam, and phishing, Consumer Reports listed “spyware” among the four major threats on the internet in 2006. It is estimated that spyware caused nearly one million U.S. households to replace their computers in 2006. Cost per incident averaged at \$100, and the total damages were \$2.6 billion. Consumers Union of U.S., Inc., *Cyber Insecurity: Viruses, Spam, Spyware—You’re More Vulnerable Than You Think*, 71 CONSUMER REPORTS 20, No. 9 (2006); see also, WEBROOT SOFTWARE, INC., THE STATE OF SPYWARE: 2005 THE YEAR IN REVIEW 30 (2005) [hereinafter WEBROOT REPORT 2005] (identifying 400,000 websites that hosted spyware in 2005); America Online & National Cyber Security Alliance, AOL/NCSA Online Safety Study (2004), http://www.staysafeonline.info/pdf/safety_study_v04.pdf (finding 80% of customers’ computers were infected with spyware programs with an average of 93 spyware components).

4. See CENTER FOR DEMOCRACY & TECHNOLOGY, FOLLOWING THE MONEY: HOW ADVERTISING DOLLARS ENCOURAGE NUISANCE AND HARMFUL ADWARE AND WHAT CAN BE DONE TO REVERSE THE TREND 5-6 (2006), <http://www.cdt.org/privacy/20060320adware.pdf> [hereinafter FOLLOWING THE MONEY]; FTC REPORT, *supra* note 1, at 2-5.

and/or less effective. Part II discusses the challenge of creating a regulatory definition of spyware and then analyzes several legislative approaches and existing laws used to combat spyware. Part II also reviews the effectiveness of litigation initiated by individual states, the FTC, and private citizens challenging parties within various sectors of the spyware industry. In Part III, this Note concludes that the encouraging results achieved since 2005 suggest that the multiple legal mechanisms working together are effectively controlling the spyware problem.

I. BACKGROUND

A. Common Types of Spyware

“Spyware” is often classified into four types of software: (1) system monitors, (2) Trojans, (3) adware, and (4) tracking cookies.⁵ System monitors pose a serious privacy risk because they can secretly capture and transmit a user’s personal information and passwords typed in online transactions.⁶ Trojans appear to be legitimate software but they can be used to steal sensitive information, install malicious programs, hijack the computer, or compromise additional computers or networks.⁷ Adware tracks users’ online activities to deliver targeted pop-up ads.⁸ Tracking

5. See, e.g., WEBROOT REPORT 2005, *supra* note 3, at 89.

6. *Id.* at 8,44; FTC REPORT, *supra* note 1, at 9-10.

7. A Trojan is defined as:

A destructive program that masquerades as a benign application. Unlike viruses, Trojan horses do not replicate themselves but they can be just as destructive. One of the most insidious types of Trojan horse is a program that claims to rid your computer of viruses but instead introduces viruses onto your computer.

Trojan Definition: TechEncyclopedia from TechWeb, <http://www.techweb.com/encyclopedia/defineterm.jhtml?term=Trojan&x=&y=> (last visited Jan. 23, 2007); see also, FTC REPORT, *supra* note 1, at 35; Kelly Martin, *Viruses, Phishing, and Trojans for Profit*, SECURITYFOCUS, Oct. 24, 2006, <http://www.securityfocus.com/columnists/419/1>; Joris Evers, *The future of malware: trojan horses*, CNET NEWS.COM, Oct. 13, 2006, http://news.com.com/The+future+of+malware+Trojan+horses/2100-7349_3-6125453.html; Dawn Kawamoto, *Trojan piggybacks on FireFox*, CNET NEWS.COM, July 26, 2006, http://news.com.com/Trojan+piggybacks+on+Firefox/2100-7349_3-6098615.html; United States Computer Emergency Readiness Team (US-CERT), Technical Cyber Security Alert TA05-189A: Targeted Trojan Email Attacks, (July 8, 2005), <http://www.us-cert.gov/cas/techalerts/TA05-189A.html>.

8. See FTC REPORT, *supra* note 1, at 3-4; see, e.g., Benjamin Edelman, Berkman Center for Internet & Society at Harvard Law School, Documentation of Gator Advertising and Targeting (June 7, 2003), <http://cyber.law.harvard.edu/people/edelman/ads/gator>. See generally Peter S. Menell, *Regulating “Spyware”: The Limitation of State “Laboratories” and the Case for Federal Preemption of State Unfair Competition Laws*, 20

cookies are small text files downloaded to a user's computer that preserve preferences on specific websites.⁹ Many reputable websites use cookies, but third parties like adware developers use cookies for targeted online marketing.¹⁰

These spyware categories are not mutually exclusive, and different types of spyware often share similar tactics in achieving installation and evading detection and removal. Generally, spyware within these four categories can be installed in one of five ways: (1) without user knowledge or consent, through exploitation of operating system or browser vulnerabilities; (2) with user consent induced by deceptive or misleading pop-up messages; (3) with user consent obtained through inconspicuous, misleading or insufficient disclosure of what the software does or what other software it contains; (4) with user consent and disclosure, but targeting children who may not appreciate the harmful consequences of the installation; or (5) without knowledge or consent, through other spyware already installed on the system.¹¹

BERKELEY TECH. L.J. 1363, 1396-97 (2005); Joanna Glasner, *Ads That Know What You Want*, WIRED NEWS, April 28, 2005, <http://www.wired.com/news/ebiz/0,1272,67365,00.html>.

9. Andrew Kantor, *When Cookies Aren't Monsters and Spyware Isn't Spyware*, USATODAY.COM, Jan. 28, 2005, http://www.usatoday.com/tech/columnist/Andrew_kantor/2005-01-28-kantor_x.htm ("That's all cookies do. Sites leave bits of information about you on your own computer, then retrieve the information they left when you return.").

10. FTC REPORT, *supra* note 1, at 27 n.35; Wayne R. Barnes, *Rethinking Spyware: Questioning the Propriety of Contractual Consent to Online Surveillance*, 39 U.C. DAVIS L. REV. 1545, 1550-51 (2006); Stefanie Olsen, *Clueless about cookies or spyware?*, CNET NEWS.COM, Feb 8, 2005, http://news.com.com/Clueless+about+cookies+or+spyware/2100-1029_3-5561063.html; Michael Gowan, *How It Works: Cookies*, PCWORLD.COM, Feb 22, 2000, <http://www.pcworld.com/article/id,15352/article.html> ("For some, [cookies] promise a more user-friendly Web; for others, they pose a privacy threat.").

11. See Benjamin Edelman, *Spyware Research, Legislation, and Suits, Spyware Installation Methods* (October 16, 2006), <http://www.benedelman.org/spyware/installations>. One of the more egregious forms of spyware installation is called "drive-by downloads," which exploits a Windows security vulnerability. A user visits a website to view some content, but the webpage contains embedded code that can automatically download and install software without her knowledge or consent. *Id.*; see also Benjamin Edelman, Berkman Center for Internet & Society at Harvard Law School, *Media Files That Spread Spyware* (Jan. 2, 2005), <http://www.benedelman.org/news/010205-1.html>. In another scenario, a user may choose to install software because he thinks it is required to view content on a website. *Id.*; see also, News Release, Federal Trade Commission, *FTC Shuts Down Spyware Operation* (Nov. 10, 2005), <http://www.ftc.gov/opa/2005/11/enternet.htm> (discussing shutting down sites that offered "free" music for use on blogs bundled with a program that flashed fraudulent warnings about the security of their com-

Once installed, spyware evades detection and resists removal.¹² Most spyware does not come with uninstall software and many leave components behind after they are uninstalled.¹³ Even if uninstalled, some spyware automatically downloads itself again once the computer is restarted.¹⁴ Spyware can also disable users' internet security software or continuously mutate to avoid detection by conventional anti-spyware solutions.¹⁵

B. The Adware Industry

Although system monitors and Trojans are the most invasive and destructive types of spyware, existing criminal statutes adequately address them.¹⁶ Recent spyware regulation targets the adware industry.¹⁷ The basic adware business model requires only four constituents: advertisers, adware developers, adware distribution affiliates, and consumers.¹⁸ Advertisers supply ad content and pay commissions to developers of adware for targeted advertising to consumers.¹⁹ Adware developers pay distribution affiliates to install their adware on more computers.²⁰ In this basic model, objectionable installations and operations are easily traced back to the responsible developers or distributors, therefore advertisers and adware de-

puter systems). In some cases, even if the user clicks on the "Decline" button, the spyware will install itself anyway. FTC REPORT, *supra* note 1, at 7; *see also* News Release, Federal Trade Commission, FTC Testifies on Spyware (Oct. 5, 2005), <http://www.ftc.gov/opa/2005/10/spyware.htm>.

12. FTC REPORT, *supra* note 1, at 7-8.

13. *Id.*

14. *Id.*; ANTI-SPYWARE COALITION, ASC RISK MODEL DESCRIPTION, WORKING REPORT 7 (2006), http://www.antispywarecoalition.org/documents/documents/ASC_Risk_Model_Description_Working_Report_20060622.pdf. [hereinafter ASC REPORT].

15. Jaikumar Vijayan, *Mutating Malware Evades Detection*, PC ADVISER, Nov. 11, 2006, <http://www.pcadvisor.co.uk/news/index.cfm?newsid=7571>. Conventional anti-spyware solutions recognize signatures in the spyware code while a new generation of anti-spyware is based on behavior heuristics. *See generally* Sana Security Inc., Sana Security—Delivering Enterprise Threat Protection, <http://www.sanasecurity.com/products/technology/activeMDT.php> (last visited Mar. 21, 2007) (introducing heuristics-based spyware detection method).

16. *See* Joris Evers, *Computer crime costs \$67 billion*, CNET NEWS.COM, Jan. 19, 2006, http://news.com.com/Computer+crime+costs+67+billion+FBI+says/2100-7349_3-6028946.html. For a list of lawsuits involving system monitors and Trojans, see the Federal Spyware Case Summary, Center For Democracy & Technology, <http://www.cdt.org/privacy/spyware/20060626spyware-enforcement-federal.php> (last visited Feb. 8, 2007).

17. *See infra* Section II.B.

18. *See* FOLLOWING THE MONEY, *supra* note 4, at 2.

19. *Id.* at 3.

20. *Id.*

velopers seeking distribution can refuse to work with those offending players.²¹

But online advertising can be extremely lucrative, fueling not only more complex spyware, but also structure of the adware industry itself by creating numerous layers of intermediaries that reduce accountability to consumers, making it difficult for legislators, agencies, and private litigants to obtain damages.²² In reality, advertising agencies, advertising affiliate networks (“AANs”), distribution affiliate networks (“DANs”), and their sub-networks form a thicket between advertisers and consumers.²³ Some security experts estimate that spyware generates \$500 million to \$2 billion a year in revenue for the AANs and DANs.²⁴ Advertising agencies and bigger AANs direct money (after taking a commission) from advertisers to adware developers or smaller AANs for the click-through traffic they generate.²⁵ The advertising agencies and AANs shield advertisers from the knowledge and control of how their ads are displayed.²⁶ Similarly, DANs direct money from adware developers to distribution affiliates by the number of installations they make.²⁷ Affiliate networks and the layers of sub-affiliate networks enable tens of thousands of individual affi-

21. *Id.*

22. According to the research firm IT-Harvest, spyware rakes in an estimated \$2 billion a year in revenue, accounting for about 11% of the internet ad business. Ben Elgin, *The Plot to Hijack Your Computer*, BUSINESSWEEKONLINE, July 17, 2006, http://www.businessweek.com/magazine/content/06_29/b3993001.htm; Matt Hines, *Research: Spyware industry worth billions*, CNET NEWS.COM, May 3, 2005, http://news.com.com/Research+Spyware+industry+worth+billions/2100-1029_3-5693730.html. See generally FOLLOWING THE MONEY, *supra* note 4 (discussing the complexities of the real world adware market); Matt Hines, *Malware Money Tough to Trace*, EWEK.COM, September 18, 2006, <http://www.eweek.com/article2/0,1895,2016949,00.asp> (commenting on the lack of accountability due to intermediaries in the adware industry).

23. FOLLOWING THE MONEY, *supra* note 4, at 3-6. There are two other kinds of intermediaries: (1) ad-serving platforms and (2) software vendors and websites. These two kinds of intermediaries receive money for serving some passive functions in the adware business model, but do not channel money further downstream. Ad-serving platforms store ads from thousands of advertisers for different adware to retrieve, so adware no longer needs to get ads from advertisers directly. Software developers and websites offer desirable software products and content for adware distributors to bundle with their adware. *Id.* Many of the intermediaries play multiple roles in the adware business model, further complicating the industry structure. *Id.*; Joseph Menn, *Big Firms' Ad Bucks Also Fund Spyware: Fortune 500 Members Are among the Unwitting Backers of Software That Sneaks into Computers*, LA TIMES, May 9, 2005, at C.1.

24. Menn, *supra* note 23.

25. See FOLLOWING THE MONEY, *supra* note 4, at 6.

26. *Id.*

27. *Id.* at 5.

ates to participate in the adware business without transparency or accountability.²⁸ Thus, effective anti-spyware regulation must recognize and address complexities in detection and enforcement created by these intermediaries.

II. REGULATORY APPROACHES AGAINST SPYWARE

A. The Spyware Definition

Spyware eludes a precise and effective regulatory definition.²⁹ The debate pivots on three issues: (1) the level of user knowledge and consent required for software installation; (2) the types of unacceptable software activities; and (3) the extent of harm that warrants sanction.³⁰ A narrow definition can easily be circumvented, but too broad a definition will interfere with legitimate business activity and possibly hurt innovation in advertising technology.³¹

It is not controversial to suggest that software distributors should provide disclosure and obtain consent before installation. However, some worry that an overly cumbersome notice and consent requirement will not only be costly to implement, but also counter-productive if users find the terms lengthy and burdensome.³² Some software that brings risk to privacy and user control³³ can sometimes give consumers added convenience and value. For example, while criminals can use monitoring software to steal information, parents may use the same technology to oversee their children's online activities.³⁴ Targeted pop-up ads may be intrusive, but also

28. *Id.* at 4. Some of the largest advertising networks supporting the 180Solutions ad-delivering software include ValueClick Inc., Commission Junction, BeFree, ClickBank, and LinkShare. *See* Benjamin Edelman, Berkman Center for Internet & Society at Harvard Law School, *Intermediaries' Role in the Spyware Mess* (May 23, 2005), <http://www.benedelman.org/news/052305-1.html>.

29. FTC REPORT, *supra* note 1, at 3 (defining spyware as "software that aids in gathering information about a person or organization without their knowledge and that may send such information to another entity without the consumer's consent, or that asserts control over a computer without the consumer's knowledge").

30. *Id.* at 4-5.

31. *Id.* at 15.

32. *Id.* at 5; *cf.* Electronic Privacy Information Center, *The Children's Online Privacy Protection Act* (Apr. 28, 2003), <http://www.epic.org/privacy/kids> (identifying some verification methods outlined by the FTC—sending/faxing printed forms, supplement of credit card numbers, calling toll-free numbers, and forwarding digital signatures through e-mail—as prohibitively costly and cumbersome).

33. *See generally* ASC REPORT, *supra* note 14 (showing privacy and control risks associated with various software functions).

34. *See* WEBROOT SOFTWARE INC., *STATE OF SPYWARE Q1 2005* 59 (2005).

allow consumers to receive relevant shopping information and help advertisers reach a market segment at lower cost.³⁵ Users with proper knowledge and consent often willingly compromise their privacy and control when there is sufficient reward.³⁶ A flat ban on any particular technology is not desirable because it can disrupt this market altogether. Individual consumers will tolerate different levels of risk. When defining spyware, some consider that “trespass” on a computer alone is *per se* harmful, while others call for a higher threshold of injury to consumers to justify such classification.³⁷

Rather than creating one precise regulatory definition of spyware based on consent, software behavior, or harm, it may be more productive to identify and prohibit deceptive and unfair business practices in the context of spyware.³⁸ Deceptive and unfair practices can occur both during the software installation and during the operation, and they may encompass all the issues regarding consent, behavior, and harm.³⁹

B. Spyware Regulation

The lack of consensus in terms of a regulatory definition of spyware is increasingly apparent when comparing state and federal legislation targeting spyware. By the end of 2006, sixteen states enacted spyware legislation.⁴⁰ Several federal bills have been proposed, and two were passed by the House of Representatives.⁴¹ Spyware legislation falls roughly into four

35. See Menell, *supra* note 8, at 1396-97; Jean-Philippe Maheu, 2006: *The Year of Behavioral Marketing*, BEHAVIORALINSIDER, Dec 16, 2005, http://publications.media.post.com/index.cfm?fuseaction=Articles.showArticleHomePage&art_aid=37562.

36. A reward may include, for example, free e-mail services or software that provides weather information.

37. See FTC REPORT, *supra* note 1, at 3.

38. *Id.* at 4 n.29 (“Panelists expressed broad support for the Consumer Software Working Group’s effort to identify and prevent specific activities related to software that are unfair, deceptive, or devious.”).

39. *Id.* at 3-4.

40. Twelve states enacted spyware legislation in 2005: Alaska, Arizona, Arkansas, California, Georgia, Indiana, Iowa, New Hampshire, Texas, Utah, Virginia, and Washington. In 2006, Hawaii, Louisiana, Rhode Island, and Tennessee also enacted spyware legislation. See National Conference of State Legislatures, 2005 State Legislation Relating to Internet Spyware or Adware, <http://www.ncsl.org/programs/lis/spyware05.htm> (last visited Mar. 19, 2007); National Conference of State Legislatures, 2006 State Legislation Relating to Internet Spyware or Adware, <http://www.ncsl.org/programs/lis/spyware06.htm> (last visited Mar. 1, 2007).

41. The Safeguard Against Privacy Invasions Act (SPY-ACT) and the Internet Spyware (I-SPY) Prevention Act have both been passed by the House. H.R. 29, 109th Cong. (2005); H.R. 744, 109th Cong. (2005). Proposed bills include the Software Principles Yielding Better Levels of Consumer Knowledge, the Enhanced Consumer Protec-

categories: (1) bills against adware, (2) bills against deceptive and harmful software installation and operation, (3) bills with enhanced requirements for software notice and disclosure, and (4) bills against fraud and other criminal acts accomplished through spyware.

Utah was the first state to enact state spyware legislation.⁴² Utah's Spyware Control Act falls into the first category.⁴³ Despite objections from many internet companies and adware developers,⁴⁴ the Act defines spyware as software that "collects information about an Internet website at the time the Internet website is being viewed" and "uses the information . . . contemporaneously to display pop-up advertising on the computer."⁴⁵ The Act bans the display of pop-up ads that are triggered by trademarks or URLs on the websites, which interfere with users' ability to view the content or paid advertising they originally attempted to access.⁴⁶ The Act gives the right of private action only to trademark and website owners.⁴⁷

Other states have opted for a more consumer-focused approach, protecting them from deceptive and harmful spyware installation and operation by spyware vendors. Core prohibitions in this category are substantially similar.⁴⁸ For example, Washington State outlaws software that

tion Against Spyware Act, and the Computer Software Privacy and Control Act. S. 1004, 109th Cong. (2005); S. 687, 109th Cong. (2005); H.R. 4255, 108th Cong. (2004).

42. H.B. 323, 2004 Gen. Sess. (Utah 2004). This act was later amended to accommodate the dormant Commerce Clause. H.B. 104, 2005 Leg., 56th Sess. (Utah 2005).

43. Utah H.B. 104. Alaska and Tennessee have passed bills similar to Utah's amended spyware statute, although the Alaska bill is enforced under existing unfair business practices statute. S.B. 140, 24th Leg., 24th Sess. (Ala. 2005); S.B. 2069, 104th G.A. (Tenn. 2006).

44. Opposition Letter from AOL et al. to John Valentine, Utah State Senator, and Steve Urquhart, Utah House Representative (Mar. 1, 2004) (on file with the author), available at <http://www.benedelman.org/spyware/utah-mar04/letter-01mar04.pdf>. Following the initial enactment of the 2004 Spyware Control Act, an adware company WhenU moved to enjoin the Act for constitutional violations. WhenU won the preliminary injunction, and the Act was subsequently amended and passed again in March 2005. Susan P. Crawford, *First Do No Harm: The Problem of Spyware*, 20 BERKELEY TECH. L.J. 1433, 1440 (2005) (citing *WhenU.com, Inc. v. State*, No. 040907578 (D. Utah June 22, 2004)).

45. See Utah H.B. 104 § 13-40-102.

46. Utah H.B. 104 § 13-40-201.

47. Utah H.B. 104 § 13-40-301.

48. This category of spyware laws are from Arkansas, Arizona, California, Georgia, Hawaii, Indiana, Iowa, Louisiana, New Hampshire, Rhode Island, Texas, and Washington. See Benjamin Edelman, *Spyware Research, Legislation, and Suits*, State Spyware Legislation (Apr. 23, 2006), <http://www.benedelman.org/spyware/legislation>; H.B. 6811, 2006 G.A., Jan. Sess. (R.I. 2006); H.B. 2904, 85th G.A., Reg. Sess. (Ark. 2005); H.B.

“through intentionally deceptive means,” (1) modify computer’s internet settings, (2) collect “personally identifiable information” through keyloggers or through monitoring “all or substantially all” website visits, (3) prevent “reasonable efforts” to block installation or to remove the software, or (4) disable anti-spyware technology already installed.⁴⁹ The law also addresses some of the specific harm that spyware causes: (1) “tak[ing] control of the computer” (a) by using the internet to cause damage to the computer or cause users to incur financial charges, or (b) through incessant display of pop-up advertisements that users “cannot close without turning off the computer or closing the internet browser”; (2) modifying internet settings that affect privacy and computer security.⁵⁰ In addition, the Washington statute bans software that installs despite users’ express non-consent and that induces users’ consent by “intentionally misrepresenting the extent to which installing the software is necessary for security or privacy reasons” or for opening a particular type of content.⁵¹ Most legislation in this second category provides public enforcement by a state attorney general and many provide a private right of action for consumers, trademark owners, or any aggrieved parties.⁵² The Washington spyware law gives the right of enforcement to both the attorney general and the affected website or trademark owners.⁵³

The third category of legislation also protects consumers by significantly enhancing notice, consent, or disclosure requirements. For example, the Securely Protect Yourself Against Cyber Trespass Act (Spy Act) clearly states requirements for proper notice and consent for “information col-

2414, 47th Leg., 1st Reg. Sess. (Ariz. 2005); S.B. 127, 2005-2006 Leg. Sess. (Ga. 2005); H.B. 2256, 23rd Leg., Reg. Sess. (Haw. 2006); S.B. 49, 114th G.A., 1st Reg. Sess. (Ind. 2005); H.F. 614, 81st G.A. (Iowa 2005); H.B. 690, 2006 Reg. Sess., (La. 2006); H.B. 47, 2005 Sess. (N.H. 2005); S.B. 327, 79th Leg., Reg. Sess. (Tex. 2005); H.B. 1012, 59th Leg., 2005 Reg. Sess. (Wash. 2005); S.B. 1436, 2003-2004 Sess. (Cal. 2004).

49. Wash. H.B. 1012 § 2.

50. *Id.* § 3.

51. *Id.* § 4.

52. Arkansas only allows public enforcement. Ark. H.B. 2904. Arizona, Texas, and Washington allow both public enforcement and private actions by software vendors, trademark owner, and website owners. Ariz. H.B. 2414; Tex. S.B. 327; Wash. H.B. 1012. California, Georgia, and Hawaii allow both public enforcement and private action by consumers. Cal. S.B. 1436; Ga. S.B. 127; Haw. H.B. 2256. Indiana, Louisiana, New Hampshire, and Rhode Island allow both public enforcement and private actions by any aggrieved parties. Ind. S.B. 49; La. H.B. 690; N.H. H.B. 47; R.I. H.B. 6811. Iowa allows only private actions by software vendors and trademark and website owners. Iowa H.F. 614.

53. *See* Wash. H.B. 1012 § 6.

lection programs.”⁵⁴ The Act prescribes the timing, content, format, and language of the notice and requires disclosure about the type of information collected as well as the purpose for which it is collected.⁵⁵ It also mandates that the software contain a disable-function and provide self-identifying information on each pop-up ad it delivers.⁵⁶

The fourth category of spyware legislation combats criminal activity carried out with the use of spyware. For example, the proposed Internet Spyware (I-SPY) Prevention Act of 2005 would amend the Computer Fraud and Abuse Act of 1984 to criminalize unauthorized installation and use of software on a protected computer: (1) in furtherance of another federal crime; (2) to intentionally obtain or transmit personal information with the intent to defraud or injure a person or cause damage to a computer; or (3) to intentionally impair the security protections of the protected computer.⁵⁷

Legislation within each category might prove effective in certain situations, but ineffective in others. For example, the fourth category tackles the most egregious types of spyware based on their criminal purpose, and the other three categories of legislation address spyware based on its offensive operation. In the first category, the Utah Spyware Control Act acknowledges consumers’ rights only indirectly by failing to provide consumers with a private cause of action.⁵⁸ Nor is enforcement easy for trademark owners. The Act provides a safe haven for defendants who request state of residence information prior to sending pop-up ads.⁵⁹ Although it imposes liability for advertisers who purchase ads from adware developers, liability is imposed only if an advertiser ignores specific notices of violations from the trademark or website owners.⁶⁰

54. See H.R. 29, 109th Cong. § 3. (1st Sess., 2005); see also S.B. 1315, 2004 Leg. (Mich. 2004) (as referred to Comm. on Tech. & Energy, June 22, 2004); Crawford, *supra* note 44, at 1445-48.

55. For software that collects user information, notice must be provided and consent be obtained before the software is transmitted, installed or executed. H.R. 29 § 3. Before a user is given the option to consent or decline, disclosure about the types of information collected, the purpose for the information collection and the identity of the software must be disclosed. H.R. 29 § 3(c)

56. H.R. 29 § 3(d)(1)-(2).

57. See H.R. 744, 109th Cong. § 2 (1st Sess. 2005).

58. See Utah H.B. 104 § 2.

59. The amended Act applies its penalties only to vendors who have installed their spyware on a computer in Utah and exempts from liability those who request residence information prior to sending pop-up ads. See *id*; see also, Crawford, *supra* note 44, at 1440.

60. See Utah H.B. 104 § 4.

The second category of spyware legislation is more sophisticated than a ban on pop-up ads because it addresses common deployment tactics of spyware developers.⁶¹ Enforcement may also be stronger since both attorneys general and consumers have an incentive to battle spyware.⁶² Nonetheless, these laws are weakened by a high threshold of harm to establish unlawful ad dissemination⁶³ and the requirement that the offending act be “intentionally deceptive.”⁶⁴ The definition of “intentionally deceptive” fails to address the hidden, confusing or extremely lengthy disclosures that some spyware developers have implemented.⁶⁵

The third category of legislation might address issues of hidden, confusing, or extremely lengthy disclosures by enhancing notice and disclosure requirements, but legislation like the Spy Act allows multiple information collection programs to use a single notice if they are provided in one software bundle.⁶⁶ For example, the extremely lengthy disclosure provided by Grokster for its large software bundle will pass the notice requirement unscathed.⁶⁷

C. Spyware Litigation

Existing laws that prohibit unfair and deceptive business practices have also been used to address spyware, including some state business or consumer protection statutes as well as section 5 of the Federal Trade Commission Act (“FTC Act”). Spyware litigation comes in a variety of forms. Suits have been brought pursuant to spyware statutes, state fair business or consumer protection statutes, and common law by both states and by consumers. The FTC has also filed suits under the FTC Act. Although most of the defendants have settled, the way in which the settle-

61. See *e.g.*, H.B. 1012, 59th Leg., 2005 Reg. Sess. §§ 1-4 (Wash. 2005).

62. See Benjamin Edelman, Berkman Center for Internet & Society at Harvard Law School, What Hope for Federal Anti-Spyware Legislation? (Jan. 31, 2005) (“State attorneys general face public election which inspires aggressive pro-consumer litigation. Private parties also have clear incentives to sue, since they could seek to recover damages from spyware companies operating in violation of the bill’s requirements.”), <http://www.benedelman.org/news/011905-1.html>.

63. See Wash. H.B. 1012 § 3(1)(b).

64. “Intentionally deceptive” is (a) an “intentionally and materially” false statement, (b) an intentional and material omission or misrepresentation “in order to deceive”, or (c) an intentional and material “failure to provide any notice” regarding the installation or execution of the program. Wash. H.B. 1012 § 1(5).

65. See Benjamin Edelman, Berkman Center for Internet & Society at Harvard Law School, California’s Toothless Spyware Law (Sept. 29, 2004), <http://www.benedelman.org/news/092904-1.html>.

66. See H.R. 29 § 3(c)(1).

67. See Edelman, *supra* note 62.

ment agreements impose duties to control affiliates may have a lasting positive effect on the spyware problem.

1. *State and Private Actions*

Washington and New York have shown particular interest in fighting spyware through litigation.⁶⁸ Actions have been brought under the Washington Spyware Act, Washington Unfair Business Practices-Consumer Protection Act, and New York's General Business Law.⁶⁹ While the Washington State Attorney General targeted individual rogue software vendors, the New York Attorney General targeted well-known adware developers and distributors.⁷⁰ Both Attorneys General named individual corporate officers as codefendants for their participation in their companies' unlawful practices.⁷¹

In January 2006, the Washington State Attorney General filed his first spyware action under the Washington Spyware Act and Unfair Business Practices-Consumer Protection Act against Secure Computer LLC, its president, and its marketing affiliates in the U.S. and India.⁷² The defen-

68. As of the end of 2006, Washington State Attorney General Rob McKenna has filed three spyware cases and (former) New York State Attorney General Eliot Spitzer has filed two.

69. The Washington Unfair Business Practices-Consumer Protection Act prohibits "unfair or deceptive acts or practices in the conduct of any trade or commerce." See WASH. REV. CODE § 19.86.020 (2005). New York General Business Law prohibits "deceptive acts or practices in the conduct of any business, trade or commerce or in the furnishing of any service in this state." N.Y. GEN. BUS. LAW § 349 (1984). It also prohibits "false advertising in the conduct of any business, trade or commerce or in the furnishing of any service in this state[.]" *Id.* § 350 (1963).

70. See Verified Petition, *New York v. Intermix Media, Inc.*, No. 401394-2005 (N.Y. Sup. Ct. Apr. 28, 2005); Verified Petition, *New York v. DirectRevenue LLC*, No. 401325-2006 (N.Y. Sup. Ct. Apr. 4, 2006); Complaint, *Washington v. SoftwareOnline.com Inc.*, No. 06-2-12343-3SEA (Wash. Super. Ct. Apr. 11, 2006); Complaint, *Washington v. Secure Computer LLC*, No. C06-0126RSL (W.D. Wash. Jan. 24, 2006); Complaint, *Washington v. Digital Enters., Inc.*, No. 06-2-26030-9 (Wash. Super. Ct. Aug. 14, 2006).

71. See Verified Petition, *New York v. DirectRevenue LLC*, No. 401325-2006 (naming Joshua Abram, Alan Murray, Daniel Kaufman, and Rodney Hook, the founders, officers, and owners of DirectRevenue LLC, defendants); Complaint, *Washington v. SoftwareOnline.com, Inc.*, No. 06-2-12343-3SEA (naming David W. Plummer, the Chief Technology Officer of SoftwareOnline, Inc., a defendant); Complaint, *Washington v. Secure Computer LLC*, No. 06-0126RSL (naming Paul E. Burke, the president of Secure Computer LLC, a defendant); Complaint, *Washington v. Digital Enters., Inc.*, No. 06-2-26030-9 (naming Easton A. Herd, the sole officer of Digital Enterprises, Inc., a defendant).

72. See Complaint at 23-32, *Washington v. Secure Computer LLC*, No. 06-0126RSL. Defendants were also cited for violations of the CAN-SPAM Act and The

dants fraudulently used Microsoft's name in advertisements, claiming that computers had been infected with spyware to induce consumers into purchasing a fake anti-spyware program.⁷³ The defendants' software also modified computer security settings related to user's access or use of the internet.⁷⁴ These acts allegedly violated the Washington Spyware Act, RCW 19.270.040(1) and RCW 19.270.030(2)(b), which prohibit a person from "induc[ing] a computer owner to install a computer software component by intentionally misrepresenting the extent to which installing the software is necessary for security or privacy reasons", and "modify[ing] security settings in order to cause damage to a computer."⁷⁵ Defendants' misrepresentation in promoting the software, deceptive tempering of computer settings, false claims of spyware detection and removal, and dissemination of deceptive and misleading pop-up ads allegedly violated the Unfair Business Practices-Consumer Protection Act.⁷⁶ Two similar actions have been filed against individual spyware vendors who made false and deceptive claims in promoting and running their products that prevented users from uninstalling their software.⁷⁷

In April 2005, New York Attorney General filed suit against Intermix Media, Inc., a well-known adware distributor.⁷⁸ He filed another case in April 2006 against another prominent adware developer and distributor, DirectRevenue LLC.⁷⁹ He also named DirectRevenue's founders, owners

Commercial Electronic Mail Act for other associated acts. *Id.* at 8-13; *see also* Press Release, Washington State Office of the Attorney General, McKenna, Microsoft Announce Landmark Spyware Lawsuit (Jan. 25, 2006), *available at* http://www.atg.wa.gov/releases/2006/rel_Spyware_Lawsuit_012506.html.

73. *See* Complaint at 7, *Washington v. Secure Computer LLC*, No. 06-0126RSL.

74. *Id.* at 28-29.

75. *Id.* at 14-32; WASH. REV. CODE §§ 19.270.030(2)(b), 19.270.040(1) (2005).

76. *See* WASH. REV. CODE § 19.86.020.

77. *See* Complaint, *Washington v. SoftwareOnline.com, Inc.*, No. 06-2-12343-3SEA; Complaint, *Washington v. Digital Enters., Inc.* No. 06-2-26030-9. The case against Digital Enterprises, Inc. is still pending, and the FTC also has sued them for the same conduct. *See* Complaint, *FTC v. Digital Enters., Inc.*, No. CV06-4923CAS (C.D. Cal. Aug. 8, 2006).

78. *See* Verified Petition, *New York v. Intermix Media, Inc.*, No. 401394-2005; *see also*, Press Release, Office of the New York State Attorney General Eliot Spitzer, State Sues Major "Spyware" Distributor: Intermix Media Accused of Vast Pattern of Surreptitious Installations (Apr. 28, 2005), *available at* http://www.oag.state.ny.us/press/2005/apr/apr28a_05.html.

79. *See* Verified Petition, *New York v. DirectRevenue LLC*, No. 401325-2006; *see also*, Press Release, Office of the New York State Attorney General Eliot Spitzer, State Sues Major "Spyware" Distributor: Direct Revenue Accused of Vast, Elusive Pattern of Spyware Installations (Apr. 4, 2006), *available at* http://www.oag.state.ny.us/press/2006/apr/apr04a_06.html.

and officers as codefendants in the case.⁸⁰ Intermix Media operated websites that advertised “free” software downloads.⁸¹ However, Intermix secretly bundled this “free” software with ad-delivery programs, affecting millions of computers in New York and elsewhere.⁸² DirectRevenue routinely distributed its programs without proper notice, through either “free” software bundles or “drive-by-downloads.”⁸³ DirectRevenue’s software design also hindered detection and removal.⁸⁴ New York State has not enacted any spyware statutes, so both actions were brought under the common law trespass to chattels and the New York General Business Law, which prohibits false advertising and deceptive business practices.⁸⁵

Consumer actions also have been filed against big name adware vendors. Since 2005, consumers have filed class actions against adware developers and distributors including DirectRevenue LLC, 180Solutions, Inc., eXact Advertising, LLC, EBates Shopping.com, Inc., and Intermix Media, Inc.⁸⁶ *Sotelo v. DirectRevenue LLC* was the first class action suit that has moved past the summary judgment stage.⁸⁷ The plaintiff class was able to sustain four claims against Direct Revenue’s motion to dismiss: (1) common law trespass to chattels; (2) violation of the Illinois Consumer Fraud Act through deceptive and misleading advertisements; (3) negligent breach of the duty not to harm plaintiffs’ computers; and (4) computer

80. Verified Petition, *New York v. DirectRevenue LLC*, No. 401325-2006.

81. See Verified Petition at 4, *New York v. Intermix Media, Inc.*, No. 401394-2005.

82. *Id.* at 3.

83. See Verified Petition at 5-13, *New York v. DirectRevenue LLC*, No. 401325-2006.

84. *Id.* at 14-15.

85. See Verified Petition at 8-9, *New York v. Intermix Media, Inc.* No. 401394-2005; Verified Petition at 17-8, *New York v. DirectRevenue LLC*, No. 401325-2006; N.Y. GEN. BUS. LAW §§ 349-350. Additional claims were brought against DirectRevenue under the N.Y. PENAL LAW § 156.20 (1999), which prohibits computer tampering. See Verified Petition at 19, *New York v. DirectRevenue LLC*, No. 401325-2006.

86. Civil Minutes for Defendant’s Motion to Dismiss, *Kerrins v. Intermix Media, Inc.*, No. CV05-5408-RGK (C.D. Cal. Jan. 10, 2006); Complaint, *Consumer Advocates Rights Enforcement Soc’y, Inc. v. 180solutions, Inc.*, No. CV027141 (Cal. Super. Ct. Oct. 27, 2005); Complaint, *Sotelo v. Ebates Shopping.com, Inc.*, No. 06C-2531 (N.D. Ill. May 5, 2006); Class Action Complaint, *Simios v. 180Solutions, Inc.*, No. 05C5235 (N. D. Ill. Sept. 13, 2005); Memorandum Opinion and Order, *Sotelo v. DirectRevenue, LLC*, 384 F. Supp. 2d 1219 (N.D. Ill. Aug. 31, 2005); Class Action Complaint, *Michaeli v. eXact Adver., LLC*, No. 05CV8331 (S.D.N.Y. Sept. 27, 2005).

87. See Julie Anderson & David Fish, *Sotelo v. DirectRevenue, LLC: Paving the Way for a Spyware-Free Internet*, 22 SANTA CLARA COMP. & HIGH TECH. L.J. 841, 842, 861 (2006).

tampering under Illinois Computer Crime Prevention Law.⁸⁸ So far, three of these cases have been filed in Illinois, two in California, and one in New York, all of which involve similar facts and claims.⁸⁹

Although most of these state and private actions have been settled, they have produced some positive results. The settlements in state actions force defendants to disgorge their profits, and the settlements in the consumer actions have created prospective obligations that can disrupt further distribution of spyware. For example, in *Washington v. Secure Computer LLC*, the three U.S. defendants agreed to pay fines, disgorge profits between \$2,000 and \$84,000, and refrain from future similar practices.⁹⁰ The corporation, its officers, and affiliates in *New York v. Intermix Media Inc.* agreed to pay millions in penalties and disgorgement and were banned from future adware distribution.⁹¹ Most consumer cases were either dropped, pending, or were settled without payment to the plaintiffs.⁹² De-

88. Memorandum Opinion and Order, *Sotelo v. DirectRevenue, LLC*, 384 F. Supp. 2d at 1229-34, 1235-37.

89. Civil Minutes for Defendant's Motion to Dismiss, *Kerrins v. Intermix Media, Inc.*, No. CV05-5408-RGK; Complaint, *Consumer Advocates Rights Enforcement Soc'y, Inc. v. 180solutions, Inc.*, No. CV027141; Complaint, *Sotelo v. Ebates Shopping.com, Inc.*, No. 06C-2531; Class Action Complaint, *Simios v. 180Solutions, Inc.*, No. 05C5235; Memorandum Opinion and Order, *Sotelo v. DirectRevenue, LLC*, 384 F. Supp. 2d 1219; Class Action Complaint, *Michaeli v. eXact Adver., LLC*, No. 05CV8331.

90. See Consent Decree as to Seth Traub at 3-5, *Washington v. Secure Computer LLC*, No. 06-0126RSM (W.D. Wash. June 5, 2006); Consent Decree as to Gary Preston at 3-5, *Washington v. Secure Computer LLC*, No. C06-0126RSM (W.D. Wash. May 4, 2006); Stipulated Judgment and Order as to Zhijian Chen at 6-8, *Washington v. Secure Computer, LLC*, No. C06-0126RSM (W.D. Wash. April 14, 2006). In the case against *SoftwareOnline.com*, the defendants settled with an admission to multiple violations. The defendants agreed to pay \$400,000 in civil penalties, with \$250,000 suspended on condition of compliance with all terms in the settlement. They must also give refunds to consumers who have filed complaints and pay \$40,000 in attorneys' costs and fees. Defendants also agreed to refrain from future similar practices. See Stipulated Judgment and Order as to *SoftwareOnline.com, Inc.* at 8-11, *Washington v. SoftwareOnline.com, Inc.*, No. 06-2-12343-3SEA (Sup. Ct. Wash. Apr. 11, 2006).

91. Under the agreement, Brad Greenspan, the founder and former CEO of Intermix Media, will pay \$750,000 in penalties and disgorgement. Assurance of Discontinuance at 3-4, *In re Brad Greenspan* (N.Y. Att'y Gen. Internet Bureau Sept. 28, 2005). Intermix will pay \$7.5 million in penalties and disgorgement and accept a ban on the distribution of adware programs in the future. Intermix's affiliate, Acez Software, agreed to pay \$35,000 in penalties and disgorgement and to adhere to fair notice and disclosure standards. Consent and Stipulation at 3-5, *New York v. Intermix Media, Inc.*, No. 401394-2005 (N.Y. Sup. Ct. Sept. 28, 2005).

92. *Kerrins v. Intermix Media, Inc.*, No. CV05-5408-RGK (pending); Complaint, *Consumer Advocates Rights Enforcement Soc'y, Inc. v. 180solutions, Inc.*, No. CV027141 (pending); Complaint, *Sotelo v. Ebates Shopping.com*, No. 06C-2531 (pending); Class Action Complaint, *Simios v. 180Solutions, Inc.*, No. 05C5235 (having been

spite a lack of published case law, these settlement agreements have created some non-pecuniary penalties and prospective responsibilities for defendants.⁹³ DirectRevenue was required to destroy all personally identifiable information it collected and provide uninstallation support for consumers.⁹⁴ Prospectively, DirectRevenue must provide full disclosure and require users to affirmatively consent before installation.⁹⁵ It may not distribute software at sites targeting children.⁹⁶ Most importantly, the settlement agreement required DirectRevenue to contractually bind its distributors to abide by the policies embodied in the settlement agreement.⁹⁷ DirectRevenue carries the duty to closely police its distributors.⁹⁸

2. *FTC Enforcement Actions*

The FTC has been the most active force against spyware with eight spyware-related enforcement actions in the past two and a half years.⁹⁹ Section 5 of the FTC Act allows the FTC to challenge “unfair or deceptive acts or practices in or affecting commerce.”¹⁰⁰ This relatively broad language allows the FTC to target ever-changing spyware tactics. So far, the FTC has targeted “deceptive and unfair” practices that include (1) depriving consumers of their right of consent and control in software installation, operation, and removal; (2) making misrepresentation and false statements

voluntarily dismissed); Settlement Agreement and Limited Release, *Sotelo v. DirectRevenue, LLC*, No. 1:05-cv-02562. Civil Minutes for Defendant’s Motion to Dismiss, Class Action Complaint, *Michaeli v. eXact Adver., LLC*, No. 05CV8331 (pending).

93. See e.g., Settlement Agreement and Limited Release 3-7, *Sotelo v. DirectRevenue, LLC*, No. 1:05-cv-02562.

94. *Id.* at 4-5.

95. *Id.*

96. *Id.* at 6.

97. *Id.* at 5-6.

98. *Id.*

99. Complaint, *FTC v. Digital Enters., Inc.*, No. CV06-4923CAS (C.D. Cal. Aug. 8, 2006); Complaint, *FTC v. Enternet Media, Inc.* No. CV05-7777 (C.D. Cal. Nov. 10, 2005); Complaint, *FTC v. Odysseus Mktg., Inc.*, No. CV05-00330, 2005 WL 3026853 (D.N.H. Sept. 21, 2005); Complaint, *FTC v. TrustSoft, Inc.*, No. H05-1905, 2005 WL 1555021 (S.D. Tex. May 31, 2005); Complaint, *FTC v. MaxTheater, Inc.*, No. CV-05-69-LRS, 2005 WL 4115954 (E.D. Wash. Mar. 7, 2005); Complaint, *FTC v. Seismic Ent. Prods., Inc.*, No. 04cv00377, 2004 WL 3958666 (D.N.H. Oct. 6, 2004); Complaint, *In re Zango, Inc.*, No. 0523130 (F.T.C. Nov. 3, 2006); Complaint, *In re Advertising.com, Inc.*, No. C-4147, 2005 WL 2329812 (F.T.C. Sept. 12, 2005).

100. 15 U.S.C. § 45 (2005). In order to establish the “deception” element, the FTC must find that the representations, omissions, or practices likely would mislead consumers, acting reasonably, to their detriment. The “unfair” element is established if the spyware is “likely to cause substantial injury to consumers which is not reasonably avoidable by consumers themselves and not outweighed by countervailing benefits to consumers or competition.” See 15 U.S.C. § 45(n).

during installation and operation; (3) providing inadequate disclosure for ad-delivering software; (4) interfering with normal computer functions; and (5) failure to provide reasonable uninstall means.

The FTC filed actions against MaxTheater, Inc., TrustSoft, Inc., Seismic Entertainment Productions, Inc., and Advertising.com, Inc.¹⁰¹ In these cases, defendants utilized affiliate websites, banner ads, pop-up ads, and/or spam to deceptively market fake anti-spyware products.¹⁰² They falsely claimed before and after installation, that computers had been “scanned” and that spyware had been “detected” even though defendants had not performed any scans.¹⁰³

In *In re Advertising.com*, in addition to misrepresentation and false advertising, the action also raised the issue of inadequate notice as a violation of the FTC Act.¹⁰⁴ In this case, the defendant displayed a “security warning” pop-up window and asked the user to install free anti-spyware software called “SpyBlast” which was bundled with other adware products.¹⁰⁵ While the license agreement disclosed that pop-up ads would be delivered based on user’s browsing habits, the license was behind a hyperlink and consumers were not required to see it before installing the software.¹⁰⁶ Thus, the FTC alleged that the defendant did not provide sufficient disclosure to the user that third-party adware would be bundled with the SpyBlast.¹⁰⁷ The FTC stated that this insufficient disclosure violated the FTC Act, and ordered respondents to provide clear and conspicuous disclosure when an advertisement would be downloaded.¹⁰⁸

Interference with normal computer use and control and lack of reasonable means to uninstall software are possibly violations of the FTC Act. In *FTC v. Digital Enterprises Inc.*, an online content provider induced con-

101. See Complaint, *FTC v. MaxTheater, Inc.*, 2005 WL 4115954; Complaint, *FTC v. TrustSoft, Inc.*, 2005 WL 1555021; Complaint, *FTC v. Seismic Entm’t Prods., Inc.*, 2004 WL 3958666; Complaint, *In re Advertising.com, Inc.*, 2005 WL 2329812.

102. See Complaint at 3-6, *FTC v. MaxTheater, Inc.*, 2005 WL 4115954; Complaint at 3-5, *FTC v. TrustSoft, Inc.*, 2005 WL 1555021; Complaint at 2-5, 8-9, *FTC v. Seismic Entm’t Prods., Inc.*, 2004 WL 3958666; Complaint at 2, *In re Advertising.com, Inc.*, 2005 WL 2329812.

103. See Complaint at 6-15, *FTC v. MaxTheater, Inc.*, 2005 WL 4115954; Complaint at 5-13, *FTC v. TrustSoft, Inc.*, 2005 WL 1555021; Complaint at 12-13, *FTC v. Seismic Entm’t Prods., Inc.*, 2004 WL 3958666; Complaint at 2, *In re Advertising.com, Inc.*, 2005 WL 2329812.

104. Complaint 2-3, *In re Advertising.com, Inc.*, 2005 WL 2329812.

105. *Id.* at 2.

106. *Id.*

107. *Id.* at 2-3.

108. See *id.* at 3.

sumers to download its software to view content for a “free trial.”¹⁰⁹ The software then produced incessant pop-ups and hijacked users’ computers, demanding payments.¹¹⁰ The software provided no uninstall methods and only relinquished control when payments were continuously made.¹¹¹ None of the cases have reached a court ruling, and thus, it remains unclear whether this software violates the FTC Act.

In addition to fake anti-spyware vendors, the FTC also targeted various segments of the spyware industry, including adware developers and distributors, individual advertising/distribution affiliates, and intermediate advertising/distribution affiliate networks (AANs and DANs). For example, in *FTC v. Enternet Media, Inc.*, the FTC filed an action against an adware developer/distributor (Enternet Media) and an individual distribution affiliate (Nicholas C. Albert).¹¹² Albert was an individual distribution affiliate of Enternet Media and created a website with “free” music samples and ring tones, each secretly bundled with the adware code from Enternet Media.¹¹³

Other examples of defendant advertising/distribution affiliates include the defendants in *FTC v. Odysseus Marketing, Inc.* and *FTC v. Seismic Entertainment Productions, Inc.*¹¹⁴ Both derived revenues from advertisers for disseminating pop-ups (as advertising affiliates) and from adware developers for installations (as distribution affiliates).¹¹⁵

Although adware developers have been able to evade responsibility for the violations of their affiliates, the FTC in *Enternet Media* alleged that providing the means and instrumentalities for the commission of deceptive and unfair acts and practices constituted a violation of section 5(a) of the

109. Complaint at 7, *FTC v. Digital Enters., Inc.*, No. CV06-4923CAS.

110. *Id.* at 8-15.

111. *Id.* at 17-20. The two relevant counts were “unfairly tak[ing] control of consumers’ computers to extort payments” and “unfairly instal[ling] software onto consumers’ computers that consumers cannot remove.” Both acts were unfair practices in violation of 15 U.S.C § 45(a). *Id.* at 21-22.

112. See Complaint, *FTC v. Enternet Media, Inc.*, No. CV05-7777; see also News Release, Federal Trade Commission, *FTC Shuts Down Spyware Operation: Outfit Used Unsuspecting Bloggers to Spread Its Malicious Code* (Nov. 10, 2005), <http://www.ftc.gov/opa/2005/11/enternet.htm>.

113. Complaint at 4-7, 10, *FTC v. Enternet Media, Inc.*, No. CV05-7777.

114. See Complaint 2-3, *FTC v. Odysseus Mktg., Inc.*, 2005 WL 3026853; Complaint 2-3, *FTC v. Seismic Entm’t Prods., Inc.*, 2004 WL 3958666.

115. See Complaint at 9-10, *FTC v. Odysseus Mktg., Inc.*, 2005 WL 3026853; Complaint 9-10, *FTC v. Seismic Entm’t Prods., Inc.*, 2004 WL 3958666.

FTC Act.¹¹⁶ This indicates that adware developers could be held responsible for providing spyware code to their distribution affiliates.

In re Zango Inc. represents a big step toward piercing the layers of intermediaries and holding the top layer advertising and distribution networks responsible for the illegal acts of their third-party affiliates.¹¹⁷ Defendant Zango (a/k/a 180solutions), is one of the most prominent adware vendors today.¹¹⁸ Its products—180SearchAssistant, Zango, and others—have been consistently named among the top security threats by the anti-spyware industry.¹¹⁹ The defendant installed its software on tens of millions of computers through third-party affiliate networks and numerous sub-affiliates.¹²⁰ In the past, Zango had been able to hide behind these layers of affiliates.¹²¹ However, the FTC alleged that Zango had violated the FTC Act because it (1) “knew or should have known” that its affiliates had retained numerous third-party sub-affiliates to install its adware; (2) “knew or should have known” that there had been widespread failure by its affiliates and sub-affiliates to provide adequate notice and obtain consumer consent; and (3) had committed, through affiliates and sub-affiliates acting on its behalf and for its benefit, various deceptive and unfair software installations and operations.¹²² No specific affiliates were named in the action, and it indicated that adware developers could be held responsible even without direct contact with or specific knowledge of their affiliates or sub-affiliates.¹²³

116. See Complaint at 15, *FTC v. Enternet Media, Inc.*, No. CV05-7777.

117. Complaint, *In re Zango, Inc.*, No. 0523130; Agreement Containing Consent Order, *In re Zango, Inc.*, No. 0523130 (FTC); News Release, Federal Trade Commission, Zango, Inc. Settles FTC Charges: Will Give Up \$3 Million in Ill-Gotten Gains for Unfair and Deceptive Adware Downloads (Nov. 3, 2006), <http://www.ftc.gov/opa/2006/11/zango.htm>;

118. Complaint at 1-2, *In re Zango, Inc.*, No. 0523130.

119. See, e.g., Webroot Report 2005, *supra* note 3, at 34.

120. Complaint at 2, *In re Zango, Inc.*, No. 0523130.

121. Letter from Keith Smith, CEO and founder of 180solutions, Inc., to Jerry Berman, the Center for Democracy and Technology (July 8, 2004), available at <http://www.cdt.org/privacy/spyware/20040708180solutions.pdf> (“In this instance, it appears that Aztec Marketing, through their Web site Ilookup.com, exploited a security hole in Microsoft’s Internet Explorer to install our software along with others without our knowledge and consent and most importantly, without users’ knowledge and consent.”).

122. See Complaint at 2-5, *In re Zango, Inc.*, No. 0523130.

123. See *id.* at 1.

All of the FTC actions have resulted in settlements.¹²⁴ Typically, defendants were ordered to disgorge profits ranging from tens of thousands of dollars to several million dollars and were barred from their respective deceptive practices.¹²⁵ Zango's settlement is particularly noteworthy because it not only involved a \$3 million payment but also imposed some strict guidelines on its future practices.¹²⁶ First, Zango had to cease communication with users who downloaded the Zango/180solutions software before January 1, 2006.¹²⁷ Nor could it install software on users' computers without first obtaining "express consent" after clear and complete disclosures that are separate from the end-user license agreement (EULA).¹²⁸ Most importantly, the settlement makes clear that Zango is responsible for the actions of affiliates acting on its behalf.¹²⁹ This settlement sends a message that: (1) companies cannot retain customer bases built on patterns of unfair practices, (2) distributors of unwanted software cannot bury their disclosures in EULAs in hopes that users will simply click through without reading them, and (3) companies can no longer hide behind their affiliates.¹³⁰

III. CONCLUSION

Regulating spyware is a challenge in many respects. This Note has provided a brief overview of the difficulties in defining spyware in the

124. See Center for Democracy and Technology, Federal Trade Commission Spyware Case Summary, <http://www.cdt.org/privacy/spyware/20060626spyware-enforcement-ftc.php> (last visited Mar. 19, 2007).

125. *E.g.*, Stipulated Final Order for Permanent Injunction and Settlement of Claims for Monetary Relief at 17-18, *FTC v. Odysseus Mktg., Inc.*, No. 05CV330-SM, (D.N.H. Oct. 24, 2006) (ordering Odysseus Marketing, Inc. to pay \$1.75 million and refrain from distributing software that exploits a security vulnerability or installs without user consent); Stipulated Order for Permanent Injunction and Monetary Judgment at 4-12, *FTC v. TrustSoft, Inc.*, No. H05-1905 (S.D. Tex. Jan. 5, 2006) (ordering TrustSoft to pay \$1.9 million and refrain from making deceptive claims in the sale, marketing, advertising, or promotion of any goods or services); Stipulated Final Order for Permanent Injunction and Other Equitable Relief at 6-9, *FTC v. MaxTheater, Inc.*, No. 05-CV-0069-LRS (E.D. Wash. Dec. 6, 2005) (ordering MaxTheater, Inc. to pay \$76,000 and refrain from installing spyware on consumers' computers or making marketing misrepresentations).

126. Agreement Containing Consent Order at 4-8, *In re Zango, Inc.*, No. 0523130 (FTC) (pending Commission's final approval), available at <http://www.ftc.gov/os/caselist/0523130/0523130agree061103.pdf> (last visited Feb. 28, 2007).

127. *Id.* at 4.

128. *Id.* at 5, 7.

129. *Id.* at 5-7.

130. *Id.* at 4-7; see also, Press Release, Center for Democracy & Technology, CDT Praises FTC Adware Settlement, Urges Continued Enforcement (Nov. 20, 2006), <http://www.cdt.org/press/20061120press-zango.php>.

face of evolving technology and the complexity of the web advertising industry. However, spyware legislation as well as the existing consumer protection and unfair competition statutes have seemingly addressed the most widespread and egregious spyware problems. State, private, and FTC actions have targeted various segments of the spyware industry and some have been able to extract settlements that require future accountability and reform. Admittedly, enforcing the settlements is a whole other battle, and the online advertising industry needs to find its way to balance the benefits and burdens it creates for society. This Note concludes that the encouraging results achieved since 2005 suggest that the multiple legal mechanisms working simultaneously are effectively controlling the spyware problem.

BERKELEY TECHNOLOGY LAW JOURNAL

PRESUMED ASSENT: THE JUDICIAL ACCEPTANCE OF CLICKWRAP

By Nathan J. Davis

Electronic standard form contracting has become increasingly common as computers and the internet have taken on an important role in commerce and in the distribution of products and services.¹ Despite the prevalence of these types of agreements, they have been the subject of controversy because of the conventional wisdom that people typically do not take the time to read standard form contracts.² Rather than attempting to enter the debate over how theoretically unreasonable these contracts can be, this Note accepts that clickwrap agreements can provide significant benefits and suggests that a review of the cases in which clickwrap terms have been litigated demonstrates that contractors are not vigorously exploiting their ability to extract assent in a way that requires a drastic judicial response. This Note submits that although the current analytical framework for adjudicating clickwrap agreements does not include a particularly rigorous assent analysis, it has been adequate for addressing the types of agreements that have been litigated thus far.

This Note will focus exclusively on clickwrap,³ rather than shrinkwrap⁴ or browsewrap agreements.⁵ Clickwrap agreements are gen-

© 2007 Nathan J. Davis

1. See, e.g., Robert A. Hillman & Jeffrey J. Rachlinski, *Standard-Form Contracting in the Electronic Age*, 77 N.Y.U. L. REV. 429 (2002).

2. See Juliet M. Moringiello, *Signals, Assent and Internet Contracting*, 57 RUTGERS L. REV. 1307 n.30 (2005) (noting that despite a lack of empirical research, many commentators state that many people do not read standard forms); Lydia Pallas Loren, *Slaying the Leather-Winged Demons in the Night: Reforming Copyright Owner Contracting with Clickwrap Misuse*, 30 OHIO N.U. L. REV. 495, 503 (2004) (“It is common knowledge that the vast majority of individuals do not, in fact, read the shrinkwrap and clickwrap agreements employed by content owners.”).

3. A clickwrap agreement has been defined as:

[An] agreement [that] appears when a user first installs computer software obtained from an online source or attempts to conduct an Internet transaction involving the agreement, and purports to condition further access to the software or transaction on the user’s consent to certain conditions there specified; the user “consents” to these conditions by “clicking” on a dialog box on the screen, which then proceeds with the remainder of the software installation or Internet transaction.

Kevin W. Grierson, *Enforceability of “Clickwrap” or “Shrinkwrap” Agreements Common in Computer Software, Hardware, and Internet Transactions*, 106 A.L.R.5TH 309, 317 n.1 (2003).

erally thought to be a form of adhesion contract.⁶ Despite the inherent dangers,⁷ such contracts have been recognized as a necessary and beneficial part of a functioning economy.⁸ Although clickwrap agreements are often long, complex, and include many terms, most litigation is over one of six basic types of terms: forum selection clauses, choice of law provisions, agreements to arbitrate, software terms of use, service terms of use, or limitations of liability.

These types of terms in particular have been recognized by commentators as providing important economic advantages. Forum selection clauses are “an indispensable element in international commerce, and contracting”⁹ and are necessary to provide certainty as to where future disputes will be litigated.¹⁰ Arbitration provisions offer licensors a quick, inexpen-

4. See Grierson, *supra* note 3, at 317 n.2 (“A ‘shrinkwrap’ agreement consists of written conditions on a card or paper sheet which appears when the user opens packaged hardware or software, which card or sheet purports to condition use of the hardware or software on the user’s implicit agreement to abide by the conditions specified thereon.”).

5. See Christina L. Kunz et al., *Browse-Wrap Agreements: Validity of Implied Assent in Electronic Form Agreements*, 59 BUS. LAW. 279, 280 (2003) (defining browse-wrap as “terms and conditions, posted on a Web site or accessible on the screen to the user of a CD-ROM, that do not require the user to expressly manifest assent, such as by clicking ‘yes’ or ‘I agree.’”).

6. See 1 E. ALLAN FARNSWORTH, FARNSWORTH ON CONTRACTS § 4.26 (2d ed. 2001) (defining a contract of adhesion as one that is offered on “a take-it-or-leave-it proposition, . . . under which the only alternative to complete adherence is outright rejection.”); see also Robert W. Gomulkiewicz & Mary L. Williamson, *A Brief Defense of Mass Market Software License Agreements*, 22 RUTGERS COMPUTER & TECH. L.J. 335, 343 (1996) (“EULAs are most likely ‘contracts of adhesion’”).

7. 1 FARNSWORTH, *supra* note 6, § 4.26 (noting that an adhesion contract “affords a means by which one party may impose terms on another unwitting or even unwilling party.”).

8. 1 ARTHUR L. CORBIN, CORBIN ON CONTRACTS § 1.4 (Joseph M. Perillo ed., rev. ed. 2006); see also RESTATEMENT (SECOND) OF CONTRACTS § 211 cmt. a (1981) (noting that standardized adhesion contracts reduce transactional and operation costs “to the advantage of all concerned.”); W. David Slawson, *Standard Form Contracts and Democratic Control of Lawmaking Power*, 84 HARV. L. REV. 529, 529 (1971) (suggesting that standard form contracts account for more than ninety-nine percent of all contracts made).

9. *M/S Bremen v. Zapata Off-Shore Co.*, 407 U.S. 1, 13-14 (1972).

10. See, e.g., *Forrest v. Verizon Commc’ns, Inc.*, 805 A.2d 1007, 1015 (D.C. Cir. 2002) (“[F]orum selection clauses enhance contractual and economic predictability, while conserving judicial resources and benefiting commercial entities as well as consumers.”); *Am. Online v. Superior Court*, 90 Cal. App. 4th 1, 12 (2001) (“[T]here are strong economic arguments in support of [forum selection] agreements, favoring both merchants and consumers, including reduction in the costs of goods and services and the stimulation of e-commerce.”); see also Kaustuv M. Das, Comment, *Forum-Selection Clauses in Consumer Clickwrap and Browsewrap Agreements and the “Reasonably Communicated”*

sive, and flexible alternative to litigation.¹¹ Software license agreements allow producers to keep prices low by reducing transaction costs¹² and give licensors flexibility to provide inexpensive, but limited rights to some users while charging other users more for rights that come at a higher cost to the developer.¹³ Eliminating these benefits could have a significant negative effect on commerce.¹⁴

Although clickwrap agreements provide these benefits, they have also raised concerns about the potential for sneaking onerous terms into agreements.¹⁵ Some of the most controversial terms include those forbidding public criticism of the product, requiring consent to third-party monitoring, prohibiting reverse engineering, prohibiting use in connection with third-party software, requiring consent to future revisions of the agreement (which is subject to change without notice), disclaiming warranties, and disclaiming liabilities.¹⁶

Despite these concerns, the courts have unanimously found that clicking is a valid way to manifest assent since the first clickwrap agreement was litigated in 1998.¹⁷ Essentially, courts have settled on a mechanical approach to determining whether assent was given by simply testing whether the click can be proved. Over time, courts have made it clear that absent fraud or deception, the user's failure to read, carefully consider, or otherwise recognize the binding effect of clicking "I Agree" will not preclude the court from finding assent to the terms.

However, the courts have shown a willingness to consider other doctrines that can mitigate the harshness of unfair terms and compensate, at least to some degree, for the fact that many users may not truly wish to agree. These doctrines include unconscionability, violations of public pol-

Test, 77 WASH. L. REV. 481, 504-06 (summarizing policy reasons for enforcing forum selection clauses).

11. 2 MICHAEL SCOTT, SCOTT ON COMPUTER LAW § 7.47 (2002). The "emphatic federal policy in favor of arbitral dispute resolution" led to codification in the Federal Arbitration Act, 9 U.S.C. §§ 1-16 (2000). *Quackenbush v. Allstate Ins. Co.*, 517 U.S. 706, 729 (1996).

12. Gomulkiewicz & Williamson, *supra* note 6, at 342.

13. *Id.* at 356-57 (noting that most users do not wish to pay the higher cost associated with the right to reverse engineer the software).

14. See Robert W. Gomulkiewicz, *The License is the Product: Comments on the Promise of Article 2B for Software and Information Licensing*, 13 BERKELEY TECH. L.J. 891, 896-97 (1998).

15. Annalee Newitz, *Dangerous Terms: A User's Guide to EULAs*, <http://www.eff.org/wp/eula.php> (last visited Oct. 23, 2006).

16. *Id.*

17. *Hotmail Corp. v. Van\$ Money Pie, Inc.*, No. C-98 JW PVT ENE, C 98-20064 JW, 1998 WL 388389 (N.D. Cal. Apr. 16, 1998).

icy, analyses of the fairness of forum selection clauses, and federal copyright preemption. These doctrines have provided a workable framework for determining the enforceability of clickwrap agreements because they address the major concerns inherent in the varieties of terms that have ended up in court. This Note argues that these alternative doctrines, rather than a more rigorous assent analysis, provide an acceptable way of adjudicating the enforceability of these terms while allowing the realization of the recognized benefits of standard form contracting in the electronic environment.

I. EARLY HISTORY

Clickwrap licensing first received judicial recognition in *ProCD, Inc. v. Zeidenberg*¹⁸ in 1996, although the term “clickwrap” was not used until later. This case is famous for its holding that pay-first, terms-later shrinkwrap licensing of software is a valid form of contracting.¹⁹ The license agreement at issue was printed in the user manual, encoded on the CD-ROM disk, and displayed each time the program was started.²⁰ Although this case is most commonly cited for its application to shrinkwrap licensing, the court noted in its acceptance analysis that Zeidenberg “had no choice [but to accept the license], because the software splashed the license on the screen and would not let him proceed without indicating acceptance.”²¹ Outside of this one sentence, this decision did not address clickwrap licensing because the court found that Zeidenberg accepted the terms when he *used* the software, not when he merely clicked to indicate his acceptance in order to navigate past the license screen.²² After this decision, there was a two-year lull before clickwrap resurfaced in a judicial opinion.

The first case to clearly suggest that clickwrap agreements, standing alone, are enforceable was a preliminary injunction ruling in *Hotmail Corp. v. Van\$ Money Pie*²³ in April 1998. In *Hotmail*, the court granted Hotmail’s motion for a preliminary injunction based on its likelihood of success on a variety of claims, including, importantly, breach of contract based on a clickwrap license agreement.²⁴

18. *ProCD, Inc. v. Zeidenberg*, 86 F.3d 1447 (7th Cir. 1996).

19. *Id.* at 1452; *see also* U.C.C. § 2-204(1) (2003).

20. *ProCD*, 86 F.3d at 1450.

21. *Id.* at 1452.

22. *Id.*

23. *Hotmail Corp. v. Van\$ Money Pie, Inc.*, No. C-98 JW PVT ENE, C 98-20064 JW, 1998 WL 388389 (N.D. Cal. Apr. 16, 1998).

24. *Id.* at *6.

The defendant, Van\$ Money Pie, was in the business of sending thousands of "spam e-mail messages" advertising products such as pornographic materials and cable descrambling kits.²⁵ In the course of its business, the defendant created multiple Hotmail accounts for receiving responses and "bounced back" messages.²⁶ Before opening these accounts, the defendant was required to agree to the clickwrap Terms of Service provided by Hotmail, which included a clause that forbade users from sending unsolicited bulk e-mail and obscene or pornographic materials.²⁷ Based on this fairly sympathetic set of facts, the court held that the evidence supported a finding that Hotmail would likely prevail on the breach of contract claim without further discussion of the issues of assent or the enforceability of such online agreements.²⁸

Within two months of the *Hotmail* decision, the Rhode Island Superior Court addressed a similar issue and reached the same conclusion in *Groff v. America Online, Inc.*²⁹ This time, the court provided a more detailed discussion of its rationale for enforcing the clickwrap agreement, but, as in *Hotmail*, it did not address the peculiarities of online contracting.

At issue in *Groff* was a forum selection clause that selected Virginia law and Virginia courts as the appropriate law and forum for litigation between members and AOL.³⁰ During the installation of AOL's software and the process of subscribing to AOL's online service, the user was presented with the Terms of Service and prompted to select either "I Agree" or "I Disagree."³¹ The user was unable to proceed unless and until he clicked "I Agree."³²

Similar to *Hotmail*, the court did not address the unique nature of online contracting as part of its analysis. Instead, it considered the enforceability of the forum selection clause under the guidance of traditional contract cases that involved such clauses.³³ In examining the circumstances surrounding the contracting, the court noted that the plaintiff, a 30-year member of the Rhode Island bar, should have known that he was accept-

25. *Id.* at *2-3.

26. *Id.* at *2.

27. *Id.*

28. *Id.* at *6.

29. *Groff v. Am. Online, Inc.*, No. PC 97-0331, 1998 WL 307001 (R.I. Super. Ct. May 27, 1998).

30. *Id.* at *2.

31. *Id.* at *1.

32. *Id.*

33. *Id.* at *3-4 (analyzing the forum selection clause under *M/S Bremen v. Zapata Off-Shore Co.*, 407 U.S. 1 (1972) and *D'Antuono v. CCH Computax Sys., Inc.*, 570 F. Supp. 708 (D.R.I. 1983)).

ing a binding contract and failed to give any reason for his alleged failure to see, read, or agree to the terms.³⁴ The court held that the plaintiff had the option not to accept the terms, but instead “effectively ‘signed’ the agreement by clicking ‘I Agree’ not once but twice” and therefore could not complain that he failed to take note of the terms.³⁵

Thus, clickwrap was squarely addressed in two cases in 1998 and was immediately found to be enforceable without much discussion, perhaps in part because both cases featured relatively unsympathetic parties—the internet pornography spammer and the veteran lawyer who did not read contracts. In both of these cases, the courts used traditional contract doctrines to determine issues of enforceability without expressing much interest in the peculiarities of clickwrap. Since these two cases were decided, courts have used largely the same analytical process and have enforced the vast majority of clickwrap cases that have come before them.³⁶ Essentially, the courts determine whether the requisite click occurred, and, if so, presume that the user assented to the terms of the agreement.

There have only been a few occasions when courts have refused to enforce the terms of clickwrap agreements. These cases never turned on the issue of whether a click was sufficient to manifest assent. Instead, these courts either refused to enforce the agreements because there was insufficient evidence of clicking, or voided the terms based on traditional contract doctrines.

II. THE ANALYTICAL PROCESS FOR EVALUATING ASSENT TO CLICKWRAP

In most clickwrap cases, the courts have taken a fairly straightforward approach to analyzing the enforceability of the disputed terms. The court

34. *Id.* at *5.

35. *Id.*

36. *See, e.g.*, *Forrest v. Verizon Commc'n, Inc.*, 805 A.2d 1007 (D.C. Cir. 2002); *Siebert v. Amateur Athletic Union of the U.S., Inc.*, 422 F. Supp. 2d 1033 (D. Minn. 2006); *Salco Distribs., L.L.C. v. Icode, Inc.*, No. 8:05 CV 642 T 27TGW, 2006 WL 449156 (M.D. Fla. Feb. 22, 2006); *Hugger-Mugger, L.L.C. v. NetSuite, Inc.*, No. 2:04-CV-592TC, 2005 WL 2206128 (D. Utah Sept. 12, 2005); *Motise v. Am. Online, Inc.*, 346 F. Supp. 2d 563 (S.D.N.Y. 2004); *Koresko v. RealNetworks, Inc.*, 291 F. Supp. 2d 1157 (E.D. Cal. 2003); *DeJohn v. The .TV Corp. Int'l*, 245 F. Supp. 2d 913 (N.D. Ill. 2003); *Hughes v. McMenamon*, 204 F. Supp. 2d 178 (D. Mass. 2002); *ILan Sys., Inc. v. NetScout Serv. Level Corp.*, 183 F. Supp. 2d 328 (D. Mass. 2002); *Am. Online, Inc. v. Booker*, 781 So. 2d 423 (Fla. Dist. Ct. App. 2001); *Hopkins v. Trans Union, L.L.C.*, No. 03-5433 ADM/RLE, 2004 WL 1854191 (D. Minn. Aug. 19, 2004); *Caspi v. Microsoft Network*, 732 A.2d 528 (N.J. Super. Ct. 1999); *Barnett v. Network Solutions, Inc.*, 38 S.W.3d 200 (Tex. App. 2001).

will generally begin by determining whether the user assented to the terms. Although there is some controversy about whether simply clicking "I Agree" should be sufficient to show assent,³⁷ courts have almost uniformly found assent when the user clicks while having notice of the terms. Next, the court will dispose of any objections based on the failure to read, appreciate, or understand the contract. Finally, the court will give more careful consideration to arguments that the term is unconscionable or a violation of public policy, or, in the case of forum selection clauses, that the term is unfair or unreasonable. These arguments will be addressed further in Part IV.

The courts have essentially reduced the assent analysis to a test of whether there is evidence that the user clicked the acceptance icon or proceeded in a manner that would have been impossible but for clicking on the acceptance icon. If the party asserting the term can prove either of these alternatives, the courts will generally find assent without much further discussion.

For example, in one recent case, *XPEL Technologies Corp. v. Maryland Performance Works Ltd.*,³⁸ the court enforced a forum selection clause that was agreed to as part of a clickwrap End User License Agreement (EULA) based on evidence of actual clicking.³⁹ The plaintiff operated a website that sold design kits for manufacturing protective coating for automobile paint, headlights, and windows.⁴⁰ In order to access the section of the website that sold the kits, each user was required to agree to the EULA, which provided that all disputes would be arbitrated or litigated in Bexar County, Texas.⁴¹ The defendant stated that he was "unaware of ever 'clicking on' the EULA,"⁴² but the court found assent by relying on the plaintiff's evidence that the defendant had in fact accepted the agreement on twenty-nine separate occasions.⁴³

Similarly, the court in *Eslworldwide.com, Inc. v. Interland, Inc.*⁴⁴ held that the forum selection clause in the clickwrap Terms of Service Agreement for a website was valid and enforceable based on evidence of actual

37. See, e.g., Moringiello, *supra* note 2, at 1330-33 (questioning whether clicking is comparable to more traditional ways of showing assent).

38. *XPEL Techs. Corp. v. Md. Performance Works Ltd.*, No. SA-05-CA-0593-XR, 2006 WL 1851703 (W.D. Tex. May 19, 2006).

39. *Id.* at *7-8.

40. *Id.* at *1.

41. *Id.*

42. *Id.* at *7.

43. *Id.* at *2.

44. *Eslworldwide.com, Inc. v. Interland, Inc.*, No. 06 CV 2503 (LBS), 2006 WL 1716881 (S.D.N.Y. June 21, 2006).

clicking despite the plaintiff's inability to remember clicking "Accept."⁴⁵ Eslworldwide.com sued the provider of its web-hosting services, Interland, for damages resulting from the loss of access to its database for seven months.⁴⁶ A few days before the database loss, Interland instructed Shim, the president of Eslworldwide.com to go to Interland's website, log in, and enter a valid credit card number to pay late fees.⁴⁷ Before he was able to access the webpage to input the credit card information, he was required to "Accept" or "Decline" new Terms of Service by clicking on one of the two buttons.⁴⁸ Eslworldwide.com argued that the forum selection clause was invalid because Shim did not remember clicking "Accept."⁴⁹ However, the court held that this argument was insufficient to overcome the general presumption that forum selection clauses are valid and enforceable because Interland's records showed that Shim did indeed click "Accept."⁵⁰ In some circumstances, the licensor will not have access to specific evidence showing that the user actually clicked "I Accept." In these cases, the courts have accepted evidence that the user's actions would not have been possible without the requisite click.⁵¹

In *Recursion Software, Inc. v. Interactive Intelligence, Inc.*,⁵² Recursion Software sued Interactive Intelligence, another software company, for breach of a software license.⁵³ The record showed that Interactive incorporated the licensed software into its own software in violation of the terms of the click-wrap license agreement,⁵⁴ but Interactive argued that there was no evidence that it ever assented to those terms.⁵⁵ However, one of

45. *Id.* at *2-3.

46. *Id.* at *1.

47. *Id.*

48. *Id.*

49. *Id.* at *2.

50. *Id.* at *4.

51. *See, e.g., Eslworldwide.com, Inc. v. Interland, Inc.*, No. 06 CV 2503 (LBS), 2006 WL 1716881, at *2 (S.D.N.Y. June 21, 2006) (noting that the plaintiff could not have accessed the website without clicking to show assent); *Salco Distributions, LLC v. Icode, Inc.*, No. 8:05 CV 642 T 27TGW, 2006 WL 449156 at *1 (M.D. Fla. Feb. 22, 2006) (noting that plaintiff was required to click "I accept" before proceeding with installation and registration of software); *Caspi v. Microsoft Network*, 732 A.2d 528, 530 (N.J. Super. Ct. 1999) (noting that plaintiff could not subscribe to MSN without clicking "I Agree"); *Groff v. Am. Online, Inc.*, No. PC 97-0331, 1998 WL 307001, at *1 (R.I. Super. Ct. May 27, 1998) (noting that user could not become a member of AOL without clicking "I Agree").

52. *Recursion Software, Inc. v. Interactive Intelligence, Inc.*, 425 F. Supp. 2d 756 (N.D. Tex. 2006), *reh'g denied*, Mar. 13, 2006.

53. *Id.* at 761-62.

54. *Id.* at 783.

55. *Id.* at 783.

Interactive's software developers testified that he had personally downloaded the licensed software and saved it to his computer.⁵⁶ In order to download the software, the user must visit the company's website and provide certain information to get to the download page, which included the terms of the license agreement.⁵⁷ The software could not be downloaded unless the user responded affirmatively when prompted to click a "Yes" or "No" button to indicate acceptance to the terms.⁵⁸ Accordingly, the court held that because it was impossible to download and install the software without accepting the clickwrap license, the evidence was "sufficient to support the conclusion that Interactive could not have incorporated [the licensed software] in [its] software without clicking 'Yes' to the terms of the license agreement."⁵⁹

Courts have only refused to enforce clickwrap agreements for lack of assent when the party seeking to enforce the term was unable to present evidence that the user either actually clicked or must have clicked on the acceptance icon. This situation has presented itself in three scenarios: (1) the user was not clearly required to affirmatively indicate assent before completing the transaction; (2) the user was never required to assent before the alleged violation; and (3) the user's claim arose before the user had the opportunity to assent.

The first scenario arose in *Specht v. Netscape Communications Corp.*⁶⁰ The plaintiffs sued Netscape alleging that Netscape's SmartDownload software violated the Electronic Communications Privacy Act and the Computer Fraud and Abuse Act. In response, Netscape moved to compel arbitration based on an arbitration clause in the EULA.⁶¹ The plaintiffs downloaded the software from Netscape's website by clicking a button labeled "Download."⁶² The webpage only had one reference to the EULA, a message inviting the user to review the license agreement, which only became visible if the user scrolled to the bottom of the page.⁶³ The court found that this process "allows a user to download and use the software without taking any action that plainly manifests assent to the terms of the associated license or indicates an understanding that a contract is being

56. *Id.*

57. *Id.*

58. *Id.*

59. *Id.*

60. *Specht v. Netscape Commc'ns Corp.*, 150 F. Supp. 2d 585 (S.D.N.Y. 2001), *aff'd*, 306 F.3d 17 (2d Cir. 2002).

61. *Id.* at 587.

62. *Id.* at 588.

63. *Id.*

formed.”⁶⁴ The court justified this holding by reasoning that the “Download” button, as contrasted with a button labeled “I assent,” did not put the user on notice or indicate that he was entering into a binding contract.⁶⁵ Therefore, no contract was formed because Netscape “fail[ed] to require users of [the software] to indicate assent to its license as a precondition to downloading and using its software.”⁶⁶ On appeal, the Second Circuit agreed that clicking the “Download” button did not communicate assent because the website did not make it clear that such an action would be interpreted as signifying assent.⁶⁷

The second scenario was adjudicated in *SoftMan Products Co. v. Adobe Systems Inc.*⁶⁸ Adobe accused SoftMan of violating the terms of its license agreement by breaking apart collections of Adobe software and copying and distributing the individual parts in an unauthorized manner.⁶⁹ Adobe distributed its software according to licenses that were electronically stored and presented to the user for acceptance during the installation process.⁷⁰ However, SoftMan never attempted to load any of the software onto its computer, and therefore never encountered the license agreement or had the opportunity to assent to its terms before the alleged copying and distribution.⁷¹ Although the product boxes contained a notice that the software was subject to a license agreement, the court held that simply reading the notice on the box did not provide assent.⁷² Rather, the user must accept the license agreement explicitly during installation before he will be bound by the terms.⁷³

64. *Id.* at 595.

65. *Id.* at 595-96.

66. *Id.* at 595.

67. *Specht v. Netscape Commc'ns Corp.*, 306 F.3d 17, 29 (2d Cir. 2002); *see also Williams v. Am. Online, Inc.*, No. 00-0962, 2001 Mass. Super. LEXIS 11 (Super. Ct. Mass. Feb. 8, 2001) (holding that plaintiffs did not have notice of a forum selection clause in the Terms of Service for a new version of AOL software, despite having previously agreed to a similar term for an older version of software, because the alleged harm occurred before the terms were presented and the plaintiffs cancelled installation without accepting the terms).

68. *SoftMan Prods. Co. v. Adobe Sys. Inc.*, 171 F. Supp. 2d 1075 (C.D. Cal. 2001); *see also Aral v. Earthlink, Inc.*, 134 Cal. App. 4th 544, 550 (2005) (questioning whether the user assented to clickwrap terms during installation based on the user's uncontested declaration that he used “alternate means known to him as a software engineer” to install the software without clicking to indicate acceptance).

69. *SoftMan*, 171 F. Supp. 2d at 1080.

70. *Id.*

71. *Id.* at 1087-88.

72. *Id.* at 1087.

73. *Id.*

The third and final situation is similar to the second scenario discussed above, but differs in that in all likelihood the terms would have been agreed to but for the claim arising before the opportunity to assent to the contract. This circumstance arose in *Martin v. Snapple Beverage Corp.*⁷⁴ when the defendant tried to enforce an arbitration provision that was part of the rules for an online promotional program.⁷⁵ The promotion encouraged consumers to save Snapple bottle caps and redeem them for merchandise via Snapple's website, and gave rise to the plaintiff's lawsuit when stock of merchandise ran out, leaving essentially no products available for purchase.⁷⁶ Users who attempted to purchase merchandise with their bottle caps were required to click an "I agree" button during the process of placing their order.⁷⁷ However, a user could visit the website, browse the merchandise, and collect bottle caps without ever clicking on the "I agree" button and, in fact, Snapple did not present any evidence that any of the plaintiffs actually did so click.⁷⁸ The court held that although Snapple's website had an "I agree" button and the plaintiffs may have viewed that page, there was insufficient evidence to find assent to the arbitration clause in the absence of proof that the plaintiffs actually clicked the "I agree" button.⁷⁹

These few cases are the only occasions on which courts have refused to enforce clickwrap agreements based on a lack of assent to the terms. Essentially, it has been settled that clicking a button labeled "I Accept" or "I Agree" provides adequate assent and creates a binding agreement. Therefore, courts must only conduct a mechanical analysis of whether the evidence proves that such a click actually occurred prior to the action that allegedly violated the agreement. Although contractees sometimes continue to argue that they should be released from the contract because the terms were too lengthy and cryptic,⁸⁰ they did not read the agreement,⁸¹

74. *Martin v. Snapple Beverage Corp.*, No. B174847, 2005 WL 1580398 (Cal. Ct. App. July 27, 2005).

75. *Id.* at *1.

76. *Id.*

77. *Id.*

78. *Id.* at *5.

79. *Id.*; see also *Williams v. Am. Online, Inc.*, No. 00-0962, 2001 Mass. Super. LEXIS 11 (Super. Ct. Mass. Feb. 8, 2001). In *Williams*, the court focused on the lack of notice in declining to find assent. It seems that it would have been equally valid to find a lack of assent based simply on the plaintiffs' failure to click to show agreement.

80. See, e.g., *Bar-Ayal v. Time Warner Cable, Inc.*, No. 03 CV 9905 (KMW), 2006 WL 2990032, at *11 (S.D.N.Y. Oct. 16, 2006) ("[T]hat an individual must go through multiple computer screens to read an agreement does not in and of itself mean that he should not be bound by his consent to the agreement as manifested by his clicking of the

did not remember clicking “I accept,”⁸² or did not realize that they were agreeing to anything,⁸³ the courts are quick to discard these arguments as irrelevant. However, there are other doctrines, such as unconscionability, public policy, analyses of the reasonableness of forum selection clauses, and copyright preemption, which can be used to hedge against the possible unfairness resulting from rubber-stamping the finding of assent. Part III provides an overview of the types of cases in which clickwrap agreements

‘accept’ button.”); *Scarcella v. Am. Online, Inc.*, 798 N.Y.S.2d 348, 2004 WL 2093429, at *2 (N.Y. City Civ. Ct. Sept. 8, 2004).

The Court does not doubt that the long series of screens with which Claimant was presented did, in fact, induce the trance of lethargy and inattentiveness that he describes, and would have the same effect on many others. A contract of equivalent length printed on paper, however, could be expected to induce the same result. Nonetheless, a signatory to [a] contract . . . is presumed to know the contents of the instrument she signed and to have assented to such terms.

Id. (internal quotations omitted).

81. *See, e.g., Siebert v. Amateur Athletic Union of the U.S., Inc.*, 422 F. Supp. 2d 1033, 1039 (D. Minn. 2006) (“The court finds [the plaintiff’s assent to the arbitration provision] was valid, whether or not he had actually read the arbitration and forum selection clauses. Absent fraud or misrepresentation, a person who signs a contract may not avoid it on the ground that he did not read it or thought its terms to be different.” (internal quotations omitted)); *DeJohn v. The .TV Corp. Int’l*, 245 F. Supp. 2d 913, 919 (N.D. Ill. 2003) (“The fact that DeJohn claims that he did not read the contract is irrelevant because absent fraud, . . . failure to read a contract is not a get out of jail free card.”); *Barnett v. Network Solutions, Inc.*, 38 S.W.3d 200, 204 (Tex. App. 2001) (“It was Barnett’s responsibility to read the electronically-presented contract, and he cannot complain if he did not do so.”). There is one exception to this rule, at least in California: failure to read the terms does qualify as an excuse if the writing does not appear to be a contract and the terms are not called to the attention of the recipient. *See Specht v. Netscape Commc’ns Corp.*, 306 F.3d 17, 30 (2d Cir. 2002).

82. *See, e.g., Eslworldwide.com, Inc. v. Interland, Inc.*, No. 06 CV 2503(LBS), 2006 WL 1716881, at *4 (S.D.N.Y. June 21, 2006) (holding that plaintiff failed to overcome presumption of enforceability of forum selection because although he “may not remember clicking the icon, . . . Defendant’s records reveal that he did, in fact, so click.”); *Hugger-Mugger, LLC v. NetSuite, Inc.*, No. 2:04-CV-592TC, 2005 WL 2206128, at *6 (D. Utah Sept. 12, 2005) (“[The plaintiff] testified at the hearing and denied that he clicked on the button. [His] memory of events, although he was a credible witness, simply does not stand up to reliable computer documentation of transactions.”).

83. *See, e.g., I-Systems, Inc. v. Softwares, Inc.*, No. Civ. 02-1951 JRFLN, 2004 WL 742082, at *6-7 (D. Minn. Mar. 29, 2004) (holding that a jury could find that the defendant accepted the clickwrap license despite the defendant’s contention that it was “not aware of and never accepted” the license); *Groff v. Am. Online, Inc.*, No. PC 97-0331, 1998 WL 307001, at *2 (R.I. Super. Ct. May 27, 1998) (rejecting plaintiff’s argument that he never “knowingly agreed to be bound by the choice of law” provision in a clickwrap agreement he accepted by clicking).

are litigated, and Part IV examines how these alternative doctrines can mitigate some concerns about the lack of a rigorous assent analysis.

III. OVERVIEW OF CASES IN WHICH CLICKWRAP AGREEMENTS HAVE BEEN LITIGATED

Currently, there have been approximately fifty-eight cases in which clickwrap agreements have been litigated. An examination of these cases shows that each of the disputed terms can be categorized into one of six categories: forum selection, choice of law, arbitration, breach of software license, breach of service contract, or limitation of liability. Because multiple terms are at issue in some cases, it is most informative to count the number of times each type of provision has been litigated.

The results of this analysis are shown in Figure 1. The most obvious observation is that nearly eighty percent of the litigated terms involve procedural aspects of the lawsuit, namely forum selection clauses, choice of law provisions, and agreements to arbitrate.

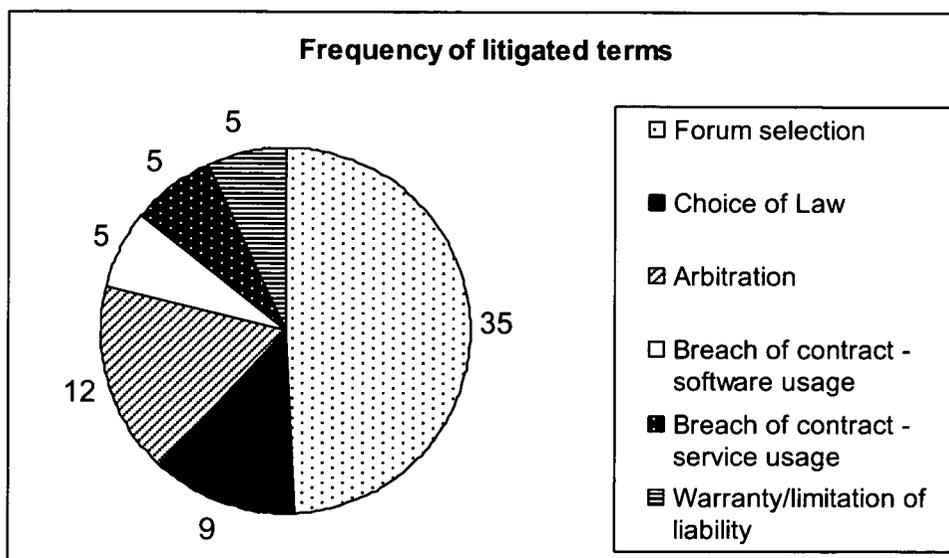


Figure 1⁸⁴

A second observation is that very few of the most onerous types of terms⁸⁵ have resulted in litigation. There has been no litigation pertaining to provisions prohibiting public criticism, requiring acquiescence to moni-

84. Data on file with author.

85. See Newitz, *supra* note 15 and accompanying text.

toring, or prohibiting use with competitors' products. Although there has been litigation over provisions forbidding reverse engineering, that type of provision accounts for only two of the seventy-one disputed clickwrap terms.⁸⁶ Finally, limitation of liability provisions account for only five cases, two of which were between business entities,⁸⁷ leaving only three cases where consumers were disputing the term.⁸⁸ Thus, over the past eight years, only seven clickwrap disputes, or less than ten percent of all such disputes, have involved the most controversial types of provisions.

Based on these two observations, this Note suggests that clickwrap licensing has not been used in a harsh and oppressive manner that would require additional judicial scrutiny of the assent requirement when enforcing these agreements.

IV. ALTERNATIVE DOCTRINES FOR TESTING THE VALIDITY OF CLICKWRAP AGREEMENTS

Each of the six categories of disputed terms, including the more controversial varieties, is subject to alternative legal doctrines that can be used to protect against licensors taking unfair advantage of the fact that licensees may not carefully read and understand the terms of clickwrap agreements. For example, the unconscionability doctrine can be applied to many types of contracts⁸⁹ and has been applied generally to test the terms of various clickwrap agreements.⁹⁰ Similarly, courts can refuse to enforce any contractual terms that violate public policy.⁹¹

In addition to these general-purpose doctrines, there are specialized doctrines that can be applied to some types of terms that arise frequently in clickwrap litigation. Forum selection clauses in particular are subject to

86. See *Davidson & Assocs., Inc. v. Internet Gateway*, 334 F. Supp. 2d 1164 (E.D. Mo. 2004); *I-Systems, Inc. v. Softwares, Inc.*, No. Civ. 02-1951 JRTFLN, 2004 WL 742082, at *4 (D. Minn. Mar. 29, 2004).

87. See *Treiber & Straub, Inc. v. United Parcel Serv., Inc.*, No. 04-C-0069, 2005 WL 2108081, at *3-4 (E.D. Wis. Aug. 31, 2005); *I.Lan Sys., Inc. v. NetScout Serv. Level Corp.*, 183 F. Supp. 2d 328 (D. Mass. 2002).

88. See *In re Am. Online, Inc.*, 168 F. Supp. 2d 1359 (S.D. Fla. 2001); *Moore v. Microsoft Corp.*, 293 A.D.2d 587 (2002); *Mathias v. Am. Online, Inc.*, No. 79427, 2002 WL 377159, at *2-4 (Ohio Ct. App. Feb. 28, 2002).

89. See 1 FARNSWORTH, *supra* note 6, § 4.28.

90. See, e.g., *Bar-Ayal v. Time Warner Cable, Inc.*, No. 03 CV 9905 (KMW), 2006 WL 2990032, at *16 (S.D.N.Y. Oct. 16, 2006); *Davidson & Assocs., Inc. v. Internet Gateway*, 334 F. Supp. 2d 1164, 1179 (E.D. Mo. 2004); *DeJohn v. The .TV Corp. Int'l*, 245 F. Supp. 2d 913, 919 (N.D. Ill. 2003); *Comb v. PayPal, Inc.*, 218 F. Supp. 2d 1165, 1172-77 (N.D. Cal. 2002); *Aral v. Earthlink, Inc.*, 134 Cal. App. 4th 544, 557 (2005).

91. See 2 FARNSWORTH, *supra* note 6, § 5.1.

additional judicial scrutiny as to whether the term is “unreasonable under the circumstances”⁹² and choice of law provisions are not enforceable if the choice is “contrary to a fundamental policy of a state which has a materially greater interest than the chosen state” in resolving the dispute.⁹³ Additionally, although there is controversy surrounding the subject since the decision in *ProCD, Inc. v. Zeidenberg*, courts may be able to offer additional protection against unfair clickwrap terms by finding that the terms are preempted by federal copyright law.

Although these doctrines may not give judges complete discretion to invalidate terms of clickwrap contracts, the distribution and results of previous cases show that this existing framework has the capability to prevent major injustices while allowing the benefits of electronic standard form contracting to be realized.

A. Forum Selection Clauses

As the most frequently litigated term found in clickwrap agreements, the fair enforcement of forum selection clauses is of fundamental importance. It is firmly established that although these terms are presumed valid,⁹⁴ they are subject to an additional layer of judicial scrutiny prior to enforcement. The courts have found that the presumption of validity will be overcome by a demonstration that enforcement would be unreasonable under the circumstances, which potentially occurs when:

- (1) the incorporation of the forum selection clause into the agreement was the product of fraud or overreaching;
- (2) the party seeking to escape enforcement will for all practical purposes be deprived of his day in court because of the grave inconvenience or unfairness of the selected forum;
- (3) the fundamental unfairness of the chosen law will deprive the plaintiff of a remedy; or
- (4) enforcement of the forum selection clause would contravene a strong public policy of the forum state.⁹⁵

Although the fundamental unfairness argument is often invoked in clickwrap cases involving forum selection clauses, such arguments are most

92. *XPEL Techs. Corp. v. Md. Performance Works Ltd.*, No. SA-05-CA-0593-XR, 2006 WL 1851703, at *6 (W.D. Tex. May 19, 2006) (quoting *Haynsworth v. Corp.*, 121 F.3d 956, 963 (5th Cir. 1995)).

93. RESTATEMENT (SECOND) OF CONFLICT OF LAWS § 187(2)(b) (1971).

94. *See, e.g., Eslworldwide.com, Inc. v. Interland, Inc.*, No. 06 CV 2503 (LBS), 2006 WL 1716881, at *2 (S.D.N.Y. June 21, 2006) (“Forum selection clauses are presumed valid and enforceable.”).

95. *XPEL Techs.*, 2006 WL 1851703, at *6 (internal quotation omitted).

often unsuccessful.⁹⁶ However, three exemplary cases in which courts have struck down forum selection clauses based on the fourth prong, violations of public policy, demonstrate that this doctrine can be effective.

In *Williams v. America Online, Inc.*,⁹⁷ the court refused to enforce a forum selection clause that specified Virginia as the exclusive forum for all litigation.⁹⁸ The plaintiffs sought to represent a class of Massachusetts residents in a suit alleging that the installation of AOL's software damaged their computers.⁹⁹ The court held that it was a violation of public policy to require the plaintiffs to travel from Massachusetts to Virginia to pursue relatively small claims against AOL.¹⁰⁰

Similarly, the court in *America Online, Inc. v. Superior Court*¹⁰¹ held that the Virginia law governing the plaintiff's class action claims was so inadequate that transferring the suit according to AOL's forum selection clause would be a violation of California's public policy as codified in the California Consumers Legal Remedies Act (CLRA).¹⁰² The court held that enforcing the forum selection clause (along with the accompanying choice of law provision) would deprive the plaintiffs of the CLRA's statutory remedies designed to protect residents from deceptive and unfair business practices.¹⁰³ Most notably, Virginia law shortened the statute of limitations, limited damages if the violation was found to be "unintentional," and failed to provide for lawsuits such as the one at issue to proceed as

96. See, e.g., *id.* (enforcing the forum selection clause because the party seeking enforcement would be equally inconvenienced by a failure to enforce it); *Siebert v. Amateur Athletic Union of the U.S., Inc.*, 422 F. Supp. 2d 1033, 1046 (D. Minn. 2006) (holding that Florida was not too remote of a forum to require Minnesotan residing in Minnesota to bring his claim there); *Groff v. Am. Online, Inc.*, No. PC 97-0331, 1998 WL 307001 (R.I. Super. Ct. May 27, 1998) (holding that the forum selection clause was reasonable under the circumstances).

97. *Williams v. Am. Online, Inc.*, No. 00-0962, 2001 Mass. Super. LEXIS 11 (Super. Ct. Mass. Feb. 8, 2001).

98. *Id.* at *1.

99. *Id.*

100. *Id.* at *10 n.4 (noting that one plaintiff's damages amounted to only \$130); see also *Aral v. Earthlink, Inc.*, 134 Cal. App. 4th 544, 561 (2005) ("To expect [California consumers with losses between \$40 and \$50] to travel to Georgia in order to obtain redress on a case-by-case basis, whether in a courthouse or in an arbitration hearing room, is unreasonable as a matter of law."); *Am. Online, Inc. v. Pasioka*, 870 So.2d 170 (Fla. Dist. Ct. App. 2004) (holding that a forum selection clause requiring litigation in Virginia was unenforceable because it would prevent plaintiffs with small monetary claims from getting relief under the Florida Deceptive and Unfair Trade Practices Act).

101. *Am. Online, Inc. v. Superior Court*, 90 Cal. App. 4th 1 (2001).

102. *Id.* at 4-5.

103. *Id.* at 11, 15.

class actions.¹⁰⁴ Moreover, the court held that California's policy in favor of class action remedies was so important that "[t]he unavailability of class action relief in this context is sufficient in and by itself to preclude enforcement of the [Terms of Service] forum selection clause."¹⁰⁵

Finally, the court in *Scarcella v. America Online, Inc.*¹⁰⁶ again refused to enforce AOL's forum selection provision on public policy grounds.¹⁰⁷ The plaintiff in this case sued in small claims court, which the court noted was provided to litigants as a low-cost and relatively simple forum available to individuals who were unable to attend court proceedings during the working day.¹⁰⁸ The court held that transferring the suit to Virginia, as required by the forum selection clause, would be a violation of public policy because it would prevent the plaintiff from receiving the benefits of the small claims court proceedings that the legislature specifically had provided to ensure access to justice.¹⁰⁹

B. Arbitration Provisions

Clickwrap arbitration clauses are often analyzed under the doctrine of unconscionability, but much like the allegations of unreasonableness in the forum selection context these arguments are often unsuccessful.¹¹⁰ However, two recent cases, *Comb v. PayPal, Inc.*¹¹¹ and *Aral v. Earthlink, Inc.*,¹¹² demonstrate that the unconscionability doctrine is a viable way to prevent enforcement of an arbitration clause.

104. *Id.* at 16-17.

105. *Id.* at 18; *see also* *Dix v. ICT Group, Inc.*, 106 P.3d 841, 845 (Wash. Ct. App. 2005) ("Requiring [plaintiffs] to litigate their [Consumer Protection Act (CPA)] claim in Virginia without the benefit of a class action procedure as is allowed in Washington therefore undermines the very purpose of the CPA, which is to offer broad protection to the citizens of Washington. The forum selection clause is unenforceable.").

106. *Scarcella v. Am. Online, Inc.*, 798 N.Y.S.2d 348, 2004 WL 2093429 (N.Y. City Civ. Ct. Sept. 8, 2004).

107. *Id.* at *3.

108. *Id.*

109. *Id.*

110. *See, e.g.*, *Forrest v. Verizon Commc'ns, Inc.*, 805 A.2d 1007, 1013 (D.C. Cir. 2002) (finding no merit in unconscionability argument); *Siebert v. Amateur Athletic Union of the U.S., Inc.*, 422 F. Supp. 2d 1033 (D. Minn. 2006) (holding that an arbitration provision was not unconscionable); *DeJohn v. The .TV Corp. Int'l*, 245 F. Supp. 2d 913, 919 (N.D. Ill. 2003) (holding that a forum selection clause was not procedurally or substantively unconscionable).

111. *Comb v. PayPal, Inc.*, 218 F. Supp. 2d 1165 (N.D. Cal. 2002).

112. *Aral v. Earthlink, Inc.*, 134 Cal. App. 4th 544 (2005).

In *Comb*, the plaintiffs sued PayPal on behalf of a nationwide class for business practices that allegedly violated state and federal law.¹¹³ PayPal moved to compel arbitration based on its clickwrap User Agreement.¹¹⁴ The court began its analysis by noting that although the Federal Arbitration Act provides for their enforceability, “generally applicable contract defenses, such as fraud, duress, or unconscionability, may be applied to invalidate arbitration agreements.”¹¹⁵ Next, the court found that the contract was procedurally unconscionable because the agreement was a contract of adhesion: it was a “standardized contract, which, imposed and drafted by the party of superior bargaining strength, relegates to the subscribing party only the opportunity to adhere to the contract or reject it.”¹¹⁶ Finally, the court found in its substantive unconscionability inquiry that the following terms were too one-sided: (1) PayPal was allowed self-help remedies such as freezing customer accounts, while the customer’s only option was to pursue arbitration;¹¹⁷ (2) customers were prohibited from consolidating their claims;¹¹⁸ (3) the agreement called for the parties to bear their *pro rata* share of the arbitration expenses, despite the fact that no individual plaintiff’s claims exceeded \$310;¹¹⁹ and (4) Santa Clara, CA was selected as the exclusive jurisdiction for arbitration, even though PayPal served millions of customers across the United States with an average transaction value of \$55.¹²⁰ The court refused to compel arbitration because the combination of these terms served only as a means of shielding PayPal from liability by making it excessively impractical for plaintiffs to seek relief.¹²¹

The court in *Aral* followed a comparable analytical process and held that the arbitration provision in Earthlink’s DSL service agreement was unconscionable and unenforceable.¹²² The plaintiff, a California resident, brought a class action suit against Earthlink for overcharging customers for internet access.¹²³ The arbitration provision required that all claims be settled by arbitration in Georgia.¹²⁴ The court focused its attention on the

113. *Comb*, 218 F. Supp. 2d at 1166.

114. *Id.* at 1166, 1169.

115. *Id.* at 1170.

116. *Id.* at 1172.

117. *Id.* at 1174.

118. *Id.* at 1175.

119. *Id.* at 1176.

120. *Id.* at 1177.

121. *Id.* at 1176-77.

122. *Aral v. Earthlink, Inc.*, 134 Cal. App. 4th 544, 548-49 (Cal. Ct. App. 2005).

123. *Id.* at 550.

124. *Id.* at 549.

plaintiff's inability to seek class action relief which it recognized may be "the only effective way to halt [and] redress the exploitation when [a] company wrongfully exacts a dollar from each of millions of customers."¹²⁵ Accordingly, the provision was unconscionable under California law given the allegation that "numerous consumers were cheated out of small sums of money through deliberate misbehavior."¹²⁶

C. Software Usage Agreements

Copyright preemption has recently been raised unsuccessfully as a defense to claims alleging violations of clickwrap software license agreements. Although the defense has been unsuccessful, courts have not entirely discounted the applicability of the doctrine and commentators continue to suggest that the courts have been misguided in refusing to consider preemption arguments more carefully.¹²⁷ It is addressed here because the state of the law may not yet be settled¹²⁸ and preemption may emerge as a viable defense to breach of software license claims.

A state-law contract claim, such as one arising out of a clickwrap agreement, is preempted by federal copyright law if: "first, the [contractually-governed] work [is] within the scope of the subject-matter of copyright as specified in 17 U.S.C. §§ 102, 103, and second, the rights granted under state law are equivalent to any exclusive rights within the scope of federal copyright as set out in 17 U.S.C. § 106."¹²⁹ The second prong has caused difficulties for defendants in electronic contracting cases because courts have continued to find that contractual rights are not "equivalent" to copyrights.¹³⁰ Copyright preemption arguments have been raised, and re-

125. *Id.* at 556 (internal quotations omitted).

126. *Id.* at 557.

127. *See, e.g.*, 1 MELVILLE B. NIMMER & DAVID NIMMER, NIMMER ON COPYRIGHT § 1.01 (2006); David Nimmer, Elliot Brown & Gary N. Frischling, *The Metamorphosis of Contract into Expand*, 87 CALIF. L. REV. 17, 23 (1999) (arguing that the decision in *ProCD* "fail[ed] to appreciate the preemptive force of copyright").

128. *See* 1 NIMMER, *supra* note 127, § 1.01 (suggesting that the Federal Circuit's decision in *Chamberlain Group, Inc. v. Skylink Techs., Inc.*, 381 F.3d 1178 (Fed. Cir. 2004), *cert. denied*, 544 U.S. 923 (2005), casts doubt on the majority decision in *Bowers v. Baystate Techs., Inc.*, 320 F.3d 1317, 1324 (Fed. Cir. 2003), *cert. denied*, 539 U.S. 928 (2003)).

129. *United States ex rel. Berge v. Bd. of Trustees of the Univ. of Ala.*, 104 F.3d 1453, 1463 (4th Cir. 1997) (internal quotations omitted).

130. *See, e.g.*, *Bowers v. Baystate Techs., Inc.*, 320 F.3d 1317, 1324 (Fed. Cir. 2003), *cert. denied*, 539 U.S. 928 (2003) ("[M]ost courts to examine [Copyright Act preemption] have found that the Copyright Act does not preempt contractual constraints on copyrighted articles."); *ProCD, Inc. v. Zeidenberg*, 86 F.3d 1447, 1455 (7th Cir. 1996) ("[A]

jected, in the two most recent clickwrap cases involving breach of software license claims.

In the first case, *Davidson & Associates, Inc. v. Internet Gateway*,¹³¹ the plaintiff alleged that the defendants violated the clickwrap EULA by reverse engineering the plaintiff's software to learn the underlying protocol and to develop their own alternative software.¹³² In response, the defendants urged that the Copyright Act preempted the plaintiff's breach of EULA claim.¹³³ The court recognized that the software was within the subject matter of copyright, but found that the second prong of the test failed because the "right to restrict the use" that was created by the EULA was not equivalent to any right provided by the Copyright Act.¹³⁴ However, it is precisely this type of restriction on reverse engineering that leads commentators to doubt the validity of some courts' preemption analyses. The existence of seemingly contradictory case law suggests that the application of this defense is still unsettled and may become viable in the future.¹³⁵

In the second recent case, *Recursion Software, Inc. v. Interactive Intelligence, Inc.*,¹³⁶ the court held that federal copyright law did not preempt enforcement of a clickwrap license agreement term prohibiting the licensee from embedding the licensed software within software that is marketed or sold.¹³⁷ The defendant allegedly violated this term by selling its software to the public after incorporating plaintiff's software.¹³⁸ The defendant characterized the plaintiff's claim as being "based solely on the distribution" of the licensed software and accordingly argued that the Copy-

simple two-party contract is not equivalent to any of the exclusive rights within the general scope of copyright and therefore may be enforced." (internal quotation omitted)).

131. *Davidson & Assocs., Inc. v. Internet Gateway*, 334 F. Supp. 2d 1164 (E.D. Mo. 2004).

132. *Id.*

133. *Id.* at 1174.

134. *Id.* at 1175.

135. See 1 NIMMER, *supra* note 127, § 1.01; see also *Chamberlain Group, Inc. v. Skylink Techs., Inc.*, 381 F.3d 1178, 1202 (Fed. Cir. 2004) (rejecting the plaintiff's attempt to "repeal the fair use doctrine with respect to an individual selected work" through "a combination of contractual terms and technological measures"). *But see Davidson & Assocs. v. Jung*, 422 F.3d 630, 639 (8th Cir. 2005) ("[P]rivate parties are free to contractually forego the limited ability to reverse engineer a software product under the exemptions of the Copyright Act." (internal quotations omitted)).

136. *Recursion Software, Inc. v. Interactive Intelligence, Inc.*, 425 F. Supp. 2d 756 (N.D. Tex. 2006), *reh'g denied*, Mar. 13, 2006.

137. *Id.* at 765-66.

138. *Id.* at 762.

right Act should preempt it.¹³⁹ However, the court found that the alleged infringing act was more properly characterized as the defendant's conduct of embedding the plaintiff's software into its own product that was sold because the license otherwise allowed for distribution of the plaintiff's software.¹⁴⁰ Therefore, the court held that the claim was not preempted because it was not "equivalent" to the distribution rights afforded by copyright law.¹⁴¹ However, the court criticized and declined to adopt the expansive rule used by some courts that "breach of contract claims can never be preempted by copyright because they necessarily involve the additional element of a promise to perform the contract."¹⁴² Thus, although the defendant's argument failed in this case, the court left open the possibility of future defendants prevailing on copyright preemption grounds.

D. Unconscionability, Public Policy, and the Remaining Litigated Terms

Finally, unconscionability and public policy doctrines have been applied to the remaining terms that have been litigated but are not discussed in previous sections. The fact-specific analyses in the few cases involving these terms make it difficult to come to a definite conclusion as to how each of these clauses will be treated in the future, but the courts have shown that they are cognizant of the applicability of these doctrines to terms governing software usage,¹⁴³ service usage,¹⁴⁴ and limitations of lia-

139. *Id.* at 766.

140. *Id.*

141. *Id.*

142. *Id.* at 767 (noting as examples *Wrench LLC v. Taco Bell Corp.*, 256 F.3d 446, 457 (6th Cir. 2001); *ProCD, Inc. v. Zeidenberg*, 86 F.3d 1447, 1454 (7th Cir. 1996); *Architectronics, Inc. v. Control Sys., Inc.*, 935 F. Supp. 425, 438 (S.D.N.Y. 1996); and *Kabehie v. Zoland*, 102 Cal. App. 4th 513, 525 (2002)). In rejecting this rule, the court asked:

Can, for example, a breach of contract claim arising out of a bare promise not to reproduce or distribute copies of a copyrighted work be said to be *qualitatively* different from a copyright infringement action for the violation of exclusive rights of reproduction and distribution granted to the copyright holder by 17 U.S.C. § 106?

Id. at 767-68.

143. *See Davidson & Assocs., Inc. v. Internet Gateway*, 334 F. Supp. 2d 1164, 1179-80 (E.D. Mo. 2004) (considering and rejecting unconscionability argument).

144. *See DeJohn v. The .TV Corp. Int'l*, 245 F. Supp. 2d 913, 919 (N.D. Ill. 2003) (considering and rejecting unconscionability argument); *Siedle v. Nat'l Ass'n of Sec. Dealers, Inc.*, 248 F. Supp. 2d 1140, 1145 (M.D. Fla. 2002) (considering and rejecting public policy argument).

bility.¹⁴⁵ Although these defenses were not successful in the cited cases, the inclusion of these doctrines in the courts' analyses suggests that they will be available in the future if unreasonable terms are litigated. Because these terms rarely arise in litigation and the courts have shown that they are aware and presumably capable of applying these doctrines if necessary, there is nothing to suggest at this time that unreasonable terms cannot be adequately addressed within the current framework.

V. CONCLUSION

Despite the controversial nature of clickwrap agreements, courts have settled on a mechanical assent analysis that only seeks to determine whether or not the "I Agree" button was indeed clicked. Although there are legitimate reasons for believing that computer users do not truly agree when clicking through electronic license agreements, invalidating all of these terms for lack of assent would have significant negative effects on electronic commerce. A review of the occasions on which these agreements have been litigated shows that these agreements do not tend to result in the enforcement of particularly onerous terms. Rather, the majority of cases involve terms such as forum selection and agreements to arbitrate, which, when reasonable, are generally thought to provide economic benefits to both consumers and providers. Each term that has been litigated is susceptible to review under various legal doctrines: there is a specialized forum selection clause analysis, and all of the other terms are subject to review pursuant to unconscionability and public policy doctrines. Courts have in the past and can continue to invalidate clickwrap agreement terms on each of these grounds. When the types of terms that have been litigated are viewed in conjunction with the courts' demonstrated ability to void unfair terms, the current framework for adjudicating clickwrap licensing appears to be an effective way to allow the benefits of these contracts to accrue without posing a serious threat to contractees.

145. See *Treiber & Straub, Inc. v. United Parcel Serv., Inc.*, No. 04-C-0069, 2005 WL 2108081, at *11-12 (E.D. Wis. Aug. 31, 2005) (noting plaintiff's argument that enforcing the provision would violate public policy, but declining to take jurisdiction over the state law breach of contract claim); *I.Lan Sys., Inc. v. NetScout Serv. Level Corp.*, 183 F. Supp. 2d 328, 338 (D. Mass. 2002) (recognizing that adhesive contracts are susceptible to unconscionable provisions, but finding no such provision in the contested agreement).

ADDITIONAL DEVELOPMENTS— CYBERLAW

PEBBLE BEACH COMPANY V. CADDY

453 F.3d 1151 (9th Cir. 2006)

In *Pebble Beach*, the United States Court of Appeal for the Ninth Circuit affirmed the dismissal of the plaintiff's claim for lack of personal jurisdiction. The court, following the "minimum contacts" test, held that the foreign business owner's "passive" website was insufficient to show a purposeful availing by the defendant of the privilege of conducting activities in California, or the United States as a whole.

Plaintiff Pebble Beach Company, proprietor of a well-known golf course in Monterey County, California, had used the trade name "Pebble Beach" for 50 years and maintains a website at www.pebblebeach.com. Defendant Michael Caddy, a dual citizen of the United States and the United Kingdom, operated a bed-and-breakfast in southern England named "Pebble Beach" and advertises it at www.pebblebeach-uk.com. This site contained information about lodging rates and accommodations, but was "passive" insofar as it lacks interactive features, like a reservation system.

In 2003, Pebble Beach sued Caddy for intentional infringement and dilution of its "Pebble Beach" mark under the Lanham Act and the California Business and Professions Code. The district court dismissed Pebble Beach's claim for lack of personal jurisdiction, and Pebble Beach appealed.

The Ninth Circuit affirmed the district court's dismissal for lack of personal jurisdiction, finding that passive websites like Caddy's were an insufficient basis for asserting personal jurisdiction. Despite state and federal long-arm statutes, Pebble Beach failed to establish that Caddy had "minimum contacts" with either California or the United States by (1) purposefully availing himself of the privilege of conducting activities in California or the United States as a whole; or (2) that he purposefully directed its activities toward one of those two forums.

The court found that Pebble Beach failed to identify any conduct by Caddy that took place in California or in the United States that would invoke the benefits and protections of the laws of the forum. The court also found that Caddy's registration of a domain name or creation of a passive website, which did nothing to encourage residents from the forum state to act, lacked the "something more" required for Caddy to have "expressly aimed" his conduct at California or the United States, regardless of their foreseeable effects.

UNITED STATES V. ZIEGLER*474 F.3d 1184 (9th Cir. 2007)*

The US Court of Appeals for the Ninth Circuit held that although the defendant's subjective expectation of privacy in his office and computer was also objectively reasonable, his employer maintained the authority to consent to the search of his workplace environment. The resulting evidence, images of child pornography stored on the computer, copied from the defendant's computer were therefore admissible.

In 2001, the director of a company that served as an internet service provider to Frontline Processing, Inc. ("Frontline"), Ziegler's employer, contacted the FBI with a tip that a Frontline employee had been accessing child pornographic websites from a company computer. The FBI then contacted Softich, Frontline's IT Administrator, who confirmed that such sites had indeed been accessed. Softich told the FBI that Frontline was using a firewall, which allowed constant monitoring of employees' internet activities, and that the employees were aware of this practice. Softich identified Ziegler's computer as the one involved. Softich then told the FBI agent that the IT department had already installed a monitoring device inside the computer.

The parties dispute whether the FBI agent then instructed Softich to copy Zeigler's hard drive, or merely to safeguard the backup copy of the hard drive, which the IT department already had. However, the parties did not dispute that on January 30, 2001, Softich obtained a key to Zeigler's office from Frontline's chief financial officer, opened Ziegler's computer, and made two copies of its hard drive.

In May of 2003, Ziegler was indicted for receipt of child pornography, possession of child pornography and receipt of obscene material. Ziegler filed a pretrial motion to suppress the evidence, claiming that the FBI violated the Fourth Amendment when it directed the Frontline employees to search his computer without first obtaining a warrant. The government countered that Softich had copied the hard drive without any instructions from the agent, and discounted the contradictory accounts of the event as a misunderstanding. The court ruled that this dispute was secondary to the issue of Ziegler's expectation of privacy in his workplace computer.

As the court noted, a legitimate expectation of privacy is established when the claimant can show that he had a subjective expectation, and when such subjective expectation is objectively reasonable. The government did not dispute Ziegler's subjective expectation of privacy and found it to be objectively reasonable for a private employee to retain at least some expectation of privacy in her office. Zeigler's office was not shared with co-workers and had a separate lock, facts supporting his reasonable belief in privacy.

The retrieval of Zeigler's hard-drive was justified by the court as complying with the Fourth Amendment because Zeigler's private employer had retained the right to consent to the search. By receiving permission to conduct the search from the employer's Chief Financial Officer, the search had received valid consent.

***YAHOO! INC. v. LA LIGUE CONTRE LE RACISME ET
L'ANTISEMITISME***

433 F.3d 1199 (9th Cir. 2006), cert. denied, 126 S.Ct. 2332 (2006)

In *Yahoo! Inc. v. La Ligue Contre Le Racisme et L'Antisemitism*, a divided panel of the Ninth Circuit held that the lower court properly exercised personal jurisdiction over two French associations by virtue of their filing and the prosecution of the action in France was an intentional act, expressly aimed at the forum state, causing harm that the associations knew was likely to be suffered in the forum state., but reversed and remanded because the suit was not sufficiently ripe for judicial decision.

Two French associations, La Ligue Contre Le Racisme et L'Antisemitisme ("LICRA") and L'Union des Etudiants Juifs de France ("UEJF"), originally brought an action against Yahoo! Inc. ("Yahoo!") in the Tribunal de Grande Instance de Paris because Yahoo! had presented Nazi objects and memorabilia for sale in violation of French law. The French court issued an order requiring Yahoo! to "dissuade and render impossible any access" to sites or services "that may be construed as constituting an apology for Nazism or a contesting of Nazi crimes" or face a penalty of 100,000 Euro per day per violation.

Yahoo! sought a declaratory judgment in a California federal court that the French court's orders were unenforceable. The district court found that it could exercise personal jurisdiction over the French parties, that the dispute was ripe, and that the French court's orders were unenforceable because they violated the First Amendment. Shortly thereafter, Yahoo! adopted a new policy prohibiting use of auctions or classified advertisements for items "associated with or could be used to promote or glorify groups that are known principally for hateful and violent positions directed at others based on race or similar factors." Yahoo! represented that its new policy was unrelated to the the French court's orders.

In an 8-3 decision, the Ninth Circuit held that *Calder v. Jones*, 465 U.S. 783 (1984) controlled and that personal jurisdiction over the two French associations was proper because their filing an action against Yahoo! in a French court constituted an intentional act expressly aimed at the forum state causing harm that the French associations knew was likely to be suffered in the forum state.

However, a three judge plurality of the panel decided that the case was not ripe for judicial determination. Yahoo!'s voluntary change of policy brought it "in large measure" into compliance with the French court order, rendering penalties highly unlikely. Thus, the Ninth Circuit did not address the lower court's holding with respect to the First Amendment.

*SNOW V. DIRECTV, INC.**450 F.3d 1314 (11th Cir. 2006)*

The United States Court of Appeal for the Eleventh Circuit held that a website owner failed to state a claim under the Stored Communications Act (SCA) against DirecTV. Although the website expressly forbade access to DirecTV, required users to register, create a password, and agree to additional terms that affirmed the non-association with DirecTV, there was nothing inherent in any of these steps to infer that access to the website by the general public was restricted.

DirecTV, a satellite television provider, was engaged in a nationwide effort against those intercepting and pirating the company's encrypted satellite transmissions using "pirate access devices." One of these actions was against Michael Snow, eventually dismissed without prejudice.

In response to this campaign, Snow created a non-commercial website, <http://www.stop-corporate-extortion.com> as a "private support group" for "individuals who have been, are being, or will be sued by any Corporate entity." The website's homepage explicitly forbade access to DIRECTV and its agents, and users of the site to register, create a password, and agree to additional terms reaffirming non-association with DirecTV. A person clicking "I Agree to these terms" could enter, view, and participate in the electronic bulletin board.

Snow alleged that employees of DirecTV and two of its law firms accessed the website on numerous occasions in violation of the SCA. The SCA prohibits intentional accessing or exceeding authorization to access an electronic communication while in electronic storage. The United States District Court for the Middle District of Florida dismissed the complaint because the electronic bulletin boards were not "in electronic storage" and, therefore, not protected by the SCA.

The Eleventh Circuit affirmed the district court's determinations to dismiss Snow's claim for lack of personal jurisdiction and failure to state a claim. The lower court found that Snow's electronic bulletin board was not within the scope of electronic communication in electronic storage as contemplated by the SCA. The Eleventh Circuit affirmed on different grounds, finding Snow's website "readily accessible to the general public" and therefore explicitly exempt from the SCA under 18 U.S.C. § 2511(2)(g). Requiring registration, the creation of a password, and clicking "I Agree to these terms" were insufficient restrictions on public access and instead constituted a self-screening process by which non-intended users would voluntarily excuse themselves.

BEYOND SYSTEMS INC. V. KEYNETICS INC.*422 F.Supp.2d 523 (D. Md. 2006)*

The United States District Court for the District of Maryland held that Maryland's anti-spam statute—the Maryland Commercial Electronic Mail Act (“MCEMA”)—did not violate Dormant Commerce Clause of the Constitution and was not preempted by the federal anti-spam legislation, Controlling the Assault of Non-Solicited Pornography and Marketing Act 15 U.S.C. § 7707 (“CAN-SPAM Act”).

Beyond Systems, Inc (“BSI”), a Maryland based ISP, brought suit against Keynetics, Inc., Jeffrey Mulligan, the operator of two websites, and Rackspace Ltd., an ISP that facilitated their actions. The suit alleged that BSI had received over 6,000 unsolicited commercial e-mails on behalf of the defendants, in violation of the MCEMA.

Keynetics, trading under the name ClickBank, operated a website selling digital products from various venders and used a network of online affiliates to drive potential customers to ClickBank's website, primarily through bulk e-mail. The referring affiliate received a commission for any completed sales. Jeffrey Mulligan is the sole proprietor of CBmall, a website similar to ClickBank, though it re-routed all of its customers to ClickBank for actual purchase. Rackspace Ltd., the ISP, provided hosting services for the e-mail sent by Keynetics, Mulligan, and their affiliates.

BSI alleged that the e-mails it received were prohibited by MCEMA and that the defendants had notice of BSI's objections. Keynetics and Rackspace moved for summary judgment on the grounds that the MCEMA imposed an undue burden on interstate commerce in violation of the Dormant Commerce Clause of the Constitution

The court examined the legitimacy of the state's interest and weighed the burden on interstate commerce in light of the local benefit derived from the statute. The court relied upon *Washington v. Heckle*, 24 P.3d 404 (Wash. 2001), in which the Washington Supreme Court upheld the constitutionality of an “essentially identical” Washington anti-spam statute challenge on the same grounds. The court also relied on *MaryCLE, LLC v. First Choice Internet, Inc.*, 890 A.2d 818 (Md. Ct. Spec. App. 2006), which applied the reasoning from *Heckle* to the MCEMA and held it constitutional.

The court also rejected Keynetics' argument that MCEMA was preempted by the CAN-SPAM Act. At least in the situations where an action under MCEMA was against a non-resident defendant, the MCEMA was “in no way inconsistent with CAN-SPAM” because CAN-SPAM did not preempt any “statute, regulation, or rule [which] prohibits falsity or deception in any portion of a commercial electronic mail messages or information attached thereto.”

COMMUNICATIONS DECENCY ACT (CDA) IMMUNITY

BARNES V. YAHOO! INC.

No. Civ. 05-926-AA, 2005 WL 3005602 (D. Or., Nov. 8, 2005)

LANDRY-BELLE V. VARIOUS, INC.

No. 05-1526, 2006 WL 1676136 (W.D. La., June 9, 2006)

PRICKETT V. INFOUSA, INC.

No. 4:05-CV-10, 2006 WL 887431 (E.D. Tex., Mar. 30, 2006)

DIMEO V. MAX

433 F. Supp. 2d 523 (E.D. Pa. 2006)

ANTHONY V. YAHOO! INC.

421 F. Supp. 2d 1257 (N.D. Cal. 2006)

DOE V. BATES

No. 5:05-CV-91-DF-CMC, 2006 WL 3813758, (E.D. Texas, Dec. 27, 2006)

Over the past year, courts have clarified and expanded the immunity afforded to interactive computer services under the Communications Decency Act, 47 U.S. § 230(c)(1).

In *Barnes v. Yahoo!, Inc.*, the United States District Court for the District of Oregon granted defendant Yahoo!'s motion to dismiss, ruling that Yahoo! qualified for immunity as an interactive service provider notwithstanding the company's failure to remove a false online profile of Cecilia Barnes after a company representative allegedly assured Barnes that it would do so. Barnes argued that her claims under Oregon tort law relied only on defendant's liability for failing to fulfill its alleged promise and thus were not barred by § 230 immunity. The court rejected this argument; since Barne's ex-boyfriend, not Yahoo!, had created the offensive material, Yahoo! was immune from liability as publisher of the false online profile.

Similar facts in *Landry-Belle v. Various, Inc.* led the United States District Court for the Western District of Louisiana to grant defendant Various, Inc.'s motion to dismiss claims relating to a false and obscene profile of Shelly Landry-Belle posted on an adult-oriented site owned and operated by Various. Even though Landry-Belle believed her ex-boyfriend created the profile with her picture, she claimed Various acted as an information content provider, and thus not afforded § 230(c)(1) immunity. Various created the entry form used to accept the false profile and subsequently added keywords to the profile, categorizing it, and submitting it to search engines. The court held that the "web-

site's role in eliciting the information at issue [does] not deprive the website operator of immunity under the CDA."

The plaintiffs in *Prickett v. infoUSA, Inc.*, in the United States District Court for the Eastern District of Texas, also failed to convince the court that creating an online form with informational prompts sufficed to abrogate the defendants' immunity. The plaintiffs brought tort claims based on infoUSA's listing of their home addresses and phone numbers under the heading "Entertainers—Adult" on both infoUSA's own website and other websites licensing infoUSA's database of business listings, including Yahoo! Local and Yahoo! Yellow Pages. The court ruled in favor of defendants infoUSA, dismissing a motion for summary judgment. After rejecting the informational prompts argument, the court went on to hold that a defendant retains immunity under the CDA even if it later provides content to a third party, like a search engine. The court held that even though infoUSA's new business listing entry form contained an assurance that it "call[ed] every [new] business to verify" each listing, § 230(c)(1) immunity could not be lost due to a failure in verifying anonymous third party's entry of plaintiffs' contact information along with false, damaging information. Citing *Barnes*, the court found that to hold infoUSA liable for its failure to verify the listing would be "treating it as a publisher," a claim necessarily barred by § 230(c)(1).

In *Dimeo v. Max*, plaintiff Anthony Dimeo, III filed a complaint against Tucker Max for defamatory remarks about Dimeo posted on defendant's website, a gossip and entertainment site. The site's message boards included harsh comments about Dimeo from anonymous individuals which had been edited and selectively posted by Max. Despite criticizing the site as coarse and vulgar, the United States District Court for the Eastern District of Pennsylvania granted Max's motion for summary judgment with regard to § 230 immunity. First, the court classified Max's site as an interactive computer service providing a "service" that "enables computer access" by multiple users to a server. Second, the court ruled that Max's editorial control had not risen to the level of an information content provider's "development of information," therefore being insufficient to void § 230(c)(1) immunity.

The United States District Court for the Northern District of California in *Anthony v. Yahoo!, Inc.* found that § 230 did not immunize Yahoo! from fraud and negligent misrepresentation claims regarding the defendant's online dating services. Plaintiff Robert Anthony claimed Yahoo! created and forwarded false or expired user profiles to misrepresent the number of eligible singles using the service, thereby coaxing non-members to join and current members to renew the service. Yahoo!'s role in creating misrepresentative marketing communications with expired profiles, as well as the plaintiff's unopposed contention that Yahoo! created false profiles could not garner § 230 immunity.

In *Doe v. Bates*, the plaintiffs claimed that Yahoo! was liable for harm to their minor son as a result of pornographic photographs of him posted in a Yahoo! e-group. The United States District Court for the Eastern District of Texas granted Yahoo!'s motion to dismiss adopting the report and recommendations of the magistrate judge.

The magistrate judge found that Yahoo! met the requirements of § 230(c)(1) immunity because it had not participated in the creation of the content at issue (the photos) and that the plaintiffs' claims as to Yahoo!'s failure to "overs[ee] and intervene" postings on the "Candyman" Yahoo! group (a group centered on sharing hard-core child pornography) necessarily required the content to have been furnished by another content provider, the exact scenario § 230(c)(1) protects. The magistrate also rejected the plaintiffs' assertion that § 230(c)(1) is merely "definitional" and does not itself provide immunity.

The district court also rejected the plaintiffs' contention that there is an exception within § 230 immunity for an intentional violation of criminal law. The plaintiffs asserted that Yahoo! should be liable because it profited from child pornography in violation of 18 U.S.C. § 2252A. The court noted that Congress' intention to immunize providers of interactive computer services was not dependant on how they earned their revenue, and that the immunity was created to protect service providers like Yahoo! from just such liability because of the practical impossibility of monitoring and restricting every Yahoo! group or posting hosted by Yahoo!.

COMPUTER FRAUD AND ABUSE ACT

NILFISK-ADVANCE, INC. v. MITCHELL

2006 WL 827073 (W.D.Ark.)

NEXANS WIRES S.A. v. SARK-USA, INC.

166 Fed.Appx. 559 (2d. Cir. 2006)

These two recent decisions concern the scope of Computer Fraud and Abuse Act (CFAA) and the definition of losses under the Act.

In *Nexan-Wires v. Sark-USA* the United States Court of Appeal for the Second Circuit rejected plaintiffs' CFAA claims for the loss of revenue resulting from the defendant's alleged misappropriation of the plaintiff's protected files because that loss was not caused by the "interruption of service," and was not related to any type of "computer investigation or repair." In contrast, in *Nilfsk-Advance, Inc. v. Mitchell*, the United States District Court for the Western District of Arkansas ruled that the defendant's conduct fell within the CFAA when he accessed the plaintiff's computer with the intention to misappropriate confidential information, even though the defendant was authorized to access the computer.

In *Nexans Wires S.A. v. Sark-USA, Inc.*, the Second Circuit addressed the question of what constitutes losses sufficient to state a claim under the CFAA. The plaintiff, a manufacturer of silver-plated copper wire, alleged that individuals employed by distribution affiliates accessed and downloaded the plaintiff's proprietary information. These employees subsequently resigned, and with the help of other named defendants and the downloaded information, formed Sark-USA to compete with plaintiff. Plaintiff brought suit under the CFAA and state law against Sark-USA, Inc. The defendants moved for summary judgment, which the United States District Court for the Southern District of New York denied.

According to § 1030(a)(5)(B)(I) of the CFAA, a plaintiff must have suffered a loss of at least \$5,000 in order to state a claim for relief. The CFAA defines a loss as "any remedial costs of investigating the computer for damage, remedying the damage and any costs incurred because the computer cannot function while or until repairs are made." The CFAA only allows plaintiff to include lost revenue when it is lost "because of an interruption of service." The plaintiff in *Nexans Wires* claimed to have met the statutory \$5,000 requirement because it (a) lost "profits of at least \$10 million," and (b) spent \$8,000 in travel expenses when it sent its executives from Germany to New York to investigate the loss of data.

The Second Circuit agreed with the district court that CFAA distinguished "loss of revenue" from "incurred costs," and that the former is only recoverable when it is related to an "interruption of service." The district court rejected the plaintiff's claim for lost revenue because it was undisputed that no interruption of service occurred, and therefore, the losses were not within the scope of CFAA. The district court also rejected the plaintiff's second claim for damages because the travel expenses were related to investigating business losses unrelated to actual computers or computer services.

In *Nilfisk-Advance, Inc. v. Mitchell*, the United States District Court for the Western District of Arkansas ruled on whether an employee violated the CFAA by transmitting company files containing confidential information and trade secrets to his personal computer after having resigned, but prior to actually completing work with the company. Having indicated his intent to leave the company, defendant project engineer Mitchell e-mailed numerous zip files of proprietary and confidential information to his personal e-mail account. He was terminated a week later, and subsequently refused to let Nilfisk inspect his personal computer.

Claiming that Mitchell had exceeded his authorization and intentionally caused damage to plaintiff by transferring files stored on his office computer to his personal e-mail account, Nilfisk brought suit under the CFAA. Nilfisk further alleged that while Mitchell did have the authority to access his computer at work, the transmission of files for the purpose of misappropriation exceeded that authorization. Even though Mitchell had authorization to access the files, the court found the Mitchell's conduct sufficiently excessive to deny Mitchell's motion to dismiss the CFAA claim.

BERKELEY TECHNOLOGY LAW JOURNAL
ANNUAL REVIEW OF LAW AND TECHNOLOGY

CONSTITUTIONAL LAW

BERKELEY TECHNOLOGY LAW JOURNAL

DEVELOPMENTS— CONSTITUTIONAL LAW

ALMEIDA V. AMAZON.COM, INC.

456 F.3d 1316 (11th Cir. 2006)

The United States Court of Appeal for the Eleventh Circuit affirmed the district court's grant of summary judgment for defendant Amazon.com, holding that displaying a book's cover image in furtherance of the book's sale did not violate Florida's right of publicity statute because the display was incidental to, and customary for, the business of book sales and did not constitute an endorsement or promotion of a product or service pursuant to Fla. Stat. § 540.08

In 1991, Fabio Cabral, a fashion photographer, offered for sale a controversial book including photographs of girls between the ages of ten and seventeen, which included an image of Thais Cardosa Almeida when she was ten years old. Cabral had asked Almeida's mother's to authorize the use of the photograph, and two hundred copies of the book *Anjos Proibidos* ("Forbidden Angels") were sold before authorities stopped further sales of the book. In 2000, a second edition of the book was released with the plaintiff's picture on the book's cover. The book was offered for sale on Amazon.com, which provides for its customers an image of the book's cover.

Almeida sued Amazon.com for violating her right of publicity under Fla. Stat. § 540.08, civil theft under Fla. Stat. § 772.11, and for common law invasion of privacy. The United States District Court for Southern District of Florida granted Amazon's motion for summary judgment as to Almeida's right of publicity and privacy claims because their subject matter was preempted by the Communications Decency Act of 1996 ("CDA"). Further, the district court granted summary judgment against Almeida on her civil theft claim and awarded Amazon attorney's fees.

The Eleventh Circuit affirmed the district court's grant of summary judgment for Amazon, finding that Amazon.com did not use Almeida's image for the purpose of directly promoting a product or service as required by Fla. Stat. § 540.08. Instead, Amazon.com's use of the book cover image was incidental to, and customary for, the business of book sales. The court also found that Almeida also failed to present any evidence that Amazon.com misappropriated any of Almeida's property with felonious intent as required for Almeida's civil theft claim under Fla. Stat. § 772.11.

With respect to CDA immunity, the threshold issue was whether Almeida's complaint would withstand a motion to dismiss without regard to the CDA, specifically whether an internet retailer, such as Amazon, could be held liable under Florida's right of publicity statute for displaying a book's cover image in furtherance of the book's sale. Because it could not be held liable for displaying the book's cover image, the Eleventh Circuit found that it was unnecessary for the district court to determine whether the CDA preempted Almeida's state law right of publicity claim, and declined to rule on Almeida's challenges to the district court's ruling.

DOE V. MCFARLANE
207 S.W.3d 52 (Mo. Ct. App. 2006)

The Missouri Circuit Court, City of St. Louis, affirmed a jury verdict of \$15 million against a comic book creator, holding that the use of the plaintiff's name for a character in a comic book series was not entitled to First Amendment protection because it was for the purpose of selling comic books and not an expressive comment about the plaintiff.

Defendant Todd McFarlane, acclaimed comic book writer and artist, creates a popular comic book called *Spawn* that features a villain named Tony Twist. McFarlane admitted he named his character after the plaintiff, Tony Twist, a former professional hockey player. After the first trial, a jury awarded \$24.5 million to Twist. However, the trial court entered a judgment notwithstanding the verdict because Twist had not made a submittable case. On appeal, the Missouri Supreme Court ruled that Twist had made a valid right of publicity claim. The court clarified its preference for a "predominant use" test for determining First Amendment protection and determined that McFarlane's use, predominantly commercial rather than expressive, was not constitutionally protected and remanded the case for a second trial based on an instructional error. The jury awarded \$15 million to Twist after a second trial.

McFarlane appealed the verdict of the second trial again to the Missouri Circuit Court, City of St. Louis. Bound by the Missouri Supreme Court's predominant-use analysis from the earlier proceedings, the court concluded that McFarlane's use merited no First Amendment protection because the use of Twist's name was predominantly commercial rather than expressive or literary. In particular, Twist presented evidence that McFarlane: (1) intended to create the impression that Twist was associated with McFarlane's comic book, (2) marketed comic books to hockey fans, and (3) McFarlane induced readers to purchase the comic book in order to see hockey players' names.

The court also found no abuse of discretion in admitting expert testimony regarding lost endorsement opportunities, separate expert testimony regarding the fair market value of *Spawn* royalties, and other relevant evidence.

**BERKELEY TECHNOLOGY LAW JOURNAL
ANNUAL REVIEW OF LAW AND TECHNOLOGY**

TELECOMMUNICATIONS

BERKELEY TECHNOLOGY LAW JOURNAL

BRINGING NEUTRALITY TO NETWORK NEUTRALITY

By Kai Zhu

Can internet service providers (ISPs) such as AT&T and Verizon prioritize internet traffic by its type, source, destination, or volume? If yes, can they do it for profit? Internet content providers (ICPs) such as Google, Yahoo, and Microsoft want to ban such prioritization via legislation. They have argued that all internet traffic, be it from a heavy-traffic and delay-sensitive videoconference or from an e-mail, should be treated equally.¹ This debate over what has been coined “network neutrality” (“NN”)² has gained momentum quickly. SavetheInternet.com, a grassroots coalition formed in April 2006, collected more than one million signatures in just two months to support NN.³ Congressmen introduced five bills, either for or against NN, between March and May 2006.⁴ The issue has divided legal scholars, but both sides agree that internet innovation is at risk.

At its core, the network neutrality debate focuses on a technical question that has great economic significance, although the exact meaning of the term has received different and confusing interpretations. Interestingly, the legal community originated and popularized the debate, which has since fallen victim to political and ideological polarization. If the industry giants and Congress were actually neutral to this “neutrality” debate, they should have found a middle ground by now. If legal scholars understood the technicalities of the internet, they could have reached that middle ground as well.

This Note argues that (1) the internet has never been neutral and has never been designed to be neutral; (2) internet traffic prioritization can both coexist with and encourage internet innovation; and (3) some minimal regulation is needed to prevent market power abuses and usage discrimination in the internet service market. Part I explains some technical de-

© 2007 Kai Zhu

1. See Anne Broache & Declan McCullagh, *Playing favorites on the net?*, CNET NEWS.COM, Dec. 21, 2005, http://news.com.com/2100-1028_3-6003281.html.

2. This Note will use the term “network neutrality” and its abbreviation “NN” interchangeably.

3. See Press Release, Free Press, One Million Americans Urge Senate to Save the Internet (June 24, 2006), <http://www.freepress.net/press/release.php?id=155>.

4. See Declan McCullagh, *House plans vote on net neutrality*, CNET NEWS.COM, June 7, 2006, http://news.com.com/2100-1028_3-6080983.html.

tails and the evolution of the internet that are critical to understanding the NN debate. Part II describes the development of the debate. Part III analyzes the debate and points out the engineering and economic realities that have been overlooked in the debate. Part IV proposes a middle-ground solution that can unite both sides of the debate.

I. THE TECHNOLOGIES AND EVOLUTION OF THE INTERNET

To understand the network neutrality debate, it is critical to grasp the technical details of the internet and to understand that the modern internet is very different from what it was thirty years ago. The internet began its life in 1969 as a research network funded by the U.S. government, but was commercialized in the early 1990s.⁵ Since then it has grown rapidly and steadily—in its size, territorial scope, the number of users, the number and types of applications running over it, and, most importantly, in the sophistication of the many technologies underlying it. The architects of the original internet did not and could not envision the many new technologies and applications that are now common for the internet. In addition, some engineering solutions designed for the original internet later generated some technical problems, although initially these problems were not detrimental or obvious. As the evolution of the internet shows, the original internet architecture cannot serve current or future internet applications efficiently.

This Part explains the underlying technologies and the evolution of the internet. Section I.A gives a technical overview of the internet. Section I.B discusses some inherent technical problems of the internet. Sections I.C and I.D discuss real-time applications and their requirements for Quality of Service (QoS). Section I.E shows how the internet has continuously evolved to adapt to new technologies and applications.

A. A Technical Overview

The internet is a computer network.⁶ For internet communication to occur, the source computer splits digitized data into small pieces called packets and submits those packets into the network. The network then de-

5. See JAMES F. KUROSE & KEITH W. ROSS, *COMPUTER NETWORKING* 52-59 (3d ed. 2005).

6. This Section gives a very high-level overview of some technical aspects of the internet that are most relevant to the network neutrality debate. See *generally* KUROSE & ROSS, *supra* note 5; DIMITRI BERTSEKAS & ROBERT GALLAGHER, *DATA NETWORKS* (2d ed. 1992).

livers the packets to the destination computer.⁷ Multiple intermediate hops, called routers, exist between the source and the destination.⁸ Along this path, each router receives a packet from an upstream router and then forwards it to a downstream router.⁹ Thus the packet is “routed” hop-by-hop to its destination. Each packet contains some basic information such as Internet Protocol (IP) addresses of its source and destination.¹⁰

Routers run sophisticated software called routing protocols among themselves to learn the topology of the internet and establish routing tables.¹¹ A router knows how to forward a packet by looking at both its routing table(s) and the destination IP address of the packet.¹² When packets arrive, a router may need to queue them before forwarding them on.¹³ The queuing is necessary because packets may arrive from different upstream routers around the same time and need to go to the same downstream router, but the instant router has fixed bandwidth—limited by installed communication links—toward that downstream router, and can’t accommodate all of the packets at once.¹⁴ Thus a competition for limited resources may exist in a router, and a packet may experience unpredictable queuing delay at each router. The technical essence of the NN debate is whether routers can reduce the queuing delays of some packets by increasing the delays of other packets.

B. Inherent Technical Problems of the Internet

Most internet applications send data in random bursts of variable sizes.¹⁵ Such traffic makes queuing delays even more unpredictable.¹⁶ When queuing occurs, a router needs to store queued packets in memory buffers. When the buffers are full, the router has to drop either new arriving packets or existing queued packets.¹⁷ When such packet-dropping continues, a

7. KUROSE & ROSS, *supra* note 5, at 4.

8. The intermediate hops may also be switches, which differ slightly from routers. For the purpose of discussing network neutrality, this technical difference is immaterial, and this Note does not make distinction between routers and switches. *See id.* at 4, 18, 301-04.

9. *Id.* at 4.

10. *Id.* at 81, 327, 331-35.

11. *Id.* at 301-04.

12. *Id.*

13. *Id.* at 18-19.

14. *Id.*

15. *See* BERTSEKAS & GALLAGHER, *supra* note 6, at 14; *see also* K. R. RAO ET AL., INTRODUCTION TO MULTIMEDIA COMMUNICATIONS 605-06 (2006).

16. *See* K. R. RAO ET AL., *supra* note 15, at 605-06.

17. KUROSE & ROSS, *supra* note 5, at 19, 42.

phenomenon called “network congestion” occurs,¹⁸ for which the key Transport Control Protocol (TCP) of the internet has a fairly sophisticated congestion control mechanism.¹⁹ Under this mechanism, the TCP of each application²⁰ independently detects network congestion and slows down the traffic of that application. When all applications cooperate, the network may recover from serious congestion.²¹ Network congestion was not a problem in the early days because the original internet had light traffic loads and no real-time applications. It was also because TCP can recover dropped packets by retransmission.²² Thus, users simply did not notice transient packet losses of their applications.

C. The Challenges of Real-time Applications

The arrival of real-time applications distinguishes the modern internet from the original internet.²³ A real-time application such as streaming video or online gaming is time-sensitive; its data can only tolerate a very limited end-to-end delay.²⁴ Because the communication is in real time, a packet not meeting the end-to-end delay requirement is useless and is equivalent to a lost packet.²⁵ Loss or significant end-to-end delay of a small fraction of packets may lower the quality of the communication to the point of rendering the application useless.²⁶

Real-time applications can be classified as interactive or non-interactive.²⁷ For a non-interactive real-time application such as streaming video, only one direction of the communication is real-time. Data caching,

18. See BERTSEKAS & GALLAGHER, *supra* note 6, at 493.

19. See KUROSE & ROSS, *supra* note 5, at 188, 264-84.

20. TCP is implemented within the operating system of a computer; thus, every computer on the internet has a TCP module. See BERTSEKAS & GALLAGHER, *supra* note 6, at 29.

21. See KUROSE & ROSS, *supra* note 5, at 264-84 (describing how TCP, working properly, controls congestion).

22. *Id.* at 239-46.

23. See Domenico Ferrari, *Client Requirements for Real-Time Communication Services*, 26 IEEE COMM'NS. MAG. 65 (1990) (envisioning real-time applications on the internet and studying their performance requirements), available at <http://www.ietf.org/rfc/rfc1193.txt>; see also KUROSE & ROSS, *supra* note 5, at 565-69, 643 (discussing multimedia internet applications).

24. See KUROSE & ROSS, *supra* note 5, at 586. Besides the queuing delay, an end-to-end packet delay includes other components such as processing, transmission and propagation delays. *Id.*; BERTSEKAS & GALLAGHER, *supra* note 6, at 150.

25. See KUROSE & ROSS, *supra* note 5, at 585-86.

26. *Id.* at 586.

27. *Id.* at 566-69.

a technique by which a destination computer collects and temporarily buffers data and then replays the buffered data a short while later, can “smooth out” the packet delays and rebuild a “delayed copy” of the original real-time data.²⁸ Data caching, however, cannot overcome excessively random delays. Interactive real-time applications such as online gaming or tele-surgery, which are real-time in both directions, are the most challenging ones for the internet; data caching does not help them.

Applications such as web browsing have real-time characteristics, but are not real-time *per se*. For such applications, a user will not be as concerned with the delays of individual data packets as with the throughput, or the average data transfer rate,²⁹ of her communications. But the individual packet delays cannot be excessive; otherwise the user would think that the communication is “frozen.”

D. Quality of Service

Quality of Service (QoS), a technical term describing the quality of communication that an internet application receives, is at the center of the technical dimension of the network neutrality debate. As discussed earlier, queuing within routers can cause queuing delay and packet loss. Because it is useless to recover excessively delayed or lost packets for real-time applications, the major QoS metrics for such applications are end-to-end delay bounds and packet loss rates, where an end-to-end delay bound refers to the maximum end-to-end delay that an application demands from the network, and a packet loss rate refers to the fraction of the packets that either get lost due to full buffers or fail to meet the end-to-end delay bound. Real-time applications cannot work well without reasonable QoS. In contrast, non-real-time applications can recover lost packets without disrupting user experiences. Thus, QoS is generally not a concern for non-real-time applications. NN proponents tend to downplay or misinterpret the importance of QoS because they are not familiar with the technical challenges faced by QoS provision.³⁰

28. *Id.* at 586-87.

29. Roughly, throughput is defined as the average data transfer rate over a relatively long period; it is not the instantaneous data transfer rate. *See* KUROSE & ROSS, *supra* note 5, at 255-56; BERTSEKAS & GALLAGHER, *supra* note 6, at 282 (discussing throughput in the context of a multiaccess local area network).

30. *See, e.g.*, LAWRENCE LESSIG, *THE FUTURE OF IDEAS* 46-47 (2001) (asserting “technologists have begun” to change the internet architecture to provide QoS and expressing willingness to “believe in the potential of essentially infinite bandwidth” as a QoS solution). Lessig did not seem to be aware that the networking community started QoS research in the 1980s. *See, e.g.*, KUROSE & ROSS, *supra* note 5, at 636.

A router can take certain measures to provide QoS. A router controls queuing delays primarily via link schedulers.³¹ A link scheduler is a functional module within the router that controls the sending order of queued packets at the outgoing link toward a downstream router. Because the link has a fixed bandwidth, the scheduler cannot limit the delay of every waiting packet if the queue is long; it can only limit the delays of some packets by giving those packets higher priorities for transmission. The router controls packet losses primarily via buffer managers.³² A buffer manager is another functional module within the router that controls the access to memory buffers by assigning priorities to packets. To save space for high-priority packets when a buffer is full or is close to being full, the manager drops low-priority packets, which are either just arriving or already being buffered.³³ Thus, a router prioritizes packets to offer QoS.

The simplest link scheduler is First-In-First-Out (FIFO), which sends packets out in their arrival order.³⁴ This order-preservation nature of FIFO is tightly coupled with the “neutrality” concept in the NN debate. FIFO is a trivial link scheduler because it does not practically prioritize packets. However, it is very easy to implement FIFO, and thus FIFO became ubiquitous in older routers and is still dominant in modern routers. However, a link scheduler can be very sophisticated. It can take many parameters as its inputs, such as the end-to-end delay bound and/or local delay bound of each application, the traffic characteristics of that application such as its average data rate and peak data rate, and so on.³⁵ Based on those parameters, a scheduler can implement very complex algorithms. Like a link scheduler, a buffer manager can also implement complex algorithms.³⁶

Besides link-scheduling and buffer management, the internet may also need ancillary mechanisms such as “resource reservation,” “call admission control” and “traffic conditioning” to provide QoS.³⁷ Resource reservation enables a newly launched application to negotiate with the network on the traffic characteristics and QoS requirements of that application, and accordingly, to reserve some network resources such as link bandwidth or buf-

31. See KUROSE & ROSS, *supra* note 5, at 321, 621.

32. *Id.* at 322.

33. *Id.*

34. FIFO is also called First-Come-First-Served (FCFS). See *id.* at 321, 621.

35. See, e.g., KUROSE & ROSS, *supra* note 5, at 621-25; BERTSEKAS & GALLAGHER, *supra* note 6, at 495.

36. See KUROSE & ROSS, *supra* note 5, at 322.

37. See *id.* at 625-43.

fer space.³⁸ With resource reservation, the application can expect that its packets will traverse the network without excessive delays or losses. Call admission control complements resource reservation by allowing the network to determine whether sufficient network resources can be reserved for an application, and whether the network should accordingly admit or reject that application; call admission control prevents over-reservation of network resources.³⁹ The network also needs traffic conditioning to monitor an application and ensure that the application will not generate a traffic load higher than what was agreed upon at the resource reservation phase.⁴⁰ Under each of these ancillary mechanisms, the network essentially prioritizes individual applications or their packets.

Some have argued that over-provision, which means building a network with significantly more bandwidth than what the normal level of network traffic load demands, will solve the QoS problem.⁴¹ However, the idea has not become mainstream.⁴² Two related problems challenge this idea. First, the “normal level” of network traffic load is a moving target, because whenever the network has “extra resources” due to over-provision, those “extra resources” will induce newer applications with heavier traffic to appear. Such heavier traffic tends to exhaust those “extra resources.” Second, this idea can at best “almost” solve the QoS problem: it cannot guarantee QoS for mission-critical applications such as tele-surgery because the network does not take *ex ante* measures such as link-scheduling and buffer management but relies on chance to provide QoS. When the network indeed has moderate traffic load during a particular period, the over-provision approach toward QoS may appear to work, but it tends to create an illusion that it will continue to work.⁴³

38. *See id.* at 625, 629, 636-37.

39. *See id.* at 628-29, 642-43.

40. *See id.* at 625-28.

41. *Id.* at 571-72 (discussing the debate within the networking research community on how to provide QoS); *see, e.g.*, LESSIG, *supra* note 30. Although some networking researchers disfavor a QoS approach that may fundamentally change the internet architecture, they are primarily concerned with the technical complexities of such a change, which differs from the concerns of network neutrality proponents. *See* KUROSE & ROSS, *supra* note 5, at 571-72. This issue is discussed further in Section II.B.

42. *See* KUROSE & ROSS, *supra* note 5, at 628-43 (discussing the current internet QoS standard, which includes two QoS architectures, Intserv and Diffserv, and an accompanying signaling protocol, RSVP).

43. *See id.* at 636, 631 (discussing the phenomenon that internet users not paying for QoS may perceive QoS-comparable quality for their applications when the network is not loaded, but such quality rapidly degrades when the network becomes more loaded).

E. Internet Architecture Is Alive and Growing

The internet is a gigantic network of smaller heterogeneous networks with an evolving architecture. The Internet Engineering Task Force (IETF) is an international organization in charge of the technical development of the internet.⁴⁴ IETF sets up the de facto technical standards for the internet by publishing a series of documents called "Request for Comments" ("RFCs").⁴⁵ The actual technical work of IETF is split among many Working Groups ("WGs") for specific technical areas of the internet.⁴⁶ As of this writing, 121 active WGs exist under IETF.⁴⁷ Those WGs keep producing new RFCs in their individual technical areas and thus keep shaping the overall internet architecture.⁴⁸

Although the internet has enjoyed rapid growth for many years, the standard-setting process for the internet is still accelerating.⁴⁹ Beyond the sheer number of new RFCs produced each year, the internet continues to

44. See Harald Tveit Alvestrand, A Mission Statement for the IETF (2004), <http://www.ietf.org/rfc/rfc3935.txt>; Paul Hoffman, The Tao of IETF: A Novice's Guide to the Internet Engineering Task Force (2006), <http://www.ietf.org/rfc/rfc4677.txt>. IETF is not the only organization that contributes to technical standards related to the internet; many other organizations, such as the Institute of Electrical and Electronics Engineers (IEEE), also set up technology-specific standards that directly impact the internet.

45. See RFC Editor, <http://www.rfc-editor.org> (last visited Feb. 27, 2007).

46. See Hoffman, *supra* note 44, at 23-27 (describing IETF working groups).

47. See Active IETF Working Groups, <http://www.ietf.org/html.charters/wg-dir.html> (last visited Mar. 18, 2007). There are 12 WGs in the Application Area, 1 WG (Intellectual Property Rights) in the General Area, 29 WGs in the Internet Area, 17 WGs in the Operations and Management Area, 14 WGs in the Real-time Applications and Infrastructure Area, 16 WGs in the Routing Area, 17 WGs in the Security Area, and 15 WGs in the Transport Area. *Id.*

48. In February 2007, the cumulative index number of all RFCs reached a whopping 4,816, with the first RFC produced in 1968 (RFC 31; for some reason all other RFCs, including RFC 1, were produced after 1968). An RFC may go through several versions; typically the latest version of a RFC makes older versions of the same RFC obsolete, but the index number will simply accrue. See RFC Index, http://www.ietf.org/iesg/lrfc_index.txt (last visited Feb. 27, 2007).

49. There were about 234 new RFCs in 2003, about 281 new RFCs in 2004, about 327 new RFCs in 2005, and about 459 new RFCs in 2006. In contrast, there were only 1,068 RFCs produced before 1990. See RFC Index, *supra* note 48. For a new internet standard document to gain RFC status, it must go through an Internet-Draft stage for wide discussion in the networking community. Any organization or individual can propose an Internet-Draft, but many drafts do not end up with RFC status. Because there are so many Internet-Drafts proposed every year, they are not even archived. See Internet-Drafts, <http://www.ietf.org/ID.html> (last visited on Feb. 27, 2007). Thus, the actual internet standard-setting activities are even more rigorous than the growing number of RFCs suggests.

evolve even in its most basic areas. For its key TCP and IP protocols, many changes and updates were made in the last twenty-five years.⁵⁰ Routing is an extremely critical function for any data network, and internet routing keeps evolving.⁵¹

Many of the IETF WGs and the RFCs produced by them represent technical progresses that are completely new to the original internet. The first RFC dedicated to real-time applications appeared in 1990,⁵² while today fourteen WGs work in the Real-time Applications and Infrastructure Area.⁵³ No major RFCs on internet security appeared before 1990, but today seventeen WGs work in the Security Area alone.⁵⁴ As another example, the modern internet adopts a two-level hierarchical routing architecture to accommodate the exponentially growing numbers of computers and routers on the internet.⁵⁵ This architecture contrasts sharply with the

50. The first RFC for the TCP protocol was published in 1981 as RFC 793. *See* RFC Index, *supra* note 48. TCP has received numerous improvements since that time, and the latest RFC, which directly updates RFC 793, was RFC 3168, published in 2001. *Id.* The latest TCP-specific RFC was RFC 4614, published in September 2006. *Id.* Similarly, the first RFC for the IP protocol was published in 1981 as RFC 791, which has been known as IPv4 because the version number of the protocol as specified in this RFC was 4. *See* Information Sciences Institute, Internet Protocol 11 (1981), <http://www.ietf.org/rfc/rfc0791.txt>. IPv4 was last directly updated by RFC 1349 in 1992. *See* RFC Index, *supra* note 48. The next version of the IP protocol, known as IPv6, was first published in 1995 as RFC 1883, and last directly updated in 1998 by RFC 2460. *Id.* The IETF IPv6 WG is a very active group and has produced numerous IPv6 related RFCs, with the latest as of this writing published in August 2006 as RFC 4620. *See* IP Version 6 Working Group (ipv6) Charter, <http://www.ietf.org/html.charters/ipv6-charter.html> (last visited Feb. 27, 2007).

51. For example, the most important routing protocol on the internet, Border Gateway Protocol (BGP) was first specified in 1989 as RFC 1105. *See* RFC Index, *supra* note 48; RADIA PERLMAN, INTERCONNECTIONS: BRIDGES, ROUTERS, SWITCHES, AND INTER-NETWORKING PROTOCOLS 435 (2d ed. 2000) (arguing that the internet is probably stuck with BGP forever). The subsequent direct updates of BGP included RFC 1163 in 1990, RFC 1267 in 1991 (BGP-3), RFC 1654 in 1994 (BGP-4), RFC 1771 in 1995 and RFC 4271 in 2006. *Id.* During this period, the IETF Inter-Domain Routing WG produced many other BGP related RFCs. *See* Inter-Domain Routing (IDR) Charter, <http://www.ietf.org/html.charters/idr-charter.html> (last visited Feb. 27, 2007).

52. *See* Ferrari, *supra* note 23.

53. *See* Active IETF Working Groups, Real-time Applications and Infrastructure Area, <http://www.ietf.org/html.charters/wg-dir.html#Real-time> (last visited Feb. 27, 2007).

54. *See* Active IETF Working Groups, Security Area, <http://www.ietf.org/html.charters/wg-dir.html#Security> (last visited Feb. 27, 2007).

55. *See generally* PERLMAN, *supra* note 51, at 367-445 (discussing routing protocols of the internet); KUROSE & ROSS, *supra* note 5, at 370-84 (discussing same).

simple routing architecture of the original internet, in which a clear hierarchy did not exist.⁵⁶ All the examples and data above show that the internet architecture is alive and growing.

II. DEVELOPMENT OF THE NETWORK NEUTRALITY DEBATE

This Part describes the development of the network neutrality debate from several angles. Section II.A discusses how recent commercial disputes about internet usage have brought NN to the attention of the general public. Section II.B discusses how the NN concept and debate was developed among academics. Section II.C discusses the regulatory and legislative developments surrounding NN.

A. Controversies in the Internet Service Market and in the Public

As the internet grew, disputes emerged between ISPs and their customers over who should have what rights regarding internet usage. This is hardly surprising because the internet was not designed to be a commercial network; its commercialization and exponential growth came too fast and too unexpectedly.

1. Controversies Over Internet Access Rights of Consumers

Although cable companies have used contracts to prevent their residential customers from specific internet usage for quite some time,⁵⁷ controversies related to internet usage did not receive much publicity until recently. Most of those controversies involved blocking some internet content, sites, or services.

In 2004, Madison River Communications LLC ("Madison River"), a small ISP in North Carolina, blocked its customers from using the market-leading Vonage Voice over IP (VoIP) service.⁵⁸ After the Federal Communications Commission (FCC) intervened, Madison River restored the

56. See 1 DOUGLAS E. COMER, INTERNETWORKING WITH TCP/IP 234-40, 249-55 (3d ed. 1995) (discussing the simple early internet routing architecture and the first inter-domain routing protocol, EGP); PERLMAN, *supra* note 51, at 367-68 (discussing the history of intra-domain routing protocols). One of the earliest intra-domain routing protocols, Routing Information Protocol (RIP), did not exist until the late 1980s. See *id.* at 367; C. Hedrick, Routing Information Protocol (1988), <http://www.ietf.org/rfc/rfc1058.txt>.

57. See Tim Wu, *Network Neutrality, Broadband Discrimination*, 2 J. TELECOMM. & HIGH TECH. L. 141, 156-62, 173-75 (2003) (surveying broadband usage restrictions) [hereinafter Wu, *Network Neutrality, Broadband Discrimination*].

58. See Declan McCullagh, *Telco agrees to stop blocking VoIP calls*, CNET NEWS.COM, Mar. 3, 2005, http://news.com.com/2100-7352_3-5598633.html.

service, entered into a consent decree, and paid a \$15,000 fine.⁵⁹ In 2005, Canadian telephone giant Telus blocked the access to a website supporting the company's labor union during a labor dispute; the blocking lasted for approximately sixteen hours.⁶⁰ In April 2006, Time Warner's AOL blocked all e-mails mentioning an advocacy campaign opposing AOL's pay-to-send e-mail scheme, but the company said the incident was a "software glitch."⁶¹ Importantly, *In re* Madison River Communications LLC remains the only administratively adjudicated internet-blocking case as of this writing, and no internet-blocking case has ever been brought to a court.

2. Industry Giants in Dispute

ISPs now complain that major internet content providers (ICPs) such as Google, Yahoo, and Microsoft generate too much traffic and that such traffic burdens the network and worsens the experience for general internet users. ISPs have proposed ways to charge ICPs higher fees. For example, AT&T and the former BellSouth proposed to provide better QoS to either their own traffic or to ICPs willing to paying higher fees.⁶² Such a scheme has been generally termed a "two-tier" internet.⁶³ Debates over such proposals turned bitter. Some ISP executives have used hyperbolic language to threaten ICPs with higher fees.⁶⁴ Those threats resulted in equally hyperbolic responses from ICPs such as Google, counter-threatening to pursue network neutrality legislation and antitrust law-

59. *Id.*; see also *In re* Madison River Commc'ns LLC, 20 F.C.C.R. 4295 (2005), available at http://hraunfoss.fcc.gov/edocs_public/attachmatch/DA-05-543A2.pdf.

60. See CBC News, *Telus Cuts Subscriber Access to Pro-Union Website* (July 24, 2005), <http://www.cbc.ca/canada/story/2005/07/24/telus-sites050724.html>.

61. See Stefanie Olsen, *AOL charged with blocking opponents' e-mail*, CNET NEWS.COM, Apr. 13, 2006, http://news.com.com/2100-1030_3-6061089.html.

62. See, e.g., Hiawatha Bray, *Telecoms Want Their Products to Travel on a Faster Internet*, BOSTON GLOBE, Dec. 13, 2005, http://www.boston.com/business/globe/articles/2005/12/13/telecoms_want_their_products_to_travel_on_a_faster_internet/?page=full.

63. *Id.*

64. See, e.g., Jonathan Krim, *Executive Wants to Charge for Web Speed*, WASH. POST, Dec. 1, 2005, at D5, available at <http://www.washingtonpost.com/wp-dyn/content/article/2005/11/30/AR2005113002109.html> (analogizing NN to regulating what results Google's search engine can return); Arshad Mohammed, *Verizon Executive Calls for End to Google's "free lunch"*, WASH. POST, Feb. 7, 2006, at D1, available at <http://www.washingtonpost.com/wp-dyn/content/article/2006/02/06/AR2006020601624.html> (accusing Google of enjoying a free lunch by doing business via nothing but cheap servers).

suits.⁶⁵ Not surprisingly, telecommunications equipment vendors such as Cisco, Motorola, Qualcomm, and Corning joined their customers to oppose NN because they expected to sell ISPs equipment that enable QoS.⁶⁶

3. *Advocacy Groups Adding Heat to the Debate*

Numerous advocacy groups are taking strong positions on the network neutrality debate. Among many others, SavetheInternet.com is a NN-supporting coalition,⁶⁷ which includes the largest consumer advocacy groups in the nation.⁶⁸ Hands Off The Internet is an anti-regulation coalition funded by major telecommunications companies.⁶⁹ As of this writing, the SavetheInternet.com coalition has set up an ambitious agenda to push Congress to pass NN laws.⁷⁰ Collectively, such advocacy groups have generated much publicity for the NN debate.

B. Conceptual Development of Network Neutrality Within Academia

Some legal scholars initiated and advocated the network neutrality concept, but they tend to disagree on the scope of NN. Other legal scholars and economists do not believe in NN as a solid public policy. This Section gives a detailed account of these developments.

65. See Mohammed, *supra* note 64 (claiming that NN legislation protects the internet's freedom, consumer choices, economic growth, technological innovation and U.S. global competitiveness); Anne Broache, *Net neutrality debate still simmers*, CNET NEWS.COM, July 11, 2006, http://news.com.com/2100-1028_3-6092927.html (threatening antitrust lawsuits if NN legislation fails).

66. See Anne Broache, *Tech manufacturers rally against net neutrality*, CNET NEWS.COM, Sept. 19, 2006, http://news.com.com/2100-1028_3-6117241.html.

67. See SavetheInternet.com, <http://www.savetheinternet.com> (last visited Feb. 27, 2007).

68. See SavetheInternet.com Charter Members, <http://www.savetheinternet.com/coalition> (last visited Feb. 27, 2007).

69. See Hands Off The Internet, <http://www.handsoff.org> (last visited Feb. 27, 2007); Jeffrey H. Birnbaum, *No Neutral Ground in This Internet Battle*, WASH. POST, June 26, 2006, at D1, available at http://www.washingtonpost.com/wp-dyn/content/article/2006/06/25/AR2006062500735_pf.html (reporting the funding sources of Hands Off The Internet).

70. See SavetheInternet.com, *supra* note 67.

1. *Invention of the Term and a Narrow View on Network Neutrality*

In 2002, Professors Tim Wu and Lawrence Lessig expressed their concerns about some cable carriers blocking access to certain websites.⁷¹ Wu and Lessig felt that the behavior was “a threat to the ‘neutrality’ of the internet,”⁷² and in 2003, they sent the FCC an *ex parte* letter proposing a set of network neutrality rules on internet broadband access.⁷³ They proposed to grant internet users a general right to use their broadband connections as long as the usage was not “publicly detrimental.”⁷⁴ They also proposed to prohibit carriers from restricting this right,⁷⁵ subject to a set of exceptions detailing “publicly detrimental” behaviors.⁷⁶

Separately, Wu studied NN and discriminatory behaviors in the broadband access market in a now widely cited paper published in 2003.⁷⁷ He also updated his suggested NN rules in 2004.⁷⁸ In 2003, Wu acknowledged that some internet applications required special QoS guarantees.⁷⁹ Indeed, Wu and Lessig had explicitly listed QoS provision as an exception to their NN rules.⁸⁰ But in 2004 Wu dropped this exception without explanation.⁸¹ Wu also implicitly endorsed price discrimination⁸² in internet

71. See Tim Wu, Network Neutrality FAQ, http://www.timwu.org/network_neutrality.html (last visited Jan. 15, 2007).

72. *Id.*

73. See Letter from Tim Wu, Associate Professor, University of Virginia School of Law, and Lawrence Lessig, Professor of Law, Stanford Law School, to the Fed. Comm'n's Comm'n (Aug. 22, 2003) (on file with author), available at http://www.freepress.net/docs/wu_lessig_fcc.pdf.

74. *Id.* at 13.

75. *Id.*

76. *Id.*

77. See Wu, *Network Neutrality, Broadband Discrimination*, *supra* note 57, at 156-62, 173-75.

78. Tim Wu, *The Broadband Debate: A User's Guide*, 3 J. TELECOMM. & HIGH TECH. L. 69, 95 (2004) [hereinafter Wu, *The Broadband Debate*].

79. See Wu, *Network Neutrality, Broadband Discrimination*, *supra* note 57, at 149.

80. See Wu & Lessig, *supra* note 73, at 13.

81. See Wu, *The Broadband Debate*, *supra* note 78, at 95.

82. Price discrimination is a term in economics and “is one of the most prevalent forms of marketing practices.” See generally Hal Varian, *Price Discrimination*, in 1 HANDBOOK OF INDUSTRIAL ORGANIZATION 598 (1987). Standard economics taxonomy uses first-degree, second-degree, and three-degree price discrimination to distinguish different price discrimination scenarios. *Id.* at 601-17; cf. CARL SHAPIRO & HAL R. VARIAN, *INFORMATION RULES: A STRATEGIC GUIDE TO THE NETWORK ECONOMY* 39-81 (1998) (applying the three types of price discrimination to information goods).

services if such discrimination was not based on application types.⁸³ More generally, he agreed that there existed “both justified and suspect bases of discrimination.”⁸⁴

2. *Root of the Term and a Broad View on Network Neutrality*

To Lessig, however, the NN proposal is just a small example of his general belief that the internet is a platform for innovation and should remain an “innovation commons.”⁸⁵ Lessig applied a model with three layers—a physical layer, a code (logical) layer, and a content layer—to study a communication system by determining whether each layer of the system is free or controlled.⁸⁶ He asserted that the internet has a controlled physical layer, a free code layer, and a somehow controlled but largely free content layer.⁸⁷ Lessig centrally asserts that these last two layers together turned the whole internet into an innovation commons.⁸⁸

Lessig based his free-code-layer model⁸⁹ partially on an end-to-end principle promoted by some early internet architects, where the principle says that most of the internet intelligence should exist at the edge of the network and within applications, rather than inside the network.⁹⁰ Although this principle was articulated in a purely technical context that reflected the state-of-the-art of the internet at the time, Lessig asserted that it was good public policy because it made the internet neutral to applications

83. See Wu, *Network Neutrality, Broadband Discrimination*, *supra* note 57, at 154 (proposing to use different tiers of service with low, medium, or high bandwidth to eliminate discrimination exclusively based on application types). Wu’s language in the 2003 study was vague as to whether he regarded this proposal to be a form of “price discrimination.” In economics, Wu’s proposal is arguably *product differentiation*, but the boundary between these two marketing practices can sometimes be fuzzy. Jean Tirole, a well-respected economist and competition policy authority, acknowledged the difficulty to “offer an all-encompassing definition” for price discrimination, and pointed out that product differentiation is “also partly an attempt to capture consumer surplus by separating consumers into different groups.” JEAN TIROLE, *THE THEORY OF INDUSTRIAL ORGANIZATION* 133-34 (1988).

84. See Wu, *Network Neutrality, Broadband Discrimination*, *supra* note 57, at 150.

85. See LESSIG, *supra* note 30, at 19-23.

86. *Id.* at 23 (using the word “free” in the “freedom” sense).

87. *Id.* at 25.

88. *Id.* at 23, 48, 57-58, 72, 85-86.

89. Lessig attributed the largely free content layer primarily to the open source software movement. *Id.* at 49-61, 72.

90. See J. H. Saltzer et al., *End-to-End Arguments in System Design*, 2 ACM TRANSACTIONS ON COMPUTER SYSTEMS 277 (1984), available at <http://web.mit.edu/Saltzer/www/publications/endtoend/endtoend.pdf>.

and thus encouraged innovation.⁹¹ In particular, Lessig argued: (1) innovators with new applications need only to connect their computers to the internet without modifying the network; (2) because the network is not optimized to any particular applications, it is open to innovations not originally imagined; and (3) the principle effects a neutral platform “because the network owner can’t discriminate against some packets while favoring others.”⁹² This last argument is the most general statement of network neutrality and it bans ISPs from prioritizing packets in any way; in particular, ISPs cannot use product differentiation or price discrimination to serve different markets, especially an emerging QoS market.

Lessig’s innovation-commons belief was embodied in his proposal of an open access policy for the broadband internet access market.⁹³ This open access proposal, discussed in the following Section, predated the Wu-Lessig NN proposal and can be regarded as an early version of NN. ◦

3. *Open Access: an Early Version of Network Neutrality*

For the greater part of the 1990s, phone line dial-up was almost the only residential internet access option in the nation. In the late 1990s, two broadband access options became available: Digital Subscriber Line (DSL) and cable modem service. Under the Telecommunications Act of 1996 (“1996 Act”), the FCC classified DSL service as a “telecommunication service”⁹⁴ and subjected to regulation as a “common carrier,” meaning that local phone companies must open their wires to competing DSL providers on a nondiscriminatory basis. Under the 1996 Act, however, cable modem service was classified as an “information service,”⁹⁵ and thus cable companies could monopolize the cable broadband access market.

Professors Lessig and Mark Lemley worried that this monopoly would further reduce the competition and drive up prices in the broadband market.⁹⁶ In a paper published in 2001, they advocated that the FCC adopt an “open access” policy toward cable companies, meaning that cable companies need to open their wires to other ISPs, but do not need to be subject to a full-scale “common carrier” rule.⁹⁷ Their focal point, however, was that

91. See LESSIG, *supra* note 30, at 34-37.

92. *Id.* at 36-37.

93. See Mark A. Lemley & Lawrence Lessig, *The End of End-to-End: Preserving the Architecture of the Internet in the Broadband Era*, 48 UCLA L. REV. 925 (2001).

94. 47 U.S.C. § 153(43), (46) (2000).

95. *Id.* § 153(20) (2000).

96. See Lemley & Lessig, *supra* note 93, at 929, 934-36.

97. See *id.* at 927-29, 963-64.

the monopoly allowed the cable companies to bundle the access service with other services such as backbone internet services or content services.⁹⁸ They argued that this potential vertical integration might damage the end-to-end principle, destroy internet neutrality, and impede internet innovation because it would give cable companies excessive power to improperly influence or even control the internet architecture.⁹⁹

In contrast, Wu has argued that open access is neither a correct nor an effective approach toward network neutrality.¹⁰⁰ Among other things, he argued that open access may prevent broadband operators from “architectural cooperation with ISPs for the purpose of providing QoS dependent applications.”¹⁰¹

4. *Different Views on Network Neutrality*

Numerous scholars have taken opposing or cautious views on network neutrality, either from a policy perspective or from an economic perspective. Among them, Professor Christopher Yoo is the leading academic opposing NN. In a series of papers, Yoo has opposed NN on several grounds.¹⁰² He has argued that NN will reduce ISPs’ incentives to invest and innovate,¹⁰³ that NN will defeat the QoS requirements from newer internet applications,¹⁰⁴ and that the end-to-end principle has been misread into the NN debate.¹⁰⁵

Professor James Speta has argued that regulations such as NN are unnecessary because ISPs have no incentives to discriminate against independent applications.¹⁰⁶ Adam Thierer has argued that the “dumb pipe” approach toward the internet architecture, as mandated by the end-to-end

98. *Id.* at 940-43.

99. *Id.* at 943-46.

100. See Wu, *Network Neutrality, Broadband Discrimination*, *supra* note 57, at 147-49.

101. *Id.* at 149.

102. See Christopher Yoo, *Would Mandating Broadband Network Neutrality Help Or Hurt Competition? A Comment on the End-to-End Debate*, 3 J. TELECOMM. & HIGH TECH. L. 23 (2004) (criticizing network neutrality) [hereinafter Yoo, *A Comment on the End-to-End Debate*]; Christopher Yoo, *Beyond Network Neutrality*, 19 HARV. J.L. & TECH. 1 (2005) (calling for network diversity rather than network neutrality); Christopher Yoo, *Network Neutrality and the Economics of Congestion*, 94 GEO. L.J. 1847 (2006) (opposing network neutrality by applying an economic theory of network congestion).

103. See Yoo, *A Comment on the End-to-End Debate*, *supra* note 102, at 63.

104. See *id.* at 35-36.

105. See *id.* at 43-46.

106. See James B. Speta, *Handicapping the Race for the Last Mile? A Critique of Open Access Rules for Broadband Platforms*, 17 YALE J. ON REG. 39, 84-85 (2000).

principle, is not good public policy, because it oversimplifies the need of emerging internet applications and also discourages the development of competing infrastructures.¹⁰⁷ Thierer also has agreed with Yoo in that NN will reduce ISPs' incentives to invest and innovate.¹⁰⁸

Professors Joseph Farrell and Philip Weiser gave a informative account of the relationship between vertical integration and antitrust laws in the context of telecommunications.¹⁰⁹ Farrell and Weiser showed that integrative efficiency, subject to certain exceptions,¹¹⁰ may exist for vertical integrations and can be a rationale against an open access regulation.¹¹¹ This view is an answer to Lemley and Lessig's concern on ISPs' service-bundling behaviors.¹¹² Separately, Weiser has proposed to let the FCC take an antitrust-like, *ex post* approach to ensure competition and prevent discrimination in the internet service market.¹¹³

C. Regulatory and Legislative Developments

In light of the Wu-Lessig proposal, in February 2004 then FCC Chairman Michael Powell set forth four "Internet freedom" principles: (1) freedom to access content; (2) freedom to run applications; (3) freedom to attach devices; and (4) freedom to obtain service plan information.¹¹⁴ Noticeably, *Madison River* was adjudicated after those principles were announced.¹¹⁵ In June 2005, the Supreme Court upheld, in *National Cable & Telecommunications Association v. Brand X Internet Services*, the FCC's classification of cable modem service as an information service.¹¹⁶ In that case, the FCC filed a declaratory ruling on this classification and the Supreme Court held that the ruling was lawful.¹¹⁷ Soon after *Brand X*, the

107. See Adam D. Thierer, *Are "Dumb Pipe" Mandates Smart Public Policy? Vertical Integration, Network Neutrality, and the Network Layer Model*, 3 J. TELECOMM. & HIGH TECH. L. 275, 276, 287-91 (2005).

108. *Id.* at 287-88.

109. See Joseph Farrell & Philip J. Weiser, *Modularity, Vertical Integration, and Open Access Policies: Toward a Convergence of Antitrust and Regulation in the Internet Age*, 17 HARV. J.L. & TECH. 85 (2003).

110. *Id.* at 105-19.

111. *Id.* at 100-05.

112. See Lemley & Lessig, *supra* note 93.

113. See Philip J. Weiser, *Toward A Next Generation Regulatory Regime*, 35 LOY. U. CHI. L.J. 41, 74-84 (2003).

114. See Michael Powell, *Preserving Internet Freedom: Guiding Principles for the Industry*, 3 J. TELCOMM. & HIGH TECH. L. 5, 11-12 (2004).

115. See McCullagh, *supra* note 58.

116. 545 U.S. 967, 985-1000 (2005).

117. *Id.*

FCC reclassified DSL from a telecommunication service to an information service.¹¹⁸ At the same time, the FCC issued a policy statement that followed the framework of Powell's four "Internet freedom" principles but limited the scope of "freedom."¹¹⁹ Although this statement sounds like a weak endorsement of NN, proponents of NN have regarded the FCC's reclassification of the DSL market as a threat to NN.¹²⁰ In response, they brought their concerns to Congress.

Since the FCC's reclassification of DSL service, Congress has been exceptionally active on network neutrality legislation with Republicans generally opposing it, and Democrats supporting it.¹²¹ Five bills on NN were introduced between March and May 2006, among which the Communications Opportunity, Promotion, and Enhancement Act ("the COPE Act"), a comprehensive bill that aimed to reform the 1996 Act, was the most important one.¹²² The COPE Act incorporated the "Internet freedom" principles announced by Powell¹²³ and gave the FCC limited authority to oversee internet usage discriminations, but such authority has been regarded by some commentators as being even less than what exists under the current law.¹²⁴ Representative Ed Markey offered an amendment to the COPE Act with much stronger NN language.¹²⁵ On June 8, 2006, the House passed the COPE Act by a vote of 321-101 but failed to pass the

118. See Marguerite Reardon, *FCC changes DSL classification*, CNET NEWS.COM, August 5, 2005, http://news.com.com/2100-1034_3-5820713.html.

119. See Federal Communications Commission, Policy Statement FCC 05-151, 20 F.C.C.R. 14986 (adopted Aug. 5, 2005), available at http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-05-151A1.pdf.

120. See Faith in Neutrality, Posting of Susan Crawford to Susan Crawford Blog, http://scrawford.blogware.com/blog/_archives/2005/8/5/1111877.html (Aug. 5, 2005, 07:21 p.m. EST); Lawrence Lessig & Robert W. McChesney, *No Tolls on The Internet*, WASH. POST, June 8, 2006, at A23, available at <http://www.washingtonpost.com/wp-dyn/content/article/2006/06/07/AR2006060702108.html>.

121. See, e.g., Robert D. Atkinson & Philip J. Weiser, *A Third Way on Network Neutrality*, 13 NEW ATLANTIS 47, 48 (2006), available at <http://www.thenewatlantis.com/archive/13/atkinsonweiser.htm>; Declan McCullagh, *House rejects net neutrality rules*, CNET NEWS.COM, June 8, 2006, http://news.com.com/2100-1028_3-6081882.html.

122. See McCullagh, *supra* note 4; Communications Opportunity, Promotion, and Enhancement Act of 2006, H.R. 5252, 109th Cong. § 2 (2006), available at [http://thomas.loc.gov/cgi-bin/query/z?c109:H.R.5252:\(version 4, referred to Senate committee after being received from House, June 12, 2006\)](http://thomas.loc.gov/cgi-bin/query/z?c109:H.R.5252:(version 4, referred to Senate committee after being received from House, June 12, 2006)).

123. See Powell, *supra* note 114.

124. See Atkinson & Weiser, *supra* note 121, at 54.

125. See McCullagh, *supra* note 4.

Markey Amendment by a vote of 152-269.¹²⁶ None of these bills have been enacted into law.

III. THE MISSING TECHNICAL AND ECONOMIC UNDERSTANDING IN THE NETWORK NEUTRALITY DEBATE

The network neutrality debate immediately puts the interests of many industry giants at stake. Any solution for the debate will likely have profound and enduring social and economic impact. In searching for a solution, it is crucial to differentiate the real problems that NN seeks to solve from the interests of the debating parties. The many dimensions of the debate make this a challenging exercise, because it is hard for anyone to grasp all the technical, economic, legal, and social complexities as well as subtleties of something as big as the internet.

Legal scholars often resort to nonprofessional resources such as trade magazines, journalists, or even other social scientists to understand the technical aspects of the NN debate because it is often quicker and easier to do so.¹²⁷ While this might help them in crafting their arguments, they often get incomplete explanations, and this incomplete knowledge then distorts the debate.¹²⁸ At the other end, technology professionals often cannot effectively participate in the debate because their technical training and lack of social science background often position them in assisting but not leading roles in a legal debate. All these difficulties are exacerbated by the in-

126. See McCullagh, *supra* note 121.

127. See, e.g., LESSIG, *supra* note 30, at 277-78 nn.69-70 (stating that he learned QoS from another social scientist and citing trade magazines to support his arguments on QoS).

128. For example, the Wu-Lessig proposal stated that “[u]nder the neutrality principle here proposed . . . [u]sers interested in a better gaming experience would then need to buy more bandwidth.” Wu & Lessig, *supra* note 73, at 15. However, an application “buying” more bandwidth is simply asking link schedulers in routers for a higher queueing priority—that is the only way the application can “receive” more bandwidth in any packet-switching network such as the internet. But this higher priority is exactly the “discrimination” that many strong network neutrality proponents, including Lessig himself, have condemned. Indeed, it is ironic that Wu’s endorsement of this type of “non-application-type-based discrimination” clashes with other NN proponents and advocacy groups. See *supra* note 83 and accompanying text. That is hardly surprising; many of those proponents and advocacy groups do not really understand the technical aspects of either the internet or the buzzword “network neutrality” in the first place. See *infra* Section III.B.3.

fluences of powerful companies that have great financial interests in the debate.¹²⁹

This Part analyzes the network neutrality debate with a focus both on a technical explanation and an economic explanation of NN. Section III.A discusses what NN really means, both as a technical term and as a public policy. Section III.B analyzes the positions and interests of major debating parties.

A. What Does Neutrality Mean to the Internet?

In the network neutrality debate, nothing is more paramount than agreeing on what “neutrality” means. As Wu has acknowledged, the concept is “finicky” and depends on “what set of subjects you choose to be neutral among.”¹³⁰ Consider two packets at a router: a packet from an e-mail arriving *slightly* earlier than a packet from a tele-surgery application. Should the router send out the e-mail packet first? An e-mail message can wait for a short while, but a patient under surgery cannot. So is this FIFO order neutral? Such a question inevitably asks for value judgment, but the example used here illustrates a point: NN cannot be debated in the abstract without considering the underlying engineering realities.

1. *The Internet Has Never Been Neutral and Has Never Been Designed to Be Neutral*

Contrary to what many NN proponents have asserted,¹³¹ the internet has never been neutral and has never been designed to be neutral. Simplifying the technically complex and elegant TCP/IP into a “dumb pipe”¹³² or a “code layer”¹³³ is both technically inaccurate and conceptually misleading for the NN debate. Examples of this non-neutrality abound, but this Note focuses on those that are most fundamental to the internet.

In Request for Comment (RFC) 791, the RFC that was published in 1981 to define an IP packet, a Type of Service (TOS) field was defined for every IP packet. This TOS field was designed to convey QoS information, such as “precedence,” “delay,” and “throughput.”¹³⁴ The field is mandato-

129. See, e.g., *supra* notes 62, 64-66 and accompanying text.

130. See Wu, *Network Neutrality, Broadband Discrimination*, *supra* note 57, at 147-48.

131. See, e.g., Dynamic Platform Standards Project, Introduction and Summary for Congressional Staff, <http://www.dpsproject.com/CongressSummary.html> (last visited Feb. 27, 2007) (“[T]he Internet is, in fact, neutral.”).

132. See Thierer, *supra* note 107, at 281.

133. See LESSIG, *supra* note 30, at 23.

134. See Information Sciences Institute, *supra* note 50.

ry and it takes one full byte, which is significant in protocol design.¹³⁵ As explicitly indicated in RFC 791, the early internet architects were seriously considering QoS and packet prioritization.¹³⁶ IPv6, the newer version of IP published in 1995, emphasized QoS even more.¹³⁷ As FIFO scheduling does not need information in a TOS field, the dominance of FIFO on the internet shows that TOS has not been utilized much. Such a result, however, was due to the facts that (1) FIFO is very simple; (2) it is very difficult to implement complex link schedulers;¹³⁸ and (3) real-time applications emerged only recently. The result was not because of a “neutrality” principle.

Border Gateway Protocol (BGP) is the most important routing protocol for the internet.¹³⁹ RFC 1105, the first RFC on BGP that was published in 1989, specified policy routing as a fundamental design goal.¹⁴⁰ In non-technical terms, this means AT&T routers can make discriminatory routing decisions such as treating traffic from Sprint more favorably than traffic from Verizon, or even rejecting Verizon traffic altogether. In practice, almost all routers from Cisco and Juniper, the two dominating router vendors that have consistently captured more than eighty percent of the world’s internet router market in the past, provide rich functions for ISPs to implement such routing policies on a daily basis.¹⁴¹

Nor is TCP, the key Transport Control Protocol of the internet, neutral. In Lessig’s view, every internet application has the freedom to send pack-

135. In network protocol design, a mandatory byte in a packet is significant because the byte can convey a lot of control information. It would be a significant waste of network resources to add a byte of no use to every IP packet.

136. See Information Sciences Institute, *supra* note 50, at 1 (“The Type of Service is used to indicate the quality of the service desired.”).

137. See Stephen E. Deering & Robert M. Hinden, Internet Protocol, Version 6 (IPv6) Specification 25 (1998), <http://www.ietf.org/rfc/rfc2460.txt> (using a 20-bit field in an IP packet to carry QoS information).

138. See Itamar Elhanany et al., *Packet Scheduling in Next-Generation Multiterabit Networks*, 34 IEEE COMPUTER 104 (2001) (commenting that implementing smart schedulers under heavy traffic loads is a difficult task).

139. See PERLMAN, *supra* note 51.

140. See Kirk Lougheed, A Border Gateway Protocol (BGP) (1981), <http://www.ietf.org/rfc/rfc1105.txt> (stating that “policy decisions at an AS level may be enforced”).

141. See, e.g., Cisco Systems, Connecting to a Service Provider Using External BGP, http://www.cisco.com/en/US/products/ps6350/products_configuration_guide_chapter09186a0080446c4a.html (last visited Feb. 27, 2007) (BGP configuration manual for Cisco routers); Juniper Networks, BGP Configuration Guidelines, <http://www.juniper.net/techpubs/software/junos/junos82/swconfig82-routing/html/bgp-config.html> (last visited Feb. 27, 2007) (BGP configuration manual for Juniper routers).

ets without consulting with the network because the network should not have intelligence under the end-to-end principle.¹⁴² As discussed in Section I.B above, TCP implements congestion control by voluntarily reducing the data rate of its application, even if the application is not an actual contributor to the congestion. From that application's perspective, however, its TCP is part of the network.¹⁴³ Thus, the network indirectly discriminates the application via its TCP,¹⁴⁴ and the application certainly cannot send data "at will."

2. *Neutrality as a Public Policy for the Internet*

The social and economic dimensions of the network neutrality debate center around internet innovation. Proponents argue that application innovations, especially those from individuals or "garage"¹⁴⁵ innovators, need NN protection because traffic prioritization may deny their access to the internet completely.¹⁴⁶ Opponents argue that NN will deter network innovation because it will discourage ISPs from investing in the network infrastructure.¹⁴⁷

A dilemma about the relationship between a network and its applications can shed some light on the NN debate: do new applications drive the development of a better network or does a good network drive the development of newer applications? To support newer applications, such as tele-surgery, that have heavy traffic and strict real-time requirements, the network needs faster hardware, faster physical links, better algorithms, more sophisticated and more stable software, and possibly even a better architecture. Enhancing such network capacities requires significant investments in scientific research, engineering development, and large-scale network upgrades. Such investments can be justified only if newer applications are emerging either to predictably make the investments profitable,

142. See LESSIG, *supra* note 30, at 36-38.

143. This is because the application software runs on the top of TCP. See *supra* note 20; BERTSEKAS & GALLAGHER, *supra* note 6, at 17-20 (discussing the architectural principle of layering that the internet has followed).

144. Here the instant well-behaving application and other bandwidth-hogging applications are equally "punished." This type of discrimination is similar to a form of price discrimination where identical products with different costs are sold at the same price. See Varian, *supra* note 82, at 598.

145. Cf. Atkinson & Weiser, *supra* note 121, at 47 (calling small application companies "garage" companies).

146. See, e.g., Lemley & Lessig, *supra* note 93, at 932; Wu, *Network Neutrality, Broadband Discrimination*, *supra* note 57, at 153.

147. See *supra* notes 103 and 107 and accompanying text.

in the case of private investments, or to significantly utilize the enhanced network capacities to generate social values, in the case of governmental investments.¹⁴⁸ On the other hand, developing new major applications usually takes considerable time and institutional resources; motivation to develop such applications will be seriously dampened if the network stops its evolution and does not technically support those applications.¹⁴⁹ This is a classic chicken-and-egg problem. The past evolution of the internet, however, had a simple answer for this problem: both the network development and the applications development were incremental, and they drove each other in a positive feedback loop. More specifically, a few new applications such as the World Wide Web generated more traffic and greater demand for a faster network, which stimulated ISPs to build a somewhat, but not revolutionarily better network. This marginally improved network gave the birth of a few even newer applications such as online stock trading and internet chat, which in turn stimulated the building of an even better network. This positive feedback loop continued to drive the internet's evolution forward.

The NN debate is partially a chicken-and-egg dilemma in the following sense. The development of major QoS-oriented applications needs QoS support from the network, but uncontrolled QoS provision may, as those NN proponents have worried, stifle garage innovation if the innovators cannot receive meaningful bandwidth under the product differentiation regimes that would be in place. The evolution of the internet has witnessed both institutional and garage-based innovations. From a technical perspective, the incremental nature of the internet's evolution makes those garage innovations, which are typically smaller application innovations such as Wikipedia, particularly significant. From an economic perspective, the many application innovations discussed by Lessig¹⁵⁰ have not only directly driven up the demand side of the networking market, but also naturally generated the *network effect* that is invaluable to an information economy.¹⁵¹ Although it is important to protect and encourage garage innovation, it is also critical to sustain ISPs' incentives to invest so that ma-

148. The internet, however, has been privatized since the early 1990's. Its current size makes it nearly impossible for any government to make significant and meaningful investments.

149. It may be argued that garage innovators can develop many "minor" new applications without major network evolution. However, the mileage of those innovators, although better than that of institutional developers of major new applications, is still limited if the network stops evolving.

150. See LESSIG, *supra* note 30, at 120-36.

151. See SHAPIRO & VARIAN, *supra* note 82, at 13-14, 183-84.

for new applications, which typically require institutional efforts, will have a capable network as their platform.

The NN proposals try to protect garage innovation by banning QoS-based product differentiation or even traffic prioritization altogether. They solve one problem of the dilemma but exacerbate the other more serious problem. They may even defeat themselves in the sense that they will impede institutional application innovation. The key policy challenge in the NN debate is to strike a balance between incentives and monopolies. This challenge, however, is a familiar issue in many intellectual property laws.

B. The Interests and Stakes of the Debating Parties

1. The Dilemma and Fallacies of ISPs

The chief problem that ISPs face is a pricing model crisis—they cannot serve all available markets and cannot capture the consumer surplus in an emerging QoS market. QoS, which has received extensive research in the last twenty years,¹⁵² had not been practically available until recently. Due to this limitation and other technical and marketing difficulties, ISPs were forced to adopt a flat-rate pricing model to sell their bandwidth in the early days of the internet. Commercial and individual customers have become used to this model for many years and now take it for granted. Now that ISPs are ready to capture some consumer surplus via QoS-based product differentiation, they just have found that they are locked into this flat-rate model.¹⁵³

Capturing consumer surplus via product differentiation is not illegal. Capturing consumer surplus via price differentiation is not illegal in most

152. See KUROSE & ROSS, *supra* note 5, at 636 (discussing numerous unsuccessful attempts on QoS by the networking community in the last twenty years).

153. QoS-based product differentiation can also be regarded as a form of second-degree price discrimination on bandwidth. Fundamentally, ISPs sell as QoS the “timeliness” of the usage of their communication links. Applications not receiving QoS may still have their traffic—of exactly the same amount—delivered by the network; they just experience larger, more unpredictable packet delays than those QoS-receiving applications do. See SHAPIRO & VARIAN, *supra* note 82, at 39, 53-63 (applying a more flexible definition of second-degree price discrimination, termed as “versioning,” for information goods). *But cf.* Varian, *supra* note 82, at 600 (applying a traditional definition of second-degree price discrimination based on quantity of goods); *cf.* TIROLE, *supra* note 83 (suggesting that classes in airplanes might be a form of price discrimination). It is noteworthy that, as to price discrimination, bandwidth of a packet network seems to be a good that differs from all traditional goods, including information goods. The reason seems to be that bandwidth has both a rivalrous nature and a “timeliness” nature.

cases.¹⁵⁴ However, some ISP executives have both exaggerated and done an embarrassing publicity job. For example, when a vice president of Verizon alleged that Google “enjoy[ed] a free lunch,”¹⁵⁵ he forgot that Google had paid its internet service fees. Although Google might have taken more bandwidth than Verizon originally expected, such expectation, if any, was not part of the service contracts between Google and Verizon.

The exaggeration by ISPs has technical dimensions as well. First, most of the current internet content does not generate interactive real-time traffic, but only non-real-time or non-interactive real-time traffic that consumes vast bandwidth due to its volume. Second, and also as a business issue, QoS provision today is far from satisfactory. Because QoS provision is end-to-end, every router along the path from a source computer to a destination computer must participate in the provision. But the sheer size of the internet makes it impossible for any single ISP to provide end-to-end internet services; instead, ISPs must interconnect with one another.¹⁵⁶ Consequently, ISPs need to cooperate to provide true end-to-end QoS, but in general this cooperation proves difficult.¹⁵⁷ In summary, although the heavy traffic generated by ICPs today does cause network congestion that hurts other “innocent” applications, ISPs should not charge premiums on such traffic, either under existing service contracts or in the name of QoS.

2. *The Rights and Obligations of ICPs*

Because of the ubiquitous flat-rate ISP service contracts and the competitive nature of fixed network resources, the ever-increasing traffic volume generated by ICPs has indeed caused a “tragedy of the commons”¹⁵⁸ problem for bandwidth consumption. Despite this problem, the ISPs do not have the right to *block* the sites or contents of those ICPs for two closely related reasons. First, as discussed above, this tragedy-of-the-commons problem does not result in a breach of the flat-rate contracts. Second, the ISPs have an implied-warranty duty under contract law not to block; blocking is different from downgrading internet services as blocking means no service at all. On the other hand, the flat-rate contracts pro-

154. See Varian, *supra* note 82, at 598 and accompanying text. Illegal price discrimination under the Robinson-Patman Act, 15 U.S.C. § 13, represents a narrow exception to this general statement.

155. See Mohammed, *supra* note 64.

156. See KUROSE & ROSS, *supra* note 5, at 636.

157. *Id.*

158. See Garrett Hardin, *The Tragedy of the Commons*, 162 SCI. 1243 (1968).

vide no guarantee that the ISPs cannot downgrade the services to a certain degree.

Concerns about ISP's blocking behavior, however, have been largely historical. The FCC set a precedent to ban such discriminatory behavior in *Madison River*.¹⁵⁹ The FCC policy statement in August 2005 reaffirmed the agency's position to follow the *Madison River* precedent.¹⁶⁰ Nevertheless, ICPs tend to use those narrow and obsolete examples of blocking in order to launch a wholesale attack on QoS, and cloak their bandwidth tragedy-of-the-commons behavior.

3. *The Motivations and Irrationalities of Consumers*

Because the ISP market—in particular the broadband access market—has limited competition, consumers in general need some protection to deter market power abuse. This is the traditional realm of antitrust law, not telecommunications policy. Many consumers are both the initiators *and* the victims of the bandwidth tragedy-of-the-commons problem, which is the essence of the term “tragedy:” on one hand, they generate heavy traffic when they retrieve contents from ICPs; on the other hand, they downgrade the services of each other by their own bandwidth-hogging behavior. For consumers, codifying network neutrality is probably overkill because it is much stronger than antitrust law. Moreover, it is a double-edged sword because it may prevent many useful QoS-based applications from taking off. Nevertheless, consumer advocacy groups, exemplified by SavetheInternet.com, decided to fight together with the ICPs to advocate NN.

Two explanations exist for such irrational positions. First, most consumers do not understand NN in either a technical sense or an economic sense, but they can be easily provoked by abstract terms such as “net freedom,” “digital democracy,” or “consumer rights” that are used by NN proponents.¹⁶¹ For many of those consumers, QoS provision sounds like a

159. See McCullagh, *supra* note 58.

160. See *supra* notes 58-59 and note 119 and accompanying text.

161. See, e.g., Jon Leibowitz, Comm'r, Fed. Trade Comm'n, Remarks at the Broadband Connectivity Competition Policy Workshop: Navigating Between Dystopian Worlds on Network Neutrality, With Misery and Wretchedness on Each Side, Can We Find A Third Way? (Feb. 13, 2007), http://www.ftc.gov/speeches/leibowitz/070213_Navigating_Between_Dystopian_Worlds.pdf (discussing Powell's four “Internet freedom” principles and consumer rights on the internet); Free Press, The Struggle for Net Freedom, <http://www.freepress.net/netfreedom> (last visited Feb. 27, 2007); Bryan Zandberg, *Canada Sleeps Through War to 'Save the Internet'*, THE TYEE, Jan. 17, 2007, <http://theyee.ca/Mediacheck/2007/01/17/NetNeutrality> (“Digital democracy at risk if telecoms get their way say opponents.”).

new conspiracy among monopolistic ISPs,¹⁶² while few of those consumers know that the networking community started QoS research at least twenty years ago.¹⁶³ Second, because QoS-based product differentiation may significantly limit or even eliminate bandwidth-hogging, people may perceive an imminent threat to an existing privilege, and simply react by trying to fend off that threat.

IV. A MIDDLE-GROUND PROPOSAL

Based on the analyses above, a working middle-ground solution to the network neutrality debate needs to: (1) allow ISPs to serve an emerging QoS market; (2) sustain and encourage garage innovation; (3) give consumers meaningful protection; and (4) treat all ISP customers, including the ICPs, fairly. This Part proposes such a solution and explains how it meets these four objectives.

A. Protecting Garage Innovation Under QoS Provision

Robert Atkinson, president of the Information Technology and Innovation Foundation, and Professor Philip J. Weiser published a moderate proposal in 2006 that addressed some of the objectives enumerated above.¹⁶⁴ Extending Weiser's earlier idea,¹⁶⁵ they proposed to give the FCC anti-trust-like regulatory power to protect consumers. They also proposed that the FCC mandate that ISPs use "some not insignificant portion of the broadband bandwidth" to provide basic internet services. This last idea and some more sophisticated versions of it, however, have been well known in the networking community for many years, a fact suggesting that the current NN debate has not attracted enough attention from the technical community.¹⁶⁶

162. See Christopher Stern, *The Coming Tug of War Over the Internet*, WASH. POST, Jan. 22, 2006, at B1, available at http://www.washingtonpost.com/wp-dyn/content/article/2006/01/21/AR2006012100094_pf.html. ("But the nation's largest telephone companies have a new business plan.")

163. See KUROSE & ROSS, *supra* note 5, at 636.

164. See Atkinson & Weiser, *supra* note 121, at 55-58.

165. See Weiser, *supra* note 113.

166. For example, the once hyped but largely failed Asynchronous Transfer Mode (ATM) network offers an Available Bit Rate (ABR) service for non-real-time applications. See ATM Forum Technical Committee, Traffic Management Specification Version 4.0, at 5 (1996), <http://www.mfaforum.org/ftp/pub/approved-specs/af-tm-0056.000.pdf>. ABR has a Minimum Cell Rate (MCR) parameter that sets a lower bound on the bandwidth that an application can receive. *Id.* Essentially, ATM reserves a portion of its bandwidth to serve applications having no QoS requirements.

This Note argues that QoS provision can co-exist with garage innovation protection. More specifically, a certain fraction of network bandwidth can be reserved to protect garage innovation, and the rest of bandwidth can be used for QoS provision. This is technically feasible, as will be explained below.

B. How It Works

Understanding and appreciating the idea above requires a detailed discussion of link-scheduling algorithms. As discussed in Section I.D, a router controls packet queuing delays mainly via link schedulers. By controlling the sending-order of packets, a link scheduler effectively distributes the link bandwidth among applications. This can be better understood by studying the traffic-control mechanism at freeway entrances in many metropolitan areas. At such an entrance, two or more ramps lead to a single on-ramp of a freeway. During rush hour, one of the ramps is an express lane for carpools. A traffic light controls the ramps and one car goes per green signal at the car's ramp. By controlling the interval lengths between the green signals at each ramp, the traffic light can assign different fractions of the highway passage to the ramps, and the carpool ramp can receive a faster passage. However, any other ramp can still receive a fraction of the passage and will not be starved. In computer networking, such a scheduling scheme is known as Weighted Fair Queuing (WFQ), which was a breakthrough in QoS research.¹⁶⁷ Very sophisticated link schedulers based on WFQ can deliver very flexible QoS services, although it is in general difficult to implement any complex scheduling algorithms such as WFQ.¹⁶⁸

In theory, ISPs can dedicate all or most of their bandwidth to QoS provision; other applications not paying premiums may only be served on a "best effort" basis, which means their packets will consume the residual bandwidth, if any, in a FIFO order. The residual bandwidth can go down

167. See KUROSE & ROSS, *supra* note 5, at 625 ("WFQ plays a central role in QoS architectures."). The WFQ algorithm is generally credited to the Ph.D. work of Abhay Parekh of MIT. The idea itself was arguably not a breakthrough, as the highway entrance example shows. However, Parekh proved that, with WFQ at each router, a deterministic end-to-end delay bound can be guaranteed to an application that has reserved a minimum bandwidth at each intermediate router. See Abhay Parekh & Robert Gallagher, *A Generalized Processor Sharing Approach to Flow Control—The Single Node Case*, 1 IEEE/ACM TRANSACTIONS ON NETWORKING 344 (1993); Abhay Parekh & Robert Gallagher, *A Generalized Processor Sharing Approach to Flow Control—The Multiple Node Case*, 2 IEEE/ACM TRANSACTIONS ON NETWORKING 137 (1994).

168. See Elhanany et al., *supra* note 138.

to zero in the worst case. This situation is similar to a highway on-ramp where no signal exists for the carpool ramp and the signals at other ramps are always red if at least one car exists on the carpool ramp. Thus, in theory, the carpool ramp can take almost all the passage and starve the other ramps. Many NN proponents have challenged such a situation vigorously. Indeed, as in the blocking case, even for applications not paying premiums, ISPs have an implied-warranty duty to avoid such a starvation or near-starvation. With advanced link schedulers, however, ISPs can eliminate such starvation by reserving a nontrivial fraction of their bandwidth to provide the “typical” services of today, although all applications not paying premiums need to share this reserved bandwidth and the bandwidth tragedy-of-the-commons problem may still exist among those applications.

C. A Counter-argument and a Rebuttal

Network neutrality proponents may argue that this bandwidth reservation scheme effectively downgrades the services of those non-premium-paying applications from their current levels. This argument, while valid, is economically misplaced.

For a simplified illustration, assume that the reserved fraction of bandwidth is set at fifty percent. With the remaining fifty percent of bandwidth set aside to serve the QoS market, ISPs can increase their profits and then invest in a faster internet in response to greater QoS demands. With a QoS market taking off, such a feedback loop is positive and the ISPs could triple the capacity of the internet within a certain period of time. This calculation is realistic because a QoS-enabling network will incubate many newer QoS-based applications demanding for larger network capacities. While this positive feedback occurs, the reserved bandwidth will also increase three-fold, and will then be fifty percent larger than what it is now. In contrast, if the ISPs are discouraged from investing, the capacity of the internet may stay relatively flat for a long time. Clearly, the proposed scheme can sustain garage innovation as well as promote it via steadily driving the internet’s evolution. Thus, internet traffic prioritization can both coexist with and encourage internet innovation, including network innovation, institutional application innovation, and garage application innovation.

D. The Other Objectives to Be Achieved

Protecting consumers and enforcing fair dealing across all ISP customers do not present any problems if the market is competitive and has FCC policies as well as antitrust laws present in the background, where

competition will assure fair treatment of all customers. Perhaps new internet service contracts with non-flat-rate billing will be written, but competition will prevent ISPs from overcharging specific customers. It is possible, and indeed likely, that when the market reaches its equilibrium, ICPs will pay more than what they do now, even without requesting QoS. This will be, however, because the ICPs currently are enjoying a historical pricing-model lock-in and treating the flat-rate bandwidth as a commons, not because they will receive discrimination in the future.

A counter-argument for this last analysis is that since the current competition in the broadband access market is limited, there is no guarantee of fair dealing. This Note argues otherwise. First, as other commentators have argued, current FCC policies (as suggested by *Madison River*), newer antitrust-like FCC policies, or even antitrust law itself can help enforce fair dealing.¹⁶⁹ Second, the limited competition in the current broadband access market should not be taken as a given; newer broadband access technologies such as wireless, power-line, metro-Ethernet or optical-fiber are technically available now, although with small penetration rates and high initial costs. The policy-making focus should be on solving the competition problem by stimulating those new technologies to establish a more competitive market, rather than artificially neutralizing the problem by stifling the evolution of the internet via regulation.

V. CONCLUSION

The network neutrality debate is complicated. Navigating it requires a solid understanding of the technical details of the internet and some economic aspects of internet evolution. As a living engineering miracle, the internet has never been neutral and has never been designed to be neutral. Rather, it has been designed to be practical and it continues to evolve in a practical way. Many of the current arguments in the debate are misplaced, prejudiced or hyperbolic. The fundamental policy goal should be striking a balance between securing incentives for network innovation as well as institutional application innovation, and protecting garage application innovation. Driven by their respective financial interests, ISPs and ICPs essentially dispute, under the name of network neutrality, their legacy internet service contracts, which are increasingly problematic with today's technical and economic realities on the internet. This Note has proposed a technically feasible middle-ground solution to the debate. The solution is

169. See Atkinson & Weiser, *supra* note 121, at 55-58.

to use bandwidth reservation to protect garage innovation under QoS provision.

BERKELEY TECHNOLOGY LAW JOURNAL

STRETCH BEFORE EXERCISE: THE FCC'S OVERBROAD INTERPRETATION OF CALEA AND THE D.C. CIRCUIT'S DEFERENTIAL REVIEW

By Kamilla Mamedova

As communications technology evolved in the late twentieth century, Congress had to balance two competing goals: providing law enforcement with sufficient access to telecommunications for surveillance purposes while preserving individual privacy.¹ The advent of new technologies, including the internet in the late twentieth century, introduced yet another goal: avoiding a potentially detrimental restriction on information service providers that could hinder innovation beneficial to society.² This third goal promises to rise in importance in the twenty-first century. Nonetheless, the Federal Communications Commission (FCC) has interpreted the Communications Assistance for Law Enforcement Act (CALEA)³ in a way that impedes the continued progress of broadband providers by including them under the Act's definition of telecommunications carriers.⁴

Fitness experts often recommend that we stretch before exercising to avoid serious physical injury. Ironically, the FCC applied this advice to its interpretation of CALEA⁵ and in 2005 ordered broadband and Voice over Internet Protocol ("VoIP") providers to comply with the Act by May

© 2007 Kamilla Mamedova

1. See H.R. REP. NO. 103-827, 104th Cong., at 13 (1994).

2. See *id.* at 14.

3. Communications Assistance for Law Enforcement Act, Pub. L. No. 103-414, 108 Stat. 4279 (codified at 47 U.S.C. §§ 1001-1021 (1994)).

4. The FCC has itself specifically excluded information service providers from the definition of a telecommunications carrier in its interpretation of the Telecommunications Act of 1996. *Nat'l Cable & Telecomm. Ass'n v. Brand X Internet Servs.*, 125 S. Ct. 2688, 2695 (2005). Since VoIP is provided through broadband, the FCC would not be able to assert its authority or control over VoIP communications if they were to remain classified as information services under CALEA. No administrative body at this time is specifically entrusted with regulation of internet communications.

5. Interestingly, the FCC commissioner Michael J. Copps himself admitted that "The statute is undeniably *stretched* to recognize new service technologies and pushed very hard to accommodate new and emerging telecommunications platforms." *In re Commc'ns Assistance for Law Enforcement Act & Broadband Access & Servs.*, 20 F.C.C.R. 14989, 15042 (2005) (Copps, Comm'r., concurring) (emphasis added). Furthermore, Commissioner Kathleen Q. Abernathy stated that, "Our decision today must not, however, lead to complacency regarding the need for legislative action clarifying CALEA's reach," recognizing that the FCC's actions stand without support from the statute. *Id.* at 15041 (Abernathy, Comm'r., concurring).

2007.⁶ The American Council on Education (“ACE”), supported by numerous other organizations, filed a petition for review with the D.C. Circuit challenging the FCC’s determination that CALEA applies to information service providers, as Congress had specifically excluded “information services” from compliance with CALEA when drafting the statute.⁷ Applying the deferential *Chevron*⁸ standard, the D.C. Circuit affirmed the order. The court found that by inserting the “substantial replacement provision” (“SRP”) into CALEA’s definition of a “telecommunications carrier,” Congress left that term ambiguous, thereby instilling the FCC with the authority to reasonably interpret the statute if and when it was called on to do so.⁹

This Note discusses the FCC’s order to include broadband providers under the substantial replacement provision of CALEA’s definition of a telecommunications carrier and the D.C. Circuit’s subsequent deferential review. The Note analyzes problems inherent in the application of CALEA to VoIP, including the threat to the ultimate balance that Congress sought to achieve through its surveillance regulatory legislation, threats to privacy and innovation, and exorbitant costs that will be passed on to consumers while telecommunications carriers attempt to comply with the Act.

Part I provides technical background on the Public Switched Telephone Network (“PSTN”) and VoIP as well as historical and statutory background on the FCC’s order. Part II discusses the FCC’s order and the D.C. Circuit’s subsequent review. Part III argues that due to the architectural differences between the PSTN and VoIP, and because the legislative history of CALEA does not support the FCC’s interpretation, the FCC’s order and the D.C. Circuit’s decision affirming it were not properly reached. This Note concludes that although law enforcement deserves all necessary and appropriate access to voice communications, the FCC cannot impose

6. *See id.* ¶ 3.

7. *See* Corrected Petition for Rehearing En Banc, *Am. Council on Educ. v. FCC*, 451 F.3d 226 (D.C. Cir. 2005) (No. 05-1404) [hereinafter *Petition for Rehearing*]. American Council on Education (“ACE”) is a coordinating body for all of the nation’s higher education institutions. (For more information, please visit www.acenet.edu). ACE filed the petition with the D.C. Circuit supported by groups such as the Electronic Frontier Foundation (EFF), American Civil Liberties Union (ACLU), and the Center for Technology and Democracy.

8. *See Chevron v. Nat’l Res. Def. Council, Inc.*, 467 U.S. 837, 842-43 (1984) (creating a judicial standard of review for administrative agency’s legislative interpretation). For a general discussion of the *Chevron* standard and its application in subsequent cases, see Susan K. Goplen, *Judicial Deference to Administrative Agencies’ Legal Interpretations After Lechmere, Inc. v. NLRB*, 68 WASH. L. REV. 207 (1993).

9. *ACE*, 451 F.3d at 231.

this requirement by stretching CALEA so far as to invent distinctions that Congress never intended to include in the legislation. Most of the problems created by the FCC's order can only be alleviated by appropriate legislative amendment and provisions counteracting the negative implications of the decision.

I. BACKGROUND

A. Technical Background: PSTN and VoIP

The PSTN and VoIP are two very different systems. The architectural differences make implementation of surveillance on VoIP substantially more difficult than on the PSTN. The PSTN is a circuit-switched network.¹⁰ It operates by establishing a circuit between two users for the duration of the call, such that if neither user is speaking, the communication line remains open.¹¹ In the early days of telephony, an operator was required to route calls between two users by completing the circuit.¹² Eventually, automatic switching systems replaced the operator and with that the need for human presence in the middle when a call takes place between two users.¹³

Thus, as illustrated in Figure 1 below, most of the intelligence in the PSTN is at the center of the communication. This is why wiretapping regular phone lines is as easy as finding the copper wires that comprise them.¹⁴ Because the PSTN is centralized and geographically dependent, however, any change to the way it operates must be introduced into its infrastructure which is extremely difficult to accomplish.¹⁵ The architecture of the PSTN is probably the most important reason why the telephony network has not changed very much since its inception in the nineteenth century.¹⁶

10. For a more thorough discussion on how the PSTN operates, see Susan P. Crawford, *The Ambulance, the Squad Car, & the Internet*, 21 BERKELEY TECH. L.J. 873, 891 (2006).

11. *Id.* at 889.

12. *Id.*

13. *Id.*

14. *ACE*, 451 F.3d at 227.

15. Crawford, *supra* note 10, at 892; see also Susan Landau, *Digital Age Communications Law Reform: National Security on the Line*, 4 J. TELECOMM. & HIGH TECH. L. 409, 427 (2006).

16. See Crawford, *supra* note 10, at 892; Landau *supra* note 15, at 427.

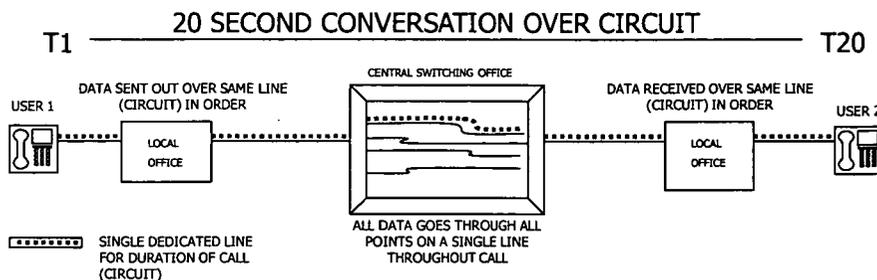


Figure 1: PSTN – 20 Second Conversation Between User 1 and User 2¹⁷

Unlike the PSTN, the internet is a packet-switched network.¹⁸ As illustrated in Figures 2 and 3 below, VoIP operates by breaking up information into packets that are subsequently sent over available paths.¹⁹ A single message can be broken up into any number of packets, sent over different available paths, and eventually put back together at the other end. In fact, multiple packets can be sent over the same path without interfering with each other.²⁰ Furthermore, in a packet switched network, there is no need to occupy the same path for the entire duration of a communication.²¹

17. This diagram is based on text and figures from ANDREW S. TANENBAUM, *COMPUTER NETWORKS* 118-51 (4th ed. 2003).

18. Crawford, *supra* note 10, at 891.

19. See Crawford *supra* note 10, at 889; see also Landau, *supra* note 15, at 427; STEVEN BELLOVIN, ET AL., SECURITY IMPLICATIONS OF APPLYING THE COMMUNICATIONS ASSISTANCE FOR LAW ENFORCEMENT ACT TO VOICE OVER IP 2-5 (2006), available at <http://www.itaa.org/news/docs/CALEAVOIPreport.pdf>.

20. See Crawford, *supra* note 10, at 891.

21. *Id.*

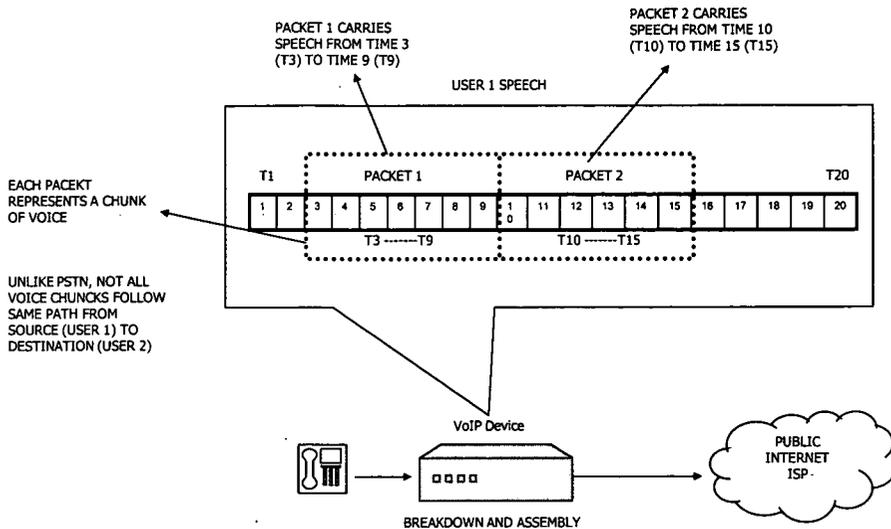


Figure 2: VoIP - 20 Second Conversation between User 1 and User 2²²

In contrast to the PSTN, the intelligence required to administer VoIP communication is at the sending and receiving ends.²³ The internet, unlike the PSTN, has evolved substantially since its inception because its architecture allows for individual control and innovation at the end points and there are practically no barriers to access.²⁴ Thus, in effect, what makes surveillance problematic is exactly what makes the internet so user-friendly—easy individual access to the infrastructure. As explained in Part III, these architectural differences make application of CALEA to VoIP extremely problematic. The following Section provides the history of CALEA and the tension created by the statute's substantial replacement provision in today's technologically advanced world of communication.

22. This diagram is based on text and figures from ANDREW S. TANENBAUM, *COMPUTER NETWORKS* 343-73, 685-69 (4th ed. 2003).

23. Landau, *supra* note 15, at 427.

24. *Id.*

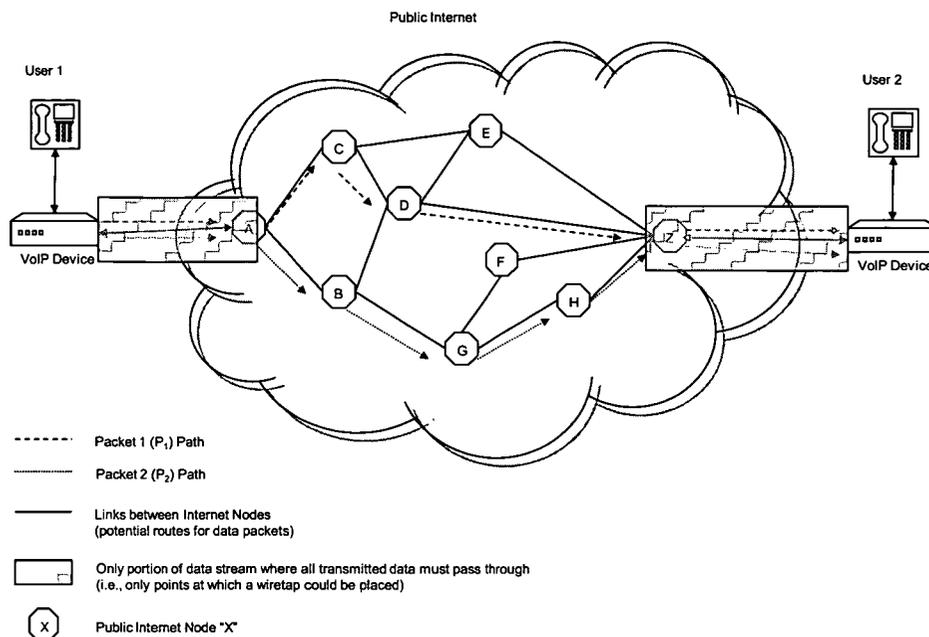


Figure 3: How the Packet From Figure 2 Will Travel From User 1 to User 2²⁵

B. Statutory Background

1. History of the Act

Congress has long attempted to find a balance between law enforcement's need to conduct authorized surveillance and the public's need for privacy.²⁶ In 1968, Congress passed Title III of the Omnibus Crime Control and Safe Streets Act.²⁷ The purpose behind Title III was to allow authorized surveillance while preserving the public's privacy.²⁸ In 1986, Title III was amended by the Electronic Communications Privacy Act (ECPA),²⁹ which includes three acts that broaden the application of the

25. This diagram is based on text and figures from ANDREW S. TANENBAUM, *COMPUTER NETWORKS* 343-473 (4th ed. 2003).

26. See H.R. REP. NO. 103-827, 104th Cong., at 13 (1994).

27. See *id.*; Omnibus Crime Control & Safe Street Act, Pub. L. No. 90-351, 82 Stat. 197 (codified at 42 U.S.C. § 3711 (1968)). For a brief discussion of Title III, see DANIEL J. SOLOVE, MARC ROTENBERG & PAUL M. SCHWARTZ, *INFORMATION PRIVACY LAW* 263-72 (2d ed. 2006).

28. H.R. REP. NO. 103-827, 104th Cong., at 13 (1994); SOLOVE ET AL., *supra* note 27, at 265.

29. Pub. L. 99-508, 100 Stat. 1848 (codified at 18 U.S.C. §§ 2510-2522 (1986)).

federal electronic surveillance laws.³⁰ ECPA extended law enforcement authority and privacy protection to newly developed technologies, such as e-mail and wireless telephones.³¹

Technology and telecommunications rapidly evolved in the 1990s, especially with the growth of the internet. In 1990, Senator Patrick Leahy, then chairman of the Senate Judiciary Committee, assembled a Privacy and Technology Task Force.³² Its mission was to assess the current state of the law as it relates to telecommunications and provide Congress with the requisite amount of information on what changes were required at the time.³³ The Task Force issued its final report in 1991, in which it concluded that ECPA protections must be extended to new forms of wireless data communications and cordless phones.³⁴ The Task Force also found that new legislation was necessary to continue to preserve the balance sought by previous acts.³⁵ In addition, it suggested that a third concern must be added to this balance: the continued ability of the telecommunications industry to evolve and develop the revolutionizing technology that benefits our society.³⁶

In 1994, CALEA was passed to help define common carriers³⁷ compliance responsibilities while preserving the three key policies:

30. H.R. REP. NO. 103-827, at 13; SOLOVE ET AL., *supra* note 27, at 265. ECPA includes the Wiretap Act, the Stored Communications Act, and the Pen Register Act. Each is codified under different sections of Title 18 and applies to different types of communication. *Id.* The Wiretap Act applies to interception of communications in flight and provides the most stringent protection for communications because it requires the highest level of suspicion out of the three acts to obtain a court order. SOLOVE ET AL., *supra* note 27, at 265. The Stored Communications Act applies to communications stored in electronic storage and is somewhat less demanding on law enforcement because it requires a slightly lower level of suspicion than the Wiretap Act to obtain a court order. *Id.* Finally, the Pen Register Act applies to installation of pen registers and trap and trace devices and is the least stringent on law enforcement out of the three acts because it requires the lowest level of suspicion for a court order. *Id.*

31. *See* H.R. REP. NO. 103-827. It is worth noting that most of these laws were prompted by advances in technology that posed serious threats to privacy because they made authorized as well as unauthorized surveillance easier than before.

32. *Id.*

33. *Id.*

34. *Id.* at 15.

35. *See supra* text accompanying note 1.

36. H.R. REP. NO. 103-827, at 15.

37. CALEA defines "common carrier" or "carrier" as:

[A]ny person engaged as a common carrier for hire, in interstate or foreign communication by wire or radio or in interstate or foreign radio transmission of energy, except where reference is made to common carriers not subject to this Act; but a person engaged in radio broadcasting

(1) to preserve a narrowly focused capability for law enforcement agencies to carry out properly authorized intercepts; (2) to protect privacy in the face of increasingly powerful and personally revealing technologies; and (3) *to avoid impeding the development of new communications services and technologies.*³⁸

As noted earlier, at the time CALEA was enacted, wiretapping phone lines was as easy as finding the copper wires that comprised them. Due to emerging technology in the late 1990's and early twenty-first century, however, surveillance of certain communications became problematic or impossible in some cases.³⁹ Although Congress never manifested an intention to amend CALEA, the FCC interpreted the statute in a way that undermines at least two of the above-mentioned policies while attempting to allow law enforcement surveillance access to new technologies.

2. *Irreconcilable Tension*

CALEA was not originally intended to apply to broadband and VoIP providers. In fact, the Act specifically excluded information services from its definition of telecommunications carriers who were required to comply with CALEA. CALEA's definition of a telecommunications carrier is straightforward:

a person or entity engaged in the transmission or switching of wire or electronic communications as a common carrier for hire; and includes a person or entity engaged in providing wire or electronic communications switching or transmission service to the extent that the Commission finds that such service is a replacement for a substantial portion of the local telephone exchange service and that it is in the public interest to deem such a person or entity to be a telecommunications carrier for purposes of this subchapter; but *does not include persons or entities insofar as they are engaged in providing information services.*⁴⁰

The language stating that an entity is "a replacement for a substantial portion of the local telephone exchange service and that it is in the public in-

shall not, insofar as such person is so engaged, be deemed a common carrier.

47 U.S.C. § 153(10) (1996). CALEA adopts the definition of a common carrier from the Communications Act of 1934, Pub. L. No. 416, 48 Stat. 1064 (codified as amended by the Telecommunications Act of 1996, 47 U.S.C. § 151). *See* H.R. REP. NO. 103-827, at 21.

38. H.R. REP. NO. 103-827, at 15 (emphasis added).

39. *Am. Council on Educ. v. FCC*, 451 F.3d 226, 227-28 (D.C. Cir. 2005).

40. 47 U.S.C. § 1001(8)(A)-(C)(i) (emphasis added).

terest to deem such a person or entity to be a telecommunications carrier" is commonly referred to as the "substantial replacement provision" ("SRP").⁴¹

Since broadband and VoIP providers have started to substantially replace ordinary telephonic communications,⁴² merely finding copper wires no longer serves law enforcement objectives. The manner in which VoIP services are provided, however, is inextricably intertwined with broadband technology (i.e., information services). Consequently, because CALEA's definition of a telecommunications carrier expressly excludes information services, the substantial replacement provision creates an irreconcilable tension within CALEA: VoIP providers fall under both the SRP and the section excluding information services from compliance with the Act.

Part III elaborates on the statutory inconsistency of CALEA as it is applied to VoIP, and offers legislative history to buttress the assertion that Congress never intended for the Act to apply to broadband providers. The next Section discusses the FCC order itself and the D.C. Circuit's deferential review.

II. THE FCC ORDER AND THE D.C. CIRCUIT'S DEFERENTIAL REVIEW

A. The Order

In 2004, a number of federal law enforcement agencies, including the FBI and the Drug Enforcement Administration, filed a joint petition for expedited rulemaking with the FCC seeking an expansion of CALEA's

41. *ACE*, 451 F.3d at 228.

42. *See* Crawford, *supra* note 10, at 878 (discussing the recent growth of VoIP and wireless technology as the predominant method of telecommunication). "Telecommunications companies are losing local wireline (traditional) telephone customers to VoIP and wireless services at a rate of about 5% of their basic phone subscribers each year." *Id.* (citing Leslie Cauley, *BellSouth Likes To Go It Alone*, USA TODAY, Nov. 1, 2005, available at http://www.usatoday.com/tech/news/techpolicy/business/2005-10-31-bellsouth-mergers_x.htm).

These Baby Bell difficulties relate to the growth of VoIP usage in the U.S. Although the idea of offering voice services online is not new, the availability of broadband access and special VoIP equipment has made these services truly attractive to consumers. The uptick in VoIP usage began in 2002, when 50-employee Vonage Holdings Corp. offered a much cheaper internet-based voice service that worked through telephone-like handsets connected to adapters that could packetize voice. Consumers no longer needed to talk into their PCs.

Id. at 878.

definition of a telecommunications carrier to apply to interconnected broadband and VoIP providers.⁴³ The FCC immediately took action by issuing its Notice of Proposed Rulemaking and Declaratory Ruling in August of 2004.⁴⁴ After receiving numerous comments, holding hearings, and discussing its view of the state of the law, the FCC concluded that the SRP of CALEA's definition of a telecommunications carrier effectively encompassed interconnected broadband and VoIP providers.⁴⁵ As a result, the FCC reasoned, these providers must comply with CALEA.⁴⁶

In its subsequent order issued in August 2005, the FCC elaborated on its decision to treat broadband and VoIP providers as telecommunications carriers.⁴⁷ The FCC concluded that CALEA's definitions of a telecommunications carrier and an information service provider created three distinct categories of services: (1) pure information services, which were clearly outside of CALEA; (2) pure telecommunications, which were completely within CALEA; and (3) hybrid telecommunications-information services which partially fell within CALEA.⁴⁸ According to the FCC, interconnected broadband and VoIP providers are hybrid telecommunications-information services.⁴⁹

The FCC decided that broadband and VoIP providers are subject to CALEA only insofar as their services satisfy the three prongs of the SRP.⁵⁰ First, providers of both broadband and VoIP services must perform

43. *ACE*, 451 F.3d at 228-29; Crawford, *supra* note 10, at 886.

44. See Notice of Proposed Rulemaking and Declaratory Ruling, Commc'ns Assistance for Law Enforcement Act & Broadband Access & Services, 19 F.C.C.R. 15676 (Aug. 9, 2004) (No. 04-295).

45. *Id.* ¶ 1.

46. *Id.*

47. See *In re* Commc'ns Assistance for Law Enforcement Act & Broadband Access & Servs., 20 F.C.C.R. 14989, ¶¶ 9-37 (2005).

48. *ACE*, 451 F.3d at 229 (citing *In re* Commc'ns Assistance for Law Enforcement Act & Broadband Access & Servs., 20 F.C.C.R. 14989, ¶¶ 9-37 (2005)).

49. *Id.*; *In re* Commc'ns Assistance for Law Enforcement Act & Broadband Access & Servs., 20 F.C.C.R. 14989, ¶ 21 (2005).

We therefore understand the legislative history of CALEA to show that when a single service comprises an information service component and a telecommunications component, Congress intended CALEA to apply to the telecommunications component. It follows, therefore, that because Congress intended CALEA to cover the transmission of information services, it must have intended that CALEA would continue to reach such services even when they are provided by new technologies.

Id.

50. *ACE*, 451 F.3d at 229.

switching and transport.⁵¹ Second, both technologies must serve as replacement for substantial telephonic functionality.⁵² Finally, the Commission found that there is a public interest in applying CALEA to these providers.⁵³ Since broadband and VoIP providers satisfied all three prongs, they inevitably fell within the substantial replacement provision of CALEA's definition of a telecommunications carrier.⁵⁴

B. The Opinion: *ACE v. FCC*

In 2005, ACE and a number of other interested parties filed a petition for review of the order with the D.C. Circuit, alleging that the FCC's interpretation of CALEA as applicable to broadband and VoIP providers was unlawful.⁵⁵ ACE first argued that broadband internet access is an "information service" for purposes of CALEA and, as such, is expressly excluded from the definition of a "telecommunications carrier" and thus exempt from compliance with the Act.⁵⁶ Second, ACE argued that since VoIP is provided through broadband, it qualifies as an information service and need not comply with CALEA. ACE finally argued that the Commission unlawfully applied the Act to "private networks."⁵⁷

ACE argued that the FCC had already determined that broadband providers are information services under the Telecommunications Act and thus cannot now redefine their designation under CALEA.⁵⁸ Furthermore, ACE argued that because information services by their very nature are provided through telecommunications, the FCC's decision completely undermines the statutory language. If the telecommunications aspect of an "information service" is removed, the definition of the latter becomes a nullity.⁵⁹ The D.C. Circuit did not share ACE's view on these issues and affirmed the FCC's interpretation of the statute.⁶⁰

51. *Id.* at 227 (citing *In re Commc'ns Assistance for Law Enforcement Act & Broadband & Access Servs.*, 20 F.C.C.R. 14989, ¶ 35 (2005)).

52. *Id.* The FCC found that broadband replaces the transmission function previously used to reach dial-up Internet Service Providers (ISPs) and that VoIP replaces traditional telephonic voice communication capabilities. *Id.*

53. *Id.* at 229 (citing *In re Commc'ns Assistance for Law Enforcement Act & Broadband Access & Servs.*, 20 F.C.C.R. 14989, ¶ 37 (2005)).

54. *Id.* at 229.

55. *Id.*

56. *Id.* at 227, 229, 231.

57. This Note concerns only the first two arguments.

58. *ACE*, 451 F.3d at 232.

59. *Id.* at 234.

60. *Id.* at 231.

The D.C. Circuit analyzed the FCC order under the *Chevron* standard, which consists of two steps.⁶¹ First, the court must decide whether Congress' intent was clear.⁶² If it is, then that is the end of the inquiry and the court as well as the agency must fulfill the unambiguously expressed intent of Congress.⁶³ If the court decides that the statute is silent or ambiguous with respect to the specific question at issue, however, it must determine whether the agency's construction is permissible given the objectives of the statute.⁶⁴ If the interpretation reasonably serves the objectives of the statute, then it qualifies as a permissible construction.⁶⁵ If the interpretation is capricious, arbitrary or manifestly contrary to the statute's objectives, on the other hand, it may not be a permissible construction.⁶⁶

In *ACE*, the D.C. Circuit operated on a presumption that Congress left a gap in the statute and the FCC was now entrusted with the ultimate authority to fill it.⁶⁷ The court reasoned that under the *Chevron* standard, the FCC acted within the scope of its designated authority to reasonably interpret statutory language that Congress left "silent or ambiguous."⁶⁸ The court explained that the FCC has express authority to reasonably interpret any ambiguous language within CALEA, and, as long as its interpretation satisfies the statute's objectives, the construction was permissible.⁶⁹

The D.C. Circuit's opinion, however, was not unanimous. One judge from the three judge panel, Senior Circuit Judge Edwards, offered harsh criticism of the majority opinion. Judge Edwards, whose dissent will be discussed later in the Note, stated that prior to the order, the FCC had consistently held that broadband internet services are "information services" and as such were not subject to CALEA.⁷⁰ In fact, as recently as in 2005, the Supreme Court affirmed the FCC's decision that broadband providers are "information services" for purposes of the Telecommunications Act of

61. *Id.* (citing *Chevron v. Nat'l Res. Def. Council, Inc.*, 467 U.S. 837, 843-45 (1984)).

62. *Id.*

63. *Id.*

64. *Id.*

65. *Id.*

66. *Id.* at 231-32 (citing *Chevron*, 467 U.S. at 843-45).

67. *See ACE*, 451 F.3d at 232 (referring to the SRP, the court stated: "where as here, 'Congress has explicitly left a gap for the agency to fill, there is an express delegation of authority to the agency to elucidate a specific provision of the statute by regulation. Such legislative regulations are given controlling weight,' so long as they reflect 'reasonable policy choices.'").

68. *ACE*, 451 F.3d at 231.

69. *Id.*

70. *See ACE*, 451 F.3d at 237 (Edwards, J., dissenting).

1996 in *National Cable & Telecommunications Association v. Brand X Internet Services*.⁷¹ The issue presented in *Brand X* was whether Title II of the Communications Act of 1934 as amended by the Telecommunications Act of 1996 subjects all providers of telecommunications services to mandatory common-carrier regulation.⁷² The FCC issued a declaratory ruling concluding that broadband internet service providers do not provide 'telecommunications services' as the Communications Act defines the term, and as a result they are exempt from mandatory common-carrier regulation.⁷³ The Supreme Court found that the FCC's interpretation of the Telecommunications Act's definitions of information services and telecommunications carriers was reasonable and deferred to the conclusion that broadband internet service providers are information services for purposes of the Act.⁷⁴ At the same time, the Supreme Court left the FCC with the authority to interpret or define telecommunications and information services and impose additional rules on information service providers even if they seem to be contrary to the Act's substantive requirements.⁷⁵

Picking up on the *Brand X* reasoning, ACE argued that the definition of a telecommunications carrier adopted by Congress in the Telecommunications Act of 1996 should be instructive on the intent behind the definition of a telecommunications carrier in CALEA.⁷⁶ The argument was based on the fact that information services are by their very definition delivered via telecommunications under both acts.⁷⁷ Because this clause makes tele-

71. See *Nat'l Cable & Telecomm. Ass'n v. Brand X Internet Servs.*, 125 S. Ct. 2688, 2695 (2005).

72. *Id.* The Telecommunications Act of 1996 was enacted two years after CALEA. Although it offers a slightly different definition of a telecommunications carrier than CALEA, "information services" are defined identically. See *infra* note 77.

73. *Brand X*, 125 S. Ct. at 2695.

74. *Id.* at 2706-08. For a more thorough discussion of the *Brand X* opinion, see Susan P. Crawford, *Responsibility and Liability on the Internet: Shortness of Vision: Regulatory Ambition in the Digital Age*, 74 *FORDHAM L. REV.* 695 (2005); Steven Aronowitz, Note, *Brand X Internet Services v. FCC: The Case of the Missing Policy Argument*, 20 *BERKELEY TECH. L.J.* 887 (2005); Anna J. Zichter, Note, *Developments in Regulating High-Speed Internet Access: Cable Modems, DSL, & Citywide WI-FI*, 21 *BERKELEY TECH. L.J.* 593, 602-606 (2006).

75. See *Brand X*, 125 S. Ct. at 2696-2705; see also Crawford, *supra* note 74, at n.211.

76. ACE, 451 F.3d at 232.

77. CALEA's definition of information services: "The term 'information services' means the offering of a capability for generating, acquiring, storing, transforming, processing, retrieving, utilizing, or making available information *via telecommunications*." CALEA, 47 U.S.C. § 1001 (6)(A) (1994) (emphasis added). Telecommunications Act definition of information service: "The term 'information service' means the offering of a capability for generating, acquiring, storing, transforming, processing, retrieving,

communications and information services inseparable, excluding the telecommunications component from the definition of information services will make the latter a nullity.⁷⁸ Consequently, ACE suggested that CALEA creates two mutually exclusive categories: telecommunications services and information services. Hence, the manufacture of this new “hybrid” service by the FCC is incongruous with the rest of the statute.⁷⁹

ACE also attempted to analogize to *Brand X*, arguing that since the Supreme Court agreed with the FCC’s construction that broadband services are information services under the Telecommunications Act, the FCC may not now apply a different interpretation to the same term in CALEA.⁸⁰ The D.C. Circuit distinguished the *Brand X* opinion because it was decided under a different statute with different goals.⁸¹ The court went on to list and describe the differences between the definition of a telecommunications carrier in the Telecommunications Act and the definition of a telecommunications carrier in CALEA, as well as the difference between the purposes of the two statutes.⁸² It concluded that CALEA is a law enforcement statute and its purpose is very different than that of the Telecommunications Act. That purpose allows for a different, albeit reasonable, construction, and the FCC’s interpretation reflects a reasonable policy choice.⁸³

Judge Edwards, however, started out his dissent by offering this quote: “Regardless of how serious the problem an administrative agency seeks to address . . . it may not exercise its authority in a manner that is inconsistent with the administrative structure that Congress enacted into law.”⁸⁴ He alluded to the fact that the FCC was stretching the language of CALEA to exercise its authority where no authority existed.⁸⁵ He described the FCC as attempting to “squeeze authority from a statute” that the FCC did not have.⁸⁶ Judge Edwards noted that “the most troubling aspect of the

utilizing, or making available information *via telecommunications*.” Telecommunications Act of 1996, Pub. L. No. 104-104, 110 Stat. 56, 47 U.S.C. § 153(20) (emphasis added). These definitions are identical.

78. *ACE*, 451 F.3d at 234.

79. *Id.*

80. *Id.* at 232.

81. *Id.*

82. *Id.*

83. *Id.*

84. *Id.* at 236 (2006) (Edwards, J., dissenting) (quoting *FDA v. Brown & Williamson Tobacco Corp.*, 529 U.S. 120, 125 (2000)).

85. *ACE*, 451 F.3d at 237.

86. *Id.*

FCC's interpretation is that it is directly at odds with the statutory language."⁸⁷

In July 2006, ACE, with support from other advocacy groups such as the EFF, filed a petition for a rehearing en banc with the D.C. Circuit. ACE, echoing Judge Edwards, once again argued that there was no ambiguity in the statute and that the FCC did not have a right to interpret CALEA in a manner inconsistent with legislative intent.⁸⁸ The D.C. Circuit denied the petition, once again declining to consider the issues brought up by ACE and the *amici* briefs.⁸⁹ The following Section analyzes the D.C. Circuit decision and sheds light on the inconsistency behind the FCC's order with legislative intent of Congress. It also attempts to explain why applying CALEA to broadband and VoIP providers is detrimental to the structure of the internet as we know it.

III. ANALYSIS

A. What Makes Application of CALEA to VoIP Problematic

1. Architectural Differences

As shown earlier there are dramatic architectural differences between the PSTN and VoIP. The intelligence needed to initiate communication via the PSTN is located in the middle or between the two users. Furthermore, the entire conversation takes place over a single designated circuit. Thus, wiretapping is easy because law enforcement need only access the central switching station to gain access to a user's conversation. VoIP, on the other hand, is provided through a packet-switched network and the intelligence required to initialize communication resides at the end points. Any surveillance must thus find its way into a user's station (for example, a computer or a VoIP telephone) and somehow differentiate between what is actually required and what is outside of the warrant or the order when intercepting information. Since this has proven too complicated a task for law enforcement, the remaining solution is to alter the architecture of broadband and VoIP to make it more surveillance-friendly.

Imposing wiretapping capabilities into the internet infrastructure, however, will be detrimental to its progress.⁹⁰ By requiring internet providers to introduce fundamental structural changes to the infrastructure to comply with CALEA, the FCC has threatened basic innovation: the internet will

87. *Id.*

88. See Petition for Rehearing, *supra* note 7.

89. Thus far no petition for certiorari has been filed with the Supreme Court.

90. Landau, *supra* note 15, at 428.

no longer be as easily accessible or malleable. In addition, since the order encompasses internet service providers within the definition of a telecommunications carrier, the FBI can now set standards and determine if providers are in compliance. The following Section discusses why this ultimate shift in an internet regulatory scheme may not be socially viable from a privacy standpoint.

2. *Security at the Cost of Privacy*

CALEA was the first piece of legislation in which Congress attempted to influence the way in which telecommunications networks should be structured.⁹¹ The FBI is now entrusted with the task of imposing design requirements on new technologies, a role traditionally undertaken by telephone companies.⁹² From a market perspective, there are a number of problems that plague this new designation. Telephone companies have to balance two very important goals in order to stay in business.⁹³ First, they must assure that customers retain privacy in their communications. Second, they must provide law enforcement with the necessary accessibility to conduct surveillance.⁹⁴ If the companies start to tread away from either objective, their place in the market is inevitably compromised by others who can deliver better services.

The FBI does not operate under these market forces and, unlike the telephone companies does not have to maintain the balance between law enforcement and privacy. Its goal is to enforce the law. As a result, individual privacy might be compromised when the FBI is allowed to dictate the infrastructure or the architectural design to service providers.⁹⁵ A federal law enforcement agency will not be as concerned with individual privacy as a public company. In addition, its understanding of the changes it now seeks is probably limited and uninformed by larger market objectives. Allowing the FBI to dictate the future of the telecommunications industry may not be so beneficial in the long run. In addition, as discussed below, the FBI does not have the necessary understanding of telecommunications policy to make decisions beneficial to both telecommunications providers and their customers.⁹⁶ The following Section explains why the FCC's decision contradicts Congress' intent in drafting CALEA.

91. *Id.* at 417.

92. *Id.* at 410.

93. *Id.*

94. *Id.*

95. *Id.* at 417-18.

96. *See infra* note 104.

B. Departure from Legislative Intent

1. *Departure from Congress' Policy Goals*

One of CALEA's objectives was to assure that technological innovation would not be hampered by the requirements of the statute. So, even if the court's determination that the SRP makes the definition of a telecommunications carrier "silent or ambiguous" is correct, the FCC still went outside of its authority when interpreting CALEA. The legislative history lends a rather clear view of what Congress intended by the SRP as well as what should be classified as a telecommunications carrier. The House Report clearly states that Congress' objectives were to help maintain individual privacy while providing law enforcement with sufficient access to telecommunications *and* to assure that the latter concern would not come in conflict with innovation or impede new technology.⁹⁷

The FCC's interpretation of CALEA is thus a serious stretch. First, the new interpretation undoubtedly comes into conflict with the express language of the statute. As argued earlier, CALEA's definition of a telecommunications carrier clearly calls for information service providers to be excluded. Second, the legislative history is completely at odds with the FCC's interpretation. Congress' objectives—as evidenced by the House Report—were to assure that new technologies and innovation would not be impeded by CALEA's requirements. As a result, even though Congress understood that information service providers utilize telecommunications, it expressly intended to exclude them from compliance with CALEA. Imposing CALEA on VoIP will inevitably require drastic changes to the internet and its infrastructure, thus threatening an important and recognized policy goal—innovation.

2. *Departure from Legislative History*

Congress had the legislative foresight to include the SRP within CALEA's definition of a telecommunications carrier. It also foresaw that information service providers might some day fall into this provision.⁹⁸ The

97. See *supra* text accompanying note 1.

98. Congress anticipated that information services would not remain the same and stated that the intent is to encompass all subsequent inventions within the definition:

The term "information services" includes messaging services offered through software such as groupware and enterprise or personal messaging software, that is, services based on products (including but not limited to multimedia software) of which Lotus Notes (and Lotus Network Notes), Microsoft Exchange Server, Novell Netware, CC: Mail, MCI Mail, Microsoft Mail, Microsoft Exchange Server, and AT&T Easylink (and their associated services) are both examples and precursors.

fact that Congress specifically omitted information services from the definition of a telecommunications carrier and the SRP indicates that it did not intend to include broadband and VoIP providers in the definition at the time the statute was enacted. Stretching the definition to suit specific purposes that Congress did not anticipate is an exercise of power beyond that granted to the FCC.

In *ACE*, the D.C. Circuit concluded, citing to the order, that “the application of CALEA will not impede competition or innovation” and “the overwhelming importance of the Act’s assistance capability requirements to law enforcement efforts to safeguard homeland security and combat crime weighs heavily in favor of applying CALEA *broadly*.”⁹⁹ However, the legislative history behind CALEA directly conflicts with these findings. The House Report specifically states that CALEA’s definition of a telecommunications carrier was intended to have a *narrow* scope:

It is also important from a privacy standpoint to recognize that the scope of the legislation has been greatly narrowed. The only entities required to comply with the functional requirements are telecommunications common carriers, *the components of the public switched network where law enforcement agencies have always served most of their surveillance orders. . . . Also excluded from coverage are all information services, such as Internet service providers or services such as Prodigy and America-On-Line.*¹⁰⁰

Furthermore, the House Report provides the following in its definition of a telecommunications carrier:

The definition of telecommunications carrier does not include persons or entities to the extent they are engaged in providing information services, such as electronic mail providers, on-line

It is the Committee’s intention not to limit the definition of “information services” to such current services, but rather to anticipate the rapid development of advanced software and to include such software services in the definition of “information services.” By including such software-based electronic messaging services within the definition of information services, they are excluded from compliance with the requirements of the bill.

H.R. REP. NO. 103-827, 104th Cong., at 23 (1994) (emphasis added).

99. Am. Council on Educ. v. FCC, 451 F.3d 226, 229 (D.C. Cir. 2005).

100. H.R. REP. NO. 103-827, at 18 (emphasis added).

service providers, such as CompuServe, Prodigy, America-On-Line or Mead Data, or Internet service providers.¹⁰¹

If Congress intended for CALEA to apply to broadband and VoIP providers, it would not have excluded all information services, and especially not internet service providers, when it adopted the Act. The idea of voice traveling over the internet was not completely far-fetched in 1994. Quite to the contrary, although Congress' knowledge at the time was limited, it was already aware of the differences between packet and circuit-switched networks.¹⁰²

Yet, nowhere in the opinion does the D.C. Circuit cite this important bit of information from the legislative history of the Act.¹⁰³ Even if the court is correct in its assessment that Congress intentionally left the SRP ambiguous so that the FCC could interpret and apply it to new technologies not known to the legislature at the time of enactment, it is still not permissible for the FCC to interpret the clause in a manner directly contradictory to Congress' intent. Not only has the FCC gone against the definitions of CALEA, it has completely ignored the intent behind the statute. The *Chevron* standard requires a "permissible" interpretation. A permissible interpretation reflects a reasonable policy choice that does not go against the objectives of the statute. It is difficult to see how including internet service providers within CALEA's definition of a telecommunications carrier could seem like a reasonable policy choice, when the objectives of the statute were to promote innovation by *not* including internet service providers in that same definition.

3. *Exorbitant Costs and Further Threats to Innovation*

Finally, because the order was issued by an administrative agency and not by the legislature, other important problems arise. If the legislature decided to amend CALEA so as to include broadband providers within the definition of telecommunications carriers, it could further provide for subsidies to offset the costs of compliance incurred by these providers. According to an audit report issued by the Department of Justice's Office of Inspector General, it will cost VoIP providers millions of dollars to effectively bring their systems into compliance with CALEA.¹⁰⁴

101. *Id.* at 22.

102. Crawford, *supra* note 74, at 721.

103. Am. Council on Educ. v. FCC, 451 F.3d 226 (D.C. Cir. 2005).

104. See U.S. DEPARTMENT OF JUSTICE, OFFICE OF THE INSPECTOR GENERAL, AUDIT DIVISION, AUDIT REPORT 06-13: THE IMPLEMENTATION OF THE COMMUNICATIONS ASSISTANCE FOR LAW ENFORCEMENT ACT 54 (2006). In another interview, a carrier suggested that:

The audit report, issued after the order, provided data obtained by the Department of Justice when it interviewed ten carrier officials that were actively engaged in or deploying CALEA compliance on their networks.¹⁰⁵ These officials reported that there are significant costs associated with this process.¹⁰⁶ One VoIP provider contracted a Trusted Third Party (“TTP”) at about \$100,000 to develop its CALEA solution.¹⁰⁷ The TTP will also charge this provider a monthly fee of \$14,000 to \$15,000 in addition to \$2,000 for each individual intercept.¹⁰⁸ These amounts do not include the costs of labor associated with writing the code into the software to make it compatible with CALEA.¹⁰⁹ Furthermore, providers are incurring significant opportunity costs because programmers who are working on developing CALEA solutions are not developing new features for customers.¹¹⁰ Providers also worry that having to ensure that each new feature is CALEA-compliant before release puts them at a disadvantage in comparison to non-U.S. based providers who do not have to comply with CALEA.¹¹¹

Few carriers can afford to spend this much on compliance. When the Act was originally passed in 1994, the legislature provided \$500 million to offset the costs incurred by telecommunications carriers to comply by 1995. Since the FCC imposed CALEA on VoIP providers without any legislative amendment behind it, no provisions have been made to subsidize them for their compliance associated expenses. As a result, these costs will either have to be passed onto consumers or providers will simply go out of business altogether. This is exactly why such a drastic decision must be made by Congress, which has within its control the financial resources to

[L]aw enforcement is frustrated by the new communications technology, but does not fully understand the total cost and complexity of obtaining CALEA wiretaps in a wireline and wireless environment. The representative also said that the costs and complexity involved will be exponentially greater with packet mode technology. He further stated that law enforcement wants the CALEA functionality but is largely unaware of the expense and technical impediments to full implementation. This official believed that the problems for law enforcement must be solved before CALEA is implemented on a larger scale.

Id. at 55.

105. *Id.* at 54-55.

106. *Id.*

107. *Id.*

108. *Id.*

109. *Id.*

110. *Id.*

111. *Id.*

offset market demands, and not by the FCC, which does not have those resources.

The irreconcilable tension within CALEA created by the substantial replacement provision is a testament to the fact that Congress never intended to apply CALEA to VoIP. It also shows that CALEA is extremely ill-suited to information service providers. The application of CALEA to VoIP is further complicated by the fundamental architectural differences between VoIP and the PSTN. The threats to privacy and innovation created by the new designation of broadband providers as telecommunications carriers highlight the problematic nature of the FCC's interpretation. The following Section offers some alternatives to the FCC decision.

C. Reconciling the Irreconcilable

Many national governments now recognize that some form of CALEA for internet communications is necessary.¹¹² Administrative agencies, however, cannot make laws. The Constitution has specifically delegated that power to Congress. If a law is no longer internally consistent or, as in CALEA's case, if there is an irreconcilable tension due to innovation, the legislature must find a way to fix this problem. The FCC may offer its input as to how the law can be amended, but it may not take lawmaking into its own hands.

The Department of Justice has already drafted a potential amendment to CALEA.¹¹³ The proposed changes will codify the FCC ruling and hopefully provide the necessary legislative support to carriers. Although the "irreconcilable tension" within CALEA will be resolved by an amendment, other concerns will not go away so easily. The greatest challenge to law enforcement and VoIP providers will be in figuring out how to maintain the balance between surveillance and privacy while at the same time retaining the essential structure of the internet. As mentioned earlier, broadband infrastructure differs significantly from that of the PSTN, and as a result, will require a careful and thorough approach. Furthermore, threats to privacy will have to be seriously addressed and an independent forum created to ensure that the FBI is not abusing its surveillance authority.

Legislative provisions in CALEA can help reduce the threats to innovation that the FCC created by requiring broadband and VoIP providers to

112. Mark C. Del Bianco, *Voices Past: The Present and Future of VoIP Regulation*, 14 *COMMLAW CONSPPECTUS* 365, 377-84 (2006) (noting new regulations in Canada and the EU that would facilitate wiretapping).

113. U.S. Department of Justice, Proposed Amendment to CALEA, proposed July 2006, available at www.eff.org/Privacy/Surveillance/CALEA/CALEA_amend_redline.pdf (last visited Mar. 21, 2007).

comply with the Act. Congress may choose to subsidize innovation in structural design that offers additional security, provides law enforcement with sufficient access, while retaining the essential features of the internet—accessibility and flexibility. Congress may also make necessary provisions for ISPs who will have to spend enormous amounts of money on compliance, just as it did with the PSTN providers in 1995.

IV. CONCLUSION

The FCC stretched CALEA in order to encompass broadband and VoIP providers within the Act's definition of a telecommunications carrier. The decision is problematic due to architectural differences between the two systems, the fact that the FBI is now entrusted with overseeing compliance by providers, and most importantly, because the legislative history does not support such a far-reaching interpretation of the Act. ACE seems to have exhausted its litigation alternatives, and Congress remains the only arbiter in this debate. Unfortunately, it is not clear whether Congress will amend CALEA in the near future to resolve these tensions.

ADDITIONAL DEVELOPMENTS— TELECOMMUNICATIONS

COVAD COMMUNICATIONS CO. V. FCC

*450 F.3d 528 (D.C. Cir. 2006), reh'g denied,
2006 U.S. App. LEXIS 21377 (Aug. 17, 2006)*

The United States Court of Appeal for the District of Columbia Circuit upheld the Federal Communications Commission's (FCC) order requiring incumbent local exchange carriers (ILECs) to make unbundled network elements (UNEs) available to competitive local exchange carriers (CLECs), as part of the unbundling provisions of the Telecommunications Act of 1996 (Telecom Act). The court found that the FCC's policy choices were not arbitrary and capricious because it provided reasoned explanations for its determinations and considered all necessary factors.

The Telecom Act enables the FCC to choose which network elements to unbundle so long as the FCC considers, at a minimum, whether "the failure to provide access to such network elements would impair the ability of the telecommunications carrier seeking access to provide the services that it seeks to offer." Specifically, the FCC ordered three network elements to be unbundled: (1) switches (machine equivalent of a switchboard operator); (2) transport trunks (wires that carry calls between switches); and (3) local loops (wires that run from switches over the last mile to consumers' telephones).

ILECs challenged the FCC order on two grounds. First, the ILECs alleged that the FCC failed to consider tariffed special access services (TSASs) as substitute services that allow CLECs to compete without demanding access to the ILECs' individual network elements. The court, however, held that the FCC provided a reasoned explanation for its decision not to eliminate unbundling solely on the basis of limited TSAS-based competition.

Second, ILECs alleged that the FCC order imposed impossibly high thresholds for assessing the state of competition in market for transport trunks and local loops, requiring unbundling in markets that could function competitively without it. The court, however, held that the FCC repeatedly justified its unbundling determinations on the basis of actual and potential competition. The ILECs failed to demonstrate that lines drawn by the FCC were patently unreasonable, having no relationship to the underlying regulatory problem.

The court sustained the FCC's order, holding that the term "impair" in the Telecom Act was ambiguous, and that the FCC's definition should be given deference if "based on a permissible construction of the statute." The FCC's policy choices would be upheld unless they were "arbitrary and capricious."

CLECs intervened in this action alleging that the FCC's unbundling order was not broad enough because it failed to unbundle digital subscriber line (DSL) capacity loops and mass market local switching (MMLS). The court rejected these "universal" impairment arguments based on the FCC's component-by-component analysis, which was reasonable, rational, and non-arbitrary.

BERKELEY TECHNOLOGY LAW JOURNAL