UNENJOINED INFRINGEMENT AND COMPULSORY LICENSING

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ABSTRACT

After the U.S. Supreme Court's 2006 decision in eBay v. MercExchange, federal courts have denied a substantial number of requests for permanent injunctions following a finding of patent infringement. Without an injunction, an infringing party may continue to practice the infringed patent, typically subject to the payment of a court-approved ongoing royalty. Courts and scholars have debated whether unenjoined infringement and the payment of an ongoing royalty therewith constitutes a judicial compulsory license or something else. To assess how courts view unenjoined infringement, we identified seventy-seven post-eBay cases in which patent infringement was found, but a permanent injunction was denied. In each case, we analyzed the language used by the court in establishing the right of the infringer to continue to operate under the infringed patent(s) and its obligation to compensate the patent holder. This language, as well as the surrounding transactional and litigation context, indicates that at least some federal district courts have been granting compulsory patent licenses upon the denial of permanent injunctions, both tacitly and expressly. Moreover, the Federal Circuit has agreed with this characterization in at least some cases.

To remove any lingering uncertainty, we recommend that the Federal Circuit acknowledge that a district court that declines to enjoin the infringement of a valid and enforceable patent, and concurrently orders the infringer to compensate the patent holder for acts of future unenjoined infringement, has authorized a compulsory license of the patent. Such an acknowledgment would better align the realities of unenjoined infringement with existing doctrines of patent exhaustion and transfer and encourage courts to focus greater attention on the non-royalty aspects of such licenses, which are currently missing key terms such as license scope, field of use, duration, and termination. It would also inform U.S. foreign policy regarding compulsory licensing by other countries.

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I. INTRODUCTION

Compulsory patent licensing occurs when a governmental entity requires a patent holder, against its will, to permit others to practice a patent. Several countries have granted compulsory patent licenses over the past few decades, typically to provide local populations with low-cost access to medicines. Yet, proposals to enact a general compulsory licensing power in the United States have been unsuccessful for more than a century. What's more, the U.S. government has frequently applied diplomatic and trade pressure to countries that have sought to issue compulsory licenses of drugs patented by U.S. firms. The Office of the U.S. Trade Representative, in its annual *Special 301 Report*, has regularly criticized compulsory licensing by other countries as undermining intellectual property rights, reducing incentives to invest in research and development, and impeding new biomedical discoveries. While the principal international agreement pertaining to patent rights expressly permits compulsory licensing, the U.S. government has urged other nations to issue

- 1. See infra Section II.A.
- 2. See Sapna Kumar, Compulsory Licensing of Patents During Pandemics, 54 Conn. L. Rev. 59, 73–75 (2022); David Shore, Divergence and Convergence of Royalty Determinations Between Compulsory Licensing under the TRIPS Agreement and Ongoing Royalties as an Equitable Remedy, 46 Am. J. L. & Med. 55, 66–72 (2020); John R. Thomas, Cong. Rsch. Serv., R43266, Compulsory Licensing of Patented Inventions 9–13 (2014) (cataloging and summarizing non-U.S. compulsory licenses).
- 3. Hartford-Empire Co. v. United States, 323 U.S. 386, 417 (1945) ("Congress was asked as early as 1877, and frequently since, to adopt a system of compulsory licensing of patents. It has failed to enact these proposals into law."). *See also* Dawson Chem. Co. v. Rohm & Haas Co., 448 U.S. 176, 215 n. 21 (1980) ("Compulsory licensing of patents often has been proposed, but it has never been enacted on a broad scale.").
 - 4. *See* Kumar, *supra* note 2, at 73–75.
- 5. Off. of the U.S. Trade Rep., Exec. Off. of the President, 2020 Special 301 Report (2020), at 14 [hereinafter Special 301 Report].
- 6. Agreement on Trade-Related Aspects of Intellectual Property Rights, art. 31, Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 1C, 1869 U.N.T.S. 299, 33 I.L.M. 1197 (1994) [hereinafter TRIPS Agreement]. *See also* Ministerial Declaration of 14 November 2001, WTO Doc. WT/MIN(01)/DEC/1, 41 I.L.M 746.

compulsory licenses only in extremely limited circumstances and only after making every effort to obtain authorization from the patent owner.⁷

Against this backdrop, following the U.S. Supreme Court's landmark 2006 decision in *eBay v. MercExchange*, ⁸ federal courts have denied a substantial number of requests for permanent injunctive relief after finding patent infringement. Without an injunction, an infringing party may continue to practice a patent, typically subject to the payment of a court-approved royalty.

^{7.} Special 301 Report, supra note 5, at 14. See also MAKAN DELRAHIM, DEPT. OF JUSTICE, FORCING FIRMS TO SHARE THE SANDBOX: COMPULSORY LICENSING OF INTELLECTUAL PROPERTY RIGHTS AND ANTITRUST 17 (2004), https://www.justice.gov/atr/ speech/forcing-firms-share-sandbox-compulsory-licensing-intellectual-property-rights-and ("[C]ompulsory licensing presents many policy and practical issues. I believe, however, that the remedy is appropriate so long as antitrust authorities carefully consider the potential harm to innovation, and draft the license as narrowly as they reasonably can."). This position appears to have softened somewhat during the COVID-19 pandemic, given the U.S. Trade Representative's support for a proposed waiver of trade sanctions at the World Trade Organization with respect to countries that permit the use of COVID-19 technologies without authorization of the holders of relevant intellectual property. Press Release, Off. U.S. Trade Rep., Statement from Ambassador Katherine Tai on the COVID-19 Trips Waiver (May 5, 2021), https://ustr.gov/about-us/policy-offices/press-office/press-releases/2021/may/ statement-ambassador-katherine-tai-covid-19-trips-waiver#:~:text=WASHINGTON%20-%20United%20States%20Trade%20Representative,protections%20for%20COVID%2D19 %20vaccines.

^{8.} eBay Inc. v. MercExchange, L.L.C., 547 U.S. 388 (2006).

Numerous advocates, scholars, and even some judges have assumed that this court-sanctioned ability to practice a patent after a finding of infringement—what has been termed "unenjoined" infringement—is, in effect, a court-imposed compulsory license with court-determined compensation.

The characterization of unenjoined infringement as compulsory licensing is entirely consistent with other doctrines of patent law, including patent exhaustion and transfer. In fact, treating unenjoined infringement as anything *other* than a compulsory patent license would lead to anomalous and unintended results, such as a patent holder being able to collect twice for the practice of the same patent¹² or to collect ongoing royalties even after the patent has been transferred to another party.¹³

^{9.} See Compulsory licensing in the context of U.S. injunction cases involving medical technologies, KNOWLEDGE ECOLOGY INTL., (Mar. 21, 2019), https://www.keionline.org/us-injunction-medical.

^{10.} See John M. Golden, United States, in Injunctions In Patent Law: Trans-ATLANTIC DIALOGUES ON FLEXIBILITY AND TAILORING 291, 306–07 (Jorge L. Contreras & Martin Husovec eds., 2022) ("[A] district court may provide a remedy that can operate as a sort of case-specific compulsory license: specifically, the court may order the payment of 'ongoing royalties' for continuing activity that would otherwise constitute infringement'); Shore, supra note 2, at 58 ("Typically referred to as 'ongoing royalties,' these court-mandated compulsory licenses are a modern alternative to injunctions against adjudged infringers."); H. Tomás Gómez-Arostegui, Prospective Compensation in Lieu of a Final Injunction in Patent and Copyright Cases, 78 FORDHAM L. REV. 1661, 1663 (2010) ("[L]ower courts ... are now struggling with what relief, if any, to give prevailing plaintiffs in lieu of an injunction . . . [M]ost award prospective compensation ... commonly a continuing royalty ... for future, postjudgment infringements . . . thereby effectively creating a compulsory license."); Daniel A. Crane, Intellectual Liability, 88 TEX. L. REV. 253, 263 (2009) ("In effect, the combination of declining to issue a permanent injunction and awarding the patentee a reasonable royalty is a compulsory license"); Christopher A. Cotropia, Compulsory Licensing Under TRIPS and the Supreme Court of the United States' Decision in eBay v. MercExchange, in PATENT LAW AND THEORY: A HANDBOOK OF CONTEMPORARY RESEARCH 557, 574 (Toshiko Takenaka & Rainer Moufang eds., 2009) ("[T]he de facto effect of an injunction denial is, by definition, a government-allowed compulsory license."); Bernard H. Chao, After eBay, Inc. v. MercExchange: The Changing Landscape for Patent Remedies, 9 MINN. J. L. SCI. & TECH. 543, 572 (2008) ("Some courts have replaced the permanent injunction with an ongoing royalty, a compulsory license that is only available to the losing defendant."); DANIEL GERVAIS, THE TRIPS AGREEMENT: DRAFTING HISTORY AND ANALYSIS 450 (3rd ed. 2008) ("[T]he systematic impossibility to obtain an injunction and to obtain only actual damages could amount to a compulsory license.").

^{11.} Paice LLC v. Toyota Motor Corp., 504 F.3d 1293, 1316 (Fed. Cir. 2007) (Rader, J., concurring). See infra Sections III.B.3–4.

^{12.} See infra Section IV.A (discussing patent exhaustion).

^{13.} See infra Section IV.B (discussing patent transfers).

The traditional test for granting permanent injunctive relief under the common law requires a finding that the plaintiff would be irreparably harmed if such relief were not granted. 14 Some injuries, such as encroachments on property, depletion of natural resources, and violations of civil rights, have traditionally given rise to a presumption of irreparable harm. 15 The same presumption existed under patent law for many years. The presumption of irreparable harm in patent cases was largely based on the property-like character of patents. A patent confers on its owner "the right to exclude others from making, using, offering for sale, or selling the invention," a set of rights that evokes the traditional right to exclude by property owners. Likewise, Section 261 of the Patent Act states that "patents shall have the attributes of personal property."¹⁷ These considerations led courts, particularly the Court of Appeals for the Federal Circuit, to treat patents as unique assets, like real estate, that should automatically be entitled to protection from unauthorized exploitation by permanent injunctions. 18 Accordingly, the Federal Circuit adopted a general presumption that a permanent injunction will automatically issue once a patent has been adjudged infringed and valid, absent exceptional circumstances.¹⁹ As a result, injunctions were more likely to issue in patent cases than most other types of litigation.²⁰

- 14. See 1 DAN B. DOBBS, DOBBS LAW OF REMEDIES 58 (2nd ed. 1993).
- 15. See Mark P. Gergen, John M. Golden & Henry E. Smith, The Supreme Court's Accidental Revolution? The Test for Permanent Injunctions, 112 COLUM. L. REV. 203, 220–24, 231–32 (2012). More recently, Congress reinstated the presumption of irreparable harm in trademark cases. See Trademark Modernization Act of 2020 as incorporated in Consolidated Appropriations Act. Trademark Modernization Act of 2020, Pub. L. No. 116-260, § 226, 134 Stat. 1182 (2020).
 - 16. 35 U.S.C. § 154(a)(1).
 - 17. 35 U.S.C. § 261.
- 18. See, e.g., H.H. Robertson, Co. v. United Steel Deck, Inc., 820 F.2d 384, 390 (Fed. Cir. 1987), abrogated by Markman v. Westview Instruments, Inc., 52 F.3d 967 (Fed. Cir. 1995) ("In matters involving patent rights, irreparable harm has been presumed when a clear showing has been made of patent validity and infringement. This presumption derives in part from the finite term of the patent grant, for patent expiration is not suspended during litigation, and the passage of time can work irremediable harm . . . The nature of the patent grant thus weighs against holding that monetary damages will always suffice to make the patentee whole, for the principal value of a patent is its statutory right to exclude.")(citation omitted); Richardson v. Suzuki Motor Co., 868 F.2d 1226, 1246–47 (Fed. Cir. 1989) ("Infringement having been established, it is contrary to the laws of property, of which the patent law partakes, to deny the patentee's right to exclude others from use of his property.").
- 19. See MercExchange LLC v. eBay, Inc., 401 F.3d 1323, 1339 (Fed. Cir. 2005), vacated and remanded sub nom. eBay Inc. v. MercExchange, L.L.C., 547 U.S. 388 (2006).
- 20. Though strong, the presumption of irreparable harm in patent cases was not absolute. The presumption could be rebutted under various circumstances, including the defendant's showing that future infringement was unlikely (due, for example, to advancement of technology), the patentee was willing to license the patent for monetary consideration, the patentee unduly delayed in bringing suit, or the patentee's market share was large in

The U.S. Supreme Court revisited the availability of injunctive relief in patent cases in *eBay, Inc. v. MercExchange LLC*.²¹ Justice Thomas, writing for the Court, held that the decision to grant or deny an injunction is an act of judicial discretion that must be exercised in accordance with "well-established principles of equity."²² He articulated a four-factor equitable test to be applied by courts considering the grant of injunctive relief in patent cases. This test requires that the plaintiff must satisfy the following four factors for a permanent injunction to be granted:

- 1. that it has suffered an irreparable injury;
- 2. that remedies available at law [i.e., monetary damages] are inadequate to compensate it 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 the award of an injunction.

Numerous scholars have studied the impact of *eBay* on the availability of injunctive relief in U.S. patent cases. These studies have uniformly found that, following *eBay*, district courts have issued fewer permanent injunctions in patent cases, with significantly fewer injunctions issued when the patent holder is a non-practicing entity (NPE). ²³ Researchers have also observed that

comparison to the infringer's. *See, e.g.*, Reebok Int'l, Ltd. v. J. Baker, Inc., 32 F.3d 1552, 1557–59 (Fed. Cir. 1994) (denying injunction on the basis of no reputational harm and monetarily compensable actual damages); High Tech Med. Instrumentation, Inc. v. New Image Indus., Inc., 49 F.3d 1551, 1557–58 (Fed. Cir. 1995) (denying injunction on the basis of patentee's willingness to license its patents).

- 21. eBay v. MercExchange, 547 U.S. 388, 391–94 (2006).
- 22. eBay, 547 U.S. at 391. *But see* Gergen et al., *supra* note 15, at 205 (suggesting that the eBay four-factor test did not actually reflect well-established principles of equity).
- 23. See Colleen V. Chien & Mark A. Lemley, Patent Holdup, the ITC, and the Public Interest, 98 CORNELL L. REV. 1, 9–10 (2012) ("Based on our review of district court decisions since eBay, courts have granted about 75% of requests for injunctions, down from an estimated 95% pre-eBay."); THOMAS F. COTTER, COMPARATIVE PATENT REMEDIES 103 (2013) (finding empirical evidence that from 2007 to 2011, courts have granted permanent injunctions in approximately 75% of all patent cases, with a substantially lower success rate for cases brought by non-practicing entities); Christopher B. Seaman, Permanent Injunctions in Patent Litigation After eBay: An Empirical Study, 101 IOWA L. REV. 1949, 1983, 1987–88 (2016) (finding that in the eight years before and after eBay was decided, permanent injunctions were issued in 72.125% of infringement cases, and in only 16% of cases in which the patentee was a non-practicing entity); Christopher J. Clugston & Wonjoon Kim, The Unintended Consequences of the Injunction Law after eBay v. MercExchange, 99 J. PAT. & TRADEMARK OFF. SOC'Y 249, 260 (2017) ("Since eBay, injunction denials have increased to more than one-quarter (29.8%) of all patent cases."). See also Ryan T. Holte & Christopher B. Seaman, Patent Injunctions on Appeal: An Empirical Study of the Federal Circuit's Application of eBay, 92 WASH. L. REV. 145, 187–88 (2017) (finding that

plaintiffs sought fewer injunctions after *eBay* despite an overall increase in the number of patent suits, ²⁴ suggesting that patent holders, aware of the higher burdens required to obtain injunctive relief, find it less economically attractive to seek injunctions.

These studies confirm that U.S. district courts, applying the four-factor *eBay* test, permit unenjoined infringement of patents in a meaningful number of cases. The implications of this trend for innovation, markets, and the patent system have been vigorously debated in the literature. This Article does not wade into that long-running debate. Rather, it acknowledges that, for better or worse, unenjoined infringement has been permitted throughout the United States for the past sixteen years, and it now seeks to elucidate the legal character of such unenjoined infringement. The question is whether unenjoined infringement is continued patent infringement that remains subject to further remedial action by the patent holder, or whether it is effectively a compulsory patent license imposed by the court. This Article explores the

between 2006 and 2013, the Federal Circuit affirmed district court grants of permanent injunctions 88%, 22 of 25 cases, of the time and denials of permanent injunctions 53%, 9 of 17 cases, of the time); Ryan Davis, *Patent Injunctions Drop Sharply In 2018*, LAW 360 (Jan. 3, 2019), https://www.law360.com/articles/1121976/patent-injunctions-drop-sharply-in-2018 (reporting results of a study conducted by LexMachina).

24. Kirti Gupta & Jay P. Kesan, *Studying the Impact of eBay on Injunctive Relief in Patent Cases* (Hoover Inst. Working Group on Intell. Prop., Innovation and Prosperity, Working Paper No. 17004, Jan. 10, 2017), https://www.hoover.org/research/studying-impact-ebay-injunctive-relief-patent-cases (finding that in the six years prior to *eBay*, 459 motions for permanent injunctions resulted in the issuance of 381 permanent injunctions, while in the six years following *eBay*, 384 motions for permanent injunctions resulted in the issuance of 308 permanent injunctions).

25. Compare Filippo Mezzanotti & Timothy Simcoe, Patent Policy and American Innovation After eBay: An empirical examination, 48 RSCH POL. 1271, 1272 (2019) ("In general, we find no evidence of a decline in American innovation—whether measured as patents, R&D, venture capital or productivity growth—relative to the pre-eBay baseline."), Filippo Mezzanotti, Roadblock to Innovation: The Role of Patent Litigation in Corporate R&D, 67 MANAGEMENT SCI. 7362, 7383 (2021) (finding eBay "had a positive effect on innovation"), and Chien & Lemley, supra note 23, at 2 ("eBay solved much of the patent system's holdup problem"), with Adam Mossoff, The Injunction Function: How and Why Courts Secure Property Rights in Patents, 96 NOTRE DAME L. REV. 1581, 1584 (2021) (explaining the reduction in injunctions under eBay "undermines the function of [patent] property rights in spurring economic activities in the U.S. innovation economy."), Paul R. Michel & John T. Battaglia, eBay, the Right to Exclude, and the Two Classes of Patent Owners, 2020 PATENTLY-O PATENT L. J. 1, 9 (2020) ("The probabilities on injunctive relief for NPEs should increase . . . [a]nd that itself is critical if courts are serious about properly valuing U.S. patents and restoring the U.S patent system to its innovation- and economic-driving goals"), and Tim Carlton, Note: The Ongoing Royalty: What Remedy Should a Patent Holder Receive When a Permanent Injunction is Denied?, 43 GA. L. REV. 543, 564 (2009) ("The emerging practice of the district courts of imposing an ongoing royalty rate on patent holders is not the best solution and is unfair to the patent holder.").

latter possibility, including the terms and conditions of that compulsory license, how it comports with U.S. treaty obligations, and its implications for U.S. attitudes toward compulsory licenses granted by other countries.

The remainder of this Article proceeds as follows: Section II.A describes the different legal interpretations given to unenjoined infringement, and whether unenjoined infringement should be viewed as a continuing wrong that subjects the infringer to successive suits for damages, or as infringement as to which a court has determined damages in advance, either through a lump sum payment or ongoing royalties. Section II.B then turns to the question of whether unenjoined infringement accompanied by court-determined compensation is effectively a compulsory license and concludes that it is. Part III describes a novel empirical assessment of judicial decisions in which injunctions were denied in patent cases. Section III.A describes the methodology used to collect and code these decisions. Sections III.B and III.C then respectively report the aggregate trends identified as well as specific uses of language relating to ongoing royalties and compulsory licensing. Section III.D discusses the conclusions that the Article draws from these findings, namely that several courts and judges have characterized unenjoined infringement as compulsory licensing. Part IV addresses the implications that flow from considering unenjoined infringement as compulsory licensing, including its possible effect on patent exhaustion, the transfer of patents, and international treaty obligations. The Article then addresses the need to specify additional terms of the compulsory license grant. The Article concludes by recommending that courts, and the Federal Circuit in particular, acknowledge unenjoined infringement accompanied by court-determined compensation is in fact compulsory licensing.

II. THE DEBATE OVER UNENJOINED INFRINGEMENT

While the Supreme Court's decision in eBay opened the door to unenjoined infringement, it says nothing about the status and obligations of the infringer after the denial of an injunction. Moreover, the case settled before the lower court on remand could fully adjudicate these issues.²⁶ This vacuum

^{26.} After the Supreme Court rendered its decision in *eBay*, the case was remanded to the district court for further proceedings in accordance with the Supreme Court's ruling. On remand, the district court, applying the Supreme Court's four-factor test, upheld its prior denial of injunctive relief, allowing the defendants to continue to infringe the asserted patent. MercExchange, L.L.C. v. eBay, Inc., 500 F. Supp. 2d 556, 569–91 (E.D. Va. 2007) [hereinafter *eBay IV*]. The district court also confirmed an earlier jury award of \$25 million in "reasonable royalty" damages with respect to infringement of the relevant patent. *Id.* at 563. However, the case settled in February 2008, before further issues regarding the compensation payable by eBay to MercExchange could be adjudicated. Paul M. Janicke, *Implementing the "Adequate Remedy*"

left lower courts and commentators without guidance regarding the conditions, if any, under which an infringer could continue to infringe patents after the denial of an injunction. As one patent holder observed a few months after the *eBay* decision, "[t]he landscape of the remedy that should follow the denial of a patentee's request for permanent injunction post-*eBay* is uncharted territory."²⁷

In the wake of *eBay*, significant debate emerged around two interrelated questions concerning unenjoined infringement. First, should a court's decision to deny a permanent injunction be viewed as conferring on the infringer an ongoing right to practice the infringed patent, or should the unenjoined infringer be viewed as committing continuing infringement of the asserted patent? Second, if unenjoined infringement is somehow permitted, what, if anything, should the infringer pay the patent holder to continue to infringe the patent?

A. COMPENSATION FOR UNENJOINED INFRINGEMENT

Once it is determined that no injunction will be issued to prevent an infringer from continuing to practice a valid and enforceable patent, one must ask where that leaves the infringer. There are two competing schools of thought in this regard. One holds that an infringer that continues to infringe a patent following the denial of an injunction remains an infringer, and that infringer is subject to subsequent suits by the patent holder for money damages and even further attempts to obtain an injunction (the "ongoing infringement" school). As Professor Bernard Chao succinctly puts it, "[a]fter losing a first lawsuit, a defendant continues to infringe at its own peril." The competing school of thought holds that the court denying an injunction thereby authorizes the infringer to continue to practice the infringed patent, thus necessitating the infringer's compensation of the patent holder (the "compensation" school). ²⁹ Section II.A considers the dueling theoretical

at Law" for Ongoing Patent Infringement After eBay v. MercExchange, 51 IDEA: INTELL. PROP. L. REV. 163, 174 (2011).

^{27.} Corrected Brief of Plaintiff-Cross Appellant Paice LLC at 63, Paice LLC v. Toyota Motor Corp., 504 F.3d 1293 (Fed. Cir. 2007) (No. 06-1610, -1631, Fed. Cir. Dec. 18, 2006), 2006 U.S. Fed. Cir. Briefs LEXIS 393, at *75 [hereinafter *Paice* CAFC Brief].

^{28.} Chao, *supra* note 10, at 571. *See also* Janicke, *supra* note 26, at 165 ("Ongoing unenjoined infringement remains unlawful, and it cannot be made otherwise by the waving of a judicial magic wand.").

^{29.} See Paice LLC v. Toyota Motors Corp., 609 F. Supp. 2d 620, 630 (E.D. Tex. 2009), dismissed, 455 F. App'x 955 (Fed. Cir. 2010) ("[T]he law must ensure that an adjudged infringer who voluntarily chooses to continue his infringing behavior must adequately compensate the patent holder for using the patent holder's property. Anything less would be manifestly unjust and violate the spirit, if not the letter, of the U.S. Constitution and the Patent Act.").

perspectives that motivate the ongoing infringement and compensation schools.

1. Ongoing Infringement and Successive Damages Suits

Standing alone, the denial of an injunction does not necessarily exonerate an infringer from liability for continuing to infringe the asserted patent. Even if the patent holder is unlikely to obtain an injunction in a future action against the infringer, it is certainly entitled to monetary damages to compensate it for the infringement and could bring successive actions to recover those damages.

The need to initiate successive suits to recover damages against an unenjoined, ongoing tortfeasor arises in various areas of law. In nuisance cases, for example, when the harm continues, the injured party's remedy absent an injunction is "to bring from time to time separate suits for the recurring injuries sustained." ³⁰

The district court in *eBay* appears to have contemplated the possibility of successive damages suits for unenjoined infringement when it initially denied MercExchange's request for an injunction. Specifically, the court noted that if it denied the injunction and "if the defendants continue to infringe the plaintiff's patents, the court will be more inclined to award enhanced damages for any post-verdict infringement." Likewise, in **A Techs., Inc. v. Microsoft Corp., 32 a patent infringement case decided one month after the Supreme Court's decision in *eBay*, the district court denied z4's request for an injunction against Microsoft under the *eBay* framework. 33 Then, to provide z4 with "an efficient method for . . . recovery of future monetary damages post-verdict," the court issued an order "severing z4's continuing causes of action for

^{30.} Burleyson v. W. & Atl. R. Co., 87 S.E.2d 166, 171 (Ga. App. 1955). See also St. Louis, I.M. & S.R. Co. v. Biggs, 12 S.W. 331, 331 (Ark. 1889) ("[T]he injury to be compensated in a suit is only the damage which has happened, and there may be as many successive recoveries as there are successive injuries."); Naylor v. Eagle, 303 S.W.2d 239, 241 (Ark. 1957) ("If it is known merely that damage is probable, or, that even though some damage is certain, the nature and extent of that damage cannot be reasonably known and fairly estimated, but would be only speculative and conjectural, then the statute of limitations is not set in motion until the injury occurs, and there may be as many successive recoveries as there are injuries.").

^{31.} MercExchange, L.L.C. v. eBay, Inc., 275 F. Supp. 2d 695, 714–15 (E.D. Va. 2003), aff'd in part, rev'd in part sub nom. MercExchange, LLC v. eBay, Inc., 401 F.3d 1323 (Fed. Cir. 2005), vacated and remanded sub nom. eBay Inc. v. MercExchange, L.L.C., 547 U.S. 388 (2006), and judgment entered, 660 F. Supp. 2d 653 (E.D. Va. 2007).

^{32.} z4 Techs., Inc. v. Microsoft Corp., 434 F. Supp. 2d 437, 444 (E.D. Tex. 2006).

^{33.} Id. at 439-44.

monetary damages due to Microsoft's continuing post-verdict infringement of z4's patents."³⁴

Other courts, however, have rejected the successive suit theory. In *Paice LLC v. Toyota Motor Corp.*, ³⁵ a patent infringement case considered by the Federal Circuit shortly after *eBay*, Toyota's hybrid vehicle drivetrain was found to infringe patents held by Paice. The district court, applying the four *eBay* factors, denied the permanent injunction that Paice sought. ³⁶ It then ordered Toyota to pay Paice an ongoing royalty of \$25 per vehicle to continue to practice the infringed patent. ³⁷ On appeal, Paice argued that the lack of an injunction against Toyota's continuing infringement should not be viewed as granting Toyota an affirmative right to practice Paice's patent, which it referred to as a "compulsory license." Rather, Toyota's continuing practice of the patent should be viewed as continuing infringement—possibly willful—as to which Paice "may elect to come back to court periodically to seek past damages." ³⁹ The Federal Circuit rejected Paice's argument and instead affirmed the district court's ongoing royalty as the method to compensate Paice for Toyota's unenjoined infringement (see Section II.A.3, *infra*). ⁴⁰

One advantage of the successive action approach is that it gives the patent holder a potential claim for enhanced damages for "willful infringement"

^{34.} *Id.* at 444. *Cf.* Saffran v. Bos. Sci. Corp., No. 2-05-CV-547 (TJW), 2008 U.S. Dist. LEXIS 106711, at *2 (E.D. Tex. Feb. 14, 2008) (finding that in case in which plaintiff did not seek an injunction, the "court sua sponte severs plaintiff's continuing causes of action for future royalties.").

^{35.} Paice LLC v. Toyota Motor Corp., 504 F.3d 1293, 1316 (Fed. Cir. 2007).

^{36.} Paice LLC v. Toyota Motor Corp., No. 2:04-CV-211-DF, 2006 WL 2385139, at *4–6 (E.D. Tex. Aug. 16, 2006) (*Paice I*), aff'd in part, vacated in part, remanded, 504 F.3d 1293 (Fed. Cir. 2007).

^{37.} See Paice LLC v. Toyota Motors Corp., 609 F. Supp. 2d 620, 622 (E.D. Tex. 2009) (summarizing the holding in Paice I as follows: "The Court awarded damages for past infringement in the amount found by the jury and established, dividing the jury's lump-sum damages award for past infringement by the number infringing vehicles sold, an ongoing royalty rate of \$25 per infringing vehicle for the remaining life of the '970 Patent.').

^{38.} Paice CAFC Brief, *supra* note 27, at *75–81.

^{39.} Id. at *81.

^{40.} Paice LLC, 504 F.3d at 1314 (citing, e.g., Shatterproof Glass Corp. v. Libbey-Owens Ford Co., 758 F.2d 613, 628 (Fed. Cir. 1985) in which the Federal Circuit upheld a 5% court-ordered royalty, based on sales, "for continuing operations."). Other plaintiffs have also argued in favor of the successive suit theory. See Voda v. Cordis Corp., No. CIV-03-1512-L, 2006 U.S. Dist. LEXIS 63623, at *20–21 (W.D. Okla. Sep. 5, 2006) ("Plaintiff suggests severing his action for monetary damages for post-verdict infringement . . . The court sees no reason for severance of a cause of action for the post-verdict damages . . . The court therefore denies plaintiff's motion for severance.").

under § 284 of the Patent Act. 41 That is, whatever uncertainty may have existed prior to an adjudication, once a court rules in a final and unappealable decision that a patent is valid, enforceable and infringed, there is little doubt that continuing to practice the patent without the owner's consent constitutes infringement. 42 Accordingly, in many cases a fact finder could find unenjoined infringement in a subsequent proceeding to constitute "willful" infringement, thereby authorizing the court to award the patent holder enhanced damages. 43

From a historical standpoint, Professor Tomás Gómez-Arostegui argues that successive suits are the only legally permissible way to compensate a patent holder for unenjoined infringement. ⁴⁴ Specifically, he points out that the historical English courts sitting in equity did not grant prospective financial rewards, and current federal courts issuing remedies in equity may not exceed those historically available. ⁴⁵ Professor Paul Janicke likewise argues that, under the Patent Act, a plaintiff may "elect to wait to recover damages for future wrongs after they occur by bringing successive actions" but that "compelling an unwilling plaintiff to accept judicially preset periodic payments for future infringements is not a remedy within the power of a federal court."⁴⁶

Despite these considerations, as discussed in Part III below, most courts that have denied injunctions against continuing tortious conduct, whether

^{41.} Once infringement has been established, a district court may "increase the damages up to three times the amount found or assessed." 35 U.S.C. § 284. Courts have interpreted this provision as giving rise to the possibility of enhanced damages when infringement has been "willful." *See* Halo Elecs., Inc. v. Pulse Elecs., Inc., 579 U.S. 93, 106 (2016).

^{42.} See Janicke, supra note 26, at 186–87 (finding that infringements after judgment are "almost certainly willful").

^{43.} *Id.*; Gómez-Arostegui, *supra* note 10, at 1663 ("A subsequent suit might strengthen the possibility of a willful-damages award"); Chao, *supra* note 10, at 569 ("If the defendant continues to infringe after losing a first lawsuit, a subsequent lawsuit carries the very real risk of a finding of willful infringement that would result in enhanced damages and attorneys fees.").

^{44.} Gómez-Arostegui, *supra* note 10, at 1665 ("[A] plaintiff who succeeds on the merits of her case but who fails to obtain a final injunction must be allowed to periodically sue for any subsequent infringements, if she so chooses."). But *see* Mark A. Lemley, *The Ongoing Confusion Over Ongoing Royalties*, 76 Mo. L. REV. 695, 697–99 (2011) (challenging Janicke's and Gómez-Arostegui's interpretations).

^{45.} Tomás Gómez-Arostegui & Sean Bottomley, *The Traditional Burdens for Final Injunctions in Patent Cases c.1789 and Some Modern Implications*, 71 CASE W. RES. L. REV. 403, 442 (2020) ("[F]ederal courts lack the authority to award ongoing royalties for post-judgment infringements. Apart from the absence of statutory authorization, the English Court of Chancery did not recognize a remedy like this in 1789, which is the time and place the Supreme Court looks to for the default, equitable remedies of the federal courts."); Gómez-Arostegui, *supra* note 10, at 1666 ("[T]he compulsory licenses awarded by federal courts today are ultra vires because they were unknown in the Court of Chancery in 1789.").

^{46.} Janicke, supra note 26, at 165.

patent infringement or nuisance, have *not* required injured parties to bring successive claims to recover for future harm. Doing so can be viewed as unduly burdensome to the injured parties, who must engage in, and pay for, protracted litigation, and inefficient for courts that must hear such repeated cases. As noted by one district court, the likely result is "an endless succession of lawsuits presenting the same issue." As a result, most courts have determined the compensation to be paid to the injured party for future harm in the same set of proceedings in which the injunction was denied rather than forcing the parties to return to court for future proceedings at a later date. Sections II.A.2 and II.A.3 below discuss the forms that such compensation takes.

2. Unenjoined Infringement Authorized by a Lump Sum Payment

If a court does not enjoin tortious conduct, such as patent infringement, then the court may award compensation for future harm to the injured party at the time the injunction is denied. This compensation may take one of two forms: a lump sum payment or an ongoing payment. This Section briefly discusses compensation for unenjoined infringement in the form of a lump sum payment while Section II.A.3, infra, turns to the more common remedy of ongoing royalties.

^{47.} Ord. Granting in Part and Denying in Part Motion for Ongoing Royalties at 15, Apple, Inc. v. Samsung Elecs. Co., No. 12-CV-00630-LHK, (N.D. Cal. Feb. 15, 2018), ECF No. 2217) (quoting Lemley, *supra* note 44, at 697). See also Janicke, supra note 26, at 181 ("Few patent owners, having been put through the rigors, delays, and costs of patent litigation, will want to choose the successive suits option."); Norman V. Siebrasse, Rafal Sikorski, Jorge L. Contreras, Thomas F. Cotter, John Golden, Sang Jo Jong, Brian J. Love & David O. Taylor, Injunctive Relief, in Patent Remedies and Complex Products: Toward a Global CONSENSUS 115, 158 (C. Bradford Biddle et al. eds., 2019) ("forcing a patentee to relitigate a continuing course of infringement from scratch would threaten to unduly dilute the incentives that the patent system means to provide."); Lemley, supra note 44, at 697 ("[I]t seems odd to say that the only possible solution is to doom the parties, Zeno-like, to an endless succession of lawsuits presenting the same issue and leading (hopefully, at least) to the same outcome."). Indeed, the prospect of imposing on plaintiffs the burden of bringing successive lawsuits to recover for ongoing injuries is often raised as an argument for issuing injunctions in the first place. See, e.g., Paice CAFC Brief, supra note 27, at *81; Michigan Law Review, Equity and the Eco-System: Can Injunctions Clear the Air?, 68 MICH. L. REV. 1254, 1280 (1970) ("IIIf the injury is continuous, any remedy other than an injunction may lead to the undesirable result of necessitating periodic suits by the plaintiff."). But see Janicke, supra note 26, at 181 ("In all events, successive actions may not be as burdensome to the courts as might at first appear. The issues of validity, enforceability, and scope will have already been adjudicated and hence will be precluded by the first judgment. Infringement may be a new issue if the product configuration has changed in some significant way, but all the other major issues in a typical patent case will be foreclosed.").

^{48.} See infra Section III.B.

One well-known tort case in which a court awarded the plaintiffs a lump sum for a continuing nuisance that the court did not enjoin is *Boomer v. Atlantic Cement Co.*⁴⁹ In *Boomer*, a cement plant was permitted to continue to emit dirt, smoke, and vibrations that constituted a nuisance to neighboring landowners provided that it paid those landowners "permanent damages" to compensate them for the ongoing "servitude" that the nuisance imposed on their land.⁵⁰ The *Boomer* court relied on a long line of earlier nuisance cases awarding permanent damages when the abatement of a nuisance was not practical or possible.⁵¹

Lump sum payments are also routinely awarded to compensate patent holders for past infringement.⁵² Likewise, lump sum awards may be made to compensate patent holders for *future* infringement, including in cases of unenjoined infringement.⁵³ As one district court explained,

A second way to calculate a royalty is to determine a one-time lump sum payment that the infringer would have paid at the time of the hypothetical negotiation for a license covering all sales of the licensed product both past and future. This differs from payment of an ongoing royalty because, with an ongoing royalty, the licensee pays based on the revenue of actual licensed products it sells. When a one-time lump sum is paid, the infringer pays a single price for a license covering both past and future infringing sales. ⁵⁴

^{49.} See Boomer v. Atl. Cement Co., 257 N.E.2d 870, 875 (N.Y. App. 1970).

^{50.} *Id*.

^{51.} Id. at 874.

^{52.} Thomas F. Cotter, John M. Golden, Oskar Liivak, Brian J. Love, Norman V. Siebrasse, Masabumi Suzuki & David O. Taylor, *Reasonable Royalties, in PATENT REMEDIES AND COMPLEX PRODUCTS: TOWARD A GLOBAL CONSENSUS* 6, 31 (C. Bradford Biddle et al. eds., 2019).

^{53.} See BASF Plant Sci., LP v. Commonwealth Sci. & Indus. Rsch. Org., No. 2:17-CV-503-HCM, 2019 WL 8108116, at *16 (E.D. Va. Dec. 23, 2019), aff'd in part, rev'd in part, and remanded, 28 F.4th 1247 (Fed. Cir. 2022). See also Christopher B. Seaman, Ongoing Royalties in Patent Cases After eBay: An Empirical Assessment and Proposed Framework, 23 TEX. INTELL. PROP. L.J. 203, 222 (2017) ("[A] jury may decide prospective compensation as part of a paid-in-full, 'lump sum' award for the life of the patent, which covers both past and future uses of the patented technology . . . If a jury awards a lump sum without specifying whether it was limited solely to past infringement, the district court may treat the lump sum as also encompassing all future uses.") (citing Regents of Univ. of Cal. v. Monsanto Co., No. C 04–0634 PJH, 2005 WL 3454107, at *26–28 (N.D. Cal. Dec. 16, 2005) and Personal Audio, LLC v. Apple, Inc., No. 9:09-CV-111, 2011 WL 3269330, at *13 (E.D. Tex. July 29, 2011)). But see Gómez-Arostegui & Bottomley, supra note 45, at 438 ("[S]ection 284 [of the Patent Act] compensates patentees for past, not future, infringements.").

^{54.} Final Annotated Jury Instructions at 52, Apple, Inc. v. Samsung Elecs. Co., No. 12-CV-00630-LHK, 2014 WL 1883327, (N.D. Cal. Apr. 28, 2014), ECF No. 1848; Jury

Lump sum payments have several advantages over ongoing royalties, including simplicity, avoidance of future disputes, and immediate compensation of the patent holder. ⁵⁵ Nevertheless, calculating the lump sum requires that important assumptions be made about the scope and extent of future infringement—assumptions that, if not borne out, could result in a lump sum that is higher or lower than needed to compensate the patent holder appropriately. ⁵⁶

Professor Paul Janicke points out that, in the context of unenjoined patent infringement, Section 284 of the Patent Act requires a court to award a successful patent holder "damages adequate to compensate for the infringement." ⁵⁷ And because damages awarded by federal courts must generally be rendered in the form of lump-sum payments, absent statutory provisions to the contrary, ⁵⁸ Janicke contends that a patent holder subjected to unenjoined infringement should be given the option to receive compensation in the form of a lump sum payment for future infringement and not be forced to accept "judicially preset periodic payments for future infringements." ⁵⁹ Professor Mark Lemley disagrees with Janicke's interpretation of Section 284, arguing that "damages adequate to compensate for the infringement" may include ongoing royalties. ⁶⁰ Moreover, as discussed in Part III below, most courts that compensate patent holders for unenjoined infringement have chosen to award ongoing royalties.

3. Unenjoined Infringement Authorized by an Ongoing Royalty

As an alternative to awarding a lump sum payment, district courts that have denied injunctions in patent infringement cases often establish ongoing royalty obligations to compensate patent holders for unenjoined infringement. ⁶¹ Though patent damages are usually decided by a jury, the level of ongoing royalties for unenjoined infringement is generally determined by a district court

Instructions at 33, Apple Inc. v. Samsung Elecs. Co., Ltd., No. 5:11-cv-01846-LHK, 2013 WL 11233253 (N.D. Cal. Nov. 18, 2013), ECF No. 2784.

- 55. See Seaman, supra note 53, at 224.
- 56. See id. at 225; Lemley, supra note 44, at 701; Gómez-Arostegui, supra note 10, at 1675.
- 57. Janicke, *supra* note 26, at 174–75.
- 58. *Id.* at 166 (citing cases outside of patent law), 174–75 (citing Federal Circuit cases), and 177–81 (drawing analogies to the Restatement (Second) of Torts).
 - 59. Id. at 165.
 - 60. See Lemley, supra note 44, at 697–98.
- 61. See infra Section III.B. See also Lisa M. Tittemore, The Controversy Over "Ongoing Royalty" Awards in the Evolving Landscape of Remedies for Patent Infringement, Fed. Lawyer, Nov.—Dec. 2009, at 29–30 ("[S]ince eBay, ongoing royalties have become far more prevalent").

as a matter of equity. 62 This being said, some courts have charged juries to determine such royalty rates in an advisory capacity. 63

The amount of ongoing royalties can be either a per-unit fixed amount or a percentage of the infringer's net sales revenue from infringing products during the remaining life of the infringed patent(s). ⁶⁴ Ongoing royalties are often based on, if not identical to, the jury-determined royalty for past infringement of the same patents, though numerous courts have varied these rates. ⁶⁵ Significant scholarly and judicial attention has been devoted to the appropriate analytical framework for determining ongoing royalties for unenjoined infringement, ⁶⁶ including whether such ongoing royalties should be higher than royalties awarded for past infringement due to the infringer's post-action willfulness. ⁶⁷ Although important, these issues are beyond the scope of this Article.

B. IS UNENJOINED INFRINGEMENT COMPULSORY LICENSING?

As noted in the Introduction, some commentators have characterized a court's authorization of unenjoined infringement conditioned on the infringer's payment of compensation to the patent holder as the judicial issuance of a compulsory license. Yet the Federal Circuit, in its first decision to consider the issue, generated considerable confusion by expressly denying that unenjoined infringement accompanied by an "ongoing royalty" is a compulsory license. This Section considers the arguments that have been made with respect to the characterization of unenjoined infringement as judicially-ordered compulsory licensing.

- 63. Seaman, supra note 53, at 221–22. See also Lemley, supra note 44, at 700.
- 64. See Seaman, supra note 53, at 225–27; Lemley, supra note 44, at 701.
- 65. See Seaman, supra note 53, at 227–28; Lemley, supra note 44, at 702.
- 66. See Siebrasse et al., supra note 47, at 157–59; Seaman, supra note 53, at 227–28; Lemley, supra note 44, at 700–7; Schutz & Arenz, supra note 62, at 82–83.
- 67. See generally Jonathan M. Barnett & David J. Kappos, Restoring Deterrence: The Case for Enhanced Damages in a No-Injunction Patent System, USC LAW LEGAL STUDIES PAPER NO. 22-2 (Feb. 14, 2022), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4034791; Siebrasse et al., supra note 47, at 158; Seaman, supra note 53, at 229; Lemley, supra note 44, at 702–3.
 - 68. See supra notes 9–10, and accompanying discussion.
 - 69. Paice LLC v. Toyota Motor Corp., 504 F.3d 1293, 1316 (Fed. Cir. 2007) (Paice II).

^{62.} Paice LLC v. Toyota Motor Corp., 504 F.3d 1293, 1316 (Fed. Cir. 2007) ("[T]he fact that monetary relief is at issue in this case does not, standing alone, warrant a jury trial"). See Seaman, supra note 53, at 220–21; Lemley, supra note 44, at 700. But see Gómez-Arostegui & Bottomley, supra note 45, at 442 ("[A] party should not be forced to face an equitable remedy assessed by a judge when an adequate remedy, and a right to a jury trial, would be available at law."); Ronald J. Schutz & Patrick M. Arenz, Uncharted Waters: Determining Ongoing Royalties for Victorious Patent Holders Denied an Injunction, 11 SEDONA CONF. J. 75, 78–80 (2010) (arguing that an ongoing royalty should be determined by a jury).

1. Defining Compulsory Licensing

To analyze whether unenjoined infringement is, in fact, compulsory licensing, it is useful first to understand precisely what constitutes compulsory licensing.

a) What is a License?

As provided by the Patent Act, "whoever *without authority* makes, uses, offers to sell, or sells any patented invention, within the United States or imports into the United States any patented invention during the term of the patent therefor, infringes the patent." The "authority" referenced in the Act is typically referred to as a "license" to practice the patent. A license "[i]n its simplest form . . . means only leave to do a thing which the licensor would otherwise have a right to prevent." As described by the Federal Circuit, "[a] patent license agreement is in essence nothing more than a promise by the licensor not to sue the licensee."

Agreements conferring patent licenses may take a variety of forms and, like other contracts, may be written, oral, or electronic. Likewise, patent licenses may be granted by implication, without the formal contractual mechanisms of offer and acceptance. As the Supreme Court observed nearly a century ago,

No formal granting of a license is necessary in order to give it effect. Any language used by the owner of the patent or any conduct on his part exhibited to another, from which that other may properly infer that the owner consents to his use of the patent in making or using it, or selling it, upon which the other acts, constitutes a license ⁷⁴

The term "license" is thus fairly broad, encompassing a range of modalities. This Article discusses some of these in the following Sections.

b) What is a Compulsory License?

If a license is a promise by a patent holder not to assert its rights against the licensee's practice of a patent, then a *compulsory* license is such a promise when it is required of the patent holder by a governmental entity. As explained

^{70. 35} U.S.C. § 271(a) (emphasis added).

^{71.} JORGE L. CONTRERAS, INTELLECTUAL PROPERTY LICENSING AND TRANSACTIONS: THEORY AND PRACTICE 47 (2022) [hereinafter CONTRERAS, IP TRANSACTIONS].

^{72.} W. Elec. Co., Inc. v. Pacent Reproducer Corp., 42 F.2d 116, 117 (2d Cir. 1930).

^{73.} Spindelfabrik Suessen-Schurr, Stahlecker & Grill GmbH v. Schubert & Salzer Maschinenfabrik Aktiengesellschaft, 829 F.2d 1075, 1081 (Fed. Cir. 1987). *See also* Jim Arnold Corp. v. Hydrotech Sys., 109 F.3d 1567, 1577 (Fed. Cir. 1997); Raymond C. Nordhaus, *Patent License Agreements*, 21 Bus. L. 643, 644 (1966) ("A nonexclusive license constitutes merely a waiver of infringement suit or covenant not to sue under the licensed patent.").

^{74.} De Forest Radio Tel. & Tel. Co. v. United States, 273 U.S. 236, 241 (1927).

by the World Trade Organization (WTO), "[c]ompulsory licensing is when a government allows someone else to produce a patented product or process without the consent of the patent owner . . ."⁷⁵ Similarly, a recent report by the Congressional Research Service explains,

The term "compulsory license" refers to the grant of permission for an enterprise seeking to use another's intellectual property to do so without the consent of its proprietor. The grant of a compulsory patent license typically requires the sanction of a governmental entity and provides for compensation to the patent owner.⁷⁶

The involuntary compensatory nature of a compulsory license is highlighted by Dr. Rosa Castro Bernieri, who notes that "[u]nder a compulsory license, the IP right, which is traditionally conceived as a right to exclude, is transformed into a right to receive compensation." ⁷⁷ As these definitions demonstrate, a compulsory license is simply a license that a patent holder is compelled, usually by a governmental body, to grant to another, generally with compensation.

Compulsory intellectual property licenses are authorized under two prominent multilateral international agreements. The Paris Convention for the Protection of Industrial Property, ⁷⁸ originally adopted in 1883, has been adopted by 179 member states including the United States. ⁷⁹ Provisions introduced to the Convention in 1925 provide that its members "have the right to take legislative measures providing for the grant of compulsory licenses to prevent the abuses which might result from the exercise of the exclusive rights conferred by the patent, for example, failure to work." ⁸⁰

^{75.} FAQ: Compulsory Licensing of Pharmaceuticals and TRIPS, WORLD TRADE ORG., https://www.wto.org/english/tratop_e/trips_e/public_health_faq_e.htm (last accessed Apr. 6, 2023).

^{76.} Thomas, *supra* note 2, at 1. *See also* Kumar, *supra* note 2, at 6 ("A compulsory license allows the government or a government-authorized third party to use or manufacture a patented good, or practice a patented process, without the patent owner's consent."); Cotropia, *supra* note 10, at 559 ("Compulsory licenses are an abrogation of a patentee's right, where the government allows itself or a third party to practice the patented invention without the patentee's consent.").

^{77.} Rosa Castro Bernieri, Ex-Post Liability Rules in Modern Patent Law 37 (2010).

^{78.} See generally Paris Convention for the Protection of Industrial Property, July 14, 1967, 828 U.N.T.S 305 [hereinafter Paris Convention].

^{79.} See WIPO-Administered Treaties, WORLD INTELL. PROP. ORG., https://www.wipo.int/wipolex/en/treaties/ShowResults?search_what=C&treaty_id=2 (last visited Oct. 25, 2023).

^{80.} Paris Convention, supra note 78, art. 5(A)(2) (Hague Revision of 1925).

The Agreement on Trade-Related Aspects of Intellectual Property Rights (the "TRIPS Agreement")⁸¹ was negotiated as part of the WTO Uruguay Round. Article 31 of the TRIPS Agreement permits WTO members to enact national laws that authorize the issuance of compulsory patent licenses to promote the public interest, counter anticompetitive conduct, or engage in noncommercial governmental use.⁸² Since its adoption, more than a dozen countries have reportedly invoked the compulsory licensing provisions of the TRIPS Agreement, primarily in the areas of pharmaceutical products,⁸³ and as of 2014, 87 countries, including the United States, have enacted national legislation authorizing compulsory patent licensing in some form.⁸⁴

As noted in the Introduction, ⁸⁵ the issuance of compulsory patent licenses, particularly in the area of pharmaceutical products, has given rise to international sanction from countries including the United States. For example, when in 2012 the Indian Patent Office issued a compulsory license to local drug manufacturer Natco Pharma Ltd. to produce Bayer's patented anticancer therapy Nexavar, ⁸⁶ U.S. government officials and legislators strenuously objected. ⁸⁷ The non-profit group *Médicins sans Frontières* has cataloged numerous official and unofficial U.S. objections to compulsory patent licensing, particularly in India. ⁸⁸

c) Compulsory Patent Licensing in the U.S.

Despite U.S. opposition to compulsory licenses granted by foreign governments, numerous statutory provisions exist in the United States under which patent holders may legally be compelled to grant licenses to others.⁸⁹

- 81. See generally TRIPS Agreement, supra note 6.
- 82. *Id.* art. 31. *See also* Cotropia, *supra* note 10, at 563–64.
- 83. See THOMAS F. COTTER, PATENT WARS: HOW PATENTS IMPACT OUR DAILY LIVES 200–1 (2018); Thomas, supra note 2, at 9–10.
- 84. WORLD INTELL. PROP. ORG., EXCEPTIONS AND LIMITATIONS TO PATENT RIGHTS: COMPULSORY LICENSES AND/OR GOVERNMENT USE (PART I) 2 (2014), https://www.wipo.int/edocs/mdocs/scp/en/scp_21/scp_21_4_rev.pdf.
 - 85. See supra notes 2-4 and accompanying text.
- 86. See Jorge L. Contreras, Rohini Lakshané & Paxton M. Lewis, Patent Working Requirements and Complex Products, 7 NYU J. INTELL. PROP. & ENT. L. 1, 14–15 (2017).
- 87. See James Love, USPTO and Congress Bash India over the Nexavar Compulsory License, KNOWLEDGE ECOLOGY INT'L. (June 30, 2012), https://www.keionline.org/21883.
- 88. A Timeline of U.S. Attacks on India's Patent Law & Generic Competition, MEDICINS SANS FRONTIERES (Jan. 2015), https://msfaccess.org/sites/default/files/2018-10/IP_Timeline_US%20pressure%20on%20India_Sep%202014_0.pdf.
- 89. For a comprehensive catalog of these statutory provisions, see Jonathan M. Barnett, *The Great Patent Grab, in* THE BATTLE OVER PATENTS: HISTORY AND THE POLITICS OF INNOVATION 208, 276–77, Appx 6.B Compulsory patent licensing statutes, 1946–1975 (Stephen H. Haber & Naomi R. Lamoreaux eds., 2021).

For example, the U.S. federal government has the right itself, and through any government contractor, to practice any U.S. patent for government purposes, subject only to the payment of "reasonable and entire" compensation as determined by the U.S. Court of Federal Claims. ⁹⁰ Under the Bayh-Dole Act of 1980, federal agencies may "march in" and require the holders of patents claiming inventions developed with federal funding to license those patents to others when necessary to achieve practical application of the invention, to satisfy health and safety needs, or to meet requirements for public use specified by federal regulation. ⁹¹ Likewise, the Atomic Energy Act authorizes the Atomic Energy Commission to grant patent licenses to parties in the nuclear power and fuel industries "if the invention or discovery covered by the patent is of primary importance in the production or utilization of special nuclear material or atomic energy."

The authority to impose compulsory patent licenses in the United States is not limited to actions by federal agencies. Under the Clean Air Act, a district court, upon application of the Attorney General, may require a patent holder "to license [a patent] on such reasonable terms and conditions as the court, after hearing, may determine" when necessary to enable others to comply with federal requirements relating to stationary sources of air pollutants or motor vehicle emissions.⁹³

While it is not clear how many, if any, compulsory licenses have been granted by courts under the Clean Air Act,⁹⁴ there are abundant examples of federal courts that have ordered the compulsory licensing of patents to remedy anticompetitive conduct. More than one hundred such judicial orders were issued in antitrust cases from the 1940s to the 1970s.⁹⁵ As noted by the Supreme Court in *United States v. National Lead Co.*, "assurance against

^{90. 28} U.S.C. § 1498(a). See also Kumar, supra note 2, at 9.

^{91.} See 35 U.S.C. § 203(a).

^{92.} See 42 U.S.C. §§ 2183(c)-(e).

^{93.} See 42 U.S.C. § 7608.

^{94.} See Thomas, supra note 2, at 7 n. 43 (indicating the author's unawareness of any invocation of such compulsory licensing regulations).

^{95.} See, e.g., Barnett, supra note 89, at 259–75, Appx. A (listing orders from the 1940s to the 1970s); Jorge L. Contreras, A Brief History of FRAND: Analyzing Current Debates in Standard-Setting and Antitrust Through a Historical Lens, 80 ANTITRUST L.J. 39, 74 (2015) (identifying and discussing such orders); F.M. Scherer, The Political Economy of Patent Policy Reform in the United States, 7 J. TELECOM. & HIGH TECH. L. 167, 170 (2009) ("Between 1941 and the late 1950s, compulsory licensing decrees had been issued in settlement of more than 100 antitrust complaints"); Delrahim, supra note 7, at 1 ("From the U.S. Supreme Court's decision in Besser Manufacturing, to the district court's decision fifty years later in United States v. Microsoft Corporation, courts have recognized that compulsory licensing can be a necessary remedy in some [antitrust] cases.").

continued illegal restraints upon interstate and foreign commerce through misuse of these patent rights is provided through the compulsory granting to any applicant therefor of licenses at uniform, reasonable royalties under any or all patents defined in the decree."

Even in patent infringement cases prior to eBay, several courts, including the Federal Circuit, recognized that the combination of the denial of an injunction with an ongoing royalty payment effectively gives rise to a compulsory license. For example, in Shatterproof Glass Corp. v. Libbey-Owens Ford Co., the Federal Circuit upheld a district court's order that "denied Shatterproof's request for injunction and granted Libbey-Owens Ford a compulsory license to permit future practice under the . . . patents at a royalty rate of 5%." In the same year, the Federal Circuit in Atlas Powder Co. v. Ireco Chemicals expressed concern that "[i]f monetary relief were the sole relief afforded by the patent statute then injunctions would be unnecessary and infringers could become compulsory licensees"98 Likewise, in Monsanto Co. v. Ralph, the Federal Circuit held that "the imposition on a patent owner who would not have licensed his invention for [a given] royalty is a form of compulsory license, against the will and interest of the person wronged, in favor of the wrongdoer."99 And in Foster v. American Machine & Foundry Co., a pre-Federal Circuit case, the Second Circuit affirmed a district court's denial of permanent injunction where, after balancing the equities between the parties, the court concluded that the patentee would benefit from a "compulsory royalty." All of these cases indicate that federal courts viewed themselves as having the authority to grant compulsory patent licenses through the denial of permanent injunctions.

d) A Compulsory License Need Not Be a Public License

A *public* license is an intellectual property license that is made available to the public at large, often without charge.¹⁰¹ Public licenses exist in numerous contexts and are probably best known in the areas of open source code

^{96.} United States v. Nat'l Lead Co., 332 U.S. 319, 348 (1947).

^{97.} Shatterproof Glass Corp. v. Libbey-Owens Ford Co., 758 F.2d 613, 616 (Fed. Cir. 1985).

^{98.} Atlas Powder Co. v. Ireco Chems., 773 F.2d 1230, 1233 (Fed. Cir. 1985).

^{99.} Monsanto Co. v. Ralph, 382 F.3d 1374, 1384 (Fed. Cir. 2004) (quoting Del Mar Avionics, Inc. v. Quinton Instrument Co., 836 F.2d 1320, 1328 (Fed. Cir. 1987) (internal quotation marks omitted)).

^{100.} Foster v. Am. Mach. & Foundry Co., 492 F.2d 1317, 1324 (2d Cir. 1974).

^{101.} See CONTRERAS, IP TRANSACTIONS, supra note 71, at 592; Christina Mulligan, A Numerus Clausus Principle for Intellectual Property, 80 TENN. L. REV. 235, 271 (2013) ("With a public license, a copyright owner creates or chooses a blanket license for a work, allowing anyone to use the work according to the terms.").

software ¹⁰² and online content licensed under the Creative Commons suite of licenses. ¹⁰³ While both of these licensing regimes largely concern copyrights, public licenses also exist with respect to patents, as illustrated by the large number of patents licensed to all takers under the Open COVID Pledge. ¹⁰⁴ In each of these cases, the intellectual property holder offers a standardized set of licensing terms that may be accepted by any party that wishes to utilize the licensed rights on the terms offered.

Though license holders, like the ones noted above, offer most public licenses willingly, public licenses may also be compulsory. For example, the U.S. Copyright Act requires copyright holders to grant licenses of their copyrights in certain musical compositions to any party that pays a statutorily determined licensing fee (better known as the right to "cover" a previously recorded song). ¹⁰⁵ This provision of the Copyright Act establishes a compulsory licensing regime requiring the granting of public licenses. Likewise, as discussed in Section II.B.1.c, *supra*, when patent holders were found to have violated the antitrust laws in several historical cases, courts ordered them to make licenses available to "all applicants," either on a royalty-bearing or royalty-free basis. ¹⁰⁶

However, the fact that some compulsory licenses, such as those authorized under the Copyright Act and in antitrust cases, are public licenses does not mean that *all* compulsory licenses must be public licenses.¹⁰⁷ In fact, many of

^{102.} *See*, e.g., Jacobsen v. Katzer, 535 F.3d 1373, 1376 (discussing a licensor making software source code "available for public download from a website without a financial fee pursuant to the Artistic License, an 'open source' or public license."); Mulligan, *supra* note 101, at 271–72 (discussing many program creators contribute to open source projects under public licenses).

^{103.} See CONTRERAS, IP TRANSACTIONS, supra note 71, at 594–95 ("The CC licenses are 'public' licenses. That is, they are not specifically negotiated between copyright owners and users, but are publicly posted and can be 'accepted' by anyone who wishes to use the licensed content."); Mulligan, supra note 101, at 271–72.

^{104.} See Jorge L. Contreras, The Open COVID Pledge: Design, Implementation and Preliminary Assessment of an Intellectual Property Commons, UTAH L. REV. 833, 842 (2021).

^{105.} See 17 U.S.C. § 115. For other compulsory licensing regimes established under the Copyright Act, see 17 U.S.C. §§ 111(c) (cable retransmission of broadcast television programming), 116(a) (performance of musical works by coin-operated jukeboxes), 118(d) (performance of copyrighted works by public broadcasters).

^{106.} See, e.g., United States v. Nat'l Lead Co., 332 U.S. 319, 348 (1947) ("Further assurance against continued illegal restraints upon interstate and foreign commerce through misuse of these patent rights is provided through the compulsory granting to any applicant therefor of licenses at uniform, reasonable royalties under any or all patents defined in the decree.") (italics added). See also supra note 95, and sources cited therein.

^{107.} BERNIERI, *supra* note 77, at 40 (distinguishing compulsory licenses based on whether they are authorized "ex ante" and thus apply uniformly in all cases, or ex post, applying "on a case-by-case basis.").

the most prominent compulsory licenses in the world—those granted with respect to patented pharmaceutical products—have typically been granted to a single local manufacturer. Similarly, as described in Section II.B.1.c, *supra*, most statutory regimes authorizing compulsory licensing in the United States are directed toward the granting of a license to one or more selected licensees, not to the public at large. Thus, there is no general requirement that a compulsory license must be structured as a public license. 109

2. The Federal Circuit's Mistaken Distinction Between Ongoing Royalty and Compulsory License in Paice

As noted in Section II.A.1, *supra*, the Federal Circuit in *Paice v. Toyota* (*Paice II*) affirmed the district court's award of an ongoing royalty to compensate the patent holder for future infringement following the denial of an injunction. Judge Prost, writing for the majority, confirmed the district court's authority to "step in to assess a reasonable royalty in light of the ongoing infringement" when the parties themselves are unable to "negotiate a license amongst themselves regarding future use of a patented invention." Yet Judge Prost is careful not to refer to Toyota's continuing ability to practice Paice's patent as a "compulsory license." Rather, she introduces a key distinction to avoid this term, explaining that "[w]e use the term *ongoing royalty* to distinguish this equitable remedy from a compulsory license."

^{108.} *See* Thomas, *supra* note 2, at 10–12 (discussing compulsory patent licenses granted in Brazil, India, South Africa, and Thailand).

^{109.} But see Brief Amici Curiae of 52 Intellectual Property Professors in Support of Petitioners at 9, eBay Inc. v. MercExchange LLC, 547 U.S. 388 (05-130) (2006) [hereinafter Amicus Brief of Professors] ("A compulsory license is a blanket rule that permits all others to use a patent upon payment of a specified royalty, giving certainty to those who would infringe the patent that they can do so upon payment of a royalty."). Amici cite no authority for this proposition. Interestingly, the counsel of record (and presumably the principal author) of this brief, Professor Lemley, does not repeat this argument in his 2011 article addressing the issue of unenjoined infringement. See Lemley, supra note 44, at 11.

^{110.} Paice LLC v. Toyota Motor Corp., 504 F.3d 1293, 1315 (Fed. Cir. 2007) (*Paice II*). Though the Federal Circuit in *Paice* affirmed the district court's authority to set an ongoing royalty for unenjoined infringement, it criticized the district court's failure to explain adequately its rationale for setting the ongoing royalty at \$25 per vehicle and remanded the case for reconsideration of the royalty rate.

^{111.} Paice, in its briefing to the Federal Circuit, unequivocally referred to the unenjoined infringement authorized by the district court as a "compulsory license." See Paice CAFC Brief, supra note 27, at *41 ("The district court erred in setting, sua sponte, a prospective royalty for the remaining life of the '970 patent. In setting this prospective royalty based on the jury's past damages calculation, the district court imposed a compulsory license on the parties. This action was without statutory or precedential basis.").

^{112.} Paice II, 504 F.2d at 1313 n.13 (emphasis added). Though the Federal Circuit in Paice II affirmed the district court's authority to set an ongoing royalty for unenjoined infringement,

Unfortunately, Judge Prost's distinction in *Paice II* between an "ongoing royalty" and a "compulsory license" is both incoherent and mistaken. From a purely technical standpoint, the distinction is based on a category error. A *royalty* is a form of compensation, typically distinguished, in patent cases, from an up-front or lump sum payment.¹¹³ A *license* is a grant of legal rights.¹¹⁴ A payment is not a grant of rights and does not connote any permission or authority for the ongoing infringer to continue to practice the patented invention. Judge Prost acknowledges that some ongoing authorization for unenjoined infringement is granted when she suggests that the parties first be given an opportunity to negotiate a *license* amongst themselves.¹¹⁵ If they cannot, then the court may step in to determine the applicable ongoing *royalty*. Yet if payment of that ongoing royalty insulates the ongoing infringer from future damage suits, merely calling the payment an ongoing royalty does not make it less of a permission.¹¹⁶

More importantly, Judge Prost's justification for distinguishing between a compulsory license and an ongoing royalty is based on a misunderstanding of the term "compulsory license." She writes: "The term 'compulsory license' implies that *anyone* who meets certain criteria has congressional authority to use that which is licensed." To support this assertion, she cites Section 115 of the Copyright Act, ¹¹⁷ which pertains to "cover" recordings of musical compositions (see Section II.B.1.c, *supra*). ¹¹⁸ She then concludes that because the ongoing patent royalty awarded by the district court in *Paice I* applies only to Toyota, "there is no implied authority in the court's order for any other auto manufacturer to follow in Toyota's footsteps and use the patented invention

it criticized the district court's failure to explain adequately its rationale for setting the ongoing royalty at \$25 per vehicle and remanded the case for reconsideration of the royalty rate. *Id.*

^{113.} See Contreras, IP Transactions, supra note 71, at 14.

^{114.} See Christopher M. Newman, A License is Not a "Contract Not to Sue": Disentangling Property and Contract in the Law of Copyright Licenses, 98 IOWA L. REV. 1101 (2013).

^{115.} See Paice II, 504 F.3d at 1315; see also Soverain Software LLC v. Newegg Inc., 836 F. Supp. 2d 462, 483 (E.D. Tex. 2010) ("[T]he Federal Circuit has encouraged parties to negotiate a license amongst themselves regarding the future use of a patented technology before imposing an ongoing royalty." (citing Paice II and Paice LLC v. Toyota Motors Corp., 609 F. Supp. 2d 620 (E.D. Tex. 2009)); Orion IP, LLC v. Mercedes-Benz USA, LLC, No. 6:05 CV 322, 2008 U.S. Dist. LEXIS 108683, at *12 (E.D. Tex. Mar. 28, 2008) (articulating the same standard).

^{116.} Moreover, the term "ongoing royalty" does not encompass judicially authorized unenjoined infringement that is coupled with a lump sum payment (see Section II.A.2 above). Thus, in addition to being grammatically unsound, the term "ongoing royalty" is overly narrow.

^{117. 17} U.S.C. § 115

^{118.} Paice II, 504 F.3d at 1313 n.13.

with the court's imprimatur."¹¹⁹ In short, Judge Prost reasons that because Toyota is the *only* infringer authorized by the court to continue to practice Paice's patent, this authorization cannot be a compulsory license. Rather, it is something else: an ongoing royalty.

This conclusion is incorrect. As explained in Section II.B.1.c, a *compulsory* license need not be a *public* license. While some compulsory licensing schemes, such as those established under the Copyright Act, do give rise to public licenses, public use is not a requirement for a license to be compulsory. In fact, many compulsory licenses are not public licenses. Rather, such licenses authorize a single company—often a generic drug manufacturer—to produce a patented product that the patent holder cannot or will not distribute in the issuing country. Even in the U.S., most statutory compulsory licensing regimes, and all such regimes pertaining to patents, allow the authorization of one or a selected group of entities to practice a patented invention and do not open the patented technology to all comers. Judge Prost's conflation of a compulsory license with a public license, and the resulting removal of unenjoined infringement from the ambit of compulsory licensing, is thus based on a faulty premise without support under U.S. law.

Judge Rader points out this error in reasoning in his concurring opinion in *Paice II*. He recognizes the sleight of hand performed by the court, observing that "calling a compulsory license an 'ongoing royalty' does not make it any less a compulsory license." For this reason, Judge Rader encourages district courts to permit the parties to negotiate the terms of a license for unenjoined infringement. If the parties do so, he reasons, then the ongoing royalty they negotiate would be just that, and not a compulsory license. Yet if the court steps in and determines the ongoing royalty, then it has established the compensation for unenjoined infringement, removed any further ability of the patent holder to sue the infringer for damages (e.g., in successive suits), and effectively granted a compulsory license.

Academic commentators have recognized that an ongoing royalty coupled with unenjoined infringement is effectively a compulsory license. Professor Bernard Chao notes that the Federal Circuit has approved "granting a compulsory license to the losing defendant which the courts now call an

^{119.} *Id*.

^{120.} See supra Section B.1.d.

^{121.} Paice II, 504 F.3d at 1316 (Rader, J., concurring). See also Hynix Semiconductor Inc. v. Rambus Inc., 609 F. Supp. 2d 951, 983 (N.D. Cal. 2009) (it is a "faulty assumption [to assume] that because one infringer received a compulsory license, others would be free to infringe and entitled to a similar compulsory license.").

^{122.} See Paice II, 504 F.3d at 1316 (Rader, J., concurring).

'ongoing royalty." ¹²³ Professor Daniel Crane acknowledges then embraces this move toward compulsory licensing as a desirable systemic shift toward a liability-based regime for intellectual property. ¹²⁴

Nevertheless, some courts have followed Judge Prost's reasoning in *Paice* II and denied that their establishment of ongoing royalties for unenjoined infringement is tantamount to a compulsory license. 125 Commentators, too, have echoed this argument. Professor Janicke, for example, argues that an ongoing royalty coupled with unenjoined infringement "is neither compulsory nor a license." 126 Yet he fails to follow through on this assertion, arguing instead that courts are simply not authorized to exonerate unenjoined infringement from successive lawsuits for damages. 127 He then seeks to distinguish the rationales underlying existing forms of compulsory licensing (i.e., compulsory licenses granted as remedies in antitrust cases) from the justifications for unenjoined infringement. 128 However, he does not advance any argument to refute the notion that a court that has established an ongoing royalty for unenjoined infringement has in fact granted a compulsory license. Thus, while Professor Janicke does not think that courts should grant such compulsory licenses (a conclusion as to which we remain neutral), he does not actually deny that courts are, in fact, doing so.

Professor Christopher Seaman likewise rejects the proposition that courts awarding ongoing royalties following the denial of an injunction are effectively granting compulsory patent licenses. He offers three reasons in support of this position. First, he repeats Judge Prost's assertion that a compulsory license must be a public license. ¹²⁹ Second, he argues that a patentee that is denied an

^{123.} Chao, *supra* note 10, at 545.

^{124.} Crane, *supra* note 10, at 254 ("Intellectual property is incrementally moving away from the conventional right of the landowner to fence out trespassers and toward a right to collect royalties from constructive licensees. As a categorical matter, this trend away from a right to exclude toward a right to collect royalties represents a shift from a property regime to a liability regime.").

^{125.} See, e.g., Creative Internet Adver. Corp. v. Yahoo! Inc., 674 F. Supp. 2d 847, 852 n.6 (E.D. Tex. 2009) ("As discussed by the Federal Circuit in Paice II, the Court rejects any suggestion that it is imposing a 'compulsory license' under 17 U.S.C. § 115. The term 'compulsory license' implies that anyone who meets certain criteria has congressional authority to use that which is licensed. The ongoing royalty contemplated in this case is limited to the Defendant Yahoo that was found to infringe the '432 patent.") (citations omitted). The court adjudicating this case is clearly confused, given its reference to 17 U.S.C. § 115, the compulsory licensing provision for cover recordings under the Copyright Act, which has no bearing on the case.

^{126.} Janicke, *supra* note 26, at 165.

^{127.} See id. at 174-75.

^{128.} See id. at 175-77.

^{129.} See Seaman, Ongoing Royalties, supra note 53, at 216.

injunction need not seek an ongoing royalty and may instead bring successive actions for monetary damages for unenjoined infringement. 130 As such, he reasons, an ongoing royalty is not "compulsory." Nevertheless, various courts, including the Federal Circuit in Paice II, have held that courts do have the authority, upon request of the infringer (and over the objection of the patent holder), to establish an ongoing royalty for unenjoined infringement. 131 It is thus compulsory. Finally, Professor Seaman asserts that a court-imposed ongoing royalty differs from a "traditional" licensing agreement in that the remedy for breach of the royalty obligation would arise through the court's contempt power rather than an action in breach of contract.¹³² While this observation may be correct, the nature of the remedy available for breach does not make a judicially authorized compulsory license any less a compulsory license. Certainly, many well-known compulsory licenses established by judicial order, and even by statute, 133 would be redressed through remedies other than private claims for breach of contract, yet this does not disqualify them as compulsory licenses.

As the above discussion demonstrates, there is considerable uncertainty and disagreement regarding the nature of the legal authority of an unenjoined infringer to practice an infringed patent. To shed further light on the way courts themselves are interpreting this authority, we conducted an empirical assessment of judicial opinions described in the following Part.

III. JUDICIAL CHARACTERIZATION OF UNENJOINED INFRINGEMENT AS COMPULSORY LICENSING IN POST-*EBAY* CASES

To gain a better understanding of how U.S. courts view the legal nature of unenjoined infringement, we reviewed all post-*eBay* district court decisions (and Federal Circuit appeals) in patent infringement cases in which a permanent injunction was denied. We describe the methodology that we used to collect and code these decisions in Section III.A below. We then report the aggregate trends identified as well as specific uses of language relating to ongoing royalties and compulsory licensing in Sections III.B and III.C, respectively. We discuss the conclusions that we draw from these findings in Section III.D.

^{130.} See id.

^{131.} See Paice LLC v. Toyota Motor Corp., 504 F.3d 1293, 1315 (Fed. Cir. 2007) (Paice II).

^{132.} See Seaman, Ongoing Royalties, supra note 53, at 216.

^{133.} See supra Section II.B.1.

A. METHODOLOGY

We identified all U.S. district court cases decided between May 15, 2006 (the date of the Supreme Court's decision in eBay) and July 5, 2021 (the date of our first search) in which (1) a finding of patent infringement was made and (2) a permanent injunction was denied. 134 To do so, we gueried the LexMachina database for patent infringement cases decided during that date range in which an injunctive remedy was sought. We excluded cases in which allegations of patent infringement were combined with other causes of action, such as trademark, copyright, trade secret, contract, and antitrust claims, as we wished to analyze judicial language relating exclusively to the treatment of unenjoined patent infringement and to avoid entanglement with other causes of action. We also excluded cases involving claims of patent infringement based on 35 U.S.C. § 271(e)(2) with respect to the filing of an Abbreviated New Drug Application (ANDA), as these cases appeared, as a category, to raise different issues than other patent infringement suits. 135 Finally, because we wished to assess judicial reasoning in the context of denied injunctions, we excluded cases in which a court awarded an ongoing royalty for unenjoined infringement but the patent holder did not seek a permanent injunction. 136

After these exclusions, our search yielded 263 cases, in 68 of which a permanent injunction was denied and in 195 of which a permanent injunction was granted (including by default judgment). We supplemented these results with additional cases meeting these criteria that we identified through a Lexis search¹³⁷ or that were mentioned in the literature and online sources (8 cases), and one case in which a district court's grant of an injunction was reversed by

^{134.} We did not consider decisions regarding preliminary injunctions, as the standards for obtaining preliminary injunctive relief differ materially from those applicable to permanent injunctive relief, and the remedy is grounded in the rules of civil procedure rather than traditional equitable remedy law. See John C. Jarosz, Jorge L. Contreras & Robert L. Vigil, Preliminary Injunctive Relief in Patent Cases: Repairing Irreparable Harm, 31 Tex. INTELL. PROP. L.J. 63 (2023).

^{135.} Under 35 U.S.C. § 271(e)(2), the filing of an ANDA for a generic drug infringing the patent on an already marketed drug is deemed to constitute patent infringement, as to which an injunction ordinarily issues.

^{136.} See, e.g., Optis Wireless Tech. v. Apple Inc., No. 2:19-CV-00066-JRG, 2021 U.S. Dist. LEXIS 110317 (E.D. Tex. Apr. 14, 2021); SRI Int'l, Inc. v. Cisco Sys., Inc., 254 F. Supp. 3d 680, 724 (D. Del. 2017); Arctic Cat Inc. v. Bombardier Rec. Prods., No. 14-cv-62369-BLOOM/Valle, 2016 U.S. Dist. LEXIS 107654 (S.D. Fla. Aug. 12, 2016); Prism Techs., LLC v. Sprint Spectrum L.P., No. 8:12CV123, 2015 U.S. Dist. LEXIS 169398 (D. Neb. Dec. 18, 2015); Saffran v. Bos. Sci. Corp., No. 2-05-CV-547 (TJW), 2008 U.S. Dist. LEXIS 106711 (E.D. Tex. Feb. 14, 2008).

^{137.} The search query used was: "ebay" and ("ongoing" or "running" or "future royalt*" or "compulsory license") and "patent."

the Federal Circuit, yielding a total of 77 cases involving unenjoined infringement ("Reviewed Cases"). 138

We manually reviewed relevant documents from the dockets in each Reviewed Case, including judicial orders, written opinions, jury instructions, and party pleadings, as well as the case's subsequent history and decisions on appeal. In each case, we determined the type of past and future damages awarded (e.g., lump-sum or ongoing royalty payments), if any. We then reviewed the text of each judicial decision and identified the language used by the district court, as well as any appellate court reviewing the decision below, relating to unenjoined infringement. Our findings and descriptive statistics are presented in Section III.B, below.

B. FINDINGS

1. Injunction Grants Versus Denials

As noted in Section III.A, above, we identified a total of 272 post-*eBay* patent infringement cases in which a permanent injunction was sought. An injunction was issued in 195 of these cases (72%) and denied in 77 of these cases (28%).¹³⁹

Because we wished to determine whether particular judges or courts adopted distinct interpretations of the legal nature of unenjoined infringement, we analyzed our results by federal judicial district. *Figure 1* below illustrates the distribution of these cases among U.S. district courts in each judicial district that denied at least one permanent injunction (a total of 212 cases). ¹⁴⁰

^{138.} Our goal was not to identify every district court patent infringement case in which an injunction was denied, but only a meaningful sample of such cases. In an earlier study, Professor Seaman analyzed 218 patent infringement cases between 2006 and 2014 in which an injunction was sought and found that injunctions were denied in 27.5% of those cases (59 cases). Seaman, *Permanent Injunctions, supra* note 23, at 1976, 1982. In subsequent work, Professor Seaman identified 57 cases from the same data set in which both a permanent injunction was denied and an ongoing royalty was awarded. Seaman, *Ongoing Royalties, supra* note 53, at 231. Because these studies have different aims, Seaman's exclusion criteria are less restrictive than ours, perhaps explaining the greater number of cases that he identified (e.g., several cases included in *Ongoing Royalties* include trade secret claims, which we excluded from our data set).

^{139.} These results are consistent with post-eBay injunction grant rates found in prior empirical studies. See supra note 23, and accompanying text.

^{140.} Includes all 77 patent cases in which a permanent injunction was denied, and 135 of the 195 patent cases in which a permanent injunction was issued. It is interesting to note that some judicial districts with relatively high numbers of patent cases, such as the Northern District of Illinois (9 cases), the District of New Jersey (4 cases), the District of Utah (4 cases) and the Northern District of Texas (4 cases), denied no injunctions during the period studied.

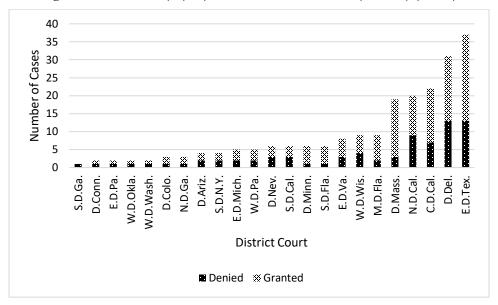


Figure 1: All Districts (>1) Injunctions Granted/Denied (2006–20) (n=212)

As shown in Figure 1, during the period studied, the Eastern District of Texas denied permanent injunctions in 13 out of 37 cases (35%). It is followed in total case volume by the District of Delaware (13 out of 31 cases, 42%), the Central District of California (7 out of 22 cases, 32%), and the Northern District of California (9 out of 20 cases, 45%). Among the fourteen district courts that decided five or more patent injunction cases during the period studied, the rate of denial ranged from 50% (Southern District of California) to 16% (District of Massachusetts), with an average denial rate of 35%. These findings suggest that there is not a strong bias for or against the issuance of patent injunctions in any particular judicial district.

2. Compensation for Unenjoined Infringement

For each of the seventy-seven Reviewed Cases, we determined whether the court: (1) awarded an ongoing royalty ("OR") for future infringement (25 cases, 32%), ¹⁴¹ (2) awarded a lump sum payment for future infringement (1 case, 1%), (3) awarded both an ongoing royalty and a lump sum payment for future infringement (1 case, 1%), (4) expressly acknowledged the patent

^{141.} In addition to the term "ongoing royalty" when referring to compensation for unenjoined infringement, some courts have used the terms "running royalty" and "future damages." *See, e.g.*, Centripetal Networks, Inc. v. Cisco Sys., 492 F. Supp. 3d 495 (E.D. Va. 2020); Tex. Advanced Optoelectronic Sols., Inc. v. Intersil Corp., No. 4:08-CV-451, 2016 U.S. Dist. LEXIS 53948 at 17 (E.D. Tex. Apr. 22, 2016). We have included these terms in the category for ongoing royalties ("OR").

holder's ability to bring successive suits for damages with respect to unenjoined infringement (5 cases, 10%), or (5) specified no compensation as a result of the termination of the litigation via settlement, dismissal or default or the mooting of the question through patent expiration, invalidity or noninfringement (45 cases, 58%). Figure 2 below illustrates the breakdown of different remedies awarded by these courts following the denial of an injunction.

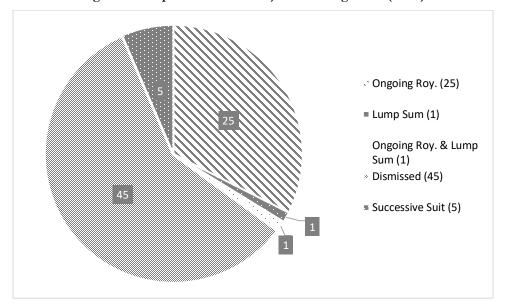


Figure 2: Compensation for Unenjoined Infringement (n=77)

3. District Court Characterization of Unenjoined Infringement as Compulsory Licensing

District courts awarded ongoing royalties for unenjoined infringement in twenty-six of the Reviewed Cases (one of which also included a lump sum payment as partial compensation for future unenjoined infringement). We analyzed the language used by each court when discussing these ongoing royalties.

a) District Court Descriptions of Ongoing Royalties

Most district courts awarding ongoing royalties for unenjoined infringement instructed juries on the meaning of the term "royalty." This instruction read, in nearly identical language in ten different cases, "[a] royalty is a payment made to a patent holder in exchange for the *right* to make, use, or

sell the claimed invention." ¹⁴² These courts thus link the payment of an ongoing royalty with the granting of a "right" to practice the infringed patent—a license.

Several other district courts make clear the connection between the ongoing royalty awarded by the court and the unenjoined infringer's right to "use" the patented invention—again describing what amounts to a license. For example, the district court in BASF Plant Science, LP v. Commonwealth Scientific "Industrial Research Organisation" explained that a court may "impose an ongoing royalty for the adjudged infringer to pay in order to use the infringing products." And in Apple, Inc. v. Samsung Electronics Co., the district court stated that "[a]n ongoing royalty permits an adjudged infringer to continue using a patented invention for a price."

b) District Court References to Compulsory Licensing

In several cases in which an ongoing royalty was established, the district court expressly referred to the granting of a compulsory license. Figure 3 below breaks down the twenty-six ongoing royalty cases according to whether the court (1) referred only to an ongoing royalty without reference to compulsory licensing (or expressly disavowed compulsory licensing, as in *Paice*) (16 cases, 62%, "OR"), (2) referred both to an ongoing royalty and compulsory licensing (9 cases, 35%, "CL with OR"), or (3) referred only to compulsory licensing without mentioning an ongoing royalty (1 case, 4%, "CL").

^{142.} Jury Instructions at 34, Tex. Advanced Optoelectronic Sols., Inc. v. Intersil Corp., No. 4:08-cv-00451-RAS, 2015 WL 5244713 (E.D. Tex. Mar. 4, 2015) (No. 506) (emphasis added).

^{143.} No. 2:17-CV-503-HCM, 2019 U.S. Dist. LEXIS 228305, at *63 (E.D. Va. Dec. 20, 2019).

^{144.} No. 12-CV-00630-LHK, 2014 U.S. Dist. LEXIS 165975, at *83 (N.D. Cal. Nov. 25, 2014). See also Humanscale Corp. v. CompX Int'l Inc., No. 3:09-CV-86, 2010 U.S. Dist. LEXIS 42083, at *12–13 (E.D. Va. Apr. 29, 2010) ("CompX sought and was awarded by the jury future royalties to compensate it for Humanscale's use of the McConnell patents until they expire.") (emphasis added); Tex. Advanced Optoelectronic Sols., Inc. v. Intersil Corp., No. 4:08-CV-451, 2016 U.S. Dist. LEXIS 53948, at *17 (E.D. Tex. Apr. 22, 2016) ("Since the Defendant has admitted to the ongoing sale of at least one Infringing Product, a running royalty is appropriate.") (emphasis added).

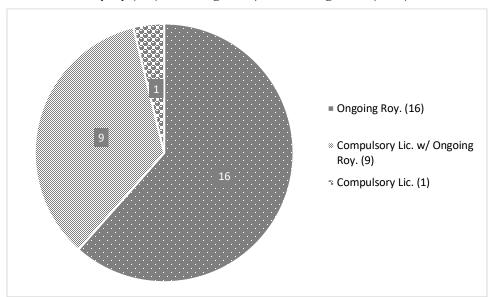


Figure 3: Judicial Use of Compulsory License (CL) Terminology with Ongoing Royalty (OR) Following Unenjoined Infringement (n=26)

When discussing compulsory licenses, the language used by courts was unambiguous. For example, the district court in *Bard Peripheral Vascular*, *Inc. v. W.L. Gore & Associates* stated that:

[T]o compensate Plaintiffs for future harm, the Court can impose a *compulsory license* on the continued sales of [Defendant's] infringing products for the remainder of the life of the [Plaintiff's] patent. The Court is satisfied that a fair and full amount of compensatory money damages, when combined with a progressive *compulsory license*, will adequately compensate Plaintiffs' injuries, such that the harsh and extraordinary remedy of injunction—with its potentially devastating public health consequences—can be avoided.¹⁴⁵

In some instances, courts referred both to an ongoing royalty and a compulsory license, essentially equating the two terms. For example, in BASF Plant Science, LP v. Commonwealth Scientific & Industrial Research Organisation, the court held that "[a]n ongoing royalty is essentially a compulsory license for

^{145.} Bard Peripheral Vascular, Inc. v. W.L. Gore & Assocs., No. CV-03-0597-PHX-MHM, 2009 U.S. Dist. LEXIS 31328, at *19–20 (D. Ariz. Mar. 31, 2009). *See also* Finisar Corp. v. DirecTV Grp., Inc., Civil Action No. 1:05-CV-264, 2006 U.S. Dist. LEXIS 101529, at *5 (E.D. Tex. Sep. 26, 2006) ("[T]he court granted future damages to Finisar by means of a compulsory license.").

future use of the patented technology during the life of the patents."¹⁴⁶ In *Hynix Semiconductor Inc. v. Rambus Inc.*, the court, echoing Judge Rader's concurrence in *Paice II*, confirmed that, "ongoing royalty' is merely a nice way of saying 'compulsory license."¹⁴⁷

In at least six cases, the district court expressly ordered the parties to negotiate a license for continued unenjoined infringement. For example, the court in *Carnegie Mellon University v. Marvell Technology Group, Ltd.* ordered the parties to "meet and confer to prepare a draft joint licensing agreement for ongoing royalties" following the denial of an injunction.¹⁴⁸ These orders are likely the result of the recommendation articulated by the Federal Circuit in *Paice II*:

In most cases, where the district court determines that a permanent injunction is not warranted, the district court may wish to allow the parties to negotiate a license amongst themselves regarding future use of a patented invention before imposing an ongoing royalty.¹⁴⁹

^{146.} BASF Plant Sci., LP v. Commonwealth Sci. & Indus. Research Organisation, No. 2:17-CV-503-HCM, 2019 U.S. Dist. LEXIS 228305, at *64 (E.D. Va. Dec. 20, 2019); see also Centripetal Networks, Inc. v. Cisco Sys., 492 F. Supp. 3d 495, 606 (E.D. Va. 2020) (repeating same language); ResQNet.com, Inc. v. Lansa, Inc., 828 F. Supp. 2d 688, 692 (S.D.N.Y. 2011) ("The court . . . imposed a license at the same rate for future activity covered by the . . . patent.").

^{147.} Hynix Semiconductor Inc. v. Rambus Inc., 609 F. Supp. 2d 951, 986–87 (N.D. Cal. 2009) (citing Paice LLC v. Toyota Motor Corp., 504 F.3d 1293, 1316 (Fed. Cir. 2007)).

^{148.} Order at 1, Carnegie Mellon Univ. v. Marvell Tech. Grp., Ltd., Civil Action No. 09-290, 2013 U.S. Dist. LEXIS 58331 (W.D. Pa. Apr. 24, 2013); see also Server Tech., Inc. v. Am. Power Conversion Corp., No. 3:06-CV-00698-LRH-VPC, 2015 U.S. Dist. LEXIS 41987, at *43-44 (D. Nev. Mar. 31, 2015) ("The parties shall have thirty (30) days from entry of this order to prepare an appropriate compulsory license with an ongoing 15% royalty rate on sales of the AP7900 and AP8900 products from the date of judgment and submit the same for approval and signature of the court."); Fractus, S.A. v. Samsung Elecs. Co., No. 6:09-CV-203 PATENT, 2013 U.S. Dist. LEXIS 37275, at *13 (E.D. Tex. Mar. 15, 2013) ("The Court denied Fractus' request for a permanent injunction; however, the Court gave the parties an opportunity to negotiate a license before setting an ongoing royalty rate."); Douglas Dynamics, LLC v. Buyers Prods. Co., No. 09-cv-261-wmc, 2011 U.S. Dist. LEXIS 157349, at *17 (W.D. Wis. Feb. 25, 2011) ("The parties have until March 28, 2011, in which to reach a licensing agreement for defendant Buyers Products' use of plaintiff's U.S. Patents Nos. 5,353,530 and 6,944,978 or to file their separate positions for the court to use in assessing the appropriate reasonable ongoing royalty."); Order at 1, Hynix Semiconductor Inc. v. Rambus Inc., 609 F. Supp. 2d 951 (N.D. Cal. 2009) (No. 3901) ("[T]he court held a conference call with Rambus and Hynix to set guidelines with respect to negotiating a compulsory license for the use of Rambus's patents . . . The parties intend to meet on March 4 in Seoul, Korea to negotiate the terms of the compulsory license.").

^{149.} See Paice LLC v. Toyota Motor Corp., 504 F.3d 1293, 1315 (Fed. Cir. 2007) (Paice II); see also Soverain Software LLC v. Newegg Inc., 836 F. Supp. 2d 462, 483 (E.D. Tex. 2010) ("[T]he Federal Circuit has encouraged parties to negotiate a license amongst themselves

Figure 4 below breaks down judicial characterizations of compensation for unenjoined infringement by judicial district.

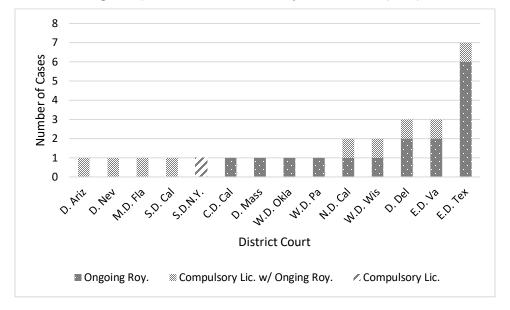


Figure 4: Judicial Characterization by District Court (n=26)

As shown in Figure 4, among the five district courts that have denied two or more patent injunctions during the period studied, all five have referred, in different cases, to the authorization of a compulsory license in connection with the award of ongoing royalties for unenjoined infringement. This finding suggests that there is not a consistent view, even within federal judicial districts, of whether a compulsory license is granted when an ongoing royalty is awarded for unenjoined infringement.

4. Federal Circuit Statements Regarding Compulsory Licensing

Of seventy-seven Reviewed Cases, fifty-three (69%) were appealed to the Federal Circuit. ¹⁵⁰ In twenty of those appealed cases, the Federal Circuit ruled

regarding the future use of a patented technology before imposing an ongoing royalty." (citing *Paixe II* and Paice LLC v. Toyota Motors Corp., 609 F. Supp. 2d 620 (E.D. Tex. 2009)); Orion IP, LLC v. Mercedes-Benz USA, LLC, No. 6:05 CV 322, 2008 U.S. Dist. LEXIS 108683, at *12 (E.D. Tex. Mar. 28, 2008) (articulating the same standard).

^{150.} The 69% appeal rate that we found is substantially lower than the 98% appeal rate found by Professors Holte and Seaman when reviewing Federal Circuit appeals of district court denials of patent injunctions between 2006 and 2013. See Holte & Seaman, supra note 23, at 179. It may be that parties have over time become less optimistic about overturning injunction denials at the Federal Circuit, leading to fewer appeals.

on grounds other than injunctive relief (e.g., validity, infringement, etc.). Six cases were dismissed by the district court before the Federal Circuit ruled (e.g., due to settlement by the parties). Of the remaining twenty-seven cases in which the Federal Circuit ruled on the district court's denial of a permanent injunction, the Federal Circuit affirmed the district court's ruling in twenty cases (74%) (five of which were decided by summary affirmance under Federal Circuit Rule 36 ¹⁵¹) and reversed the district court's ruling in seven cases (26%). ¹⁵²

The Federal Circuit equated an ongoing royalty to a compulsory license in three cases, Whitserve, LLC v. Computer Packages, Inc. and Innogenetics, N.V. v. Abbott Laboratories. Despite Judge Prost's early attempt in Paice II to disavow the granting of a compulsory license when an ongoing royalty is established, 153 other Federal Circuit judges seem less convinced. For example, in Whitserve, Judge O'Malley, joined, interestingly, by Judge Prost in the majority, stated that "[w]hile a trial court is not required to grant a compulsory license even when an injunction is denied, the court must adequately explain why it chooses to deny this alternative relief when it does so."154 In Innogenetics, Judge Moore (joined by Judges Bryson and Clevenger) wrote that "future sales would be subject to the running royalty, a compulsory license. We remand to the district court to delineate the terms of the compulsory license ... "155 Finally, in SRI International, Inc. v. Cisco Systems, Inc., in which the Federal Circuit affirmed the district court's award of an ongoing royalty in the absence of a request for an injunction by the patent holder, Judge Stoll (joined by Judges O'Malley and Lourie) explained that the district court "did not abuse its discretion in awarding 'a 3.5% compulsory license for all post-verdict sales." 156

^{151.} U.S. Ct. App. Fed. Cir., Rules of Practice 167–68 (Mar. 1, 2023), https://cafc.uscourts.gov/wp-content/uploads/RulesProceduresAndForms/FederalCircuitRules/FederalCircuitRulesofPractice.pdf/.

^{152.} The 74% affirmance rate that we found differs substantially from the 53% affirmance rate found by Holte and Seaman for cases appealed between 2006 and 2013. See Holte & Seaman, supra note 23, at 187–88. It is possible that the lower rate of appeal during the period that we studied resulted in a higher rate of affirmance among cases that were appealed (i.e., if parties tended to appeal cases with a lower likelihood of reversal). See supra note 150, and accompanying text.

^{153.} At least one other Federal Circuit Judge has followed Judge Prost's lead. Judge Gajarsa, citing Paice, disavowed the use of the term "compulsory license." Bard Peripheral Vascular, Inc. v. W.L. Gore & Assocs., 670 F.3d 1171, 1178 n.2 (Fed. Cir. 2012) ("As in Paice LLC v. Toyota Motor Corp., [w]e use the term ongoing royalty to distinguish this equitable remedy from a compulsory license.") (internal quotations marks omitted).

^{154.} Whitserve, LLC v. Comput. Packages, Inc., 694 F.3d 10, 36 (Fed. Cir. 2012).

^{155.} Innogenetics, N.V. v. Abbott Labs., 512 F.3d 1363, 1381 (Fed. Cir. 2008).

^{156.} SRI Int'l, Inc. v. Cisco Sys., 930 F.3d 1295, 1311 (Fed. Cir. 2019) (emphasis added).

These results demonstrate that several Federal Circuit judges (Bryson, Clevenger, Lourie, Moore, O'Malley, Prost, Rader, and Stoll), including three former and current Chief Judges (Moore, Prost, and Rader) have either written or joined opinions referring to the granting of compulsory licenses upon the authorization of an ongoing royalty for unenjoined infringement.

It is also informative to compare the cases in which the Federal Circuit used compulsory licensing language with those in which district courts did so. One might predict that the Federal Circuit considered the question of compulsory licensing primarily when it was raised at the district court below. However, this was not the case. In our sample, there are twelve Federal Circuit cases in which future damages were awarded for unenjoined infringement. In five of these, the district court awarded an ongoing royalty without discussion of compulsory licensing, and in four, the district court awarded an ongoing royalty that it characterizes as compulsory licensing. The Federal Circuit took a different approach in each of these latter four cases, either (1) confirming that an ongoing royalty is compulsory licensing, 157 (2) referring only to an ongoing royalty, 158 (3) referring to neither an ongoing royalty nor compulsory licensing, 159 and (4) specifically indicating that an ongoing royalty is not a compulsory license. 160 What's more, in Whitserve, the Federal Circuit referred to compulsory licensing when the district discussed neither an ongoing royalty nor compulsory licensing. 161

These somewhat confusing results suggest, at best, that the Federal Circuit lacks a clear view on whether a compulsory license is granted when an ongoing royalty is awarded for unenjoined infringement. We recommend below that this uncertainty be resolved with a clear acknowledgment that compulsory licenses are, indeed, being granted when ongoing royalties are awarded for unenjoined infringement.

C. DISCUSSION

The above findings indicate that some U.S. trial court judges across judicial districts interpret the award of ongoing royalties accompanying unenjoined infringement as conferring a compulsory license on the infringer. This view has been confirmed by the Federal Circuit in various cases, notwithstanding

^{157.} See Innogenetics, N.V. v. Abbott Labs., 512 F.3d 1363, 1381 (Fed. Cir. 2008).

^{158.} See Telcordia Techs., Inc. v. Cisco Sys., Inc., 592 F. Supp. 2d 727, 746, 748 (D. Del. 2009).

^{159.} See generally Apple, Inc. v. Samsung Elecs. Co., No. 12-CV-00630-LHK, 2013 U.S. Dist. LEXIS 38682 (N.D. Cal. Mar. 19, 2013).

^{160.} See Bard Peripheral Vascular, Inc. v. W.L. Gore & Assocs., Inc., No. CV-03-0597-PHX-MHM, 2009 WL 920300, at *5 (D. Ariz. Mar. 31, 2009).

^{161.} See Whitserve, LLC v. Comput. Packages, Inc., 694 F.3d 10 (Fed. Cir. 2012).

Judge Prost's attempt in *Paice II* to distinguish an ongoing royalty from a compulsory license.

As a simple matter of logic, there is little doubt that a court's imposition of an ongoing royalty obligation on an unenjoined infringer can be anything other than a compulsory license of the infringed patents. As defined by the authorities cited in Section II.A.1, a license is a commitment not to sue a party for practicing a licensed right. And a "compulsory license" (notwithstanding the erroneous definition advanced in *Paice II*) is such a commitment that is imposed on the patent holder by a governmental body, including a court. While a small number of district courts that have declined to issue injunctions in patent cases have left open the door for the patent holder to bring successive damages suits against an unenjoined infringer, ¹⁶² courts that have awarded the patent holder an ongoing royalty as compensation for that infringement have effectively closed this door. For all practical purposes, there appears to be no practical way that a patent holder that has been awarded judicially determined compensation for unenjoined infringement can subsequently sue the infringer for infringement of the same patents by the same infringing products.

While some academic commentators have questioned the authority of district courts to authorize compulsory licenses, and even to award ongoing royalties (see Section II.B, *infra*), those objections have not swayed judicial practice in nearly two decades since the Supreme Court's eBay decision. Moreover, even before eBay, the Federal Circuit recognized that district courts denying injunctive relief for patent infringement effectively granted compulsory licenses to infringers. ¹⁶³

For these reasons, it is time to recognize that district courts awarding compensation for unenjoined infringement, whether in the form of ongoing royalties or lump sum payments, effectively grant compulsory licenses to the infringers, no matter what terminology these courts use to describe this practice.¹⁶⁴

IV. COMING TO TERMS WITH UNENJOINED INFRINGEMENT AS COMPULSORY LICENSING

In this Part IV, we explore in greater depth some of the ramifications that arise from recognizing unenjoined infringement as compulsory licensing. In Sections IV.A and IV.B, we observe that characterizing unenjoined

^{162.} We identified five such cases. See supra Section III.B.2, and accompanying discussion.

^{163.} See supra notes 97–99 and accompanying discussion.

^{164.} Professor Janicke appears to agree, writing that "courts have drifted into thinking a suitable remedy can be a judicially issued compulsory license that converts unlawful activities into licensed ones." Janicke, *supra* note 26, at 187.

infringement as compulsory licensing is consistent with expectations under the existing patent exhaustion and transfer doctrines, and that treating unenjoined infringement as anything other than compulsory licensing would produce anomalous and unintended results under those doctrines. In Section IV.C, we address and dispense with concerns that treating unenjoined infringement as compulsory licensing could run afoul of U.S. treaty obligations. In Section IV.D, we address concerns about the effect of compulsory licensing on future and existing exclusive patent licenses. And in Section IV.E, we observe that, even though district courts appear to be granting compulsory licenses to unenjoined infringers, little has been written about the terms or other commercial effects of those licenses. We seek to fill that gap.

A. UNENJOINED INFRINGEMENT AND PATENT EXHAUSTION

It is well-established that the sale of a patented article by an authorized licensee exhausts the patents embodied in that article so that the patent holder cannot pursue infringement claims or seek royalties from any downstream purchaser or user of that article. The sale of a patented article by the holder of a compulsory license also exhausts the relevant patents and, by the same token, a sale by an unenjoined infringer must also exhaust those patents.

Any result to the contrary would be both inimical to the intent of *eBay* and to the patent exhaustion doctrine. For example, consider what would happen if unenjoined infringement did *not* constitute a license that exhausted the relevant patent rights. The unenjoined infringer could, in theory, manufacture a product covered by the patent and then sell it to a customer. The infringer would pay the patent holder the amount of the court-determined ongoing royalty with respect to that sale (usually denominated as a percentage of the product's net selling price). Yet if the manufacture and sale of the product by the unenjoined infringer were *not* deemed to be under "license," then the sale to the customer would not be authorized, and the customer would infringe the patent using the product that it purchased. And even though the unenjoined infringer paid the patent holder the court-determined royalty for that very sale, the patent holder could turn around and sue the customer for monetary damages and even seek an injunction against it. ¹⁶⁶ If so, the patent holder

^{165.} See Quanta Comput., Inc. v. LG Elecs., Inc., 553 U.S. 617, 625 (2008) ("The longstanding doctrine of patent exhaustion provides that the initial authorized sale of a patented item terminates all patent rights to that item.").

^{166.} In many cases, a product manufacturer is contractually obligated to indemnify its customer against infringement claims. *See* CONTRERAS, IP TRANSACTIONS, *supra* note 71, at 282, 312. As a result, the patent holder's claim against the unenjoined infringer's customer would likely be covered by the unenjoined infringer itself, subjecting it to double payment for the same product, another unjust and illogical result.

could, in theory, recover twice for the sale of the same patented product—once from the unenjoined infringer and once from its customer.¹⁶⁷

Such a result would subvert the intent of the ongoing royalty and unfairly reward the patent holder twice for the same infringing product—the very situation that the patent exhaustion doctrine seeks to avoid. ¹⁶⁸ Exhaustion considerations thus offer yet another reason that unenjoined infringement, at least when it is accompanied by an ongoing royalty, ¹⁶⁹ should be deemed to represent a compulsory patent license.

B. LICENSE AND PATENT TRANSFERS

A patent license is generally viewed as an encumbrance on the patent which, like a servitude on land, travels with the patent when it is transferred to a new owner, investing the new owner with both the benefit and the burden of that encumbrance.¹⁷⁰ Thus, when a patent is transferred, its new owner may not sue parties that were previously granted licenses to practice the patent, assuming that their licenses have not otherwise been terminated. By the same token, upon a transfer of the patent, licensees must pay royalties to the patent's new owner, and the prior owner loses its entitlement to those royalties.

The same must hold true in the case of unenjoined infringement. When an infringed patent is transferred to a new owner, the new owner must remain

^{167.} Professor Gómez-Arostegui identified several nineteenth century cases holding that a patentee that collected a judgment against an infringer that placed infringing articles into the stream of commerce could not then bring suit against or enjoin downstream users of the infringing articles. Gómez-Arostegui, *Prospective Compensation, supra* note 10, at 1722–23. This principle has subsequently been adopted by the Federal Circuit in, e.g., Glenayre Elecs., Inc. v. Jackson, 443 F.3d 851 (Fed. Cir. 2006); Carborundum Co. v. Molten Metal Equip. Innovation, Inc., 72 F.3d 782, 881 (Fed. Cir. 1995); King Instruments Corp. v. Otari Corp., 814 F.2d 1560, 1564 (Fed. Cir. 1987); Stickle v. Heublein, Inc., 716 F.2d 1550, 1563 (Fed. Cir. 1983). *See also* Gómez-Arostegui & Bottomley, *supra* note 45, at n.146 (discussing Amstar Corp. v. Envirotech Corp., 823 F.2d 1538, 1548–49 (Fed. Cir. 1987)). By extension, Professor Gómez-Arostegui has argued that a court would be unlikely to allow a patentee to sue customers of an unenjoined infringer that is paying ongoing royalties, whether or not it is deemed to have received a compulsory license. *See* private email communications with Professor Gómez-Arostegui (Sept. 20, 2022) (on file with authors). This conclusion may be correct, though the question remains to be addressed by the courts.

^{168.} Professor Janicke, recognizing the effect of the patent exhaustion doctrine, argues that customers of an unenjoined infringer would not be insulated from suit by the patent holder, which proves that a compulsory license is not granted by courts that authorize unenjoined infringement. Janicke, *supra* note 26, at 188.

^{169.} The status of sales by an unenjoined infringer that does not compensate the patent holder for future infringement is less clear.

^{170.} See Sanofi, S.A. v. Med-Tech Veterinarian Prods., 565 F. Supp. 931, 939 (D.N.J. 1983) ("[T]he purchaser of a patent takes subject to outstanding licenses").

bound by the prior owner's commitment not to sue the unenjoined infringer, and the unenjoined infringer must pay the ongoing royalty to the new owner.

If, on the other hand, an ongoing royalty awarded for unenjoined infringement does *not* give rise to a license—and simply represents a monetary damages award—the ongoing payment would, unless explicitly transferred along with the patent, ¹⁷¹ accrue to the original patent holder whether or not it retained the underlying patent. Accordingly, a transferee of the infringed patent, absent a separate assignment of the royalty stream, would not be entitled to receive the ongoing royalty paid by the infringer. Instead, it would, surprisingly, be entitled to sue the unenjoined infringer for both monetary damages and an injunction. In the meantime, the infringer would still be obligated to pay the ongoing royalty to the original patent holder. Clearly, this result would be both anomalous and unjustified, further demonstrating that an ongoing royalty awarded for unenjoined infringement can only indicate the issuance of a compulsory license.

C. U.S. Treaty Compliance

In its amicus brief submitted to the Supreme Court in *eBay*, the United States government cautioned the Court against "awarding monetary damages as a substitute for prospective injunctive relief" out of concern, in part, for U.S. treaty obligations "that preserve the patentee's right to exclude and that limit compulsory licensing." A group of fifty-two law professors responded in an amicus brief that "TRIPS permits the United States to give its courts the power to deny injunctions in particular cases." The Supreme Court did not directly address this concern in *eBay*, but the Federal Circuit's peculiar aversion to the term "compulsory licensing" in *Paice* might, at least in part, have been responsive to treaty compliance considerations.

The analysis of unenjoined infringement under the TRIPS Agreement is serpentine and lacks authoritative resolution. As noted in Section II.B.1.b above, Article 31 of the TRIPS Agreement permits a member state to order

^{171.} Though one might expect a patent holder that is entitled to receive an ongoing royalty from an infringer to assign that right to any assignee of the underlying patent, this may not always happen, especially if the unenjoined infringer has not yet begun to pay royalties at the time of the patent assignment. For example, if the patent holder assigns a large portfolio of patents, including one subject to a compulsory license, it may inadvertently neglect to assign associated contractual rights to the assignee.

^{172.} Brief for the United States as Amicus Curiae Supporting the Respondent at 18, eBay Inc. v. MercExchange LLC, 547 U.S. 388 (2006) (05-130) (citing the TRIPS Agreement, *supra* note 6, arts. 28, 31, 33, and the U.S.-Australia Free Trade Agreement, May 18, 2004, Heins No. KAV 622, art. 17.9, ¶7).

^{173.} Amicus Brief of Professors, *supra* note 109, at 10–11.

compulsory licensing of patents under particular circumstances.¹⁷⁴ However, compulsory licensing as contemplated by TRIPS includes several requirements and limitations, including the following: the licensee must first have made efforts to obtain a license from the patent holder on reasonable commercial terms and conditions, except in case of a national emergency;¹⁷⁵ the license should be authorized predominantly for the supply of the domestic market;¹⁷⁶ the licensee may not grant sublicenses;¹⁷⁷ the license should terminate when the circumstances that led to it cease to exist and are unlikely to recur;¹⁷⁸ and, in the case of semiconductor technology, use may only be for public noncommercial purposes or to remedy anticompetitive practices.¹⁷⁹ Given these requirements, many of which are not met in the ordinary context of unenjoined infringement, commentators have questioned whether compulsory licenses for unenjoined infringement would comply with the compulsory licensing provisions of the TRIPS Agreement.¹⁸⁰

This being said, other provisions of TRIPS appear to offer more hope. Article 44(1), concerning injunctions, provides that "the judicial authorities [of a member state] shall have the authority to order a party to desist from an infringement," but does not mandate that injunctions be issued whenever patent infringement is found. Thus, the decisions of U.S. courts not to grant injunctions in certain cases of infringement should not violate Article 44(1).

Moreover, Article 44(2) states that remedies for the use of a patented technology by a government or a third party authorized by a government may be limited to monetary compensation only if the remedies comply with the

^{174.} See supra note 82–83, and accompanying text.

^{175.} TRIPS Agreement, supra note 6, art. 31(b).

^{176.} Id. art. 31(f).

^{177.} Id. art. 31(e).

^{178.} Id. art. 31(g).

^{179.} *Id.* art. 31(c).

^{180.} Graeme B. Dinwoodie & Rochelle C. Dreyfuss, *Injunctive Relief in Patent Law under TRIPS*, *in* INJUNCTIONS IN PATENT LAW: TRANSATLANTIC DIALOGUES ON FLEXIBILITY AND TAILORING 5, 13–14 (Jorge L. Contreras & Martin Husovec eds., 2022); Cotropia, *supra* note 10, at 576.

^{181.} TRIPS Agreement, *supra* note 6, art. 44(1). This interpretation was confirmed by the WTO. WORLD TRADE ORG., PANEL REPORT, CHINA – MEASURES AFFECTING THE PROTECTION AND ENFORCEMENT OF INTELLECTUAL PROPERTY RIGHTS, at ¶ 7.326, WTO Doc. WT/DS362/R (adopted Jan. 26, 2009) ("The obligation is to 'have' authority not an obligation to 'exercise' authority") (discussed in Dinwoodie & Dreyfuss, *supra* note 180, at 10); GERVAIS, *supra* note 10, at 447, 453 ("[S]hall have the authority" requires only "the power to order the measures specified").

provisions of Article 31. ¹⁸² This requirement could be interpreted as bringing the analysis full circle. While under Article 44(1) injunctions need not be issued by courts, the substitution of injunctive relief with monetary compensation (i.e., an ongoing royalty), at least for patents, requires the same procedural hurdles as compulsory patent licensing under Article 31.

Yet Article 30 of TRIPS permits member states to "provide limited exceptions to the exclusive rights conferred by a patent, provided that such exceptions do not unreasonably conflict with a normal exploitation of the patent and do not unreasonably prejudice the legitimate interests of the patent owner, taking account of the legitimate interests of third parties." ¹⁸³ Christopher Cotropia argues that the four factors considered by U.S. courts when denying injunctive relief under *eBay* maps directly onto the requirements of Article 30, thereby authorizing this practice. ¹⁸⁴

Whatever the rationale, most commentators who have considered the issue have concluded that unenjoined infringement coupled with an ongoing royalty—whether or not labeled compulsory licensing—complies with U.S. obligations under the TRIPS Agreement.¹⁸⁵

D. EFFECT ON EXCLUSIVE LICENSEES

In *Paice*, the patent holder argued that the court should not grant a compulsory license to Toyota, the infringer, because doing so would impair its ability to grant an exclusive license under the infringed patent to another party in the future.¹⁸⁶ That is, if a compulsory license has been granted, then while it remains in effect, it is impossible for the patent holder to grant another party a truly exclusive license. And because exclusive patent licenses often command higher royalties than nonexclusive licenses,¹⁸⁷ the victorious patent holder is

^{182.} TRIPS Agreement, *supra* note 6, art. 44(2). *See* GERVAIS, *supra* note 10, at 452 (noting that the first sentence of art. 44(2) is intended to apply to patents). *See also* Dinwoodie & Dreyfuss, *supra* note 180, at 13; Cotropia, *supra* note 10, at 580.

^{183.} TRIPS Agreement, supra note 6, art. 30.

^{184.} Cotropia, *supra* note 10, at 576–79. *But see* GERVAIS, *supra* note 10, at 381 (reasoning that specific exceptions covered elsewhere in TRIPS, such as compulsory licensing under Article 31, should not be interpreted as being within the scope of Article 30).

^{185.} See Dinwoodie & Dreyfuss, supra note 180, at 15 ("[S]everal scholars have explored the issue and concluded that eBay is likely consistent with TRIPS"), n. 52 (collecting sources); Siebrasse et al., supra note 47, at 143; Cotropia, supra note 10, at 581 ("In the end, it is not so much whether the application of eBay to deny an injunction complies with TRIPS, as how exactly the decision complies with TRIPS") (emphasis in original).

^{186.} Paice CAFC Brief, supra note 27, at *80 ("Toyota now has won the privilege of being licensed under the '970 patent simply by losing a lawsuit and, as a result, Paice can never offer an exclusive license to this patent to other interested parties.").

^{187.} See CONTRERAS, IP TRANSACTIONS, supra note 71, at 176 (discussing premium payable for exclusive license rights).

unfairly injured by the grant of a compulsory license to the infringer. Conversely, Professor Janicke argues that a patent holder that has *previously* granted an exclusive license under the infringed patent may be contractually barred from granting a conflicting license to the unenjoined infringer, even if ordered to do so by a court.¹⁸⁸

Both implications of compulsory licenses—their interference with *future* exclusive licenses and their derogation from *prior* exclusive licenses—highlight the power of the compulsory license. These effects are not newly discovered in the context of unenjoined infringement. Rather, they are longstanding objections to the issuance of compulsory licenses of every kind. The owner of a pharmaceutical patent may be required to license it to a local generic manufacturer, notwithstanding its prior exclusive license to a multinational drug company. The owner of a patented semiconductor technology developed with federal funding may be required to license it to a second manufacturer if its exclusive licensee is unable to meet the demand for products in the United States. In all of these cases, the patent owner would prefer not to grant the compulsory license, which is the very reason that it is compulsory in the first place—an overriding governmental policy or concern dictates that the patent be made available in a manner beyond that desired by the patent holder.

Compulsory licenses granted for unenjoined infringement are no different. Courts may deny injunctive relief in patent cases only after assessing the four factors laid out in the Supreme Court's *eBay* decision. Courts should not take this decision lightly, and the relatively low number of such compulsory licenses granted in the two decades since *eBay* suggest that they do not. But so long as the *eBay* factors weigh in favor of denying an injunction, the financial impact on the patent holder should be addressed through the magnitude of the court-awarded ongoing royalty and not by denying that a compulsory license has been granted.

E. TERMS OF THE COMPULSORY LICENSE

The granting of a compulsory license for unenjoined infringement begs the question: what are the terms of that compulsory license? A license is an

^{188.} Janicke, *supra* note 26, at 188 ("If an exclusive license is already outstanding, the patent owner may not issue a conflicting nonexclusive license to someone else.").

^{189.} See supra note 2, and accompanying text (discussing compulsory licensing of essential medicines).

^{190.} See supra notes 91–92, and accompanying text (discussing march-in rights under the Bayh-Dole Act).

authorization to take certain actions under an intellectual property right. But which actions, for how long, and under what conditions?¹⁹¹

Perhaps due to the Federal Circuit's reluctance in *Paice II* to call this grant of authority a "license," courts and commentators have largely focused on only one admittedly important feature of the license: the royalty rate. ¹⁹² Indeed, by referring to the license merely as an "ongoing royalty," the Federal Circuit virtually guaranteed that the only term to receive substantial attention would be the royalty rate. Yet intellectual property licenses have numerous other terms that must be specified in addition to the royalty rate. Licenses have a scope, a duration, a field of use, and other provisions that define the ongoing relationship between the licensor and the licensee. Moreover, they often specify procedures for payment, audit, challenge, and dispute resolution should one party fail to live up to its obligations.

U.S. courts that granted compulsory patent licenses in the context of historical antitrust disputes took care to specify at least some terms of those licenses beyond the royalty rate. ¹⁹³ Courts authorizing unenjoined infringement under a compulsory license can and should do the same. ¹⁹⁴ If nothing else, specifying the scope of the compulsory license gives the court some control over its effective implementation. As observed by the Federal Circuit in *Innogenetics*, *N.V. v. Abbott Laboratories*, "[a]n injunction delineating the terms of the compulsory license would permit the court to retain jurisdiction to ensure the terms of the compulsory license are complied with."

^{191.} The inquiry in this Section IV.E echoes that undertaken by John Golden in his analysis of the terms and precise scope of patent injunctions. John Golden, *Injunctions as More (or Less) than "Off Switches:" Patent-Infringement Injunctions' Scope*, 90 Tex. L. Rev. 1399 (2012).

^{192.} Determining the ongoing royalty rate in unenjoined infringement cases has attracted significant attention in the academic literature. *See* Shore, *supra* note 2, at 68; Lemley, *supra* note 44, at Section IV; Seaman, *Ongoing Royalties, supra* note 53, at 220–23; Carlton, *supra* note 25, at 565.

^{193.} See Contreras, Brief History, supra note 95, at 74 (discussing terms on which licenses were granted); Delrahim, supra note 7, at 12–15 (discussing licensing terms).

^{194.} The patent holder in *Paice* complained that "the remedy fashioned in this case is impermissibly incomplete. The district court imposed a license that leaves substantial terms open to future dispute and litigation." *Paice* CAFC Brief, *supra* note 27, at *79. Professor Janicke argues that the failure of courts authorizing unenjoined infringement to specify these additional terms indicates that they are not actually granting compulsory licenses. Janicke, *supra* note 26, at 187–88. We disagree, finding instead that these courts are simply granting compulsory licenses that suffer from a lack of detail. This lack, however, does not make them into something less than licenses.

^{195.} Innogenetics, N.V. v. Abbott Laboratories, 512 F.3d 1363, 1381 n.9 (Fed. Cir. 2008).

As noted in Part II, ¹⁹⁶ in *Paice II* the Federal Circuit encouraged district courts to permit parties to negotiate the terms of their own licenses for unenjoined infringement before determining an ongoing royalty. As a result, several district courts have ordered parties to negotiate a licensing agreement for the period of unenjoined infringement after an injunction was denied. ¹⁹⁷ In these cases, a written license agreement would presumably emerge from the parties' negotiation, specifying the licensing details normally associated with a license of intellectual property. This is the ideal scenario, in which all relevant licensing terms are specified by the parties after being requested by the court to do so. However, if the parties are unable to reach such an agreement, the court itself may need to step in with licensing terms in addition to the ongoing royalty. ¹⁹⁸

In this Section IV.E, we discuss some of the legal terms beyond the royalty rate that should be defined in any compulsory patent license and urge courts granting such licenses to consider including such terms in their orders imposing compulsory licenses for unenjoined infringement, or even appending a full licensing agreement to such orders.¹⁹⁹

1. Licensed Rights

In commercial licensing agreements, significant negotiation occurs over the precise intellectual property rights that will be licensed, whether a single patent, a patent "family" sharing the same priority date, or a portfolio of patents relating to a particular product or technology. ²⁰⁰ In licensing

^{196.} See supra note 149, and accompanying discussion.

^{197.} See, e.g., Order at 1, Carnegie Mellon Univ. v. Marvell Tech. Grp., Ltd., Civil Action No. 09-290 (W.D. Pa. Apr. 24, 2013) (No. 865) ("TT IS HEREBY ORDERED that the parties, through counsel, shall meet and confer to prepare a draft joint licensing agreement for ongoing royalties."); Douglas Dynamics, LLC v. Buyers Prods. Co., No. 09-cv-261-wmc, 2011 U.S. Dist. LEXIS 157349, at *17 (W.D. Wis. Feb. 25, 2011) ("The parties have until March 28, 2011, in which to reach a licensing agreement for defendant Buyers Products' use of plaintiff's U.S. Patents Nos. 5,353,530 and 6,944,978 or to file their separate positions for the court to use in assessing the appropriate reasonable ongoing royalty."); Telcordia Techs., Inc. v. Cisco Sys., Inc., 612 F.3d 1365, 1379 (Fed. Cir. 2010) ("This court also remands to allow the parties to negotiate the terms of the royalty."); Hynix Semiconductor Inc. v. Rambus Inc., 609 F. Supp. 2d 951, 986 (N.D. Cal. 2009) ("[T]he best practice is to order the parties to negotiate the terms of an ongoing royalty for the court to impose.").

^{198.} With respect to some contractual terms, the common law may supply implied terms where the parties fail to specify them. *See* Restatement (Second) of Contracts § 204.

^{199.} For example, the district court supplied a form of license agreement for use by the parties, in Amended Final Judgment and Injunction, TCL Communication Technology Holdings, Ltd v. Telefonaktiebolaget LM Ericsson, Case No. 8:14-CV-00341 JVS-DFMx (C.D. Cal., Dec. 22, 2017).

^{200.} See CONTRERAS, IP TRANSACTIONS, supra note 71, at 129–36. Note that in settlement agreements, the licensed rights seldom include trade secrets or know-how that are not yet

agreements that are entered into when settling litigation, the licensed rights are often confined to the patents at suit, but parties may be well-advised to include other members of the same patent family and additional patents that cover the same product to avoid further litigation. ²⁰¹ The rights licensed under a compulsory license for unenjoined infringement should also be carefully delineated to avoid later disputes regarding the products and features that are covered by the license. ²⁰²

2. Duration of License

Licensing agreements can have durations of any length up to the full legal term of the licensed rights. In many cases, patent license agreements run concurrently with the term of the licensed patents and terminate upon the expiration of the last-to-expire patent. This is also the case when a licensing agreement states no defined term. Yet it is also not uncommon for patent licenses to have fixed terms that expire after a period of years or upon the occurrence of a specified event.

Beyond the commercial factors at play in a negotiated licensing agreement, a compulsory license for unenjoined infringement could take into account the circumstances that led to the denial of an injunction in the first place. That is, an injunction may have been denied to the patent holder because, at the time it initiated suit, it did not practice the infringed patent, leading the court to find that the *eBay* factors disfavored the granting of an injunction. Yet a few years later, the patent holder might have begun to practice the patent and sell patented products. Were the court to revisit the request for an injunction at that point (or if the patent holder were free to bring a subsequent suit seeking an injunction), the court might decide that an injunction was warranted. Yet, if at the time the first injunction was denied the court issued a compulsory license for the duration of the infringed patents, the patent holder would have no opportunity to petition the court for an injunction after the situation (and the balance of the *eBay* factors) had changed.²⁰⁵

In most of the Reviewed Cases in which the district court specified the term of the compulsory license or ongoing royalty, the term ended upon

known by the infringer, as the patent holder is seldom willing to assist the infringer in improving its products.

^{201.} *Id.* at 94, 360 (discussing cases in which rights licensed under settlement agreements were narrower than intended by at least one party).

^{202.} Professor Janicke notes that "[a]s far as we know from the court decisions to date, this subject has been wholly unexplored." Janicke, *supra* note 26, at 188.

^{203.} See Contreras, IP Transactions, supra note 71, at 364–65.

^{204.} See id. at 364.

^{205.} The authors thank Mark Lemley for this observation.

expiration of the last licensed patent.²⁰⁶ Nevertheless, at least one decision that we reviewed specified a license term of less than the full duration of the licensed patents based on an analysis of comparable licensing agreements in the industry.²⁰⁷ For this reason, it is important that the court authorizing a compulsory license state the term of that license and whether it will expire after a particular period, thus permitting the patent holder to renegotiate the terms of the license or bring suit, and perhaps seek an injunction, again.

3. License Scope and Field of Use

Licenses frequently specify the types of products and services that the licensee is permitted to produce and offer under the licensed rights. This "field of use" is often carefully delimited and heavily negotiated. The scope of the licensee's rights under a compulsory license must also be carefully considered. For example, the agreement should state whether the licensee may practice the licensed patents only in connection with the manufacture and sale of the types of products that it made at the time a claim for infringement was made, at the time the license was granted, or at points in the future. To what degree may the licensee introduce routine, or even extraordinary, product improvements and still retain its license? What if the licensee is acquired by a much larger company with a broad range of product offerings beyond those offered by the original licensee? Does the license cover all such product expansions?

Only a few cases involving unenjoined infringement have addressed this important issue, mostly to clarify the scope of products as to which the unenjoined infringer must pay an ongoing royalty. For example, in *Fractus, S.A. v. Samsung Electronics Co.*, the district court states that ongoing royalties must be paid with respect to any products that are not "colorably different" than the products accused of infringement.²⁰⁹ Likewise, another court makes it clear

^{206.} See XY, LLC v. Trans Ova Genetics, LC, Civil Action No. 13-cv-0876-WJM-NYW, 2020 U.S. Dist. LEXIS 78716, at *37 (D. Colo. May 5, 2020) ("[A]ll ongoing royalty obligations end with the expiration of the ... patent."); Tex. Advanced Optoelectronic Sols., Inc. v. Intersil Corp., No. 4:08-CV-451, 2016 U.S. Dist. LEXIS 53948, at *17 (E.D. Tex. Apr. 22, 2016) ("ORDERED to negotiate a royalty rate to address any future harm to the Plaintiff for the remaining life of the '981 patent. Such supplemental damages shall be for sales in the United States of products found to infringe the Plaintiff's patent from March 2014 until the expiration of the patent.").

^{207.} Centripetal Networks, Inc. v. Cisco Sys., 492 F. Supp. 3d 495, 607 (E.D. Va. 2020) (setting six-year term for license, notwithstanding three-year term found in one comparable license).

^{208.} See CONTRERAS, IP TRANSACTIONS, supra note 71, at 143–47 (discussing the need to carefully describe the range of licensed products and fields of use authorized under a licensing agreement).

^{209.} See Fractus, S.A. v. Samsung Elecs. Co., No. 6:09-CV-203 PATENT, 2013 U.S. Dist. LEXIS 37275, at *15 (E.D. Tex. Mar. 15, 2013). The language of "colorable differences" is

that the licensee's mere alternation of the "nomenclature" of its infringing products (i.e., changing product or model names) will not relieve it of the obligation to pay ongoing royalties. ²¹⁰ These judicial statements are important because they establish the scope of the licensee's field of use, and all courts issuing compulsory licenses for unenjoined infringement should more clearly identify the scope of the license granted. ²¹¹

4. Territory

Geographic or territorial reach is also relevant in defining the scope of a license. In some industries, commercial licenses are worldwide in scope.²¹² Worldwide licenses may even be negotiated in the context of litigation settlements, where the patents at issue are, by definition, limited to the jurisdiction in which litigation is being conducted, but the parties wish to establish global "peace."

This expansive reach, however, can be problematic in licenses granted by a court. As one district court explains, "the dominant practice in the industry is to license on the basis of worldwide sales, in part to avoid the need to determine which products enter which countries . . . however, the court may not impose a royalty on such a basis because the court's powers do not extend beyond the United States." Thus, the compulsory license granted by a U.S. court for unenjoined infringement could be limited solely to U.S. patents (contrary, perhaps, to the expectations of the parties). If so, the court may wish to encourage the parties to agree separately on how to handle non-U.S. patents, or to voluntarily include them within the scope of the compulsory license and ongoing royalty awarded by the U.S. court. At a minimum, the geographic scope of any license granted should be specified clearly by the court to avoid later disputes.

not infrequently found in orders for injunctive relief in patent cases. See John Golden, Injunctions as More (or Less) than "Off Switches": Patent-Infringement Injunctions' Scope, 90 Tex. L. Rev. 1399, 1404 (2012) (describing "Colorable-differences do-not-infringe injunctions").

- 210. Centripetal Networks, Inc. v. Cisco Sys., 492 F. Supp. 3d 495, 607 (E.D. Va. 2020).
- 211. Professor Janicke observed that "[i]n a real license, the scope of permission is invariably set out in the agreement, whether it is for all products covered by the patent's claims or only certain configurations, characteristics, or markets. In court-ordered situations to date, little address has been given to this important subject." Janicke, *supra* note 26, at 188.
 - 212. See Contreras, IP Transactions, supra note 71, at 147–48.
- 213. Hynix Semiconductor Inc. v. Rambus Inc., 609 F. Supp. 2d 951, 987, n.30 (N.D. Cal. 2009); see also Carnegie Mellon Univ. v. Marvell Tech. Grp., Ltd., 807 F.3d 1283, 1306 (Fed. Cir. 2015) (the scope of a compulsory license should only apply to the patented products that are sold within the United States). But see WesternGeco LLC v. ION Geophysical Corp., 138 S. Ct. 2129, 2141–42 (2018) (finding a defendant can be liable for patent infringement under 35 U.S.C. § 271(f)(2) if it ships components of a patented invention overseas for assembly).

5. Payment Terms

Given the importance of the ongoing royalty to the authorization of unenjoined infringement, some courts have included express payment and other financial terms in their orders establishing an ongoing royalty or compulsory license. For example, in *Finisar Corp. v. DirecTV Group, Inc.*, the court provides that royalties must be paid quarterly and accompanied by a statement of accounting; payments not made within fourteen days of the due date will accrue interest at a rate of 10% compounded monthly, and the patent holder has the right to conduct an audit of the licensee's books to verify compliance.²¹⁴ Few other judicial royalty orders are this detailed, leaving many of these procedural elements to further agreement (or disagreement) of the parties.

6. Other Terms

A multiplicity of other commercial terms are generally included in patent licensing agreements, and many of these would be useful to specify in compulsory licenses accompanying unenjoined infringement. For example:

- Can the license be terminated by the patent holder for the licensee's non-payment or other breach, or is it effectively irrevocable during its term?
- Is the license transferable, e.g., in the event of a sale or merger of the licensee?
- May the licensee grant sublicenses?²¹⁵
- Is the royalty adjusted, for example, if one or more licensed patents are invalidated or expire?
- Is the licensee permitted to challenge the validity of the licensed patents?²¹⁶

^{214.} Finisar Corp. v. DirecTV Grp., Inc., Civil Action No. 1:05-CV-264, 2006 U.S. Dist. LEXIS 76380, at *5 (E.D. Tex. July 7, 2006).

^{215.} Compulsory licenses granted under Art. 31 of the TRIPS Agreement may not be sublicensed. TRIPS Agreement, *supra* note 6, art. 31(e).

^{216.} Though patent licensees generally retain the right to challenge licensed patents under the Supreme Court's decision in Lear, Inc. v. Adkins, 395 U.S. 653 (1969), prohibitions on challenge have been upheld in the context of settlement agreements. *See* Flex-Foot, Inc. v. CRP, Inc., 238 F.3d 1362, 1368 (Fed. Cir. 2001) ("[W]hile the federal patent laws favor full and free competition in the use of ideas in the public domain over the technical requirements of contract doctrine, settlement of litigation is more strongly favored by the law."). An unenjoined infringer who has litigated (and lost) the issue of patent validity in the court permitting its unenjoined infringement, however, may be limited by res judicata from pursuing such a claim.

- Must the licensee mark its products with the licensed patent number(s)?²¹⁷
- Must the licensee grant any rights to the licensor in improvements to the licensed technology?

We suggest that courts imposing compulsory licenses in the context of unenjoined infringement address each of these issues in the relevant judicial order. Failing to do so can lead to ambiguity and disagreements as a multi-year licensing relationship proceeds.

V. CONCLUSIONS

Contrary to the position of some U.S. government officials and the dicta of some courts, our findings reveal that numerous district court and Federal Circuit judges have expressly acknowledged that they are granting compulsory licenses when authorizing unenjoined infringement combined with ongoing royalties. Failing to recognize that a compulsory license has been granted in this context not only defies logic, but also introduces potential issues under the doctrines of patent exhaustion and transfer.²¹⁸

Nevertheless, some district courts, relying on selected Federal Circuit statements, continue to insist that ordering an "ongoing royalty" is different than granting a "compulsory license." It is not; and the time has come for the courts—either the Federal Circuit or the Supreme Court—to acknowledge this fact explicitly. ²¹⁹ Specifically, we call on the Federal Circuit or Supreme Court to acknowledge that a district court that declines to enjoin the infringement of a valid and enforceable patent, and concurrently orders the infringer to compensate the patent holder for acts of future unenjoined infringement, has authorized a compulsory license of the patent. ²²⁰ The Federal Circuit should

^{217.} This question was raised by the patent holder in *Paice*. See Paice CAFC Brief, supra note 27, at *79 ("[T]he compulsory license is wholly silent as to patent marking. Will Paice now suffer loss of pre-suit damages against other auto makers as the result of Toyota's unmarked and yet 'licensed' sales?"). See also Arctic Cat Inc. v. Bombardier Recreational Prods. Inc., 876 F.3d 1350, 1366 (Fed. Cir. 2017) ("A patentee's licensees must also comply with § 287, because the statute extends to "persons making or selling any patented article for or under [the patentee].") (discussed in Bernard Cryan, Not All Patent Licensees Are the Same: 35 U.S.C. Sec. 287 Should Not Require Marking by Licensees That Deny Infringement, 101 J. Pat. & Trademark Off. Soc'y 531 (2021)).

^{218.} See supra Sections IV.A-B.

^{219.} See also Gómez-Arostegui & Bottomley, supra note 45, at 443 ("[T]he [Supreme] Court must squarely address whether federal courts actually have the power to impose an ongoing royalty in lieu of a final injunction in patent cases.").

^{220.} As noted above, some commentators have argued that federal district courts are not authorized under the current statutory framework to grant compulsory licenses or to order an infringer to pay ongoing royalties. *See supra* notes 44–46, and accompanying text. If they are

also expressly overrule the false distinction between ongoing royalties and compulsory licensing that was established in *Paice II*.²²¹

Taking these steps would have several benefits. First, it would eliminate the courts' embarrassing reliance on a definition of compulsory licensing that erroneously equates it with public licensing as authorized under the Copyright Act. ²²² If nothing else, such an acknowledgment would improve the doctrinal integrity of a key principle underlying judicial orders that have significant commercial and market impact.

Second, expressly recognizing the judicial authorization of compulsory licenses could encourage courts to focus greater attention on the non-royalty terms of such licenses. As discussed in Section IV.E, key terms such as license scope, field of use, and duration are typically omitted from judicial orders pertaining to unenjoined infringement, as courts focus largely on the determination of an "ongoing royalty" to the exclusion of other licensing terms. The recognition that a court is granting a compulsory license, rather than merely setting an ongoing royalty rate, would place the determination of these terms squarely within the scope of the court's order.

Finally, an acknowledgment that U.S. district courts are issuing compulsory patent licenses in significant numbers should inform U.S. foreign policy regarding compulsory licensing by other countries. As noted in the Introduction, the U.S. has consistently adopted an aggressive stance toward countries that have proposed to grant, or actually granted, compulsory licenses of patents held by U.S. entities. Yet if the characterization of unenjoined infringement as compulsory licensing is accurate, the U.S. federal courts could be viewed as among the most prolific issuers of compulsory patent licenses in the world—a result that would be starkly at odds with the public positions taken by the U.S. government. Greater self-awareness by U.S. government agencies of the prevalence of compulsory licensing within the United States could result in a more nuanced approach to such proposals by other countries.²²³

correct, then Congress should amend the Patent Act to clarify that such forward-looking remedies are, in fact, permitted.

^{221.} See supra notes 110–112, and accompanying text.

^{222.} See supra note 120, and accompanying text; see also supra Section II.B.1.d.

^{223.} See Cotropia, supra note 10, at 582–83 ("The United States' objections to other government allowances of unauthorized [patent] use are more likely to look hypocritical and hold less force before the WTO after eBay."). Nevertheless, as Fabian Gonell has pointed out the authorization by U.S. courts of unenjoined infringement, which this article classifies as compulsory licensing, is granted only when the patentee itself seeks injunctive relief against an infringer—the authorization is not generated sua sponte by the court or another governmental body, but as part of a remedial adjudication initiated by the patent holder. In this sense, the