

PATENT INJUNCTIONS AND THE PROBLEM OF UNIFORMITY COST

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INTRODUCTION

In *eBay v. MercExchange*,¹ the Supreme Court correctly rejected the Federal Circuit's general rule requiring that a permanent injunction follow from a finding that a patent is valid and infringed. Recognizing that one size does not fit all in patent law, the Court returned traditional equitable discretion to the district courts. With this discretion, district courts can now deploy remedies for patent infringement that are sensitive to relevant differences among industries, technologies, and entities.

This Essay sets the Court's rejection of a uniform remedial regime in a larger context concerning the role of uniformity in patent law. It then explores the Court's own reasons for rejecting a one-size-fits-all approach to injunctive relief. Finally, it analyzes the salient differences that

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1. 547 U.S. ___, 126 S. Ct. 1837 (2006).

deserve attention from patent courts and summarizes these in a set of guidelines that can be used for evaluating the propriety of permanent injunctive relief in patent cases.

I. ONE SIZE DOES NOT FIT ALL

A. *The Uniformity Presumption*

In its early years, the Federal Circuit applied the traditional, context-sensitive balancing test used for assessing whether to grant permanent injunctive relief.² Over time, however, that test became short-circuited by a “general rule that courts will issue permanent injunctions against patent infringement absent exceptional circumstances.”³ This “general rule” reflected a uniformity presumption that appears to run throughout patent law.

According to the uniformity presumption, all patents and patentees should be treated alike. In a formal sense, the Patent Act largely conforms to this view. With a few statutory exceptions,⁴ the law grants every inventor the rights to exclude others from making, using, offering for sale, selling or importing the invention without regard to the context in which an invention has taken place.⁵ Thus, even though the Patent Act explicitly makes injunctive relief discretionary,⁶ the uniformity presumption demands that such discretion should be held in reserve for exceptional cases. In other words, a patent is a patent, and if it has been infringed the same remedy should apply in all cases.

If patent law were truly this uniform in substance, however, it would impede rather than stimulate innovation. In fact, all patents are not alike, nor should they be. In *One for All: The Problem of Uniformity Cost in Intellectual Property Law*,⁷ I argue that the central policy challenge in intellectual property law is to manage the problems caused by granting rights to innovators on a one-size-fits-all basis. The remainder of this section briefly summarizes that argument for purposes of evaluating the Supreme Court’s opinion in *eBay*.

2. *See Roche Prods., Inc. v. Bolar Pharma. Co.*, 733 F.2d 858, 865–67 (Fed. Cir. 1984).

3. *MercExchange L.L.C. v. eBay, Inc.*, 401 F.3d 1323, 1339 (Fed. Cir. 2005), *rev’d in part*, 547 U.S. ___, 126 S. Ct. 1837 (2006).

4. *See, e.g.*, 35 U.S.C. §§ 200–212 (differential treatment for federally funded patentees); *id.* § 287(c) (limiting remedies against medical practitioners for infringement in connection with medical activities).

5. *Id.* § 271(a).

6. *See id.* § 283 (courts with jurisdiction *may* grant injunctions).

7. Michael W. Carroll, *One for All: The Problem of Uniformity Cost in Intellectual Property Law*, 55 AM. U. L. REV. 845 (2006).

The law grants patents to inventors to encourage technological innovation. While addressing an appropriability problem faced by innovators, these intellectual property rights create a different problem by supplying rightsholders with powerful weapons against end-users, direct competitors, and follow-on innovators who seek to bring socially beneficial innovations to market. To promote progress, patent law must strike a balance, providing sufficient incentives for innovation without unduly stifling the efforts of follow-on innovators or the liberties of end-users.

This balance must be sensitive to the problems the law seeks to solve. In the modern context, innovators' needs for patent protection vary substantially across industries and among types of innovation.⁸ Since patent rights impose some costs on society, such as higher prices, using uniform rights to solve innovators' problems, which differ in magnitude, necessarily gives rise to the problem of uniformity cost in patent law.⁹

Thankfully, giving each patent owner the same legal rights does not mean that each patentee receives the same economic rewards from innovation.¹⁰ A number of market-based features of the patent system partially ameliorate the uniformity cost problem. Differences in demand for patented inventions, variations in the allocation of patent rights through licensing, and a patent owner's ability to serve a wider market through differential pricing (price discrimination) all contribute to aligning the rewards that patent owners receive with the value contributed to society. Nevertheless, these features are only partial solutions because the high costs of licensing or otherwise transacting in relation to patents causes patent rights to remain in the wrong hands.¹¹ As a result, society pays too much for numerous innovations that would have been created with less robust protection, while in other cases patent rights are less extensive than would be necessary to induce the creation of certain costly but socially desirable inventions.¹²

Once one acknowledges the problem of uniformity cost in current patent law, one also realizes that the *ideal* solution to the problem would be perfectly tailored patents. That is, if intellectual property rights were the only available tool to induce inventive activity, the ideal implementation would be rights that promised the expected value necessary to

8. See, e.g., Dan L. Burk & Mark A. Lemley, *Policy Levers in Patent Law*, 89 VA. L. REV. 1575, 1581–83 (2003) (comparing the pharmaceutical industry which requires a large research and development (“R&D”) budget to the computer software industry which can operate on a much smaller budget).

9. Carroll, *supra* note 7, at 847.

10. Imagine the inefficiencies that would result if all inventors were given the same amount of money as a reward for their respective contributions to society regardless of whether the invention were a novelty toy or a life-saving medicine.

11. See Carroll, *supra* note 7, at 857–60 (describing transaction cost problem).

12. *Id.* at 860.

induce investment only in those innovations that would yield society a net positive return (measured dynamically) on the patent grant. Tailoring patents could affect the substance of the patent rights—notably their scope and duration—or the remedies for violation of such rights. While patents for some innovators would carry a traditional property rule—the right to obtain an injunction—others might be protected only by a right to receive a royalty or damages.

As desirable as perfectly tailored patents are, we can't always get what we want. Customizing patent protection on a case by case basis would be impossible for a variety of reasons, including *ex ante* uncertainty about innovation, information asymmetries between policymakers and innovators, the administrative costs of tailoring, and the political economy of intellectual property policymaking. These generally are the reasons advanced to justify why the formal articulation of patent rights in current law is highly uniform. Nevertheless, the uniformity cost perspective demonstrates that context-sensitivity is desirable in patent law's formation and application. A middle-ground solution that deserves greater attention would be to tailor patents categorically along industry-specific or technology-specific grounds.

B. *Limits on the Uniformity Presumption*

Indeed, Congress has adopted three kinds of measures to mitigate the problem of uniformity cost. First, the Patent Act already tailors the rights by treating certain classes of invention or inventor differently.¹³ Second, even when rights are nominally uniform, Congress has made obtaining and keeping patent rights optional. By doing so, these real options reduce the uniformity problem by requiring self-selection among inventors. Only those who believe their inventions possess sufficient present value pursue a patent or maintain it once it has been obtained.¹⁴ As a result, a great deal of patentable information flows into the public domain far sooner than it would were all patentable information automatically subject to a full uniform term.¹⁵

For present purposes, the third and most important policy Congress has adopted is to use flexible standards to define patent rights. These standards govern the eligibility criteria for a patent, the legal scope of a patent, and the remedies for infringement, including the remedial provision at stake in *eBay*. Many of these provisions—dubbed patent law's

13. See, e.g., 35 U.S.C. § 271(e) (relaxing exclusive right to use to enable generic pharmaceutical manufacturer to seek regulatory approval); *id.* § 287(c) (limiting remedies for infringement of certain medical process patents); *id.* §§ 200–212 (Bayh-Dole Act's special provisions for federally-funded patentees).

14. See *id.* at 879–85.

15. *Id.*

“policy levers” by Professors Burk and Lemley¹⁶—require a court to evaluate the invention and its disclosure from the perspective of a person having ordinary skill in the art of the invention. The level of skill will vary by field of invention. As a result, patents will be more easily obtained in some fields than in others, and the field of invention will affect patent breadth.

With respect to the flexible remedial standard at issue in *eBay*, the question from the uniformity cost perspective is whether courts should take account of facts and circumstances beyond the fact that a patent has been infringed when evaluating the suitability of injunctive relief. This inquiry is of a kind with that which arises when courts apply the flexible doctrines governing patent scope.

From a legal perspective, the scope of a patent is defined by the range of activities that would be infringing. While there is debate about whether the Federal Circuit has interpreted the legal standards governing legal scope to yield industry-specific differences in application,¹⁷ the large majority of commentators agree that the flexible standards necessitate some variation in application across fields.

From a business perspective, however, the scope of a patent is its threat value. The threat value is comprised of a patent’s *perceived* legal scope accompanied by the available remedies for infringement. To the extent that courts limit their flexibility in interpreting the provisions that define a patent’s threat value, they intensify the problem of uniformity cost in patent law.

It is for this reason that the Federal Circuit’s “general rule” requiring a trial court to issue a permanent injunction upon findings of patent validity and infringement was problematic.¹⁸ Thus, the Supreme Court’s intervention rejecting this rule was welcome. However, the Court’s own reasons for intervening in *eBay* were only obliquely responsive to the problem of uniformity cost. Indeed, the Court sought to reaffirm its own uniformity presumption—that general remedial rules are inappropriate

16. See Burk & Lemley, *supra* note 8.

17. Compare Dan L. Burk & Mark A. Lemley, *Is Patent Law Technology Specific?*, 17 BERKELEY TECH. L.J. 1155, 1196–1202 (2002), Burk & Lemley, *supra* note 8, at 1593, and Dan L. Burk & Mark A. Lemley, *Biotechnology’s Uncertainty Principle*, 54 CASE W. RES. L. REV. 691 (2004), with R. Polk Wagner, *(Mostly) Against Exceptionalism*, in PERSPECTIVES ON PROPERTIES OF THE HUMAN GENOME PROJECT 367 (F. Scott Kieff ed., 2003), and R. Polk Wagner, *Comment: Exactly Backwards: Exceptionalism and the Federal Circuit*, 54 CASE W. L. REV. 749, 755–56 (2004).

18. Acknowledging that its uniformity presumption short-circuited necessary remedial fact-finding, the Federal Circuit already has remanded some cases to district courts for further consideration in the wake of *eBay*. See *Monsanto Co. v. Scruggs*, 459 F.3d 1328, 1342 (Fed. Cir. 2006); *Int’l Rectifier Corp. v. IXYS Corp.*, 188 Fed. Appx. 1001, 2006 WL 2036676 (Fed. Cir. Jul. 14, 2006) (non-precedential).

and the availability of injunctive relief should be determined case by case in the absence of exceptional circumstances.¹⁹

II. *EBAY'S* OBLIQUE RECOGNITION OF UNIFORMITY COST

Having recognized that one size does not fit all in patent law, the Court in *eBay* could have done more to explain why this matters. The balance that patent law strikes between creating incentives to innovate and providing access to new inventions depends on context. Courts are unlikely to be able to effectively adapt the law to different contexts on a case by case basis for the same reasons that make customized patents infeasible. Instead, there are features of patent law that will cause the cases to cluster, and these features should be taken into account in the exercise of the district court's remedial discretion.

This section analyzes the Court's reasoning in *eBay* on its own terms to identify why the Court found the Federal Circuit's uniform approach to patent injunctions to be problematic. Section III then merges this analysis with the theory of uniformity cost from Section I to set forth functional guidelines for applying the traditional equitable factors for injunctive relief in a way that ameliorates the costs of uniform patent rights.

A. *eBay Is about Patent Policy*

The Court's holding in *eBay* is quite straightforward: "[T]he decision whether to grant or deny injunctive relief rests within the equitable discretion of the district courts, and [] such discretion must be exercised consistent with traditional principles of equity, in patent disputes no less than in other cases governed by such standards."²⁰ Thus, there is no general rule that applies to permanent injunctive relief in patent cases. Instead, the patentee must demonstrate:

- (1) that it has suffered an irreparable injury;
- (2) that remedies available at law, such as monetary damages, are inadequate to compensate for that injury;
- (3) that, considering the balance of hardships between the plaintiff and defendant, a remedy in equity is warranted; and

19. See *eBay, Inc. v. MercExchange L.L.C.*, 126 S. Ct. 1837, 1841 (2006).

20. *Id.* at 1841.

- (4) that the public interest would not be disserved by a permanent injunction.²¹

As simple and as expected as this holding was, there is more to the decision than initially meets the eye. The case below involved a range of issues, and the Federal Circuit addressed the question of injunctive relief in little more than one page of its 17-page opinion.²² Leaving the bulk of the Federal Circuit's analysis undisturbed, the Supreme Court granted certiorari to decide only the issue of whether the Patent Act calls for a "general rule that courts will issue permanent injunctions against patent infringement absent exceptional circumstances."²³

Why did the Court take this case? When looked at in the context of the recent lively conversation between the Court and the Federal Circuit, three possibilities suggested themselves at the time of the grant of certiorari. First, this would be a general jurisprudential intervention to rebuff the Federal Circuit for its formalist attachment to rules rather than standards. One can argue that this was at least one motivation for Court's earlier intervention in *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*,²⁴ when it replaced the Federal Circuit's absolute bar to the doctrine of equivalents in certain circumstances with a presumption against its application.

A second reading of the grant was that the Court felt obliged to chastise the Federal Circuit for its tendency to treat patent law as exceptional, particularly when such a stance gives the Federal Circuit license to take exception to general rules that require an appellate court to defer to other decisionmakers. On this reading, *eBay* would simply become the companion case to *Dickinson v. Zurko*,²⁵ in which the Court overruled the Federal Circuit's view that it was exempt from the Administrative Procedure Act's normal rule of deference to agency fact finding.

Had the Court taken the case for either of these reasons, the opinion should have been a single paragraph. On either of these views, the Court simply would have said that according to the plain language of the Patent Act, "the several courts having jurisdiction of cases under this title *may* grant injunctions in accordance with the principles of equity to prevent

21. *Id.* at 1839.

22. *eBay, Inc. v. MercExchange L.L.C.*, 401 F.3d 1323 (Fed. Cir. 2005).

23. The court further sought briefing on whether it should overrule its decision in *Continental Paper Bag Co. v. Eastern Paper Bag Co.*, 210 U.S. 405 (1908), which rejected the contention that a court of equity lacked jurisdiction to grant injunctive relief to a patent holder who had unreasonably declined to use a patent. *See eBay*, 546 U.S. ___, 126 S. Ct. 733 (2005) (granting certiorari). By citing *Continental*, the Court implicitly affirmed it as good law. *See eBay*, 126 S. Ct. at 1840.

24. 535 U.S. 722 (2002).

25. 527 U.S. 150 (1999).

the violation of any right secured by patent, on such terms as the court deems reasonable.”²⁶ The word “may” means may, and the “principles of equity” require the four-factor balancing of interests. Therefore, under general rules of statutory construction, the statute does not allow for a general rule in favor of injunctive relief and district courts must exercise the remedial discretion granted by the statute subject to the traditional four-factor test.

A third reading of the grant, however, was that the Court accepted the case because it disagreed with the Federal Circuit’s judgment that good patent policy required a general rule favoring injunctive relief as a response to patent infringement. This is certainly the interpretation adopted by the parties and the numerous amici, who represented most of the sectors of the economy substantially affected by the patent system, along with a range of scholarly and public interested amici.²⁷ The briefs in the case proceeded from the assumption that relying on plain-language statutory construction would be an inappropriately formalist basis for deciding the case. The Court instead should decide the case on the basis of how the standard for injunctive relief under the Patent Act would affect innovation.²⁸

Indeed, in its opinion, the Court explained that it was unpersuaded that innovation would benefit from a presumption of uniformity in this context. It then provided some instruction about how the traditional equitable factors should be applied to further the goals of the Patent Act. The Court shared some of the concerns expressed by the district court and the business press that MercExchange and similarly situated non-producing patent owners—particularly owners of business method patents—may be acting as “patent trolls” who use the threat of injunctive relief to collect tribute from innovative passersby with no meaningful pass-through to the general public. This concern, however, does not support a general

26. 35 U.S.C. § 283 (2004) (emphasis added).

27. See generally Peter S. Menell, *The Property Rights Movement’s Embrace of Intellectual Property: True Love or Doomed Relationship?* (Working Paper, Feb. 2007), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=965083. For the record, I did not sign any of the *amicus* briefs (reviewing role played by property rights advocates and those alarmed by the expansion of business method patents, respectively, in attracting the Court’s attention to this case). For the record, I did not sign any of the *amicus* briefs.

28. See, e.g., Brief of Time Warner et al. as Amici Curiae Supporting Petitioner at 4, *eBay, Inc. v. MercExchange L.L.C.*, 126 S. Ct. 1837 (2006) (No. 05-130), available at <http://patentlaw.typepad.com/patent/eBayTimeWarner.pdf> (“The automatic injunction rule can lead to grossly inequitable results affecting technology-dependent businesses.”); Brief of Pharmaceutical Research and Manufacturers of America in Support of Respondent at 5, *eBay*, 126 S. Ct. 1837 (No. 05-130), available at <http://patentlaw.typepad.com/eBay/MercPhRMA.pdf> (“The pharmaceutical industry depends for its very existence upon strong, reliable patent protection including the general rule that injunctive relief will be granted against patent infringers absent exceptional circumstances.”).

rule against granting relief to such patentees. The seven justices concurring with the Court went even further along these lines, though in arguably different directions.

B. *The Opinions*

THE COURT. In Justice Thomas's opinion for the Court, rights and remedies are distinct.²⁹ Congress exercised its constitutional option to secure to inventors the exclusive right to their discoveries by enacting patent law and by declaring that patents should have the "attributes" of chattels subject to statutory limitations and the traditional remedial rules.³⁰ If the general right has been infringed, however, a more context-specific inquiry must follow before judicially excluding a particular member of the public, the defendant, from such practice.³¹

The reason is that the statute subjects enforcement of the general right to the traditional rule under which injunctive relief is an extraordinary remedy available only when the plaintiff has made the four-factor showing set forth above.³² While many, perhaps most, patentees will be able to make this showing readily, there will be some cases in which a monetary remedy will be adequate compensation in light of the goals of the Patent Act, and there will be others in which progress will be better served by permitting the defendant's practice to continue either because the balance of hardships or the public interest calls for this result.

Turning to the question of whether application of the traditional four-factor test in specific contexts might yield predictable outcomes, the Court took up two contexts identified by the district court: a patentee's willingness to liquidate its actual or potential claim against another in a license, and a patentee's failure to engage in commercial activity to practice the patent.³³ The Court found that "traditional equitable principles do not permit such broad classifications"³⁴ for purposes of yielding a categorical rule applicable to these contexts. While willingness to license is certainly relevant to the inquiry, patent holders such as university researchers or self-made inventors who rely on licensing "may be able to satisfy the traditional four-factor test."³⁵

THE CHIEF JUSTICE, CONCURRING. The Chief Justice, joined by Justices Scalia and Ginsburg, concurred in order to warn that, although

29. *eBay*, 126 S. Ct. at 1840.

30. *Id.* (citing 35 U.S.C. § 261).

31. *Id.*

32. See note 21, *supra*, and accompanying text.

33. *eBay*, 126 S. Ct. at 1840–41.

34. *Id.* at 1840.

35. *Id.*; see also *infra* p. 25 (suggesting that the test is likely to be satisfied when a patent owner has engaged in productive licensing).

the district court's classifications in this case may have been overbroad, the traditional factors do not truly call for case-by-case adjudication because their application is limited by "the basic principle of justice that like cases should be decided alike."³⁶ He further noted that courts have granted injunctive relief upon a finding of infringement in the vast majority of cases decided since the early nineteenth century.³⁷ The import of this observation, however, is left to the reader's imagination. Perhaps, this is an embrace of the uniformity presumption, in which case the opinion is a concurrence in name only. It is difficult to know because instead of offering the district courts principles for classification, The Chief Justice invoked an increasingly favored judicial nostrum in intellectual property cases: "a page of history is worth a volume of logic."³⁸ Since the history of patent law can be read in many ways, The Chief Justice's enigmatic reasoning provides little additional guidance to district courts seeking to determine whether a case at bar is like any particular precedent.

JUSTICE KENNEDY, CONCURRING. Justice Kennedy, writing for a plurality comprised additionally of Justices Stevens, Souter, and Breyer, concurred to offer an interpretation of The Chief Justice's invocation of historical practice and to provide further guidance to district courts.³⁹ Since the subject matter of patents has expanded rapidly in recent years, historical practice may be of greatest utility when "the circumstances of a case bear substantial parallels to litigation the courts have confronted before."⁴⁰ District courts, however, now face a range of patent cases with no ready analogy to prior judicial practice. Justice Kennedy identified three classes of case in which district courts should be skeptical about the appropriateness of injunctive relief.

First, he echoed the district court's concern about granting injunctions to non-producing entities, but he focused this concern on those plaintiffs whose primary method of doing business is to purchase patents for purposes of threatening litigation in order to secure a licensing revenue stream. The ready availability of injunctive relief can lead to "exorbitant" licensing fees.⁴¹ Second, Justice Kennedy called attention to cases in which the patented invention is a small component of an infringing product. In such cases, "legal damages may well be sufficient to

36. *eBay*, 126 S. Ct. at 1841–42 (Roberts, C.J., concurring) (quoting *Martin v. Franklin Capital Corp.*, 546 U.S. ___, 126 S. Ct. 704, 710 (2005)).

37. *Id.* at 1841.

38. *Id.* at 1842 (quoting *N.Y. Trust Co. v. Eisner*, 256 U.S. 345, 349 (1921) (Holmes, J.)); see also *Eldred v. Ashcroft*, 537 U.S. 186, 200 (2003) (relying on "a page of history" to explain its constitutional interpretation).

39. *eBay*, 126 S. Ct. at 1842 (Kennedy, J.) (concurring).

40. *Id.*

41. *Id.*

compensate for the infringement and an injunction may not serve the public interest.”⁴² Finally, district courts should be particularly sensitive to the consequences of issuing injunctions in cases involving business method patents, a burgeoning class comprised of a subset that are potentially vague and of suspect validity.⁴³

These classes are not the only ones requiring special scrutiny from trial courts because “[t]he equitable discretion over injunctions, granted by the Patent Act, is well suited to allow courts to adapt to the rapid technological and legal developments in the patent system.”⁴⁴

III. APPLYING *EBAY*

The Supreme Court’s intervention in *eBay* was a welcome recognition that the patent system requires context-sensitivity to function well. However, more needs to be said about how a district court can balance its sensitivity to the nuances of a case at bar while staying true to the principle that like cases should be decided alike. To aid in this difficult task, this section first identifies functional considerations that should guide a trial court’s exercise of discretion when applying the traditional four factors to promote the purposes of the Patent Act. This section then identifies means of mapping these considerations to classifications based on industry, technology, or entity to ensure that the court treats like cases alike.

A. *Functional Principles of Equity after eBay*

The Court’s holding in *eBay* specified the standard for permanent injunctive relief in patent cases. Some questions linger concerning the implications of the holding for preliminary injunction jurisprudence in patent law, as well as its effects on the standards for both preliminary and permanent injunctions in copyright and trademark cases.⁴⁵ Full discussion of these matters is beyond the scope of this Essay.

Nonetheless, the Court’s rejection of the Federal Circuit’s “general rule” should be read as a more general rejection of the uniformity presumption with respect to equitable remedies in intellectual property cases. Thus, for example, courts should no longer presume that a plaintiff will suffer irreparable harm if a preliminary injunction does not issue

42. *Id.*

43. *Id.*

44. *Id.*

45. Professor Joe Miller is tracking the post-*eBay* cases on his weblog. See Joseph Scott Miller, Injunctions, <http://www.thefireofgenius.com/injunctions> (last visited Mar. 23, 2007).

even after the plaintiff has shown a likelihood of success on the merits.⁴⁶ Relatedly, the discussion that follows is also relevant to the preliminary injunction factors in patent cases, as well as to equitable remedies in copyright and trademark cases.

1. Plaintiff's Irreparable Injury and the Adequacy of Damages

The first two factors in the equitable inquiry for permanent injunctions are related. Both ask whether infringement causes an irreparable injury, which is to say that the defendant has caused or is likely to cause harm to the plaintiff for which damages would be inadequate. The irreparable-injury prong is prospective, while the adequacy-of-damage prong is retrospective. A plaintiff's injury is irreparable or damages are inadequate when a court is sufficiently uncertain about its ability to ascertain the value the plaintiff has placed on the right that has been infringed by the defendant.⁴⁷

A first question a court should ask is how old the patent is. Patents that are the subject of litigation tend to be relatively recently granted.⁴⁸ As a general matter, damages will tend to be inadequate for infringements of a recently-granted patent. Almost by definition, if the invention claimed in the patent is new, then its market value is likely to be difficult to ascertain. It turns out that as patents mature, most inventions prove to have little or no market value.⁴⁹

Patent maturity is relative to the field of invention or the patentee's industry.⁵⁰ In fast-growing industries, such as those in the information technology sector, many inventions lose their market value quickly as new and better inventions emerge. By contrast, in the pharmaceutical industry, the long regulatory approval process delays the test of market

46. See, e.g., *Ranbaxy Pharm. Inc. v. Apotex, Inc.*, 350 F.3d 1235, 1239 (Fed. Cir. 2003) (holding that a rebuttable presumption of irreparable harm arises after a "clear showing" of validity and infringement).

47. See, e.g., Gene R. Shreve, *Federal Injunctions and the Public Interest*, 51 GEO. WASH. L. REV. 382, 393 (1983) ("The adequate-remedy-at-law formulation poses the question: is it fair to permit plaintiff to seek an injunction when plaintiff could have selected a less onerous remedy—perhaps damages—that would, in a rough sense, protect the same interests? The irreparable-injury formulation poses the somewhat different question: are there other noninjunctive proceedings that are likely to repair, in a rough sense, the harm plaintiff seeks to avert by injunction?").

48. See John R. Allison et al., *Valuable Patents*, 92 GEO. L.J. 435, 460 (2004).

49. Kimberly A. Moore, *Worthless Patents*, 20 BERKELEY TECH. L.J. 1521 (2006); Allison et al., *supra* note 48, (identifying the characteristics of the small set of valuable patents).

50. Thanks to Chris Cotropia for this reminder.

value and the discovery of so-called “off label” uses can further increase the value of a mature patent.⁵¹

The patent owner’s post-grant treatment of the patent will affect whether a court can reasonably measure the harm of infringing conduct. For example, where the patentee has commercialized the patent by using, making, or selling embodiments of the invention—or has granted an exclusive license for another to do so—damages caused by an infringer’s entry into the market are likely to be an inadequate remedy.⁵² In such cases, it may be possible, though difficult, to ascertain lost sales or the infringer’s profits attributable to infringement. But the patentee and the court would have to speculate to value the loss of goodwill and loss of licensing opportunities, including, for example, the opportunity to cross license. Moreover, patent policy favors a finding of irreparable injury in such circumstances because the practice of an invention generally promotes the progress of science and useful arts.⁵³

One might question, as The Chief Justice did, why commercialization of the patent should be relevant to the irreparable injury inquiry since the patent grants all owners a right to exclude others from using the patent.⁵⁴ This is because, although Congress has declared that patents shall have the attributes of personal property, patent law grants such rights for reasons quite different from the reasons that the law enforces the exclusive rights of one who owns real or personal property. The very reason that the Constitution empowered Congress to grant inventors exclusive rights, and the very reason that Congress has done so since 1790, is to encourage inventors to innovate with an eye toward entering the market to enjoy monopoly profits.⁵⁵ When an infringer enters the market

51. See generally Steven R. Salbu, *Off-Label Use, Prescription, and Marketing of FDA-Approved Drugs: An Assessment of Legislative and Regulatory Policy*, 51 FLA. L. REV. 181 (1999) (describing off label uses and arguments for and against regulation of these practices).

52. Accord Mark A. Lemley & Carl Shapiro, *Patent Holdup and Royalty Stacking* 34 (Working Paper, July 2006), available at <http://faculty.haas.berkeley.edu/shapiro/stacking.pdf>.

53. Cf. *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1, 6 (1966) (“Innovation, advancement, and things which add to the sum of useful knowledge are inherent requisites in a patent system which by constitutional command must ‘promote the Progress of . . . useful Arts.’”) (citation omitted).

54. See *eBay, Inc. v. MercExchange L.L.C.*, 126 S. Ct. 1837, 1841 (2006) (Roberts, C.J., concurring) (suggesting that patentee’s showing of irreparable harm under first two factors should be easy to make since monetary remedies unlikely to adequately substitute for a right to exclude).

55. Patents rarely confer the power of a true monopoly in the sense of control over a market for which there are no ready substitutes. Instead patentees generally face monopolistic competition, in which users of an innovation can turn to imperfect substitutes if necessary. Under such conditions, the patentee can still charge prices higher than would be the case in a truly competitive market because the patent excludes competitors from selling identical goods or practicing a patented process.

to threaten those profits, the injury cuts to the quick, for it undermines the very purpose for rewarding inventors with patents in the first place.

In the case of the non-practicing entity, the patentee who has undertaken efforts to commercialize an invention through productive licensing should be distinguished from those who have not. By “productive licensing,” I mean proactively seeking out parties whose processes or products could be improved by incorporating the invention. Infringement in these cases is likely to curtail or devalue the patentee’s licensing opportunities in ways that are difficult to measure, and it is therefore appropriate to be disposed toward a finding of irreparable injury in such cases.

In contrast, a monetary award is more likely to adequately repair the injury suffered by either non-practicing entities or patentees who have created a reasonably ascertainable market rate for licensing a particular invention. For example, a non-practicing entity whose patent falls into the large class of patents that lack market value is less likely to face irreparable injury if the patent is infringed. For present purposes, it is unnecessary to decide whether such entities deserve to be labeled as “patent trolls” for the same reasons that Justice Kennedy refrained from using the term while expressing the common concerns about vague and doubtful patents and strategic behavior that lie behind the charge.⁵⁶

In these situations, an infringer probably does not inflict the kinds of intangible injuries, such as loss of competitive position, harm to goodwill, or loss of licensing opportunities, for which damages are likely to be inadequate. As a result, courts should be particularly sensitive to the dangers posed by the threat of injunctive relief. In addition to the usual

56. The term “patent troll” often is used to describe patent-owning firms whose primary business is to acquire and assert patents in order to secure licensing revenues. *See, e.g.*, James R. Farrand, *Territoriality and Incentives under the Patent Laws: Overreaching Harms U.S. Economic and Technological Interests*, 21 BERKELEY TECH. L.J. 1215, 1286–88 (2006). Although other commentators use the term more broadly. *See* Jeremiah S. Helm, Comment, *Why Pharmaceutical Firms Support Patent Trolls: The Disparate Impact of eBay v. MercExchange on Innovation*, 13 MICH. TELECOMM. TECH. L. REV. 331, 338–41 (2006) (accusing a pharmaceutical firm of troll-like behavior).

At oral argument in *eBay*, Justice Kennedy asked whether the troll analogy referred to the fishing technique or the toll-collecting creature from folk tales. Transcript of Oral Argument at 26, *eBay*, 126 S. Ct. 1837 (No. 05-130) (“Well, is—is the troll the scary thing under the bridge, or is it a fishing technique?”), available at http://www.supremecourtus.gov/oral_arguments/argument_transcripts/05-130.pdf. Although eBay’s counsel did not supply a definite answer, *id.*, the general understanding by those who use the term is the troll under the bridge. *See, e.g.*, Farrand, *supra*, at 1287 n. 171 (quoting representatives of Microsoft using the term in this way). One reason to be skeptical about claims of irreparable harm made by such entities is that often they acquire older patents without significant market value other than as a basis for threatening litigation. *See id.* at 1288–89. The poster child for this phenomenon is a case that Intel’s David Simon highlighted in congressional testimony in which a firm, TechSearch, had acquired a patent for \$50,000 and then threatened to sue Intel for \$5 billion. *See* Brenda Sandburg, *A Modest Proposal*, THE RECORDER, May 9, 2005, <http://www.law.com/jsp/article.jsp?id=1115370308794>.

transaction costs attendant to licensing or settlement discussions, asymmetry between the risks faced by the accused infringer and a non-practicing patentee opens the opportunity for strategic behavior by the patentee.⁵⁷ The facts suggest that *eBay* was just such a case.⁵⁸

Indeed, Judge Bryson, author of the Federal Circuit's *eBay* opinion, previously recognized in connection with preliminary injunctive relief:

Although a patentee's failure to practice an invention does not necessarily defeat the patentee's claim of irreparable harm, the lack of commercial activity by the patentee is a significant factor in the calculus. Because [the patentee] does not compete with [the alleged infringer] or have licensees who could be injured by competition from [the alleged infringer], [the patentee] does not run the risk of losses of sales or goodwill in the market; nor has [the patentee] suggested that [the alleged infringer's] activities have precluded it from licensing its patent or entering the market.⁵⁹

There is thus precedent in the Federal Circuit for recognizing that one size does not fit all. A relatively mature patent for which no productive licenses have been taken is likely to lack market value unless it represents such an advance in its field that the market is only now in a position to put the invention into practice. Absent such an advance, the non-practicing entity's interest in its exclusive rights is limited to the licensing revenues that could be extracted from those who independently invent technologies on which the patent reads or from willful infringers. In either case, a damage award, including an award of a reasonable royalty, is more likely to be adequate than in other cases. Other equitable considerations, such as the public interest, may lead a court to enjoin the willful infringer in such circumstances, but the infringer's willfulness does not undermine the remedial adequacy of damages.

2. Weighing the Balance of Hardships

If the plaintiff has established that a monetary award alone would risk leaving it substantially undercompensated, the court must then turn to the effects that an injunction would have on the defendant. If a

57. Thanks to Peter Menell for this point. See Lemley & Shapiro, *supra* note 52, at 13–14 (showing the dangers of hold up that result from a presumption of irreparable harm in favor of non-practicing entities not engaged in productive licensing).

58. See Menell, *supra* note 27, at 20–25 (describing the background of the case).

59. See *High Tech Med. Instrumentation, Inc. v. New Image Indus., Inc.*, 49 F.3d 1551, 1556 (Fed. Cir. 1995); *cf. Gucci Am., Inc. v. Daffy's Inc.*, 354 F.3d 228 (3d Cir. 2003) (stating that in trademark cases, “grounds for irreparable injury include loss of control of reputation, loss of trade, and loss of goodwill.”).

permanent injunction would inflict a hardship out of proportion to the harm done to the plaintiff, the court must make a judgment about which of the two hardships would be worse. Making such a judgment is quintessentially an exercise of equitable discretion.

Justice Kennedy's plurality concurrence identified two classes of

150 cases in which a presumption of uniformity is particularly misplaced because the hardship to the defendant will be particularly acute: (1) when the patented invention is but a small component of the product the defendant seeks to produce; and (2) when the patent in suit teaches a business method because such patents are sometimes potentially vague or of suspect validity.⁶⁰ The first of these classes is well defined for functional analysis of the traditional equitable factors. The concern about business method patents, however, requires some adjustment to provide functional insight.

PATENT IS SMALL COMPONENT. Justice Kennedy expressed concern that where the patentee's invention is only a small component of the defendant's product, "the threat of an injunction is employed simply for undue leverage in negotiations."⁶¹ Whether a component is a small input should be assessed both quantitatively and qualitatively. In a limited number of cases, the invention may be quantitatively small, but qualitatively it may be the "heart" of the product insofar as it is the primary source of the product's market value.⁶²

Where a patented invention is quantitatively and qualitatively small, the leverage of a threatened injunction is "undue" because the defendant faces the prospect of being denied a return on its investments in all of the other inputs that have lawfully been bundled for distribution or use.⁶³ Thus, the focus of concern in the small-component cases should not be whether the patentee may enjoy a windfall but whether an injunction would serve to disproportionately harm the defendant in relation to its lawful use of the other inputs into the product or process.⁶⁴

60. *eBay*, 126 S. Ct. at 1842.

61. *Id.*

62. *Cf. Harper & Row, Pub., Inc. v. Nation Enters.*, 471 U.S. 539, 565 (1985) (holding that factor of copyright law's fair use doctrine directed to the amount and substantiality of copying weighs in the copyright owner's favor if the "heart" of a work was copied).

63. Members of the public would also suffer from being denied access to the lawful components of the defendant's product or service, but this non-party harm is measured under the public interest factor.

64. *See, e.g., z4 Techs., Inc. v. Microsoft Corp.*, 434 F. Supp.2d 437, 439, 441 (E.D. Tex. 2006) (rejecting patentee's request for permanent injunction where infringed product activation software was a small component of Microsoft's Windows XP and where patentee sought an injunction that would have required "Microsoft to deactivate the servers that control product activation for Microsoft's infringing products and to re-design its Windows and Office software products to eliminate the infringing technology"), *appeal filed*, *z4 Techs., Inc. v.*

Moreover, in many small-component cases, the other inputs are likely to be patented inventions owned by, or licensed to, the defendant.⁶⁵ From the perspective of the patent system, an injunction in favor of the small-component patentee may well be robbing Peter to pay Paul. Whether this is true, the hardship to the defendant will generally turn on the ease with which the defendant can find and implement a lawful substitute for the infringing component.⁶⁶

Finally, the defendant's hardship may include the potential for follow-on litigation due to uncertainty over the scope of any injunction that may issue. For example, in the argument before the Court, eBay's counsel, Carter Phillips, argued that an injunction would impose an undue hardship because eBay already had committed to implementing a non-infringing substitute for MercExchange's process, but uncertainty about the scope of any injunction would likely invite follow-on litigation over the legality of the substitute.⁶⁷

VAGUENESS AND DOUBTFUL VALIDITY. A second class of case in which the district court should be particularly attentive to the potential hardship to the defendant involves patents of uncertain scope, either because of the breadth of the claim language, the subject matter of the invention, or because of a barely-descriptive or barely-enabling disclosure. Here, a slight translation is needed to give effect to Justice Kennedy's welcome concern about "the burgeoning number of patents over business methods, which were not of much economic and legal significance in earlier times."⁶⁸

Treating business method patents as a distinct class for purposes of injunctive relief is likely to be both over- and under-inclusive. On the one hand, routinely denying injunctive relief to owners of business method patents would only indirectly address larger issues if it now appears that it

Microsoft Corp., Nos. 06-1638, 06-1640 (Fed. Cir. Sep. 22, 2006); Brett M. Frischmann & Mark A. Lemley, *Spillovers*, 107 COLUM. L. REV. 257, 292-93 (2007) ("[P]articularly in circumstances where the defendant or third parties made significant contributions to the success of the product, social welfare requires that they be entitled to continue to make use of that product.").

65. See FEDERAL TRADE COMMISSION, TO PROMOTE INNOVATION: THE PROPER BALANCE OF COMPETITION AND PATENT LAW AND POLICY Executive Summary, at 6 (2003) ("In some industries, such as computer hardware and software, firms can require access to dozens, hundreds, or even thousands of patents to produce just one commercial product.) available at <http://www.ftc.gov/os/2003/10/innovationrpt.pdf>.

66. Where substitution is feasible, the court can address the defendant's hardship by staying its injunction for a reasonable period and award a reasonable royalty for use during this period. See Lemley & Shapiro, *supra* note 52 at 35-36 (arguing in favor of this approach).

67. See Transcript of Oral Argument, *supra* note 56, at 17-22 (argument of Mr. Phillips).

68. eBay, Inc. v. MercExchange L.L.C., 126 S. Ct. 1837, 1842 (2006).

was a bad policy to interpret § 101⁶⁹ to read on methods of doing business or if the quality of such patents is systematically dubious. These problems would be better addressed directly through interpretation of, or amendments to, § 101 or through more thoroughgoing patent examination.

On the other hand, the relevant concern often raised in connection with business method patents is with the potential hardship to a defendant that has run afoul of a patent of vague or uncertain scope. It may not be immediately obvious why the general uncertainty surrounding a particular patent's scope should be relevant in the injunction inquiry. By this stage of the proceeding the patent has been held valid, and the defendant's actions have been determined to have been within the patent's scope.

The reason that general uncertainty about scope remains relevant is because the court's assessment of defendant's hardship asks whether imposing the full costs of complying with an injunction would be fair. In turn, this fairness inquiry focuses in part on the ease with which the defendant could have avoided infringement. For example, the court will not, and should not, credit a defendant's claim of hardship in a case in which the defendant infringed because it invested in manufacturing a product that incorporates a well defined mechanical invention that could have been readily identified with a competent patent search.

In contrast, the court will assign greater weight to the defendant's hardship if the defendant infringed after having conducted a reasonable patent search and having remained reasonably uncertain about whether a business method or software patent, for example, would be held to cover the defendant's process or product.⁷⁰ Thus, courts should routinely inquire into the difficulties of ascertaining the boundaries of the patent in

69. See 35 U.S.C. § 101 (2004) (defining patentable subject matter).

70. Indeed, this point was implicit in the oral argument in *eBay*. The district court had denied injunctive relief in partial reliance on a general concern about business method patents, which it expressed as part of its public interest analysis. The Justices explored whether *eBay* embraced this reasoning. Under questioning from Chief Justice Roberts, *eBay*'s counsel distanced himself from the district court's reasoning. See Transcript of Oral Argument, *supra* note at 56, at 14–16. Justice Kennedy rejoined:

JUSTICE KENNEDY: But the—the business process point you give away fairly quickly. I—I thought that was rather substantial. The whole point is, is that a business process patent is—is difficult to define and could be very—it can be very restrictive.

MR. PHILLIPS: . . . I—I think in a proper case—and I don't think you can do it under the—under the public interest analysis. I think you probably end up doing it under the balance of hardships. . . .

Id. at 15–16.

suit when balancing the hardships. This inquiry is likely to highlight industry-specific or technology-specific patterns.⁷¹

Indeed, Congress has already shown some solicitude for the unwitting infringer. In the case of a reissued patent, section 252 of the Patent Act protects an infringer's detrimental reliance by immunizing any manufacture, sale, offer of sale, use or import of the invention prior to the date of reissue, and by granting the court equitable discretion to protect such reliance with respect to any post-issue conduct.⁷² Analogously, then, the potential hardship of an injunction to an unwitting infringer should favor either withholding injunctive relief or a stay for a reasonable period sufficient to permit the infringer to recoup the costs of detrimental reliance on the invention.

In sum, if a patentee has demonstrated that it will be harmed irreparably if the defendant is not enjoined, the court should then attend to the consequences of an injunction on the defendant. In many, if not most, cases, the defendant's hardship is unlikely to outweigh that of the patentee. However, the court should be particularly receptive to a defendant's claim of hardship when the patentee's invention comprises only a small component of the defendant's product or process or when the scope of the patentee's invention is difficult to ascertain *ex ante*.

3. The Public Interest

After having evaluated the stakes from the parties' perspectives, the court must then consider the interests of non-parties likely to be affected by issuance of a permanent injunction. Once again, one size does not fit all. Although occasionally derided as a "make weight" in equitable proceedings,⁷³ the public interest factor is particularly salient in intellectual

71. See, e.g., Peter Menell, *A Method for Reforming the Patent System*, 13 MICH. TECH. TELECOMM L. REV. 487, 506 (2007) ("The boundaries of software and business method patents are inherently ambiguous.").

72. See 35 U.S.C. § 252. Thanks to Peter Menell for this point. Specifically, with respect to post-reissue infringement, section 252 provides:

The court before which such matter is in question may provide for the continued manufacture, use, offer for sale, or sale of the thing made, purchased, offered for sale, used, or imported as specified, or for the manufacture, use, offer for sale, or sale in the United States of which substantial preparation was made before the grant of the reissue, and the court may also provide for the continued practice of any process patented by the reissue that is practiced, or for the practice of which substantial preparation was made, before the grant of the reissue, to the extent and under such terms as the court deems equitable for the protection of investments made or business commenced before the grant of the reissue.

Id.

73. See, e.g., Arthur D. Wolf, *Preliminary Injunctions: The Varying Standards*, 7 W. NEW ENG. L. REV. 173, 183-228 (1984);

property cases because the very point of granting the owner a right to exclude is to encourage investments that will serve the public interest. Whether the public interest would be disserved by issuance of an injunction in a particular patent case requires some attention to whether the public's short term or long term interests are more salient.

The public's short term interest will generally weigh against injunctive relief. In many settings, the presence of the infringer in the market will present consumers with greater choices or lower prices because the infringer will be allowed to compete with the patentee in ways that the patentee wishes to exclude.⁷⁴ Under rare circumstances, such as a public health crisis, the infringer's entry into the market also may be necessary to meet exigent demand. However, in the long term, routine denials of injunctive relief would devalue patent rights—a result that would undermine the goal of granting patents in the first place.

When assessing the trade-off between the public's short term and long term interests—static versus dynamic efficiency—the court must have some basis for assessing the signal it would send to future inventors if it were to deny injunctive relief.⁷⁵ This assessment really cannot be done solely on the basis of the facts in a particular case because it is too difficult to ascertain how an individual data point—the case at bar—is likely to influence the inventing community's perception's about how well the patent system is functioning.

This does not mean, however, that the public interest always favors injunctive relief. Instead, the court should assess the trade off between the public's short term and long term interests in relation to the field of invention and its relation to industry or technology. The patent system is not monolithic. In some industries, the public's short term interest will be stronger because a denial of injunctive relief is unlikely to undermine incentives to innovate. The converse is true in other industries.

In order to assess whether an injunction would disserve the public interest, the trial court will require access to legislative facts⁷⁶ about the

74. For a dramatic version of this argument in the preliminary injunction context, see *Sanofi-Synthelabo v. Apotex, Inc.*, 470 F.3d 1368, 1383 (Fed. Cir. 2006) (“Apotex, in particular, contends that if the generic products were removed from the market, consumers would be inclined not to purchase their medication because of the accompanying price increase for the brand name drug, leading to possible deaths.”).

75. See, e.g., Ramsey Shehadeh & Marion B. Stewart, *An Economic Approach To The “Balance Of Hardships” And “Public Interest” Tests For Preliminary Injunction Motions In Patent Infringement Cases*, 83 J. PAT. & TRADEMARK OFFICE SOC'Y 341 (2001) (discussing role of public interest prong of preliminary injunction standard in assessing the trade-offs between static and dynamic efficiency in patent cases).

76. See Kenneth Culp Davis, *An Approach to Problems of Evidence in the Administrative Process*, 55 HARV. L. REV. 364, 402 (1942) (introducing legislative/adjudicative fact terminology); *United States v. Gould*, 536 F.2d 216, 220 (8th Cir. 1976) (“Legislative facts are established truths, facts or pronouncements that do not change from case to case but apply

way different industries relate to the patent system. The two most common sources for these facts will be administrative agency reports and expert testimony. For example, Justice Kennedy's concurrence in *eBay* relied on a 2003 report by the Federal Trade Commission to inform his understanding that traditional practice with respect to patent injunctions would give little aid in relation to a new industry that uses patents primarily to extract licensing revenue rather than as a basis for producing or selling goods.⁷⁷

Courts are rightfully skeptical of the value of dueling experts in many situations. Nonetheless, experts play a critical role in presenting legislative fact,⁷⁸ and imbalances in the presentation of legislative facts have been shown to influence outcomes.⁷⁹ For example, in *Sanofi-Synthelabo v. Apotex, Inc.*,⁸⁰ the Federal Circuit affirmed a district court's reliance on a brand name drug manufacturer's expert in holding that the public interest favored a preliminary injunction against a generic drug manufacturer. The plaintiff's expert testified that the average cost of developing a blockbuster drug is \$800 million and that the patent system provided incentives to pharmaceutical companies to continue costly development efforts.⁸¹

These assertions of legislative fact apparently went unchallenged below, even though the \$800 million figure has been widely challenged by industry critics.⁸² While in the case of pharmaceutical patents, the public interest probably does generally favor injunctive relief for infringement even if the critics' figures are correct, one result of *eBay* should be that district courts become more self-conscious of the legislative facts necessary for an assessment of the public interest and that they should demand

universally, while adjudicative facts are those developed in a particular case."); Robert E. Keeton, *Legislative Facts and Similar Things: Deciding Disputed Premise Facts*, 73 MINN. L. REV. 1, 11 (1988) (using term "premise facts" as alternative to emphasize presence and function of facts relied upon but not ascertained through adjudication of the case at bar.); Kenneth L. Karst, *Legislative Facts in Constitutional Litigation*, 1960 SUP. CT. REV. 75, 77 (courts need "to be informed on matters far beyond the facts of the particular case."). Some commentators have identified a hybrid category of "social framework" facts that incorporate legislative facts into an adjudicative finding. See John Monahan & Laurens Walker, *Social Frameworks: A New Use of Social Science In Law*, 73 VA. L. REV. 559 (1987).

77. See *eBay, Inc. v. MercExchange L.L.C.*, 126 U.S. 1837, 1842 (2006).

78. Peggy C. Davis, "There is a Book Out . . .": *An Analysis of Judicial Absorption of Legislative Facts*, 100 HARV. L. REV. 1539 (1987)

79. *Id.* at 1548–49; see also Jon Elster, *Solomonic Judgments: Against The Best Interest of the Child*, 54 U. CHI. L. REV. 1, 10–11 (1987) (also discussing role of legislative fact in child custody disputes).

80. 470 F.3d 1368 (Fed. Cir. 2006).

81. See *id.* at 1383.

82. See generally, e.g., MERRILL GOOZNER, *THE \$800 MILLION PILL: THE TRUTH BEHIND THE COST OF NEW DRUGS* (2004) (claiming that the true cost of development is closer to \$100 million).

better information concerning these facts. Indeed, a court should be willing to appoint its own expert witness, if need be, to ascertain legislative facts concerning the public's interest in a permanent injunction proceeding.

4. Guidelines

In *eBay*, the Court held that district courts must exercise equitable discretion on a case by case basis because the harm caused by patent infringement is not uniform. The analysis above shows that the traditional equitable factors generally will favor issuance of a permanent injunction when a valid patent has been infringed. However, there are certain facts that, if present, should cause a court to be skeptical about the propriety of injunctive relief. It would be improper under the traditional framework to create evidentiary presumptions that would hamstring equitable discretion, but a busy trial court is entitled to look for patterns to orient itself and to ensure that like cases are treated alike.

The analysis above suggests that when assessing the first two factors, courts should be inclined to find irreparable injury when the patent owner is participating in the market for the invention, either by its own practice or through exclusive licensing arrangements. Where the patent owner is not practicing the invention or when the owner has not engaged in productive licensing, a court should be more skeptical that an injunction is a necessary remedy to repair the harm caused by infringement.

When balancing the hardships, the court should consider the infringing product or process from the defendant's perspective. Where there is a high patent-to-product ratio or where the infringed patent otherwise comprises a qualitatively and quantitatively small component of the infringing product or process, an injunction is more likely to impose an undue hardship on the defendant.

In addition, the defendant's hardship should be given greater weight when the scope of the patent is difficult to ascertain; inventions in some fields are harder to capture in claim language than others. In addition, the patentee may have contributed to uncertainty about scope through ambiguous drafting or barely-adequate disclosure. Whatever the reason, an injunction becomes less equitable as uncertainty increases because of the greater likelihood that the defendant will be forced to sacrifice investments that were reasonably made under the circumstances.

Finally, the public interest factor is of greater significance in patent cases than in others because it is directly implicated by patent enforcement practices. Patent infringers usually provide a short term public benefit by increasing the supply of goods or services embodying the invention in the marketplace. This increased supply tends to bring down

prices or increase consumer choice. However, in the long term, unchecked infringement is likely to harm incentives to invest in patent protection. The court must assess this trade-off to determine whether an injunction would disserve the public. By necessity, the court will require access to legislative facts about the role of patents in the particular field or industry at issue. In particular, the court should seek evidence from administrative reports or from expert testimony about the relative importance of injunctive relief in the industry or field likely to be affected by the court's decision.

CONCLUSION

The Court's decision in *eBay* is a welcome course correction that highlights the importance of context in the functioning of the U.S. patent system. Recent expansions in the subject matter of patent law combined with the growing importance of the economic effects of patents suggest that other aspects of patent law would also benefit from more explicit context sensitivity.

Going forward, district courts and the Federal Circuit should attend to the functional considerations relevant in the patent context to the traditional four-factor inquiry. A uniform approach to injunctions increases the social costs of the patent system. But the diversity of issues raised in equitable proceedings is not infinite. While each case will come to court with its own equities, salient facts are likely to be repeated. It would therefore be appropriate for patterns of injunctive relief to emerge in which the cases cluster based on industry, technology, or entity.