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In 2006, the U.S. Supreme Court ruled in *eBay Inc. v. MercExchange LLC* that courts may use a "four-factor test" to determine patentee eligibility for an injunction in patent infringement cases. Lower courts have applied *eBay* in a random way, generally disallowing an injunction for patentees that do not commercialize their inventions. By denying patentees injunctive relief, courts have opted for a *de facto* compulsory license that allows only monetary damages, using a reasonable royalty calculation, to compensate the patentee.

That the courts have opted to deny injunctions and then issue compulsory licenses appears to support a liability theory applied to patent law. However, Article I constitutional rights indicate an "exclusive right" in a patent for a limited time in order to promote investment in risky innovation. The case law for over two hundred years has supported the right to exclude others from using a patent; an injunction protects this right. Applying a strict interpretation of the "four-factor test" clearly breaches the exclusivity and property right in a patent, particularly when it is applied to discriminate against specific classes of patent holders, such as those – like independent inventors and university researchers – which, as market entrants, lack capital resources and which thus do not directly commercialize their inventions.

The article analyzes the "four-factor test" as applied to patent cases post-*eBay* and identifies a broad range of contradictions in a strict interpretation of the test as applied by the lower federal district courts. The Supreme Court needs to revisit this issue to prevent inconsistencies in the application of a compulsory licensing regime that harms the precise class that needs patent rights the most.

| | Introduction | 2 |
|------|---|----|
| I) | Overview of Argument: Review of the Four Factors | 3 |
| II) | Injunctions Protect an Exclusive Right | 9 |
| | A) Misapplication of Importing Patent Injunctive Relief | |
| | Standards from Copyright Law | 9 |
| | B) Why Injunctions are Important | 12 |
| III) | Analysis of the Four Factors | 15 |
| | A) Factor One: Irreparable Injury to Plaintiff | 15 |
| | B) Factor Two: Remedies at Law – Monetary Damages – | |
| | are Inadequate to Compensate Plaintiff for Infringement | 21 |
| | C) Factor Three: Balance of Hardships | 27 |
| | D) Factor Four: The Public Interest | 30 |
| IV) | Critique of the "Four-Factor Test" | 32 |
| | A) Series of Errors in the <i>eBay</i> Case | 32 |
| | B) Presumption in Favor of Injunction | 35 |
| | C) Dynamics Between the Four Factors | 37 |
| V) | Supreme Court Sought a Narrow Ruling in <i>eBay</i> | 40 |
| VI) | "Four-Factor Test" Promotes Inequity | 41 |

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INTRODUCTION

In 2006, the U.S. Supreme Court issued an opinion in *eBay Inc. v. MercExchange LLC*¹ that consisted of three components. In the unanimous majority opinion, the Court held that patentees that had proved infringement of a valid patent were required to meet a "four-factor test" to show eligibility for an injunction. Two additional minority opinions were, however, conflicting. The case has registered substantial controversy because of the effects of instituting a "four-factor test" that creates a bar to permitting injunctions for inventors that do not directly commercialize their patents and leaves only a limited remedy of a compulsory license. The effects of these limitations have been far reaching, particularly for upstream innovators.

This article examines the "four-factor test" and advocates that the Court has been confused in its analysis and implementation. The article analyzes the sources of the implementation of the test and argues that there are reasons to believe that the origination and application of the test are based on fundamental mistakes in patent law. The article recognizes several contradictions in the application of the test that make the test unfeasible in practice.

The consequences of these mistakes and contradictions are an inadvertent narrowing of the parameters of patent law that unduly burden and harm the precise class which needs patent rights the most. The fundamental constitutional patent bargain has been breached by misuse of the "four-factor test" that leads to perverse anticompetitive effects as well as disincentives to invest in innovation.

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¹ 126 S. Ct. 1837 (2006).

From an abstract logic viewpoint, the persistent misapplication of the "four-factor test" by the lower courts has fundamentally altered the shape of the patent right from a strong property right to a liability rule that tends to compulsory licensing in many cases. While altering the scope of the "exclusive right" embedded in Section 8 of Article I of the U.S. Constitution was neither the intended outcome nor the preferred solution of the *eBay* Court, the errors promulgated by implementation of the "four-factor test" require the Court to intervene to clarify the standards in order to correct substantial confusion and persistent abuse in the lower courts that deprive patentees of critical rights.

(I) Overview of the Argument: Review of the Four Factors

After a federal district court determines that a valid patent has been infringed, it sets out to determine whether an injunction is justified.² An injunction has typically issued to a patent holder for infringement as a matter of equity. The argument for an injunction is that only an injunction can protect the constitutional "exclusive right" to an inventor.³ The exclusivity of patent rights provides a strong property right, which is protected by an injunction.

Before eBay, it was routine for the federal courts to issue an injunction after a finding of patent infringement. In fact, this had been the position of the Federal Circuit in eBay.⁴

² See 35 U.S.C. § 283, which states: "The several courts having jurisdiction of cases under this title may grant injunctions in accordance with the principles of equity to prevent the violation of any right secured by patent, on such terms as the court deems reasonable."

³ See U.S. Constitution, Article I, § 8, Clause 8, stating: "Congress shall have power . . . to promote the progress of science and useful arts, by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries."

⁴ See *Rumford Chem. Works v. Hecker*, 20 F. Cas. 1347 (C.C.D.N.J. 1876) (stating that "the ordinary practice is for an injunction, as a matter of course, to follow a decree in favor of the

In *eBay*, Woolston, founder of MercExchange and inventor of the auction patents, approached eBay with an invitation to license patents involving Internet auction methods. EBay refused. After MercExchange filed a patent infringement suit in federal district court in Northern Virginia, eBay claimed that the patented invention was merely a small component of its overall system, that the patents were suspect and presumably invalid because Internet patents were weak and untested by the courts and that Woolston refused to practice the patents. After finding for MercExchange that the patents were valid and infringed, the trial judge refused to issue an injunction against eBay, arguing that an injunction would cause undue harm to eBay's business. Instead, the judge developed a "four-factor test" to determine whether monetary damages alone would be sufficient to compensate for Woolston's injury.

MercExchange appealed to the Federal Circuit, which claimed that an injunction ought to issue as a matter of course after a finding of infringement of a valid patent in order to protect the core property right of the patent holder. The Supreme Court overturned the Federal Circuit by claiming that an injunction does not necessarily follow as a matter of course. But in the majority decision, the Supreme Court disagreed with the

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complainant. . ."); Elect. Smelting & Aluminum C. v. Carborundrum Co., 189 F. 710 (C.C.C. W.D.Pa. 1900) (ruling that an "injunction follows as a matter of course" in the absence of mitigating factors to the contrary); Crown Cork & Seal Co. v. Aluminum Stopper Co., 108 F. 845 (4th Cir. 1901) (stating that enforcement of a patent right requires a permanent injunction and the "refusal of that protection in a proper case will deaden and destroy" the "energy which leads to experiment, invention, and all the resulting benefits."); and Continental Paper Bag Co. v. Eastern Paper Bag Co., 210 U.S. 405 (1908) (rejecting defendant's argument that injunctions should be excluded from patent holders who did not use their patents themselves. The Court held that "[P]atents are property, and entitled to the same rights and sanctions as other property As to the suggestion that competitors were excluded from the use of the new patent, we answer that such exclusion may be said to have been the very essence of the right conferred by the patent, as it is the privilege of any owner of property to use or not use it, without question of motive."). Injunctions are standard in cases involving real property. See Ariolo v. Nigro, 156 N.E.2d 536 (III. 1959) (discussing the injunctive standards for willful encroachment).

district court that Woolston's offer to license the patents to eBay or his not practicing the patents constituted a prejudice against an injunction.

In the majority unanimous opinion written by Justice Thomas, the Court held that a "four-factor test" should be implemented to determine eligibility for a permanent injunction. According to this test, the plaintiff must demonstrate:

- (1) that it has suffered irreparable injury;
- (2) that remedies available at law, such as monetary damages, are inadequate to compensate for that injury;
- (3) that, considering the balance of hardships between the plaintiff and defendant, a remedy in equity is warranted; and
- (4) that the public interest would not be disserved by a permanent injunction.

The majority decision indicated that "original inventors and university researchers" should not be precluded from injunctive relief for not practicing their inventions, following *Continental Paper Bag*, 5 thereby preserving a strong property right. But the two minority opinions were conflicting. Chief Justice Roberts issued a minority opinion, joined by two justices, suggesting that in a great majority of cases, injunctions should be granted as a matter of course following the long history of patent cases. However, justice Kennedy's minority decision, with three concurring justices, showed skepticism with the practice of allowing non-commercializing patent holders, patent holders with component patents or patent holders in the Internet field (with "questionable" patents) to obtain injunctions to limit the manufacture of products or the delivery of services. Justice Kennedy's opinion clearly mirrored the position of patent critics, which supported eBay

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⁵ See op. cit.

in amicus briefs, and had the effect of narrowing property rights to liability rules in patent cases.

In interpreting the *eBay* case, moreover, lower courts have generally followed neither the majority opinion nor the Roberts minority opinion, but rather the Kennedy minority opinion.⁶ The pattern of cases since *eBay* show that a "market competition rule"

⁶ See Golden, John M., The Supreme Court as "Prime Percolator": A Prescription for Appellate Review of Ouestions in Patent Law, 56 UCLA Law Review, 2009; The Three Year Anniversary of eBay v. MercExchange: A Statistical Analysis of Permanent Injunctions, IP Today, 2009; Elhauge, Einer, Do Patent Holdup and Royalty Stacking Lead to Systematically Excessive Royalties?, Harvard Law and Economics Discussion Paper No. 614, May 30, 2008; Geradin, Damien, Anne Layne-Farrar and A. Jorge Padilla, Elves or Trolls? The Role of Non-Practicing Patent Owners in the Innovation Economy, TILEC Discussion Paper No. 2008-018, May 23, 2008; Balganesh, Shyamkrishna, Demystifying the Right to Exclude: Of Property, Inviolability, and Automatic Injunctions, Harvard Journal of Law and Public Policy, Vol. 31, 2008; Reis, Robert I., Rights and Remedies Post Ebay v. Mercexchange - Deep Waters Stirred, Akron Intellectual Property Journal, Vol. 2, No. 1, 2008; Rendleman, Doug, The Trial Judge's Equitable Discretion Following eBay v. MercExchange, Review of Litigation, Vol. 27, 2008; Rierson, Sandra, IP Remedies After eBay: Assessing the Impact on Trademark Law, 2 Akron Intellectual Property Journal 163 (2008); Cotropia, Christopher Anthony, Compulsory Licensing Under TRIPS and the Supreme Court of the United States' Decision in eBay v. MercExchange, in Takenaka and Rainer Moufang, eds., Patent Law: A Handbook of Contemporary Research, Edward Elgar Publishing Co., 2008; Beckerman-Rodau, Andrew, The Aftermath of eBay v. MercExchange, 126 S. Ct. 1837 (2006): A Review of Subsequent Judicial Decisions, Journal of the Patent and Trademark Office Society, Vol. 89, p. 631, 2007; Diessel, Benjamin H., Trolling for Trolls: The Pitfalls of the Emerging Market Competition Requirement for Permanent Injunctions in Patent Cases Post-eBay, 106 Michigan Law Review 305, November, 2007; Golden, John M., Commentary: 'Patent Trolls' and Patent Remedies, Texas Law Review, Vol. 85, p. 2111, 2007; Mersino, Paul M., Patents, Trolls, and Personal Property: Will eBay Auction Away a Patent Holder's Right to Exclude?, Ave Maria Law Review, Fall, 2007; Ellis, Douglas, John Jarosz, Michael Chapman and L. Scott Oliver, The Economic Implications (and Uncertainties) of Obtaining Permanent Injunctive Relief After eBay v. MercExchange, The Federal Circuit Bar Journal, Vol. 17, No. 4, 2007; Hand, Rebecca A., EBay v. MercExchange: Looking at the Cause and Effect of a Shift in the Standard for Issuing Patent Injunctions, Cardozo Arts and Entertainment, Vol. 25, 461, 2007; Mulder, Jeremy, Note, The Aftermath of eBay: Predicting When District Courts Will Grant Permanent Injunctions in Patent Cases, 22 Berkeley Tech. L. J. 67, 2007; Subramanian, Sujitha, Different Rules for Different Owners: Does a Non-Competing Patentee Have a Right to Exclude? A Study of Post-Ebay Cases, SSRN, October 17, 2007; Thomas, Tracy A., EBay RX, Akron Intellectual Property Journal, vol. 2, p. 187, 2007; Thomas, Tracy A., Proportionality and the Supreme Court's Jurisprudence of Remedies, Hastings Law Journal, Vol. 59, 2007; Newcombe, George M., Jeffrey E. Ostro, Patrick E. King and Grabiel N. Ruben, Prospective Relief for Patent Infringement in a Post-eBay World, NYU J of Law and Business, Vol. 4, p. 549, 2007; Fischer, James, The Right to Injunctive Relief for Patent Infringement, SSRN, September 17, 2006; Garrey, Robert J. and John M. Jackson, The Permanent Injunction Threat in Patent Cases: Has eBay v. MercExchange Changed the Landscape

has flowed from a strict application of the "four-factor test" in which a lack of commercialization and lost profits deny eligibility for an injunction to a class of inventors that do not practice their inventions. ⁷ The consequence of this misapplication of injunctive relief is to negate the constitutional exclusive right for, and force a compulsory license on, inventors.

In its strict interpretation, as applied by the federal district courts post-*eBay*, it is very difficult for an inventor that does not actively use his patent to show that he suffered "irreparable injury" by infringement. The Court failed to offer clarity on the issue in its blunt and conflicting opinions. The district courts have established a high barrier to show "irreparable injury," have failed to define the term "irreparable injury" and have placed the burden of proof on the patent holder. Does it mean "personal injury" to the inventor as some courts proffer? How does one prove that impermissible use of his patent rise to the level of personal injury? Is this a conflict with the constitutional right?

Even when showing irreparable harm, the patent holder must show that monetary damages alone are inadequate to compensate for the infringement injury. The Court did

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for Patent Litigation in Texas District Courts?, Private White Paper, September 22, 2006; Grab, Leslie T., Equitable Concerns of *eBay v. MercExchange*: Did the Supreme Court Successfully Balance Patent Protection Against Patent Trolls?, *North Carolina Journal of Law and Technology*, Vol. 8, Issue 1, Fall, 2006; Klar, Richard B., *EBay Inc. v. MercExchange, LLC*: The Right to Exclude Under U.S. Patent Law and the Public Interest, *J of the Patent and Trademark Society*, Vol. 88, No. 10, October, 2006; Murphy, Colleen P., Money as a Specific Remedy, *Alabama Law Review*, Vol. 58, p. 119, 2006; Stockwell, Mitchell G., Implementing *eBay*: New Problems in Guiding Judicial Discretion and Enforcing Patent Rights, *Journal of the Patent and Trademark Society*, Vol. 88, No. 9, September, 2006; and Tang, Yixin H., The Future of Patent Enforcement After *eBay v. MercExchange*, *Harvard Journal of Law and Technology*, Vol. 20, No. 1, Fall, 2006.

⁷ The application of a commercialization test to patentees for injunctive eligibility is particularly ironic since the U.S. manufacturing industry has diminished to only fifteen percent of the economy. The "four-factor test" thus generally benefits foreign manufacturers at the expense of American inventors and start-ups, which is clearly an unintended outcome of eBay. See Section II (A) below.

not offer advice on calculating monetary damages, which are pertinent to showing harm to the patent holder, for instance when the damages are unfair or inadequate.

In considering the balance of hardships, the burden is on the defendant to show that its business would be harmed by an injunction. Yet, the defendant is the infringer and their position should be irrelevant in all but the most extreme cases since otherwise the rule would lure willful infringement behaviors and claims of business harm from stopping the piracy.

Regarding the public interest, the test should be focused on immediate cases of public safety or national security. To do otherwise would harm the integrity of the patent system which requires dynamic efficiency to promote progress and benefit the public interest in the long-run. This criteria is ambiguous in the absence of clear guidance and lower courts have provided conflicting interpretations.

Post-*eBay*, non-practicing entities have generally not qualified for injunctions after a strict application of the "four-factor test" and have been compelled to accept compulsory licensing. The "four-factor test" has become a "market competition rule" that requires a patent holder to commercialize a patent in order to justify an injunction. This *de facto* commercialization filter is in conflict with the Article I exclusive right and two hundred years of case law. The consequences of this removal of injunctive relief for a key class of patent holders is to undervalue patents and therefore to harm the incentives to invest in innovation.

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⁸ See Diessel, Benjamin H., Trolling for Trolls: The Pitfalls of the Emerging Market Competition Requirement for Permanent Injunctions in Patent Cases Post-eBay, 106 *Michigan Law Review* 305, 2007; and Golden, John M., Commentary: 'Patent Trolls' and Patent Remedies, *Texas Law Review*, Vol. 85, p. 2111, 2007.

(II) Injunctions Protect an Exclusive Right

For much of the nineteenth century, patent and copyright cases were treated differently by the Supreme Court, with a priority given to copyright law. In the early days of the Republic, copyrights were seen as underlying original creative works of fiction generated from subjective authorship and worthy of exclusive rights. Patents, on the other hand, were generally considered, particularly after the Patent Act of 1836, as objective, evolutionary and requiring examination. The split between the patent and copyright species of intellectual property, however, became particularly prominent after the Civil War. The period of rapid industrialization required patent rights to support commercialization of inventions; the exclusive right in a patent was the core principle upon which inventors relied.

While there were early twentieth century cases that split the level of protection for intellectual property between copyrights and patents, the requirement for a strong exclusive right was maintained in a patent. For example, a strong distinction remains, which distinguishes the fair use doctrine to allow the public interest to maintain a priority in copyright law, while in patent law a strong injunctive right is required to maintain the right to exclude so as to incentivize investment in risky technology.

(A) Misapplication of Importing Patent Injunctive Relief Standards from Copyright Law

The courts have borrowed from copyright law in order to develop the "four-factor test." Nevertheless, there are several reasons that copyright law cases on injunctive

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This line of cases date to *Dun v. Lumbermen's Credit Ass'n*, 209 U.S. 20 (1908) (suggesting that an injunction would be injurious if the court stopped infringer's use of information.). See

relief are inappropriate when applied to patent law. First, patents require a rigorous examination system, not the registration system used in copyright. Second, inventions generally require substantial investment of time and money relative to copyrighted material. Third, for patents, originality – novelty over prior art – and utility are required, while for copyrights there is no similar requirement. Fourth, the competition between inventors for similar patents requires a restriction of the scope of discoveries that is not necessary in copyrights. Next, patent law has no equivalent to copyright law's fair use doctrine. In general, it is accepted that copyrightable literary writings are subjective works of art in comparison with objective scientific discovery and engineering inventions.

In copyright law, in addition to the fair use doctrine, the right to copyrighted material has been constrained by the Court when the harm to a business outweighs the benefits to the copyright holder. In these cases, monetary damages provide a remedy for infringement, thereby denying the availability of injunctions to protect the exclusive right.

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Belushi v. Woodward, 598 F. Supp. 36 (D.C.D.C. 1984) (viewing the balance of hardships between the plaintiff and defendant before it declined to issue an injunction, stating that an injunction would cause irreparable harm that outweighs legal remedies to address plaintiff's injury); Abend v. MCA, Inc., 863 F. Supp. 1465 (9th Cir. 1988) (indicating that the defendant's investment should be considered in balancing the hardships for determination of remedies); Greenberg v. Nat'l Geographic Society, 244 F.3d 1267 (11th Cir. 2001) (an injunction may not issue in a copyright case in order to prevent public harm, particularly if monetary damages are adequate); N.Y. Times Co. v. Tasini, 533 U.S. 483 (2001) (the Supreme Court indicated that an injunction for infringement is not always required if monetary damages compensate authors); Silverstein v. Penguin Putnam, Inc., 368 F.3d 77 (2nd Cir. 2004) (indicating that, in invoking a balance of hardships, an injunction should not issue if injury resulting from an injunction is great and far greater than not issuing an injunction). On the side of strong copyright legal rights, see MAI Sys. Corp. v. Peak Computer, Inc., 991 F.2d 511 (9th Cir. 1993) (stating that a permanent injunction should be granted when liability has been established and a threat of continuing violations exists); Fisher-Price, Inc. v. Well-Made Toy Mfg., 25 F.3d 119 (2nd Cir. 1994) (indicating that when a copyright is infringed, irreparable harm is presumed); Taylor Corp. v. Four Seasons Greetings, LLC, 403 F.3d 958 (8th Cir. 2005) (stating that irreparable harm flows from the denial of the right to control one's copyrighted material); and MGM, Inc. v. Grokster, 545 U.S. 913 (2005) (stating that "[t]he presumption of irreparable harm no longer inures to the benefit of plaintiffs." According to the strong view, harm is irreparable when no other remedy except an injunction will repair the injury).

The *eBay* Court appears to have sought an equalization of principles of injunctive relief between patent and copyright law. But patent law's substantial differentiation from copyright law, particularly regarding *ex ante* invention investment incentives, suggests a clear error in logic. The intellectual property clause has diverged regarding patent and copyright. Consequently, the right to exclude in a patent is fundamental to protect a property right. In essence, the threshold to protect a property right in a patent is higher than that for copyright protection.

Despite the distinctions between copyright and patent law, which justify different standards supporting exclusive rights, the elephant in the room is the so-called problems alleged by large electronics incumbents about the "patentee holdup conjecture" and royalty stacking that allow patentees with small components of larger systems, such as a chip, to seek an injunction to limit the sale of a manufacturer's overall product. The Supreme Court did not use the language referring to "patent troll" in their written opinion, but it did emerge in the oral argument and amicus briefs.

In establishing the "four-factor test" the Court sought a compromise by borrowing principles from copyright law to apply a new standard for injunctive relief to patent law. The results have created a two-tier system, which is inequitable. In so seeking to solve a problem of so-called "patent trolls," then, the Court created a far greater problem of robbing inventors of constitutional rights for patent exclusivity, devaluing patents for a critical class of original inventor and constraining the market forces for innovation incentives.

(B) Why Injunctions are Important

The intellectual property clause of the U.S. Constitution states that "Congress shall have power . . . to promote progress of science and useful arts by securing for limited times to authors and inventors the *exclusive right* of their respective writings and discoveries." The foundation of U.S. intellectual property rights derive from this statement.

Prior to the creation of the specialized U.S. Court of Appeals for the Federal Circuit, the U.S. Supreme Court was the main venue for appellate patent cases. There is thus a treasure of Supreme Court cases interpreting the IP clause dating to the early nineteenth century. Dozens of nineteenth century cases identify the importance of the exclusive right as a right to exclude others from using a patent and the importance of obtaining an injunction in order to support that right. For example, in *Livingston v. Van Ingen*, 11 the court ruled that "[a] license does not partake of the patent right; it is merely a permit to use the invention." In *Whittemore v. Cutter*, 12 the Court carved out "an extremely narrow exception to the strict holding of the patentee's right to exclude" typically for amusement or verification. The Court further stated in *ex parte Wood and Brundage* 13 that the "inventor has a property in his invention; a property which is often of very great value, and of which the law intended to give in him the absolute enjoyment and passion . . . involving some of the dearest and most valuable rights which society acknowledges, and the constitution itself means to favor." Moreover, in *Shaw v*.

¹⁰ Op. cit., emphasis added.

¹¹ 9 John 507 (1812).

¹² 29 Cas. 1120 (1813).

¹³ 22 U.S. 603 (1824).

Cooper,¹⁴ Justice McLean indicated that "[v]igilance is necessary to entitle an individual to the privileges secured under the Patent Law. It is not enough that he should shout his right by invention, but he must secure it by law."¹⁵

In a further effort to delineate the parameters of an exclusive right of a patent, in *Bloomer v. McQuewan*¹⁶ the Court stated that "[t]he franchise which the patent grants, consists altogether in the right to exclude every one from making . . ." a device and confirmed that a patent provides no right to use but only a right to prevent others from using. Furthermore, in *Allen v. Hunter*,¹⁷ the Court stated that [n]o exclusive right can be granted for anything which the patentee has not invented or discovered . . . The right of the patentee entirely rests on his invention or discovery of that which is useful, and which was not known before. And the law gives him the exclusive use of the thing invented or discovered, for a few years, as a compensation for 'his ingenuity, labor and expense in producing it." In *Kendall v. Winsor*, ¹⁸ the Court stated that "[p]atents are not given as favors . . ., but are meant to encourage invention by rewarding the inventor with the right . . . to exclude others from the use of his invention." Finally, in *Singer v. Walmsley*, ¹⁹ a district court stated that "[p]robably of all species of property, this property in patent rights should be most carefully guarded and protected, because it is so easily

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¹⁴ 32 U.S. 292 (1833).

While the "exclusive right" is enforced as a right to exclude others from using a patent, the converse is not true. There is no onus on the inventor to use the invention. See *Bloomer v. McQuewan*, op cit.; and *Continental Paper Bag*, op cit. See also *Illinois Tool Works Inc. v. Independent Ink Inc.*, 547 U.S. 26 (2006) (stating that there is no need to practice an invention in order to enforce exclusive rights).

¹⁶ 42 U.S. (14 How.) 539 (1852).

¹⁷ 6 McLean 303 (1855).

¹⁸ 62 U.S. (21 How.) 322 (1858).

¹⁹ 1 Fisher 558 (Md. 1859).

assailed." These pre-Civil War cases illustrate a clear tradition by the Supreme Court of viewing patents as property and of a need to protect the property right to exclude.²⁰

Observing that exclusivity in the patent right is critical for market entrants to compete with incumbents, in *Picard v. United Aircraft Corp.*,²¹ the Second Circuit stated that in the "context of the David Co. v. Goliath, Inc., competition is dependent upon investment in David Co., which will not occur unless it is armed with the Patent slingshot." The Federal Circuit reiterated this view in *Schenck v. Norton*,²² confirming that "[t]he right to exclude recognized in a patent is but the essence of the concept of property." The Supreme Court reiterated this view in *Coll. Sav. Bank v. Fla. Prepaid Postsecondary Educ. Expense Bd.*,²³ stating that the "right to exclude others [is] one of the most essential sticks in the bundle of rights that are commonly characterized as property."

Regarding the need to protect the right to exclude with injunctive relief, in *Smith Int'l, Inc. v. Hughes Tool Co.*, ²⁴ the Federal Circuit weighed in with a view that "[w]ithout this injunctive power of the courts, the right to exclude granted by the patent would be diminished, and the express purpose of the Constitution and Congress, to promote the progress of the useful arts, would be seriously undermined." Without the ability to obtain an injunction, "the right to exclude granted to the patentee would have only a fraction of the value it was intended to have, and would no longer be as great an

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²⁰ See also *Wallace v. Holmes*, 29 F. Cas. 74 (C.C. D. Conn., 1871); *Adams v. Burke*, 84 U.S. 453 (1873); *Waterman v. MacKenzie*, 138 U.S. 252 (1891); and *Keeler v. Standard Folding Bed Co.*,157 U.S. 659 (1895) (supporting the "exclusive right" in a patent to be a right to exclude). See also *Dawson Chemical v. Rohm and Haas*, 448 U.S. 176 (1980), for a similar view.

²¹ 128 F.2d 632 (2nd Cir. 1942).

²² 713 F.2d 782 (Fed Cir. 1983).

²³ 527 U.S. 666 (1999).

²⁴ 718 F.2d 1573 (Fed. Cir. 1983)

incentive to engage in the toils of scientific and technological research."²⁵ District courts also recognize the importance of injunctions to protect the value of patent rights. In *Boerhinger Ingelheim Vetmedica, Inc. v. Schering-Plough Corp.*²⁶ and *Wesley Jessen Corp. v. Bausch & Lomb, Inc.*,²⁷ the courts clarified the view that patent value is reduced if not enforceable with an injunction. This line of reasoning follows a long history of real property law cases and the argument that eminent domain generally reduces the value of the seized property.

This long history of cases represents a tradition that is in sharp contrast to the view advocated by a strict interpretation of the "four-factor test" after *eBay*.

(III) Analysis of the Four Factors

The four factors in eBay's "four-factor test" are: (1) irreparable injury to the plaintiff, thereby requiring an injunction to stop the injury; (2) monetary damages that are sufficient to satisfy plaintiff's injury; (3) the balance of hardships between the plaintiff and the defendant; and (4) the public interest.

(A) Factor One: Irreparable Injury to Plaintiff

An injunction is denied, according to the "four-factor test," if the "irreparable injury" standard is not met. But what is harm to a plaintiff that rises to the level of irreparable injury? How does a plaintiff show personal harm from an infringer's activities? If the patent holder does not show irreparable injury, then an injunction will

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²⁵ See *Smith Int'l*, op. cit.

²⁶ 106 F. Supp. 2d 696 (D. N.J. 2000).

²⁷ 209 F. Supp. 2d 348 (D. Del. 2002).

not issue. Rather, monetary damages alone will be used to compensate for the infringement.

On a *strong* interpretation of "irreparable injury," the very act of infringement is irreparable harm. This view has a long tradition from the nineteenth century to the present. For example, *Smith Int'l, Inc. v. Hughes Tool Co.*²⁸ suggests that the mere showing of the infringement of a valid patent illustrates "irreparable harm" and warrants injunctive relief. The main idea of using the simple act of infringement as a test for irreparable harm derives from the importance of the right to exclude in order to promote progress.²⁹ There is a stream of copyright cases that also support the strong interpretation of "irreparable injury."³⁰

However, a "market competition rule" has emerged as the standard for measuring irreparable injury. According to this view, in order to obtain an injunction, the plaintiff must not only use the invention underlying the infringed patent but must also be directly competing with the infringer. Therefore, the onus is not only on the plaintiff to use its patented invention, but this view only values *defensive patents* as worthy of justifying an injunction. In contradistinction with the majority opinion in *eBay*, this standard creates a "broad classification" that unfairly treats plaintiffs that otherwise may satisfy the irreparable injury criterion. In this *strict* interpretation of the "irreparable injury"

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²⁸ See op. cit.

See *Abbott Laboratories v. Andrx Pharmaceuticals, Inc.*, 452 F.3d 1331 (Fed Cir. 2006) (providing a broad interpretation of irreparable harm in a patent infringement case). See also *Wald v. Mudhopper Oilfield Services, Inc.*, (WL 2128851 (2006); and *Telequip Corp. v. The Change Exch.*, 2006 WL2385425 (2006) (citing that "without the right to obtain an injunction, the right to exclude granted to the patentee would have only a fraction of the value it was intended to have, and would no longer be as great an incentive to engage in the toils of scientific and technological progress.").

³⁰ See *Fisher-Price*, *Inc.*, op. cit.; *Taylor Corp.*, op. cit.; *MGM Inc.*, op. cit.; and *IDEARC Media Corp.*, op. cit. (holding that the very act of copyright infringement justifies irreparable harm to the plaintiff and issuance of an injunction.) See discussion above at II (A).

standard, a non-competing patent holder cannot satisfy the standard. In fact, it is impossible, by definition, for a non-competing patentee to meet the "irreparable injury" standard if market competition is required.

Further, *eBay*'s majority decision clearly specified that the use of a "broad classification" of plaintiffs based on previous licensing behavior or the patentee's identity is improper as justification for denial of an injunction, though courts are actually using this criteria. It is ironic that courts are not using the licensing of the patent as justification for commercialization, on the one hand, yet are using the intent to license, on the other, to justify denying injunctions since, presumably, monetary damages are adequate to compensate the infringement injury. Moreover, the courts have *not* shown a preference to support rights for patent holders that seek to *exclusively* license their patent.³¹

Since infringement affects exclusive licensing rights, it is necessary, in order to uphold exclusivity, to uphold an injunction. This critical argument is ignored by the lower courts. There is no exception carved out by the intent by a patentee to exclusively license. The effect of the lack of court enforcement of an exclusive right in a patent is that any infringer can use the plaintiff's patent and therefore deprive him of a premium in the market for exclusivity.³²

In the absence of an inclusive interpretation of licensing, the district courts have denied non-commercializing inventors eligibility to satisfy the "irreparable injury"

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³¹ See *Voda v. Cordis Corp.*, 2006 WL 2570614 (W.D. Okla. 2006). Though Voda licensed a technology exclusively to a company, Cordis infringed the exclusive license and Voda was not permitted an injunction to stop the infringement, thereby breaching the exclusive license. The court reasoned that the exclusive licensee was not party to the suit, while Voda could not demonstrate irreparable harm and thus monetary damages would suffice to compensate the injury.

³² See *Int'l Rectifier Corp. v. Ixys Corp.*, 2006 WL 2036676 (Fed. Cir. 2006) (in which a patentee's assignee is a market competitor, though not the patentee himself.)

criterion. Further, the courts have sometimes denied injunctions in cases in which the plaintiff has shown a willingness to license a patent.³³

The courts have shown a tendency to grant injunctions, in the absence of an extraordinary justification, to patent holders that *do* compete with the infringer, thereby protecting their market entry right.³⁴ However, even if a plaintiff can show that it is a

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³³ See *Finisar Corp. v. DirecTV Group, Inc.*, 2006 WL 2709206 (E.D. Texas 2006) (in denying plaintiff injunctive relief, court cited "willingness to license" as justification for not satisfying "irreparable injury" standard and suggesting that monetary damages would provide adequate remedies. Finistar and DirecTV are market competitors. In general, however, there is no hardship generated by infringement for a patentee that does not compete and that wishes to license a patent. This is a misapplication of the "four-factor test."

For cases granting injunctions to market competitors post-eBay, see Wald v. Mudhopper Oilfield Servs., No. 04-1693 (W.D. Okla 2006); Teleguip Corp. v. Change Exch., No. 01-1748 (N.D.N.Y. 2006); TiVo Inc. v. EchoStar Commc'ns Corp., 446 F. Supp. 2d 664 (E.D. Tex. 2006); Am Seating Co. v. USSC Group, Inc., No. 01-00578 (W.D. Mich 2006); Floe Int'l, Inc. v. Newmans' Mfg. Inc., No. 04-5120 (D. Minn. 2006); Litecubes LLC v. N. Lights Prods., No. 0400485 (E.D. No. 2006); 3M Innovative Props. Co. v. Avery Dennison Corp., No. 01-1781 (D. Minn 2006); Rosco, Inc. v. Mirror Lite Co., No. 96-5658 (E.D. NY. 2006); Smith & Nephew, Inc. v. Sythes (U.S.A.), 466 F. Supp. 2d 978 (W.D. Tenn. 2006); Black and Decker Inc. v. Robert Sosch Tool Corp., No. 04-7955 (N.D. Ill. 2006); Visto Corp. v. Seven Network, Inc., No. 03-333 (E.D. Tex. 2006); Ortho-McNeil Pharm., Inc. v. Mylan Labs. Inc., Nos. 04-1689, 06-757, 06-5166 (D. N.J. 2007); Koninklijke Philips Elecs. v. Poso Media LLC, No. 062354 (C.D. Cal 2007); MGM Well Servs., Inc. v. Mega Lift Sys., LLC, 505 F. Supp. 2d 359 (S.D. Tex 2007); Brooktrout, Inc. v. Eicon Networks Corp., No. 03-59 (E.D. Tex. 2007); Sanofi-Syntehlabo v. Apotex Inc., 492 F. Supp. 2d 353 (S.D. N.Y. 2007); Muniauction, Inc. v. Thomson Corp., 502 F. Supp. 2d 477 (W.D. Pa. 2007); Allan Block Corp. v. Dillon & Co., 509 F. Supp. 2d 795 (D. Minn. 2007); Baden Sports, Inc. v. Kabushiki Kaisha Molten, No. 06-210 (W.D.Wash. 2007); Verizon Servs. Corp. v. Vonage Holdings Corp., 503 F.3d 1295 (Fed. Cir. 2007); 800 Adept, Inc. v. Murex Sec., Ltd., 2007 WL 1101238 (N.D. Fla. 2007); Koninklijke Philips Elecs. V. Int'l Disc Mfr., No. 06-2468 (C.D. Cal. 2007); Sundance, Inc. v. DeMonte Fabricating Ltd., No. 02-73543 (E.D. Mich. 2007); Martek Biosciences Corp. v. Nutrinova, Inc., 520 F. Supp. 2d 537 (D. Del. 2007); Acumed, LLC v. Stryker Corp., No. 04-513 (D. Ore. 2007); Innogenetics, N.V. v. Abbott Labs, 512 F.3d 1363 (Fed. Cir. 2008) [injunction vacated by Fed. Cir.]; Blackboard, Inc. v. Desire2Learn Inc., No. 06-155 (E.D. Tex 2008); Power-One, Inc. v. Artesyn Techs., Inc., No. 05-463 (E.D. Tex. 2008); Nannatech, Inc. v. Glycoproducts Int'l, Inc., No. 06-0471 (N.D. Tex. 2008); Emory Univ. v. Nova Biogenetics, Inc., No. 06-0141 (N.D. Ga. 2008); True Position, Inc. v. Andrew Corp., No. 05-747 (D. Del. 2008); Pressure Prods Med Supplies, Inc. v. Quan Emerteg, Corp., No. 06-121 (E.D. Tex. 2008); Amgen, Inc. v. F. Hoffmann La Roche Ltd., No. 05-12237 (D. Mass. 2008); Becton Dickinson & Co. v. Tyco Healthcare Group LP, No. 02-1694 (D. Del. 2008); Extreme Networks, Inc. v. Enterasys Networks, Inc., No. 07-229 (W.D. Wis. 2008); Callaway Golf Co. v. Acushnet Co., 585 F. Supp. 2d 600 (D. Del. 2008); Cam Guard Sys. Inc. v. Smart Sys. Tech., Inc., No. 07-105 (C.D. Cal. 2008); Power Integrations, Inc. v. Fairchild Semiconductor Int'l, Inc., No. 04-137 (D. Del. 2008); Sensormatic Elecs. Corp. v. Tag Co. U.S., LLC, No. 06-81105 (S.D. Fla. 2008); Funai Elec. Co., LTD. V. Daewoo Elecs. Corp., 593 F. Supp. 2d 1088 (N.D. Cal. 2009);

competitor, the courts do not necessarily suggest that this satisfies the "irreparable injury" criterion.³⁵ Generally, though, courts consider firms that practice their patent in direct competition with a rival to be worthy of protection of lost profits. For those matters that justify lost profits, the market competition rule calculates that monetary damages are inadequate and that the plaintiff suffers "irreparable injury" for infringement, thereby justifying an injunction.³⁶ This high threshold for enforcement of an injunction remedy is inequitable.

Ariba Inc. v. Emptoris, Inc., No. 07-90 (E.D. Tex. 2009); Joyal Prods. V. Johnson Elec. North Am., Inc., No. 04-5172 (D. N.J. 2009); Kowalski v. Mommy Gina Tuna Res., No. 05-00679 (D. Haw. 2009); and Mass Engineered Design, Inc. v. Ergotron, Inc., No. 06-272 (E.D. Tex. 2009). Compare 02 Micro Int'l Ltd. v. Beyond Innovation Tech., 2007 WL 869576 (E.D. Texas 2007); and Fresenius Medical Care Holdings, Inc. v. Baxter International, Inc., 2008 WL 928496 (N.D. Cal. 2008) which grant injunctions after market competitors were able to satisfy the "irreparable harm" criterion. However, there are cases for which even market competitors do not satisfy the strict interpretation for measuring "irreparable injury." See IMX v. Lending Tree, LLC, 469 F. Supp. 2d (D. Del, 2007); Praxair, Inc., v. ATMI, Inc., 479 F. Supp. 2d 440 (D. Del. 2007); Respironics, Inc. v. Invacare Corp., No. 04-0336, 2008 U.S. Dist. LEXIS 1174 (W.D. Pa. Jan. 8, 2008); ResQNet.com, Inc. v. Lansa, Inc., 533 F. Supp. 2d 397 (S.D.N.Y. 2008); Nichia Corp. v. Seoul Semiconductor, Ltd., No. 06-0162, 2008 (N.D. Cal. 2008); Cygnus Telcoms, Tech., LLC v. Worldport Commc'ns, Inc., No. 02-00144 (N.D. Cal. 2008); Chrysler LLC v. Orion IP, LLC, No. 07-158 (W.D. Wis. 2008); Adv. Cardiovascular Sys. V. Medtronic Vascular, Inc., 579 F. Supp. 554 (D. Del. 2008); Ecolab, Inc. v. FMC Corp., 569 F.3d 1335 (Fed. Cir. 2009); Telcordia Techs. Inc. v. Cisco Sys., 592 F. Supp. 2d 727 (D. Del. 2009); and Bard Peripheral Vascular, Inc. v. W.L. Gore & Assocs., No. 03-0597 (D. Ariz. 2009). In these cases, though the plaintiffs were market competitors, the courts claimed that the plaintiffs showed "no irreparable harm" and that there was an "adequate remedy available" in monetary damages in favor of not granting an injunction.

For a pre-Federal Circuit case, see *Deerfield Med. Ctr. V. City of Deerfield Beach*, 661 F.2d 328 (5th Cir., 1981) (denying an injunction, ruling that the plaintiff had not proven "irreparable harm" and limiting damages to monetary award, but noting that "monetary relief could result in lower licensing rates than Plaintiff would desire [and] if an injunction were to issue, Plaintiff would have a more impressive bargaining tool.") Compare *02 Micro Int'l Ltd. V. Beyond Innovation Tech.*, 2007 WL 869576 (E.D. Texas 2007); and *Fresenius Medical Care Holdings, Inc. v. Baxter International, Inc.*, 2008 WL 928496 (N.D. Cal. 2008) which grant injunctions after market competitors were able to satisfy the "irreparable harm" criterion. But see *Commonwealth Scientific & Indus. Research Organization v. Buffalo Tech. Inc.*, 492 F. Supp. 2d 600 (E.D. Texas 2007) (patentee is not a competitor but a research organization). See also *Novozymes A/S/ v. Genencor Int'l, Inc.*, 474 F. Supp. 2d 592 (D. Del. 2007); and *Broadcom Corp. v. Qualcomm Inc.*, No. 05-467 (C.D. Cal. 2007), in which non-competitors obtained injunctions.

³⁶ For a case that focuses on lost sales as a justification for showing "irreparable injury" and for granting an injunction, see *Smith & Nephew, Inc. v. Synthese (U.S.A.)*, 466 Supp. 2d 978 (W.D. Tenn. 2006).

One way to show middle ground on the issue of establishing irreparable harm to justify issuance of an injunction is to consider not only past infringement but also the probability of *future* infringement.³⁷ Thus, the prospect of continuing infringement is a justification for satisfaction of the "irreparable injury" criterion and issuance of an injunction for continued harm.

The paradox of not issuing an injunction when infringement is proved is that otherwise infringement – particularly continued infringement – is considered willful. Since there is a distinction between willfulness and accidental infringement which pertains to the degree of monetary damages, this implies that a patentee may not be eligible to receive an injunction against a willful infringer but may be eligible for treble damages in the absence of an injunction.³⁸ This idea pushes to its limits the contradiction of not providing an injunction to a plaintiff that can show infringement but not "irreparable injury."

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See Phillips v. Crown Cent. Petroleum Corp., 602 F.2d 616 (4th Cir. 1979) (stating that a "future injury of uncertain date and incalculable magnitude is irreparable harm, and protection for such an injury is a legitimate end of injunctive relief."). Compare Scheider AG v. Scimed Life Sys., Inc., 852 F. Supp. 813 (D. Minn. 1994) (stating that "[w]here the infringing device will continue to infringe and thus damage Plaintiffs in the future, monetary damages are generally considered to be inadequate."); and 3M Innovative Props. Co. v. Avery Dennison Corp., 2006 WL 2735499 (2006) (stating that "[w]here the infringing device will continue to infringe and thus damage Plaintiffs in the future, monetary damages are generally considered to be inadequate.") See also MAI Sys. Corp. v. Peak Computer, Inc., op. cit. (stating that a "[p]ermanent injunction [should] be granted in a copyright case when liability has been established and there is a threat of continuing violations.") See also Telequip, op. cit. (suggesting that monetary damages are not an adequate remedy from future infringement); and UMG Records, Inc. v. Blake, 2007 WL 1853956 (E.D. N.C. 2007) (suggesting in the copyright context that monetary damages will only compensate for Defendant's "one-time infringement" and not for future transfers).

The problem of continued infringement raises the problem of willfulness, which justifies treble damages under 35 U.S.C. § 284. It is ironic to consider that monetary damages for continued infringement may be a factor in proving irreparable harm. Denying injunctions and providing monetary damages under a liability rule provides infringers with an improper free ride. See Solomon, Neal E., The Problem of Willfulness in Patent Infringement Cases, 2009.

An argument can be made that the "irreparable injury" factor of the "four-factor test" was originally designed to satisfy a component of a test for a preliminary injunction and that once infringement has been proved, a permanent injunction should follow. It is in this context that the origins of the "irreparable injury" theory are recognized. ³⁹ However, judges were concerned about the prospect of "irreparable harm" to the defendant in limiting their business. ⁴⁰ These cases show the inconsistency of applying the "irreparable harm" criterion to preliminary injunctions.

(B) Factor Two: Remedies at Law – Monetary Damages – are Inadequate to Compensate Plaintiff for Infringement

The *de facto* market competition requirement for inventors to satisfy the standard of "irreparable injury" without lost revenues leaves only monetary damages alone as sufficient to compensate for the infringement. In effect, factor one folds into factor two since it only remains to determine the monetary damages once "irreparable injury" is not forthcoming. However, evaluating the adequacy of monetary damages to compensate for the patentee's injury suggests that the question is begged of the importance of the injunction to protect the property right in a patent.

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³⁹ See *Winans v. Eaton*, 1 Fish 18 (1858) (stating that [w]here there is reasonable doubt as to the novelty of the patent or its infringement, a preliminary injunction will not be granted). See also *Goodyear v. Dunbar*, 1 Fish P.C. 472 (1859) (stating that providing [p]reliminary injunctions could be granted pending litigation, if patentees stood to suffer severe losses).

⁴⁰ In cases post-*eBay*, see *MyGym LLC v. Engle*, 2006 WL 3524474 (D. Utah 2006); and *Enrico Int'l Corp. v. Doc's Marketing Inc.*, 1:05-CV-29242007 WL 10845 (N.D. Ohio 2007), both denying a preliminary injunction based on a presumption that plaintiff will not show "irreparable harm." See also *Canon Inc. v. GCC International Ltd.*, 450 F. Supp. 2d 243 (S.D. N.Y. 2006) (supporting a request for an injunction indicating that plaintiffs are likely to succeed on the merits and holding that monetary damages alone are inadequate to compensate for the injury). See Section IV (A) below.

There are three main arguments involving the insufficiency of monetary damages in patent cases. First, in the absence of satisfying the first factor of "irreparable injury," non-commercializing entities are forced to settle for monetary damages since they are not direct market competitors, which is inconsistent with the tradition of patent law. Second, the method of calculation itself is a critical component in suggesting that insufficiently low monetary damages are an irreparable injury to the patentee. Third, the very act of infringement by a single infringer or by a group of infringers devalues the patent holder's claim in the patent because the patent holder is excluded from controlling the patent and, particularly, from entering into an exclusive license for a premium value. These arguments suggest that the monetary damages criterion is closely linked with the "irreparable injury" component of the "four-factor test."

Non-commercializing entities, such as individual inventors or universities, have been segregated as a class of patent holders that have diminished eligibility for injunctions given the bias of district courts in the application of the market competition requirement. The economic status of the patentee becomes a critical factor since the inventor without capital to manufacture, sell and distribute a product or component has a disadvantage from lesser rights and thus has an inability to satisfy the "irreparable injury" criterion from a strict interpretation of the "four-factor test." In this sense, the licensing business model is seen as disadvantaged since it is ineligible – in the narrow view – for an injunction. This licensing aspect has two main components. First, the very act of seeking a license from an infringer, before or during litigation, indicates that monetary damages alone are sufficient to compensate the plaintiff. This gives a set of rights to

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⁴¹ See *Sundance*, *Inc. v. DeMonte Fabricating Ltd.*, 2007 WL 37742 (E.D. Mich. 2007) (denying a permanent injunction because the patentee "license[d] the '109 patent to others, and offered to

manufacturers that is different than, and superior to, the set of rights for licensors, thereby inadvertently creating a two tier patent system. In effect, injunctions are denied for lack of direct use of patents, contradicting *Continental Paper Bag*.

Second, denial of enforcement of a patent right by refusing to provide an injunction because the patent holder does not directly commercialize the patent is inconsistent with the notion that patent rights are intended to exclude others from using the patent, not that the inventor is compelled to use the patent by manufacturing a product himself. Without the right to limit others' use of the patent, the very notion of the patent right is in jeopardy. This is why the act of infringement itself constitutes "irreparable injury." The inclusion of the position of the patent holder or the business strategy of the patent holder to license or to build the invention should be irrelevant to the protection of the patent right. Large incumbents often selectively license their patent portfolios, illustrating the importance of the licensing model. Further, it is a basic understanding of the patent bargain that a disclosure of the invention is provided in exchange for limited exclusive rights; this is clearly intended as an inducement to invent, but the key to the incentive is the protection of the patent right for a limited time. The ability to license the patent to a specialized manufacturer is intended not to be only a patent holder's right but a choice for how he wishes to exploit the patent. In this, the patent exclusive right is similar to the property right. This right is disrupted by a forced license when a court determines that monetary damages alone are sufficient to compensate the patent holder for infringement.

license it to DeMonte prior to filing suit against it."). The eBay case had a similar set of facts. Note that the eBay majority opinion specifically indicated that prior licensing should not prejudice an opportunity for a plaintiff to meet the tests for an injunction.

The precise method used by the court to determine monetary damages begs the question of the patent's fair value that would be satisfactory to the patentee. In many cases, a minor amount of monetary damages would not in fact be sufficient. If the court severely undervalues the patent, then the inventor would suffer irreparable injury by this application of merely nominal damages. Drawing from the literature of cases in the eminent domain field, it should be clear that property valuation is a complex exercise. This valuation disparity is more complex in the case of intangible assets, particularly when the infringer disparages the patent so as to minimize its obligations for monetary damages.

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⁴² The methods of valuation of real property used by courts in eminent domain cases tend to diminish the price paid to the property holder. See Kimball Laundry Co. v. United States, 338 U.S. 1 (1949) (stating that "[t]he value of property springs from subjective needs and attitudes; its value to the owner may therefore differ widely from its value to the taker. Most things, however, have a general demand which gives them a value transferable from one owner to another. . . . this transferable value has an external validity which makes it a fair measure of public obligation to compensate the loss incurred by an owner as a result of the taking of his property for public use."); United States v. Toronto Hamilton & Buffalo Navigation Co., 338 U.S. 396 (1949) (discussing various criteria for valuation in eminent domain); United States v. 320 Acres of Land, 605 F.2d 762 (5th Cir. 1979) (stating that the court should consider in its calculation of "just compensation . . . "[t]he highest and most profitable use for which the property is adaptable and needed or likely to be needed in the reasonably near future . . . to the full extent that the prospect of demand for such use affects the market value while the property is privately held."); Wallace v. United States, 566 F. Supp 904 (D. Mass. 1981) (stating that "[c]ontroversies over valuation are not governed by fixed rules. Thus, a case cannot be decided by selecting some formula as the only correct one, then determining figures to be used in each step of the formula and proceeding through mathematical calculation to the foreordained result."); Snowbank Enters. Inc. v. United States, 6 Cl. Ct. 476 (Ct. of Claims 1984) (stating that a "trial court is not restricted to any of these methods in arriving at its determination of fair market value. Its valuation analysis may be based upon the comparable sale, the replacement cost, the income capitalization or upon any combination of these three appraisal methods."); and Basset, LLC v. United States, 55 Fed Cl. 63 (2002) (comparing plaintiff's appraisal of property at \$92,806,000 with defendant's appraisal at

See *General Motors v. Daily*, 93 F.2d 938 (6th Cir. 1937) (stating "that the diminished royalty rate to which the patentee may have been driven in individual cases by the disrepute of his patent and the open defiance of his rights should not be taken as the true measure of reasonable royalty."). See also *Fromson v. W. Litho Plate & Supply Co.*, 853 F.2d 1568 (Fed. Cir. 1988) (rejecting the "survival of the fittest' jungle mentality" that would "distinguish the respect due the patent rights of impecunious individual inventors from that due the patent rights of well-funded, well-lawyered, large manufacturing corporations.") The problem of valuing intangible

Yet, the history of calculating reasonable royalties for a patent presents a very broad range of valuations, many of which are insufficient to satisfy the patent holder. The ability to obtain an injunction to protect the exclusive right to a patent is a critical tool in the ability to negotiate a fair compensation, notably in a bilateral negotiation In the absence of a multi-bidder auction model, this problem of valuing intangible assets is particularly prominent. Perhaps if a method were employed that rendered a consistent and fair valuation, then monetary damages alone would be sufficient to satisfy the patent holder. But, in a sense, this is the essence of the problem, particularly for the non-commercializing patentees that wish to license the technology. Courts have a history of applying valuation methodologies that under-value technology.⁴⁴ This devaluation is largely possible because, though the courts seek to emulate the natural bargaining of the market, they typically fail to establish fair standards to do so. For instance, in the case of the implementation of the Georgia-Pacific fifteen factors for valuing a patent, the apportionment criterion of establishing a value over the prior art is a technique often pushed by the infringer to under-compensate the patent holder. The disagreement between the parties on the relative importance of a component in a larger system is frequently a critical dispute involving valuation.

assets is made particularly difficult by the need to anticipate future sales in a market with uncertain growth and decline. Given the uncertainty of this evaluation of future markets in cases involving valuation of intellectual property, courts have tended to assign reasonable royalty rates that allow a percentage of actual future sales to determine the fair settlement, but which require ongoing accounting and continued monitoring of royalty payments. However, in the aftermath of MedImmune, ongoing royalties are a disadvantage for plaintiffs when defendants can challenge patent validity at any time in the life of the patent.

Georgia-Pacific, op. cit., is ued to determine reasonable royalties in patent cases. The fifteen factors used in Georgia-Pacific, however, are conflicting, confusing and incomplete, thereby leaving sometimes insufficient outcomes. See also 28 U.S.C. § 1498 (a), which requires that the U.S. government may license technology for a compulsory license. These licenses, negotiated in the Court of Claims, routinely undervalue the patent holder's technology.

The irony of the bargaining for a patent's value in court is that, though the court seeks to emulate the fair bargaining of the market, the act of withholding an injunction distorts this process.

The inverse of distorting patent valuation by denying an injunction exists in the problem that the act of infringement distorts the licensing market for the patent holder. If the patent holder could maintain an exclusive license with a single licensee, he would obtain a premium in the market that is supported by an exclusive right as a right to exclude others from making, using or selling the patented invention. But the act of infringement constrains this opportunity to license to one licensee and therefore robs the patent holder of this premium. Furthermore, if there are several infringers, then anyone can infringe the patent at will and this devalues the patent for all the patent holders.

This problem resembles the fair use problem in copyright law in which a group of individuals may use the copyrighted product for free for personal use, but once the product is obtained on the Internet and no one pays for it, there is a loss for the copyright holder. This is also similar to antitrust problems in which a loss is suffered from the inefficient domination of a market by one or several competitors. When the inventor loses control over his property, the valuation drops because he loses the determination of the best use of the property. Each infringer wants to pay a minimal amount for their own infringement, precisely because others are using it, but in the *aggregate* they taint the market so that others also want to pay a minimal amount. When the inventor loses control of the patent licensing rights, it reduces patents to a sort of fair use, it rarely maximizes value and generally destroys incentives to invest in innovation. Only an injunction protects these bargaining rights. It is therefore unfair for the court to disrupt

the ordinary market bargaining structure and patentee opportunities by refusing to grant injunctions to patentees to stop infringers.

If the first factor merely folds into the second factor, and if the second factor is instrumental to establishing "irreparable harm," then in fact the two factors are the opposite sides of the same coin. In reality, these two factors are closely related. Therefore, the "four-factor test" is really a "three-factor test."

These issues beg the fundamental question of patent law as reliant on property rights. The aforementioned analysis suggests that the issue of discussing "irreparable injury" and the sufficiency of monetary damages are actually traditional questions for liability rules. While *eBay* did not explicitly seek to do so, it stepped over the line of moving from a property rule to a liability rule for patent rights. This transition, in the context of affecting the eligibility for an injunction, was not intended in the unanimous language of the *eBay* decision. So far, the Federal Circuit has been silent on refining aspects of *eBay*. Nevertheless, the lower courts have pursued a distinctive course and have created a set of problems in patent law that justify revisiting and clarifying these critical issues.

(C) Factor Three: Balance of Hardships

Since the nineteenth century, courts have been concerned about the health of the infringer's business in an attempt to balance the rights between the patent holder and the infringer.⁴⁵ The particular problem is to protect a manufacturer's business when patents

small improvement in the [device] he has built."; and Edison Elec. Light Co v. Mt. Morris Elec.

27

⁴⁵ See *Seymour v. McCormick*, 57 U.S. 480 (1853) (limiting patent damages to the component used in order to protect the "unfortunate mechanic [who sells a whole device and] may be compelled to pay treble his whole profits to each of a dozen or more several inventors of some

on only a small component of a system risks harming the whole business. This problem emerges in copyright law as well.⁴⁶

If the balancing test is subjective, though, it is difficult to weigh the harm to the patent holder or to the infringer. In the absence of an objective method for application of the third factor, the onus moves from the patent holder to the infringer to show that they are in fact harmed by use of an injunction.

The standard assumption in this regard should be that an injunction will issue. The effects of this injunction on the infringer must then be assessed beyond the mere loss of a market since the notion of a patent right is a right to exclude. The standard of proof by the infringer must therefore be high.

This burden of proof on the infringer presents an interesting issue. Was the infringement accidental or willful? If the infringement was accidental, for example, if the infringer did not know about the patent until after it had invested in the infringed product, then the court may justify a stay of an injunction for the time that the infringer requires to develop a "design around" the patent as well as a judgment of monetary damages for the time that the patent was infringed. On the other hand, if the infringement was willful, because the infringer ignored published patent disclosures or because they falsely claimed the patent was invalid, then the infringer's argument of harm from use of a standard injunction is unpersuasive. Since the patent bargain relies on the patentee to disclose his invention, there is an infringer duty to know prior art, particularly if the

Light Co., 58 F. 572 (2nd Cir. 1893) (viewing the "pecuniary injury" to an alleged infringer before is a preliminary injunction).

See *Dun v. Lumbermen's Credit Ass'n*, op cit. (stating that an injunction would be injurious to the appellee); *Abend v. MCA, Inc.*, 863 F. Supp. 1465 (9th Cir. 1988) (stating that the defendant's investment should be considered in remedies); and *Silverstein v. Penguin Putnam, Inc.*, 368 F.3d 77 (2nd Cir. 2004) (stating that an injunction should not issue if injury resulting from the injunction is greater than issuing).

infringer relies on the infringed patent as prior art in its own patents, and this duty negates the infringer's innocence. Otherwise, infringement is simply piracy, whereby the infringer plainly copies the published patent.

The main issue in cases in which the harm to the infringer becomes relevant are those in which an inventor with a patent for a small component of a larger system seeks to exert his injunctive right against the whole system. The problem of multiple inventors seeking to do the same for a set of small components of a complex device or system presents a problem to courts of determining a balance of harms. This is a narrow case that justifies consideration of the condition of the infringer in determination of a patent holder's request for an injunction. However, even in these cases, a stay of an injunction may be justified only if the infringer actively seeks to develop a design around the specific component, thereby preserving the patentee's exclusive right.

The real problem in these cases is that even if it is a small component of a larger system, the patented component may be a critical part that determines the success of the whole system in the market. In these cases in which a component of a larger device is critical to providing a competitive advantage, the determination of an injunction should be straightforward.⁴⁷

Overall, however, the hardship to the infringer should require an extremely high threshold. As a matter of law, it is extremely rare for the infringer to justify a claim that it may suffer injury from issuance of an injunction sufficient to permit its theft.

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In these cases, the "entire market value" rule is used to determine a reasonable royalty. Because the individual component is critical to the overall device and it is too complex to value the component, this method of valuation uses the whole product to determine the value of the patented part. See *Lucent*, *Inc. v. Gateway Corp.*, ______ (Fed. Cir. 2009).

(D) Factor Four: The Public Interest

There are two possible exemptions to an injunction in patent cases involving the public interest. The first is for public safety and the second for national security. These exemptions seem appropriate as the issue of defending the public interest rises to the level of necessity to protect lives. In order to preserve public safety and security, according to this view, a patent ought not to block a solution to a public health emergency. However, in either case, the patent matter would justify only a *temporary* stay of an injunction as a crisis passes.

There are lesser thresholds of protecting the public, for instance, in copyright cases, in which the public may be harmed from an injunction on a copyright infringer that needs information. But copyright cases do not transfer over to the patent realm because it is critical in order to protect the incentives for a patent right to maintain an exclusive right enforced by issuance of an injunction. Otherwise, there is compulsory licensing of patents, which is improper in order to be consistent with the constitutional entitlement. As in eminent domain of real property, the confiscation of property must benefit the public. However, since an infringer is a private party, the implied confiscation of the patent for private use cannot be justified in the name of preserving a public interest. There is no benefit for the commons when the lack of an injunction only benefits another member of the anti-commons primarily or exclusively for their self-interest.

The patent bargain that allows disclosure of an invention in exchange for a limited exclusive right benefits the public interest in the long-run because after the patent term expires the patent moves into the public domain. Moreover, the disclosure of the

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⁴⁸ See *Greenberg v. Nat'l Geographic Society*, 244 F.3d 1267 (11th Cir. 2001) (stating that a stay of an injunction is justified to prevent public harm if monetary damages are sufficient to compensate the copyright holder).

invention allows others to build on the patent so as to provide for progress, yet another public interest benefit.

While there is a short-term harm to the public of a temporary monopoly in the limited patent right, the static efficiency of a short-term increase in the cost of goods through monopoly rents of the patent holder is far outweighed by the long-term benefits of a healthy patent system. If short-term issues were prominent, then third-world countries that defy patents for short-term gain would be prosperous. In the long-run, however, competition from supporting the rights of market entrants pushes prices down and benefits the consumer with more choices. Dynamic efficiency, which looks at long-term incentives to innovate and the benefits of long-term innovation on technological progress, reinforces the public interest that benefits from a strong patent system. Because of the exclusive right in a patent, the social good is improved from the incentives to invent and the progress that this inculcates.

Upstream firms enhance social welfare and the public interest by developing new technology, providing competition in the market, lowering prices from introduction of new or substitute technologies, accelerating the velocity of innovation, solving novel problems that benefit social goals, offering product differentiation, promoting new entrants in a dynamic economic environment and originating the emergence of new industries by embarking on projects too risky for incumbents. Licensors protect the public by preventing predatory pricing of incumbents in the short-term.

Because the public interest is benefited from the healthy operation of a patent system that generally relies on strong exclusive rights supported by injunctions, the

public interest factor is rarely activated except in unusual circumstances, and then only temporarily.

- (IV) Critique of the "Four-Factor Test"
- (A) Series of Errors in the *eBay* Case

The "four-factor test" rests on a series of errors. First, the Court sought a compromise by providing a standard for the justification of injunctive relief, which borrows from copyright law. However, there is not an appropriate crossover from copyright to patent law without unduly constraining patent rights. Second, the Court erred in intending to apply the "four-factor test" to *preliminary* injunctions but inadvertently blocked permanent injunctive relief and thereby removed a fundamental property right for some patent holders. Third, there is really no formal "four-factor test" since it is a contrivance that combines several elements from prior cases that have no clear precedent in history. The Supreme Court had not addressed the applicability and limitations of the "four-factor test" applied to patent cases before *eBay*.

An incomplete and emergent Roberts court missed the mark in *eBay*. The decision was based on eight justices, not nine, because Justice O'Conner had retired and Justice Alito had not yet been confirmed. This was the first year Chief Justice Roberts deliberated and, though Justice O'Conner heard the oral arguments, Roberts did not.

It is in this context that the tersely worded "unanimous" opinion sought a compromise. On the one hand, the Court wanted to find a way to uphold *Continental Paper Bag*, allowing patent holders that did not manufacture their patented invention to maintain the constitutional exclusive right. On the other hand, the Court wanted to find a

reasonable way to limit injunctions when a single patent on a component of a larger system would risk injury to a productive enterprise, particularly when monetary damages may be sufficient. In order to find a compromise, the Court mistakenly looked to copyright cases. In its attempt to find a compromise, the Court failed to consider the substantial differences between copyright and patent law.

It is in the copyright domain that the application of the "four-factor test" to intellectual property originally emanated. However, the test was intentionally applied to a test for preliminary injunctions.⁴⁹ When a case is fully presented, and the plaintiff

The main criterion at the preliminary injunction stage, however, is the threshold issue of whether, given limited evidence at the start of trial, a prima facie case can be made that there will be a "likelihood of success on the merits." Note that the issue of irreparable injury to the plaintiff, which is a threshold issue in the *eBay* "four-factor test" becomes irrelevant to the preliminary injunction test. It appears that the four factors of the preliminary injunction test have been reorganized into the *eBay* "four-factor test" in a confusing and contradictory way. While it is logical to use a preliminary injunction test that emphasizes the probabilities of success for the issuance of an initial injunction to stop allegedly infringing behavior, it is obvious from a reading of the long tradition of patent law cases that when patent validity and patent infringement have been clearly established, a permanent injunction will issue in all but extreme cases. The use of the preliminary injunction test is a logical and fair way to protect alleged infringers against the prospect of failure of meeting the standards of proof of patent validity and infringement in court. However, the act of patent infringement, in order to be consistent, and to encourage incentives to invest in innovation, must be protected with the exclusive right that only an equitable relief with

There is in fact another "four-factor test" that has been used to determine eligibility for a preliminary injunction at the preparatory trial stage. This test consists of: (1) the likelihood of success on the merits; (2) the relative rights and hardships of the parties; (3) the possibility of irreparable harm; and (4) the public interest. Notice the similarities and differences of this test for a preliminary injunction with the "four-factor test" used in eBay. Regarding the first criterion, an early evaluation of evidence begs the question of ability to show data during discovery and trial to justify an injunction and puts a burden on the plaintiff to justify an early injunction. This early test merely questions the probability of meeting an injunction test and should not bias a final determination after proof of infringement. The second criterion is the same as the third criterion in the eBay "four-factor test" and the fourth criterion is the same in both. But in the case of the third criterion in the preliminary injunction context, viz., the possibility of irreparable harm, the onus is on the *defendant* to show that an injunction will not harm his continuing business. Why would a plaintiff need to show that there will be irreparable harm to it from continued infringement when the patent holder precisely is harmed by the very act of infringement? There is a presumption that infringement is harmful. The relative hardship of the plaintiff is considered in the balance of rights test of criterion two. By putting the issue of "irreparable injury" as a threshold issue in the eBay "four-factor test" and by putting the burden on the plaintiff, the Court may have gotten the issue backwards.

proves infringement, an injunction would issue as a matter of course in order to protect the patent holder's exclusive right. Except in extraordinary circumstances, this is the general rule that the Federal Circuit has upheld, based on two centuries of consistent case law.

The main impetus for institution of the "four-factor test" is the infringer assertion of the "patentee holdup conjecture" in which the patentee is perceived to be using the prospect of injunctive relief as a bargaining tool to increase a licensing royalty rate. In fact, the experience of the intransigent infringer is that they are "refusing to deal" with plaintiffs that may seek to license a patent. The infringers have intentionally turned the tables with confusing rhetoric to suggest that the patentee, in enforcing a constitutional right, is creating a holdup problem, when in reality, the belligerent infringer – often a large incumbent – generates the problem. It is clear that patent critics, with the aid of incumbent infringer rhetoric, overstated the "patentee holdup conjecture" arguments that influenced the Kennedy minority opinion.

While the majority decision in *eBay* clarified the right in most cases for "original inventors and university researchers" to justify eligibility for an injunction, this has been largely ignored by district courts.

There is a clear contradiction of the exclusive right for patents – enforced by injunctions – with the liability rules that inculcate monetary damages to compensate for the infringement injury to the plaintiff.⁵⁰ This larger question was not fully understood by the Court when it instituted the "four-factor test." Without providing clarification for

issuance of an injunction provides. Does this all imply that the *eBay* "four-factor test" relies on a tragic mistake of logic and judicial misinterpretation?

See Solomon, Neal E., Adverse Effects of Moving from Property Rules to Liability Rules in Intellectual Property: A New View of the Cathedral Without the Disintegration of Property Rights in Patent Law, 2009.

eligibility of satisfying each element of the test, the Court proceeded to disintegrate the property right in a patent. In fact, it is in the Kennedy minority opinion that the clear patent critic logic is specified justifying a reduction of the patent exclusive right to a liability rule. Further, given the Roberts opinion that argues for strong patent rights, the conflict between the Kennedy and Roberts minority opinions suggests a lack of clarity that provides little guidance for, and actually promulgates the confusion in, the district courts. Consequently, the courts have provided uneven applications of *eBay* and have tended to apply limits on injunctive relief to a broad classification of patentees that the majority decision abhors.

The history of the "four-factor test" is interesting for its lack of tradition. The test appears to be a contrivance of convenience that consists of an amalgam of prior lower court opinions. Though the record on each of the four factors is clear, there is no consistent combination of the factors as a test for an injunction in patent law until the federal judge in the *eBay* case used the test to bar plaintiffs from injunctions in copyright cases. The record is clear that there never was a well-worn "four-factor test" and therefore the Court has not had an opportunity until *eBay* to assess it implications.

(B) Presumption in Favor of Injunction

In a strong interpretation of the "four-factor test," once validity and infringement of a patent have been established, there is a presumption of irreparable harm to the patentee that cannot be satisfied with court administered monetary damages alone and – barring special hardship to the infringer or to the public – in order to preserve the

exclusive right in the patent, an injunction should issue. This has been the standard practice upheld by the courts for two hundred years.

The question of the evidence required in the course of trial may justify the application of a "four-factor test" in order to request a *preliminary* injunction. When there are issues that justify staying a preliminary injunction, for example, the existence of incomplete information before the court that require a trial process to hear both sides, then application of a "four-factor test" at the preliminary injunction stage may be made. But this evidence gathering is provisional and when the court ultimately determines infringement of a valid patent, the remedy should overwhelmingly be a requirement of an injunction. In view of this observation of the proper limits of the "four-factor test," then, the courts have consistently misapplied the "test" from a preliminary injunction context to the permanent injunction context.

However, in the case of a permanent injunction, with few exceptions, the mere establishment of a patent's validity and infringement will justify an injunction as a matter of course simply because the mere act of infringement is an "irreparable harm" on the patent holder that deprives him of the constitutional entitlement manifest in the patent exclusive right.

There is, in fact, no tradition of a "four-factor test" or even a "three-factor test" – that combines the "irreparable injury" to the patentee and a compulsory license implicit in monetary damages – to repair the injury along with the infringer harm and public interest injury criteria. This "test" is a contrivance of the court to seek to solve several related issues that rose to the level of a "problem" because of infringer rhetoric about the "patentee holdup conjecture." The "four-factor test" in intellectual property litigation is

generally borrowed from copyright law to satisfy a different sort of case that is not fully analogous to the patent species. In this sense, the "four-factor test" is itself an invention of sorts that is designed to provide a categorical remedy that has the effect of unfairly discriminating between types of patent holders.

The use of the "four-factor test" has been used to establish a *de facto* "market competition requirement" that discriminates between patent holders based strictly on their relative economic positions, their use of the patent or their willingness to license the patent. This categorical discrimination between patent holders benefits defensive patent holders who are able to satisfy the strict "four-factor test" by directly manufacturing the patented invention. But the distinction between patent holders has no precedence in the long history of patent cases. Finally, the ultimate beneficiaries of the *eBay* "four-factor test" are East Asian manufacturers at the expense of American innovators. This is surely not an intended outcome of an American Court.

Evidence showing the probability of *continued* infringement of the patent presents a strong case that justifies satisfaction of the "four-factor test" and issuance of an injunction to protect the patent holder.

(C) Dynamics between the Four Factors

There is a conflict between the first and second factors of the "four-factor test." It is clear that the issue of the "irreparable injury" to the plaintiff and the issue of monetary damages that may be used to remedy the plaintiff's injury involve inextricably integrated sets of concepts. Simply suggesting that the injury to a patent holder is not irreparable and that monetary damages alone are sufficient to remedy the injury are flip sides of the

same coin. In fact, the very application by a court of a low royalty rate would be a sort of injury that justifies "irreparable injury" because the limited compensation is an insufficient substitute for the loss of exclusive rights.

In particular, it is a breach of the patent holder's exclusive right for courts to maintain a categorical rejection of a class of patent holders based on their economic standing or licensing preference. The provision of an injunction only for a patent holder that manufactures and a forced license with monetary damages at a steep discount for a licensor is a breach of property rules that is unjustified given the loss to the patent holder and the consequent benefit to the infringer.

There is a conflict between the personal harm that a patentee suffers from an infringer's behavior and the harm to the infringer from the patentee obtaining an injunction. If the purpose of patent law is to provide an exclusive right for the patentee, embedded in the constitution, then an injunction is a critical way to preserve that right. The harm to the infringer is only incidental to the consideration of granting an injunction in order to protect the patent right. Even if the court stays an injunction because of the presumed harm to the infringer, given the risks of continuing infringement, it may be necessary to request that the infringer have a limited time to perform a design around the patent, so as to remove the infringing behavior and preserve the exclusive right.

The issue of a balance of hardships which accommodates an infringer's loss from imposition of an injunction is a little like asking if a thief, in the commission of a crime, was injured and should be compensated. By acknowledging the harm to the infringer, monetary damages become an implicit alternative. Without the harm of infringement, for instance, the patent holder would enforce his exclusive rights with an injunction.

Therefore, monetary damages to the patentee need to be sufficient to reward the patentee. The damage that the lack of an injunction may impose on potential revenue of the patent holder from licensing, either exclusively or voluntarily, to multiple licenses requires a satisfactory monetary remedy.

There is a conflict between the issue of showing individual harm for a patent holder (in factor one) and the public interest (in factor four). If a court determines that the benefits of a forced patent license rewards the commons at the expense of the patent holder, then the incentive to innovate is squandered. This argument is particularly relevant for pioneer inventions which allegedly inspire patent "thickets" that "clog" innovation. Forcing a patentee to license a patent for an occasional valuable patent that benefits the public in the short-run undermines the patent system. This sort of intellectual property confiscation rarely has a public benefit in the context of private litigation wherein the beneficiary is another private company. There is no monopolist infringer that justifies the public benefit for private gain against a patent holder.

There is a conflict between the public interest and the ability of monetary damages to satisfy the patentee's injury. The suggestion that the "patentee holdup conjecture," if true, justifies the confiscation of a patent when only monetary damages are sufficient becomes an arbitrary use of power. For instance, if the U.S. government needs the patent, it has the right to a compulsory license already, though this narrow exception requires extraordinary diligence.

(V) Supreme Court Sought a Narrow Ruling in *eBay*

It is evident in the *eBay* majority opinion that the Supreme Court sought to issue a narrow ruling in order to accommodate both the patent holder and the infringer, without disrupting the infringer's business, while at the same time borrowing from copyright law a set of rules that sought to balance interests. The decision sought to support a long tradition of issuing injunctions in patent cases to patent holders to maintain an exclusive right. The aim was to maintain equitability.

While the Federal Circuit sought to maintain consistency in the history of the patent law tradition with provision of an injunction as a routine matter, the combination of minor issues in the eBay case inspired the Supreme Court to consider a balance of factors.

But though the Supreme Court sought to maintain a strong patent right in as a general rule, the conflicting minority opinions offered poor guidance to the courts and created confusion in application of the "four-factor test." At best, there is inconsistency between the district courts in their application of the "four-factor test." However, the development of a trend that provides a categorical exclusion of injunctive remedies to non-commercializing entities based on their economic condition, use of the patent or willingness to license raises the standard for injunctive eligibility to a high level, typically applied to cases involving establishing damages for lost profits between market competitors. By applying the strict application of the "four factor test" to a class of patent holders that prefer to license their inventions so as to maximize capital efficiency, the licensing market is disrupted, the bargaining positions of the parties distorted, patent valuations diminished and the incentives to innovate deteriorated.

The Court created a *de facto* liability rule in *eBay* that forces a large class of patent holders into compulsory licenses in which courts administer a reasonable royalty for patent infringement. While this was clearly not an intended result of *eBay*, as indicated by the comment in the majority decision that original inventors and university researchers should be able to satisfy the "four-factor test," the risks that the sanctity of the property right in patent law have been compromised create a new set of problems that are far, far greater than those that the Court sought to resolve. It was not the intent of the *eBay* Court to overreach to determine a property right or a liability rule in patent cases, though in retrospect, the consequences of a misreading of the case renders precisely such a distinction evident.

(VI) "Four-Factor Test" Promotes Inequity

The strict application of the "four-factor test" creates a market competition requirement for patent holders that distinguishes between those that use their patents in products and those that do not. For the former, issuance of an injunction is a standard infringement remedy. For the latter, however, there is a new filter that sometimes precludes an injunction, and with it, support of an exclusive right. This categorical rejection of the patentee's rights based on the identity of the patentee, his use of the patent or his licensing preference devalues the patent and harms both the incentives to innovate and the investment in innovation. For non-commercializing entities, *eBay* presents a compulsory licensing regime as well as an unfair and inconsistent treatment of patentees.

Since capital is required to manufacture, market and distribute patented products, the institution of a "four-factor test" barring injunctions for non-commercializing entities devalues patents that are not used defensively to protect a product. This is particularly ironic since the tradition of patent law indicates that there is no need for a patentee to use a patent because a patent right is one to exclude others from making the invention. Historically, patents are used to provide a tool of exclusivity to new market entrants to compete with market incumbents. The licensing model has been a common one from which inventors partner with manufacturing businesses, by selectively choosing the licensee, and use the patent to exclude rivals. Now, these tools are absent. The very class that needs the patent right the most are the original inventors, and new ventures, that lack the capital in order to compete with the larger incumbents.⁵¹ Yet, *eBay* perversely reverses this market competition dynamic and provides incumbents with peculiar rights

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⁵¹ Breakthrough research is disproportionately performed by individual inventors and university researchers, perhaps nearly half of all significant research. There is a discontinuity in the timing between invention development and the market development of pioneer inventions. emerging market technologies particularly require legal protections from rivals to allow original inventors the time to commercialize the inventions. But this presents a paradox if there is a commercialization requirement since inventors of breakthrough technologies are seeking to partner with manufacturers at exactly the time that rivals have a perverse right to use the technology and merely pay a compulsory licensing fee. It is precisely this class of inventors that are intended to be protected by the exclusive right in a patent. Without this exclusivity, there is a disadvantage in disclosing the discoveries and a disincentive to invest in innovation. In particular, the very act of infringement harms the inventor opportunity in a nascent market from developing the market. This was a point that plaintiff MercExhange made in the eBay case in which inventor Woolston sought to compete with eBay in the on-line auction market but eBay prevailed. Does this mean that rivals that win market share can steal the losers technology at will for a nominal fee? See also z4 Technologies v. Microsoft Corp., 434 F. Supp. 2d 437 (E.D. Texas 2006) (concluding that a permanent injunction is improper since the patented component is only a 'small component' of Microsoft's software system and claiming that plaintiff's licensing and lack of commercialization lead to a finding that hardships suffered by plaintiff were "reparable," suggesting that monetary damages alone are sufficient to satisfy the plaintiff's injury). The lack of "irreparable injury" justified denying an injunction to z4 even though the plaintiff argued that it had sought to commercialize its patent and failed precisely because of Microsoft's infringement. The court responded to the plaintiff's request to stop defendant's continuing infringement by suggesting that monetary damages would need to be adjusted to accommodate these continuing acts.

to infringe with impunity in exchange for a compulsory license. This compulsory licensing regime both tends to devalue the patents that are not enforced with the injunction remedy and increases the cost of capital because investor risks are increased to the degree that the expected rewards decrease. Along with the increased risks of investors in innovation come diminished incentives. These inescapable conclusions flow from the mistaken strict application of the "four-factor test."

Imposition of a commercialization requirement now indicates that there is less competition in technology markets since key upstream companies have limited injunctive options to protect their exclusive right. Without competition, the incumbents with high market share may engage in price-fixing. The infringers may force nominal monetary damages as remedies, even for twenty years of patent rights, in order to keep their costs lower to acquire technology. With suppressed costs, they may increase their profits, particularly in the absence of direct competition. Consumers that buy their products are squeezed by less entrants at the expense of higher incumbent profits.

If, as is the case in post-eBay cases in the district courts, any or all infringers can use a non-commercializing entity's patents, there is now a new regime of technology anarchy which is governed by liability rules. The infringer may now virtually use any non-commercializing entity's patents on demand as if there is not enforcement of patent property rights. Incumbent infringers, on the one hand, have an incentive to wait to pirate the most important inventions of rivals and then wait to settle on a compulsory license only when sued. On the other hand, given such compulsory licensing opportunities, incumbents have little incentive to develop their own risky technologies. Consequently, progress suffers.

Given this new regime in the courts of barring non-commercializing entities from injunctions, incumbents may seek out and use patents that they otherwise may be deterred from using. The new compulsory licensing regime suggests that there are no patent rights except what an infringer is willing to pay, even if the very act of infringement disrupts a patentee of several market choices. This compulsory licensing scheme intentionally devalues a patent's value and, perhaps, preempts and destroys a future commercialization opportunity. For instance, a prior infringer forced license will necessarily lower a next license price precisely because of a diminishing value of non-exclusive use. This set of observations suggests that in the present regime there is a Napsterizing of patents that creates an open use standard. This directly contradicts constitutional intent to embed a limited exclusive right in a patent so as to promote progress.

EBay disrupts the balance of the patent law bargain, by tipping to the incumbents, and negates the critical elements of patent law, namely, the exclusive right in a patent that helps entrants compete with incumbents. Without injunctive relief as an option, the auction model of the market is disrupted as well since licensees will not need to compete to obtain a preferential license. The problems generated for eBay particularly damage pioneer technology, critical technology and high risk technology that requires strong incentives for investors because of their risky characteristics.

It is a contradiction that the eBay Court provided a filter to patent holders in order to obtain an injunction remedy to preserve their constitutional exclusive right when in $Trinko^{52}$ the Court refused to force a monopolist to license its technology in order to maintain an incentive to innovate. Both eBay and Trinko side with the monopolist with

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⁵² See Verizon Communications Inc. v. Law Offices of Curtis V. Trinko, 540 U.S. 398 (2004).

market power. Yet, patent rights are intended to counter the incumbent monopoly by providing rights to entrants.

The Supreme Court needs to revisit these important issues and clarify the standards for injunctions in patent cases. *EBay* solves a minor problem but causes several major problems. Moreover, *eBay* creates a bifurcated compulsory licensing regime that ultimately harms innovation incentives that Article I rights were created to foster. It is patently obvious that the Court needs to clarify the standards for application of the factors of the "four-factor test" if they are to maintain the integrity of the patent system.