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PERMANENT INJUNCTIONS: A DISCRETIONARY REMEDY FOR PATENT INFRINGEMENT IN THE AFTERMATH OF THE EBAY DECISION

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Licensed to practice before the United States Patent and Trademark Office. J.D. Candidate 2008, University of Miami School of Law. I want to give special thanks to Professor Ben Depoorter for his invaluable contribution to this article, and to the law firm of Christopher & Weisberg for teaching me the realities and complexities of patent law.

I. INTRODUCTION

“The Congress shall have Power . . . To promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors *the exclusive Right* to their respective Writings and Discoveries.”¹

The United States Supreme Court’s decision in *eBay v. MercExchange* modifies a patent holder’s *absolute* right to exclude to a *non-absolute* right to exclude, thus vacating the Federal Circuit’s long-standing policy of automatically enjoining infringing defendants in patent cases.² Effectively, the Court abrogated this once well-established property rule entitling a patent holder to an absolute right to exclude and, in its stead, institutes a rule of liability. This paradigm shift should appropriately impact all areas of the patent system for three reasons: the *eBay* decision (1) effectively stops the proliferation of “patent trolls”; (2) permits inventors to pursue technologies they may have been priced out of otherwise; and (3) provides a discretionary, four-factor test for the lower courts to apply. As such, this new rule should ultimately “promote the [p]rogress of [s]cience” for years to come.

II. THE EBAY DECISION

A. *The Background and Procedural History of the Litigation*

MercExchange patented a business method for a computerized market designed to facilitate the sale of goods between private individuals.³ The idea behind MercExchange’s method is that participants in the computerized market can speculate as to the cost of the item, bid on the item, and thus change the price of the item.⁴ A centralized authority supervises the exchange of goods and promotes trust amongst participants.⁵ MercExchange sought to license its patent to eBay, but negotiations broke down and no agreement was reached.⁶ MercExchange subsequently brought an infringement suit against eBay in the U.S. District Court for the Eastern

¹ U.S. CONST. art. I, § 8, cl. 8 (emphasis added).

² See *eBay, Inc. v. MercExchange, L.L.C.*, 126 S. Ct. 1837, 1839 (2006).

³ *Id.* at 1839.

⁴ *Id.*

⁵ *Id.*; see also U.S. Patent No. 5,845,265 (filed Nov. 7, 1995).

⁶ See *eBay*, 126 S. Ct. at 1839.

District of Virginia.⁷ The jury found that MercExchange had a valid patent, that eBay had infringed that patent, and that damages were an appropriate remedy.⁸

Following the verdict, MercExchange moved the district court for a permanent injunction, alleging irreparable harm if the district court did not grant an injunction as eBay would continue to infringe on its intellectual property rights.⁹ The court refused to grant a permanent injunction,¹⁰ reasoning that MercExchange's willingness to license its patents, its lack of commercial activity in practicing the patents, and its comments to the media reflecting its intent to collect damages from eBay instead of enjoining them, were sufficient evidence to rebut the presumption of irreparable harm.¹¹

The Federal Circuit reversed, reasoning that absent exceptional circumstances, courts should issue permanent injunctions in patent cases once an infringement has been found.¹² It concluded that the trial court did not provide sufficient evidence that this case was exceptional so as not to grant a permanent injunction.¹³ In addition, the Federal Circuit also concluded that a permanent injunction should be equally available to those who practice their inventions and to those who do not.¹⁴

B. A Unanimous Supreme Court Reverses the Federal Circuit

From the outset, the Supreme Court pronounced that a plaintiff seeking injunctive relief must first pass a traditional four-factor test in order to comply with traditional principles of equity.¹⁵ These factors are that: (1) the plaintiff has suffered an irreparable injury; (2) remedies available at law, such as monetary damages, are inadequate compensation for that injury; (3) balancing the hardships between the plaintiff and the defendant warrants an

⁷ *Id.*

⁸ *Id.*

⁹ MercExchange, L.L.C. v. eBay, Inc., 275 F. Supp. 2d 695, 711 (E.D. Va. 2005).

¹⁰ *See id.* at 712.

¹¹ *Id.*

¹² *See* MercExchange, L.L.C. v. eBay, Inc., 401 F.3d 1323, 1338-39 (Fed. Cir. 2005).

¹³ *See id.* at 1339.

¹⁴ *See id.* ("Injunctions are not reserved for patentees who intend to practice their patents, as opposed to those who choose to license. The statutory right to exclude is equally available to both groups, and the right to an adequate remedy to enforce that right should be equally available to both as well. If the injunction gives the patentee additional leverage in licensing, that is a natural consequence of the right to exclude and not an inappropriate reward to a party that does not intend to compete in the marketplace with potential infringers.")

¹⁵ eBay, Inc. v. MercExchange, L.L.C., 126 S. Ct. 1837, 1839 (2006).

equitable remedy; and (4) a permanent injunction would not disserve the public interest.¹⁶

The Court concluded that Congress had shown no intent to depart from traditional equitable practices for resolving disputes under the Patent Act.¹⁷ Further, the Court adds that support for this principle is found in the Patent Act itself, which indicates that courts “*may* grant injunctions in accordance with principles of equity.”¹⁸

The Court also recognized that under the Patent Act, “patents shall have the attributes of personal property.”¹⁹ Consistent with the attributes of personal property, patent owners shall have “the right to exclude others from making, using, offering for sale, or selling” the invention.²⁰ The Federal Circuit concluded that this statutory right to exclude favors issuance of permanent injunctive relief.²¹

Addressing the apparent discrepancy between these two statutes, one pronouncing that patent owners shall have the right to exclude, and the other leaving it to the lower court’s discretion to issue permanent injunctions, the Court looked to how permanent injunctions were treated under the Copyright Act, where it found a refusal to replace traditional equitable principles with automatic injunctions after a finding of copyright infringement.²² Similar to copyright law, the Court refused to endorse a rule that requires issuing an injunction automatically upon a determination of patent infringement.²³ Thus, the Court held that “the decision to grant or deny injunctive relief rests within the equitable discretion of the district courts, and that such discretion must be exercised consistent with traditional principles of equity, in patent disputes no less than in other cases governed by such standards.”²⁴ No longer is irreparable harm to the patent holder presumed after a finding of infringement. The burden rests with the plaintiff to adduce evidence that an injunction is the only recourse to remedy the infringement.

¹⁶ *Id.*

¹⁷ *Id.*

¹⁸ *Id.*

¹⁹ *Id.* at 1840.

²⁰ *eBay*, 126 S. Ct. at 1840 (quoting 35 U.S.C.A. § 154(a)(1)).

²¹ *See MercExchange, L.L.C. v. eBay, Inc.*, 401 F.3d 1323, 1338 (Fed. Cir. 2005).

²² *See eBay*, 126 S. Ct. at 1840.

²³ *Id.*

²⁴ *Id.* at 1841.

III. THE COURT'S DECISION IN *eBAY* SHIFTS PATENT LAW TOWARDS LIABILITY RULE.

The Supreme Court's decision in *eBay* paves the way for a shift from the traditional property-based liability rules to contract-based liability rules. What are these rules and how did they function in the intellectual property arena? What meaning does this shift have for the patent system?

A. *The Traditional Views of Property and How They Apply to Intellectual Property*

In their 1972 article, Professor Guido Calabresi and A. Douglas Melamed argued that all legal entitlements are protected either by "property rules" or by "liability rules."²⁵ Property rules are best described as a system based on absolute permission rules, whereby a party cannot take property without prior permission of the property right holder.²⁶ The absolute right holder sets the price of the entitlement. Most real property is protected by this sort of framework.²⁷ For example, an owner of a fee simple in real property sets the price at which he is willing to sell his entitlement.

In contrast, liability rule is based on a take-now, pay-later system. These rules allow non-owners to use the property, so long as they adequately compensate its owner. In the Calabresi-Melamed framework, adequate compensation is determined after the fact by a process known as "collective valuation."²⁸ In their framework, it is the function of a court and jury to determine what damages are adequate to compensate the entitlement holder.²⁹ The government's eminent domain power to take property, so long as it pays just compensation, is a classic example of the liability rule.³⁰ Another example is that of a party breaching a contract, so long as it pays damages after the fact.

However, unlike real property rights, intellectual property rights can be used by more than one person simultaneously.³¹ As such, the result of the liability rule in the patent context is that it becomes difficult for patent

²⁵ Guido Calabresi & A. Douglas Melamed, *Property Rules, Liability Rules, and Inalienability: One View of the Cathedral*, 85 HARV. L. REV. 1089, 1092 (1972).

²⁶ Robert P. Merges, *Contracting into Liability Rules: Intellectual Property Rights and Collective Rights Organizations*, 84 CAL. L. REV. 1293, 1302 (1996).

²⁷ *Id.* at 1302.

²⁸ See Calabresi & Melamed, *supra* note 25, at 1109.

²⁹ Merges, *supra* note 26, at 1302.

³⁰ See *id.*

³¹ *Id.* at 1304.

holders who are unwilling to sell or license their invention at market price to “buy off” potential patent infringers (i.e. paying a potential infringer not to infringe in order to maintain exclusivity).³²

However, the liability rule does place a ceiling on the value of the entitlement, usually set by the market in the form of a reasonable royalty.³³ But this may have a devastating effect on incentives to create for inventors who do not receive adequate compensation from royalties.³⁴

Additionally, applying the liability rule to patent rights poses a major threat to the patent holder because of the long line of potential infringers. In contrast to real property, where, for example, the holder of an easement need only negotiate with the property owner and no one else, patent rights differ considerably, in that there are many potential infringers, many of whom might be in a position to take the entitlement.³⁵ It is often difficult for a patent holder to identify all the potential infringers, and even more difficult to identify those who pose a serious threat to his entitlement.³⁶ These difficulties pose a major problem to patent holders who want to maintain exclusivity to their entitlement.

For example, if word got out that one potential infringer was being paid not to infringe a certain patent, it is likely that the number of people who would then show interest in infringing that patent would skyrocket.³⁷ As a result, it would become impossible for the patent holder to pay everyone not to infringe. In addition, the number of infringers who either have no intent to infringe or who pose no serious threat to the entitlement would increase. However, in the easement example discussed above, the property owner knows the identity of the serious threat and can buy him off.

Because of the long line of potential infringers, a liability rule in the patent rights context will tend to create a ceiling on the value of the entitlement. Assuming the entitlement holder is willing to license his right, as more potential infringers bargain for the entitlement, the price of the entitlement will gradually decrease as the entitlement loses its exclusivity. Eventually, Congress may intervene and set the price of the entitlement in the form of a compulsory license.³⁸ For example, Congress may set a reasonable royalty between 3% and 5% to compensate the patent holder. If the valuation of the entitlement is set too low and the royalty insufficient, it

³² *Id.*

³³ *Id.*

³⁴ *Id.*

³⁵ *Id.* at 1305.

³⁶ *Id.*

³⁷ *Id.*

³⁸ *See id.*

would affect the incentives of those to produce things covered by those rights. Additionally, it is often difficult to calculate the exact value of the entitlement, especially with patent rights that concern novel inventions.

Seemingly, one way to correct this problem would be to make the value of the entitlement equal to the value the holder places on the entitlement. If patent holders were to set the price for their entitlement, they could transfer to whomever is willing to pay the most for it, and to those who are willing to pay for it in advance. Those who take without paying would be enjoined, which is the goal of the property rule.³⁹

IV. EMERGING COMBINATORY TECHNOLOGIES FORCE A SHIFT FROM PROPERTY RULE TO LIABILITY RULE.

While the property rule ensures maximum protection for patent rights, it does have flaws that have become increasingly more visible, particularly in the biomedical world.

Private property, often referred to as anti-commons property, emerged as a response to the overuse of publicly shared scarce resources called commons property. The “tragedy of the commons,” as coined by Garrett Hardin, is a metaphor that tries to explain overpopulation, air pollution, and species extinction, which result when people use scarce resources with no incentive to conserve.⁴⁰ A resource is prone to overuse in a tragedy of the commons scenario when too many owners have a privilege to use a scarce resource, and no one has the right to exclude.⁴¹

Anti-commons property is best understood as the opposite of commons property. In a “tragedy of the anti-commons” scenario, the government gives too many people the right to exclude, resulting in the underutilization of a resource.⁴² The tragedy of the anti-commons refers to the obstacles that arise when an inventor needs to combine technologies from multiple patents to create a single useful product.⁴³ In the biomedical world, which may be a microcosm for the overall problem of the growing proliferation of patent rights, the tragedy of the anti-commons is felt in two ways; the patenting of gene sequences and license stacking.⁴⁴

³⁹ *Id.* at 1306.

⁴⁰ Michael A. Heller & Rebecca S. Eisenberg, *Can Patents Deter Innovation? The Anticommons in Biomedical Research*, 280 *SCI.* 698, 698 (1998).

⁴¹ *Id.*

⁴² *Id.*

⁴³ *Id.* at 699.

⁴⁴ *See id.*

A. *There are Too Many Patents for Gene Sequences with No Apparent Utility*⁴⁵

In the 1980s, patents on gene sequences generally corresponded closely to foreseeable commercial products.⁴⁶ However, beginning in the 1990s, patents began to emerge on gene fragments with no identification of a corresponding protein, biological function, or commercial products. According to Professors Heller and Eisenberg, the U.S. Patent and Trademark Office (USPTO) could have prevented the formation of the resulting anti-commons in therapeutic gene technologies by requiring the patent applicants to show a utility for these gene fragments before allowing their patent claims.⁴⁷ Whether a utility was shown before allowance of the patent claims for gene fragments is immaterial now, as there are an abundance of gene fragment patents. A search of the term “gene sequence” in the USPTO database yields more than 200 patents.

As a result of the proliferation of patents on gene fragments, held by different owners, researchers often must acquire multiple expensive licenses to develop commercial products from these gene fragments.⁴⁸ If researchers are unable to procure a complete set of licenses, they must choose between diverting resources to less promising endeavors, or proceeding with their research based on incomplete information or without key components.⁴⁹

Additionally, the long delays between filing an application with the USPTO and the issuance of a patent (usually at least two years), often lead to uncertainty in the biotech world as to the scope of patent rights that will ultimately issue.⁵⁰ Although no enforceable rights exist while a patent application is pending at the USPTO, firms and universities often negotiate and form license agreements over inchoate rights.⁵¹

⁴⁵ In order for an invention to be patentable it must be a process, machine, manufacture, or composition of matter, or any new and useful improvement thereof. See 35 U.S.C.A. § 101 (2007). This is known as the utility requirement, meaning the invention must produce a credible, tangible, and useful result.

⁴⁶ Heller & Eisenberg, *supra* note 40, at 699.

⁴⁷ See *id.* A patent claim is the written embodiment of how the patentee defines the invention. The patent claim is the legally enforceable part of the patent, whereby in order to infringe a patent, the infringer must infringe one of the patent claims. The claim language defines the scope of the patent protection. When a patent examiner at the USPTO “allows” a claim it means that the claim is patentable.

⁴⁸ See Heller & Eisenberg, *supra* note 46.

⁴⁹ *Id.*

⁵⁰ *Id.*

⁵¹ *Id.*

B. *Companies Must Now Stack Multiple Licenses To Be Able To Produce a Single Commercial Product*

A downstream biomedical invention often requires the use of multiple upstream patents before its completion. Professor Shapiro describes this “patent thicket” as a dense web of overlapping patent rights through which a company must hack its way in order to commercialize new technology, free from litigation.⁵² As a result, upstream patent holders may make their presence known early on in downstream developments in order to maintain their rights to any downstream discoveries.⁵³ The term “stacking” reflects the fact that, from the prospective of the firm making the downstream product in question, all of the different claims for royalties must be “stacked” together to determine the total financial burden based on royalties, if the firm is to sell their product free from patent litigation.⁵⁴

The threat of an upstream patent holder obtaining an injunction, thereby forcing the downstream producer to pull its product from the market is very powerful. These threats greatly affect licensing negotiations, especially when the license covers a small component of a popular or profitable commercial product.⁵⁵ Threats of injunctions often involve a very strong component of “hold-up,” a situation in which the defendant has already invested heavily in a commercial product, and is ready to sell the product with the infringing feature, but then holds up release of the product for fear of litigation.⁵⁶ A threat of an injunction often enables the patent holder to obtain a royalty far in excess of the patent holder’s true economic contribution.

For example, in *z4 Technologies*⁵⁷ the cost that Microsoft would have incurred to design around *z4*’s patent would have been exorbitant. As the trial court pointed out, Microsoft would have needed to re-release Office with 450 separate variations in 37 different languages, and Windows with more than 600 separate variations in more than 40 languages.⁵⁸ In reality, the product activation software at issue in *z4* was not a key component of either Windows or Office, and the economic hardship incurred by Microsoft

⁵² See Carl Shapiro, *Navigating the Patent Thicket: Cross Licenses, Patent Pools, and Standard-Setting*, in 1 INNOVATION POLICY AND THE ECONOMY 120 (Adam Jaffe, Joshua Lerner & Scott Stern, eds., MIT Press 2001), available at <http://haas.berkeley.edu/~shapiro/thicket.pdf> (last visited Sept. 23, 2007).

⁵³ See Heller & Eisenberg, *supra* note 46.

⁵⁴ Mark A. Lemley & Carl Shapiro, *Patent Holdup and Royalty Stacking*, 85 TEX. L. REV. 1991, 1993 (2007).

⁵⁵ *Id.* at 1992-93.

⁵⁶ *See id.* at 1993.

⁵⁷ *z4 Techs., Inc. v. Microsoft Corp.*, 434 F. Supp. 2d 437 (E.D. Tex 2006). For an in-depth discussion of this case, see *infra* Part VI.b.

⁵⁸ *See Id.* at 442.

would have been far greater than that incurred by z4, particularly because Microsoft's continued infringement did not in any way prevent z4 from selling its patented product activation software to other entities in the market. As the trial court correctly pointed out, Microsoft did not produce product activation software that it individually sold, distributed, or licensed to other software manufacturers.⁵⁹

Additionally, the downstream company may not have been aware at the time it designed its product that the patent asserted against it had been issued. Patent applications take up to two years to issue, sometimes longer, and for eighteen months after filing, an application is kept secret with the USPTO. In some cases, the patent holder will engage in strategic delay or concealment, knowing it will be in a stronger position once the downstream product has incorporated the patented feature.⁶⁰

C. The Proliferation of "Patent Trolls" May Have Caused the Court to Revisit the Property Rule in the Patent Rights Context

Prior to *eBay*, the Federal Circuit created an all but mandatory injunction standard.⁶¹ Traditionally, the rationale for routinely issuing injunctions was based on the theory that patent law is a property rule, and injunctive relief is the appropriate remedy, particularly in cases where the patentee participates in the market and enforces its patent to preserve market exclusivity.⁶² However, the potential for injunctive relief against a product with multiple components can and does permit so-called "patent trolls" to hold up defendants by threatening to enjoin products that are predominantly non-infringing.⁶³

In his *amicus* brief to the Supreme Court in the *eBay* case, Professor Merges defines patent trolls as "entities whose primary purpose is to prey on innovators who actually produce societally valuable products—abuse the patent system by obtaining patents for the purpose of coercing settlements from such innovators."⁶⁴ Arguing in support of giving the trial courts wider discretion to award injunctions, in order to limit the impact of patent trolls, Merges goes on to write, "[t]he Court should make clear that Congress in

⁵⁹ *Id.* at 440.

⁶⁰ Lemley & Shapiro, *supra* note 54, at 1995.

⁶¹ *See, e.g.,* *Odetics, Inc. v. Storage Tech. Corp.*, 185 F.3d 1259, 1272 (Fed. Cir. 1999) ("[T]he general rule [is] that an injunction should issue following an infringement verdict.")

⁶² *See* Lemley & Shapiro, *supra* note 54, at 2036.

⁶³ *Id.*

⁶⁴ *See* Brief of Amicus Curiae Yahoo! Inc. in Support of Petitioner at 2, *eBay, Inc. v. MercExchange, L.L.C.*, 126 S. Ct. 1837 (2006) (No. 05-130).

fact specifically intended trial court judges to possess and exercise that [equity jurisdiction] authority.”⁶⁵

But, how do patent trolls use the current patent system to ambush potential inventors with deep pockets? According to Merges, they acquire broad and nebulous patent claims from the USPTO that arguably encompass existing technologies that wealthy companies already rely upon.⁶⁶ In a way, patent trolls operate like cyber squatters, sitting on potentially valuable intellectual property without any intent to use or develop it.

Additionally, USPTO practices and procedures themselves may facilitate trolls in obtaining patents to ambush companies. Professors Lemley and Shapiro assert that the USPTO is “rationally ignorant” when it comes to the objective validity of patents, because it is too costly for the USPTO to discover all relevant prior art.⁶⁷ Typically, a patent examiner at the USPTO will spend about 18 hours per patent application, inclusive of time spent searching the prior art, reading the relevant prior art, deciding whether the patent application should be allowed by comparing the claims to the prior art, and writing “Office Actions” explaining why some or all of the claims should be rejected.⁶⁸ Simply put, 18 hours is not enough time to search the plethora of prior art concerning the novelty of an invention and/or whether the invention is obvious to those skilled in the art.⁶⁹ Additionally, the number of patent examiners at the USPTO has not kept pace with the explosion in the number and complexity of patent applications.⁷⁰

In addition, unscrupulous patent practitioners have become skilled at manipulating the USPTO’s procedures to create so-called “submarine patents,” whose existence stays hidden until a company has sunk irreversible investment capital into infringing technology.⁷¹ In practice, patent trolls may keep a submarine patent application alive at the USPTO for many years repeatedly filing continuation applications.

⁶⁵ *Id.*

⁶⁶ *Id.* at 6.

⁶⁷ See Lemley & Shapiro, *supra* note 54, at 1992. Prior art refers to all written publications, patents, and patent application published before either the filing date of the patent application or the date of invention.

⁶⁸ *Id.* at 5.

⁶⁹ Novelty and non-obviousness of an invention, along with utility, define the standards that a patent applicant must meet for his invention to be patentable. For specific requirements, see 35 U.S.C.A. §§ 102-103 (2007).

⁷⁰ See Brief of Amicus Curiae Yahoo! Inc., *supra* note 63, at 8-10.

⁷¹ *Id.* at 9. Patents that languish in the USPTO are often called “submarine patents,” because traditionally, patent applications were not published by the USPTO and thus were hidden from potential companies.

Typically, a patent applicant gets two or three metaphorical “bites at the apple” to convince the patent examiner at the USPTO that the applicant’s invention is patentable. This is done by responding to rejections made by the examiner in the form of amendments to the claims or persuasively arguing to traverse the examiner’s rejection. After the patent examiner issues a final rejection of the application claims, the applicant may file a request for continued examination (RCE), and thereby have more opportunities to continue prosecuting the application.⁷²

As a result, a patent practitioner may keep his client’s application alive for several years by filing several RCEs. As such, a savvy patent practitioner may keep his client’s patent lurking and waiting for a company to invest a substantial amount of money into a product that will infringe the potential patent. Once a company becomes financially committed to the infringing product, the patent applicant allows the patent to issue, and then like a troll leaping from underneath a bridge demanding a toll, the patent applicant emerges with the newly issued patent and demands royalties.

Prior to November 29, 2000, patent applications were typically not published, and therefore there was no way for a firm to detect a submarine patent. However, new rules require that all patent applications filed after November 29, 2000 be published by the USPTO eighteen months from the effective filing date.⁷³ This requirement will help firms search for potential submarine patents that stand as barriers to the development of new technology.

The Blackberry case is a prime example of how a patent troll can rear its ugly head and why a property rule in patent law can have devastating effects. In that case, the plaintiff NTP did not make, sell, or offer for sale, a competing wireless device such as a Blackberry.⁷⁴ However, the threat of an injunction forced Research in Motion to settle for the amount of \$612.5 million, nearly 18 times the jury award of damages.⁷⁵ Had this case been

⁷² See PATENT AND TRADEMARK OFFICE, U.S. DEP’T OF COMMERCE, MANUAL OF PATENT EXAMINING PROCEDURE § 706.07(h) (8th ed., rev. 5 2006) [hereinafter MPEP]. As of November 1, 2007, new patent rules regarding the number of continuation applications and RCEs per application will be limited to two continuations and one RCE as of right per patent application. See Changes to Practice for Continued Examination Filings, 72 Fed. Reg. 46,716 (Aug. 21, 2007) (to be codified at 37 C.F.R. pt. 1). The new rules also permit an applicant to file a petition to request for more than one RCE. So, the effect of the new rules on submarine patents may not be known for some time.

⁷³ See MPEP, *supra* note 72, § 1120.

⁷⁴ See *NTP, Inc. v. Research in Motion, Ltd.*, 2003 U.S. Dist. LEXIS 26837, at *2 (E.D. Va., Aug. 5, 2003).

⁷⁵ *Id.* (The jury awarded compensatory damages at a royalty rate of 5.7% in the amount of \$33,446,172.).

decided post *eBay*, it is likely the settlement agreement would have been for far less.

The Federal Circuit concluded in its decision in *eBay* that the additional leverage patent trolls hold in licensing and settlement agreements is a natural consequence of the right to exclude and, not an inappropriate reward to a patent holder.⁷⁶ However, professors Lemley and Shapiro argue that the additional leverage comes from the patent owner's ability to capture value that has nothing to do with the invention at issue, and subsequently the accused infringer cannot separate the infringing components from the non-infringing components after the fact.⁷⁷

V. THE EQUITABLE DISCRETION TEST GIVES COURTS THE POWER TO LIMIT THE IMPACT THAT PATENT TROLLS HAVE ON THE PATENT SYSTEM

Perhaps in response to critics of the Federal Circuit's decision to automatically grant injunctions in patent cases, the Supreme Court decided to go in a different direction with its decision in *eBay*, the Supreme Court held that the trial court has the "equitable discretion" whether to issue an injunction in a patent infringement case.⁷⁸

But what should the determining factors be in a court's decision to award an injunction? Merges argues there are two determinative factors which a court must consider when determining whether a patent holder is entitled to injunctive relief.⁷⁹

The first factor is the nature of the patent holder itself, and whether it is in the business of litigating instead of innovating. The second factor is whether the patent holder engaged in troll like behavior to increase the settlement value of his claim.⁸⁰

With respect to the first factor, the nature of the patent holder, Merges asserts that patent trolls exist primarily to tax innovation rather than engage in it because they do not produce anything; therefore, they should not be rewarded with injunctions that prevent inventions.⁸¹ However, it may be false to assume that just because a patent holder does not practice the invention that he could have practiced the invention, *ab initio*, when the

⁷⁶ See *MercExchange, L.L.C. v. eBay, Inc.*, 401 F.3d 1323, 1339 (Fed. Cir. 2005).

⁷⁷ Lemley & Shapiro, *supra* note 54, at 2010.

⁷⁸ *eBay, Inc. v. MercExchange, L.L.C.*, 126 S. Ct. 1837, 1841 (2006).

⁷⁹ See Brief of Amicus Curiae Yahoo! Inc., *supra* note 63, at 20.

⁸⁰ *Id.*

⁸¹ *Id.*

patent was granted. This assumption may overlook the main distinction between the patentability of an invention and the infringement of a patent.⁸²

To illustrate the difference between the patentability of an invention and the infringement of a patent, suppose inventor X holds a patent that claims an invention comprising features A, B, and C. Now suppose inventor Y obtains a patent claiming an invention comprising features A, B, C, and D. X's patent does not anticipate Y's patent because it does not disclose feature D; therefore, Y is entitled to a patent for his invention (assuming it is not rendered obvious). However, if X used the word "comprising" in his claim language (as is most often done), any invention that has features A, B, or C, (even if the invention contains more features, such as inventor Y's invention), infringes on X's patent.⁸³ Therefore, simply because an inventor is entitled to a patent does not automatically mean he can practice that invention without infringing another patent.

Perhaps Merges presupposes that, because a patent holder does not practice his invention, and may be unwilling to license it, the inventor could have practiced the invention free from infringing other patents. This supposition may be incorrect at times. While it may be true that many inventors do not intend to practice their invention, it might be too difficult a task for a court to determine who is a bona fide patent holder with intent to promote science, and who is a troll with the intent to promote profit.

Additionally, patents are enforceable twenty years from the effective filing date of the patent application.⁸⁴ Presumably, this gives an inventor ample time to decide how to use his or her property and if and when they want to enter the market. If a court denies a permanent injunction early in the effective life of a patent, the patent holder's decision to enter the market is virtually made for him by the court, as he will be forced to license his invention to an infringer. This would be akin to a court forcing the owner of beachfront property to allow a hotel resort company to build a hotel on the property, simply because the owner has not done something with the property as of a certain date.

The second factor Merges suggests, looking at the troll like behavior of the patent holder, is more readily ascertainable by the courts. The prosecution history⁸⁵ of a patent application is kept on file with the USPTO and is accessible to the public after 18 months. If the patent holder

⁸² For further information on claim construction and patentability, see ROBERT C. FABER, LANDIS ON MECHANICS OF PATENT CLAIM DRAFTING (5th ed. 2003).

⁸³ See MPEP, *supra* note 72, § 2111.03

⁸⁴ 35 U.S.C.A. § 154(a)(2) (2007).

⁸⁵ The prosecution history of a patent application means all the paperwork, responses, amendments, and correspondence between the USPTO and the patent agent or attorney prosecuting the application.

strategically delayed his application from issuing, this may show up in the prosecution history of the patent. Additionally, if the patent holder delayed bringing a lawsuit against an alleged infringer to maximize his profits, the prosecution history may show when the patent holder first learned of the infringement and should have brought suit. Although it might be a stretch to apply the doctrine of laches to a patent applicant's strategic delay in allowing his patent to issue, it is certainly an argument that should be raised in an infringement action. Thus, the equities tip in favor of the accused infringer who may have been ambushed by the patent holder after investing large sums of money in the infringing product.

Whether the Court incorporated Merges's suggestions into *eBay* is unclear, but the current factors promulgated by the Court clearly leave a lot of equitable discretion with the trial court.

VI. APPLICATION OF THE *EBAY* DISCRETIONARY TEST IN THE DISTRICT COURTS REVEALS DIFFERENT DECISIONS FOR DIFFERENT INDUSTRIES

Following the *eBay* decision, the district courts grappled with the application of the Court's four-factor test when deciding whether to grant injunctive relief. The following is a sampling of several district court opinions following the *eBay* decision, specific to certain technological industries. Because of the infrequency of patent litigation and the infrequency of decisions being rendered by courts in patent cases, the following cases provide good statistical evidence of how the district courts are proceeding under the new equitable injunction test.⁸⁶

A. *Mechanical Tools* (KEG Technologies, Inc. v. Laimer)

KEG Technologies filed suit against Laimer for infringing two of KEG's patents. The court eventually entered a default judgment in favor of KEG.⁸⁷ Turning toward the issue of injunctive relief, the court stated that had it been operating under the Federal Circuit's rule that an injunction automatically follows a finding of infringement, KEG would have been entitled to such an injunction.⁸⁸ However, while this case was pending, the Supreme Court issued its opinion in *eBay*, rejecting the Federal Circuit's

⁸⁶ Mark Lemley, *Rational Ignorance at the Patent Office*, 95 NW. U. L. REV. 1495, 1501 (2001) ("[I]t is reasonable to estimate that at most only about two percent of all patents are ever litigated, and less than two-tenths of one percent of all issued patents actually go to court.")

⁸⁷ KEG Techs., Inc. v. Laimer, 436 F. Supp. 2d 1364, 1367 (N.D. Ga. 2006).

⁸⁸ *Id.*

rule, and thus the plaintiff had to satisfy the four part equity test to get injunctive relief.⁸⁹

The court found that KEG had not satisfied the second and third elements of the test (monetary damages and balancing the hardships of the plaintiff and defendant).⁹⁰

Importantly, the Court ordered an evidentiary hearing so that both sides could introduce evidence in regards to KEG's motion for injunctive relief. This holding raises the burden placed on the plaintiff to satisfy the four factor test, as the plaintiff's injuries are no longer a rebuttable presumption. Additionally, litigation costs will be greatly increased in order for the injured party to obtain an injunction, which may encourage parties to settle the lawsuit for a royalty rather than risk not getting an injunction.

B. *Software* (z4 Technologies, Inc. v. Microsoft)

z4 owned a patent for product activation software. It filed suit against Microsoft, claiming that the product activation software Microsoft used in Office and Windows infringed its patent. A jury found that Microsoft's software products did indeed infringe z4's patent. Subsequently, z4 asked the court to enjoin Microsoft from making, using, or selling any products that use product activation software.⁹¹

The court rejected z4's contention that a finding of infringement necessarily results in a rebuttable presumption that the plaintiff has suffered irreparable harm. The plaintiff must satisfy all the elements of the four factor test.⁹² However, the difficulty in satisfying the four factor test is evinced by the court's analysis of each factor.⁹³

The court cited Justice Kennedy's concurrence in *eBay* as support for the proposition that if the infringed invention is a small component of the product the infringing party wishes to produce, then, monetary damages may be sufficient compensation.⁹⁴ Because the product activation software is not related to the core functionality of the programs for which consumers purchase the products, the court concluded that monetary damages would be appropriate.⁹⁵ In addition, the court concluded that calculating an

⁸⁹ *Id.*

⁹⁰ *Id.*

⁹¹ *See z4 Techs., Inc. v. Microsoft Corp.*, 434 F. Supp. 2d 438, 439 (E.D. Tex. 2006).

⁹² *Id.*

⁹³ *Id.* at 439-44.

⁹⁴ *Id.* at 441.

⁹⁵ *Id.*

“appropriate royalty” would not be difficult based on sales of the previous versions of the Microsoft products.⁹⁶

The “small component” test promulgated by the court may be a workable doctrine in cases where the product as a whole is functional without the infringing component, as in the case of product activation software; Windows and Office would still function even if they did not have activation software. Thus, the true inquiry should not be whether the infringing component is small relative to the entire product, but whether the product as a whole is functional without the infringing component. Whether the component is small or large is irrelevant. If the product is functional without the infringing component, then in most cases an injunction would be inappropriate because the patented invention and the infringing product would not compete in the same market. For example, excluding Windows or Office from the market would not increase sales of z4’s product activation software because consumers purchase Office for entirely different purposes than for the use of the product activation software.

Additionally, the court recognized that an injunction would force Microsoft to remove their infringing products from the market and to design around the infringed patent.⁹⁷ Forcing Microsoft to remove Office from the market would be a disservice to the public, the fourth factor in the test.

Admittedly, there are other comparable products to Microsoft Office that consumers could purchase. However, the public is so dependant upon Microsoft products that, although it is impossible to predict the actual harm to the public, the potential harm should weigh in favor against an injunction.

C. *Biomedical Devices* (Voda v. Cordis Corp.)

In this case, Dr. Jan Voda, sued Cordis Corp. for infringing his patented angioplasty guide catheter.⁹⁸ The jury returned a verdict in favor of Dr. Voda and awarded a reasonable royalty rate of 7.5% of defendant’s gross sales of the infringing catheters. At the conclusion of the trial, he moved for a permanent injunction against Cordis. Dr. Voda did not make, sell, or offer for sale his patented invention, but instead exclusively licensed the invention to Scimed, who manufactured the catheters.⁹⁹

The court relied on *eBay* and concluded that a plaintiff seeking injunctive relief must show harm to himself, rather than relying on alleged

⁹⁶ *Id.* at 442.

⁹⁷ *See id.*

⁹⁸ *Voda v. Cordis Corp.*, No. CIV-03-1512-L, 2006 WL 2570614 (W.D. Okla. Sept. 5, 2006).

⁹⁹ *See id.* at *6.

harm to a non-party.¹⁰⁰ The harm felt by an exclusive licensee is irrelevant, particularly because Scimed elected not to sue to enforce the patent rights.¹⁰¹ Not only does *Voda* reinforce the *eBay* decision by requiring the plaintiff to show irreparable harm, but showing harm to an exclusive licensee is insufficient to show irreparable harm to the patent holder.

D. *Digital Media* (TiVo, Inc. v. Echostar Communication)

The plaintiff TiVo brought suit against Echostar Communication for several claims of patent infringement of its DVR technology.¹⁰² After a jury awarded TiVo over \$73 million in damages, TiVo moved the court for entry of a permanent injunction.¹⁰³

The district court concluded that TiVo must satisfy the four factor test promulgated by the Supreme Court in *eBay* to receive injunctive relief.¹⁰⁴ Regarding the first and second factors, TiVo argued that because Echostar directly competed against TiVo and specifically targeted TiVo customers, monetary damages would be insufficient to compensate for TiVo's loss in customers.¹⁰⁵ TiVo also produced evidence to show that customers tended to stay with their current DVR service providers;¹⁰⁶ as such, TiVo argued that the result in market share loss will result in an irreparable harm.¹⁰⁷

As for the third factor, TiVo argued that the balance of hardships weighed heavily in its favor. TiVo's principle argument was that because its business is entirely dependant upon DVR technology, it would "become extinct" if it could not exploit that market.¹⁰⁸ In contrast, Echostar's primary business is satellite transmission technology, which would be unaffected by an injunction.¹⁰⁹ Regarding the fourth factor, TiVo asserted that the public interest would be disserved if Echostar was allowed to continue infringing, and that strong patent rights serve the public interest.¹¹⁰

¹⁰⁰ *Id.* at *5 ("As patents have 'the attributes of personal property', the person seeking a permanent injunction must demonstrate harm from the infringement of those rights that is personal as well.")

¹⁰¹ *Id.*

¹⁰² *TiVo, Inc. v. Echostar Commc'ns Corp.*, 446 F. Supp. 2d 664 (E.D. Tex. 2006).

¹⁰³ *Id.* at 665.

¹⁰⁴ *Id.* at 666.

¹⁰⁵ *Id.*

¹⁰⁶ *Id.* at 667.

¹⁰⁷ *Id.* at 666-67.

¹⁰⁸ *Id.* at 667.

¹⁰⁹ *Id.*

¹¹⁰ *Id.*

Based on TiVo's arguments, the court concluded that a permanent injunction was warranted.¹¹¹ Its decision to award a permanent injunction may be a rarity in patent litigation cases after *eBay*, because monetary relief is often sufficient to compensate the injured party. TiVo was able to get a permanent injunction because their sole product was in direct competition with the infringing product. If TiVo made additional products or had not practiced their patent for DVR, it is unlikely that they would have awarded injunctive relief based on the *eBay* factors.

VII. THE PUBLIC INTEREST FACTOR ALLOWS TRIAL COURTS TO ISSUE INJUNCTIONS TO PROMOTE THE PHARMACEUTICAL INDUSTRY

In *TiVo*, the district court was persuaded by arguments for injunctive relief, and concluded that a permanent injunction was warranted.¹¹² One of the court's key pronouncements concerned the public interest factor. The court wrote:

The public has an interest in maintaining a strong patent system. This interest is served by enforcing an adequate remedy for patent infringement—in this case, a permanent injunction. The infringing products are not related to any issue of public health or any other equally key interest; they are used for entertainment.¹¹³

Is the district court asserting that injunctive relief is more readily available for those inventions that are not related to public health? Is injunctive relief always not in the best interest of the public when it concerns issues of public health?

The pharmaceutical industry serves as an example of when injunctive relief might best serve the public interest in public health cases, because pharmaceutical companies often require injunctive relief to fight off infringers for their very survival. According to Professor Lemley, the pharmaceutical industry considers patent protection far more important to their research and development efforts than do other technology industries,¹¹⁴ because pharmaceutical companies spend millions of dollars

¹¹¹ *Id.* at 669.

¹¹² *Id.*

¹¹³ *Id.* at 670.

¹¹⁴ Mark A. Lemley, Patent Reform Legislation—Public Comments on Substitute H.R. 2795 and the Role of the Antitrust Modernization Commission, Oct. 24, 2005, http://www.amc.gov/commission_hearings/pdf/Statement_Lemley.pdf

developing and marketing new products, but only see returns on a fraction of those products.¹¹⁵ Infrequent blockbuster drugs produce the great majority of a pharmaceutical company's revenue.¹¹⁶ Therefore, the success of the pharmaceutical industry is critically dependent on protecting revenue streams generated by blockbuster products.¹¹⁷ Moreover, the high cost of producing new pharmaceuticals substantially reduces the number of companies with sufficient resources to engage in innovative research.¹¹⁸ This means fewer pharmaceutical companies producing fewer new drugs.

So why should the public interest weigh in favor of injunctive relief for pharmaceutical patents? First, a pharmaceutical patent will often encompass the entire drug, whereas a patent for a biomedical invention might be for one component of a device amongst thousands.¹¹⁹ Therefore, companies with pharmaceutical patents do not have to worry about the endless stream of patent infringers,¹²⁰ because the only potential infringers are those with sufficient resources to produce the entire drug covered by the patent.¹²¹

Because patents for pharmaceuticals usually cover the entire drug, permanent injunctions will force pharmaceutical companies to design around the issued patent. A classic example of how "design around" products function in the pharmaceutical world is Pfizer's® patent for Viagra®. Viagra® is the trade name for sildenafil citrate, a pharmaceutical patented by Pfizer® for the treatment of erectile dysfunction.¹²² Perhaps the fear of injunctive relief, forced Pfizer's® competitors to design around the Viagra® patent. As a result, two pharmaceuticals, Levitra® and Cialis®, hit the market soon after Viagra®, which offer substantially the same medicinal benefit as Viagra®. These new drugs offer consumers multiple choices for therapy, as each drug consists of a different chemical formula and may have different side effects.

The alternative would be to let companies produce generic drugs without any regard for patented pharmaceuticals. This result would be devastating, as pharmaceutical companies would no longer make the profits needed to create new pharmaceuticals. Moreover, there would be no incentive for pharmaceutical companies to disclose chemical formulas to the FDA or the USPTO for fear of competitors profiting from their labor. New

¹¹⁵ Robert E. Thomas, *Vanquishing Copyright Pirates and Patent Trolls: The Divergent Evolution of Copyright and Patent Laws*, 43 AM. BUS. L.J. 689, 724 (2006).

¹¹⁶ *Id.* at 724.

¹¹⁷ *Id.*

¹¹⁸ *Id.*

¹¹⁹ See Lemley, *supra* note 115, at 1, 2.

¹²⁰ See *supra* Section III-a.

¹²¹ See Thomas, *supra* note 116.

¹²² See U.S. Patent No. 6,469,012 (filed Mar. 4, 1996).

drugs would hit the market with much less frequency, and as a result, fewer generics would be available.

Furthermore, if district courts were to routinely reject permanent injunctions and order compulsory licenses in pharmaceutical patent infringement cases, generic companies would virtually freeload off the patent holder's labor. Not only would generic companies be able to bypass expensive costs associated with research and development, they could also fast-track FDA approval for generic drugs based on the prior approval of the infringed pharmaceutical. Additionally, the generic nature of the drug assumes that it is in direct competition with the patented, name-brand drug. As such, it follows that the infringed party should be able to prove irreparable harm resulting from the introduction of a generic drug that directly competes against the patented drug.

Seemingly, the only equitable solution would be to enjoin infringers of pharmaceutical patents. Several months after *eBay*, the Federal District Court for the District of Delaware awarded a permanent injunction to Novozymes, a plaintiff with a patent for alpha-amylase enzymes that are used for the production of ethanol fuel, a burgeoning industry that is an alternative to traditional fossil fuels.¹²³ Novozymes was awarded a reasonable royalty as damages and then moved the district court for permanent injunctive relief.¹²⁴ Citing *eBay*, the court concluded that Novozymes satisfied the four factor test and subsequently issued an injunction against the defendant Genecor.¹²⁵ Regarding the irreparable harm factor, the district court concluded that because Novozymes exclusively licensed its patent to a subsidiary, with the expectation that the value of the subsidiary would increase with successful marketing of the technology, Novozymes would suffer irreparable harm, even though it did not market the patented product itself.¹²⁶ Interestingly, the court concluded that the loss of the right to exclude is irreparable harm.¹²⁷ However, were this blanket rule to apply in all cases, federal courts would again find themselves at the old Federal Circuit rule, that an injunction should issue as a matter of right whenever a patent is found to have been infringed.

¹²³ See *Novozymes v. Genecor Int'l, Inc.*, 474 F. Supp. 2d 592, 595 (D. Del. 2007).

¹²⁴ *Id.* at 595.

¹²⁵ *Id.* at 612-13.

¹²⁶ *Id.*

¹²⁷ *Id.*

VIII. CONCLUSION

Nevertheless, the court in *Novozymes* pointed out that when direct competitors are involved, the injured party “has a right, granted by Congress, not to assist its rival with the use of proprietary technology.”¹²⁸ And that is the crux of the patent game. If a party patents and practices an invention, for a limited time that party should not have to share its intellectual property with competitors. However, when a party misuses its patent to tax other innovating parties, or to hold up an invention because one of the thousands of parts infringes a patent, it should not be able to stop others from practicing that invention.

As illustrated in this article, burgeoning technologies across a diverse group of industries forced the Supreme Court to give more power to lower courts in fashioning equitable remedies. No longer will a blanket rule of enjoinder reign over the patent system; instead a discretionary rule will give courts the power to weigh all the evidence and fashion an equitable remedy in infringement cases.

Justice Kennedy’s concurring opinion in *eBay* states it best: “[i]n cases now arising trial courts should bear in mind that in many instances the nature of the patent being enforced and the economic function of the patent holder present considerations quite unlike earlier cases.”¹²⁹ Time will tell how the courts respond to these new diverse technologies; however, the Court’s new discretionary power in patent cases should promote and encourage more growth in the sciences.

¹²⁸ *Id.* at 613.

¹²⁹ *eBay, Inc., v. MercExchange*, 126 S. Ct. 1837, 1842 (Kennedy, J., concurring).