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**INJUNCTIVE RELIEF POST *EBAY* AND
THE VARIOUS APPLICATIONS OF
THE FOUR-FACTOR TEST IN
DIFFERING TECHNOLOGICAL
INDUSTRIES**

by ENGEY ELREFAIE

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Abstract

In the 2006 opinion for *eBay v. MercExchange* the Supreme Court struck down the Federal Circuit's blanket rule of granting injunctions for patent infringement. Outlining a four-factored test, the Court declared that injunctive relief should be determined based on "principles of equity." This note discusses the implications of this decision on the biotechnology and software industries, and how lower courts have applied this test to reach varying results.

Injunctive Relief Post *eBay* and the Various Applications of the Four-Factor Test in Differing Technological Industries

by ENGEY ELREFAIE*

I. Introduction

In the 2006 case of *eBay v. MercExchange*, the Supreme Court rejected the Federal Circuit's blanket rule of an automatic grant of injunctive relief in patent infringement cases, instead calling for a grant of relief in line with the "principles of equity."¹ In its opinion, the Court laid out a four-factor test to assess the adequacy of injunctive relief.² Special attention has been paid to Justice Kennedy's concurrence regarding the "nature of the patent being enforced," which trial courts have interpreted as a red light to granting injunctive relief in situations where licensing firms use the threat of injunctive relief as a bargaining tool to charge exorbitant fees to licensees. Furthermore, trial courts have paid attention to the competitive nature of the patent holder and the alleged infringer, their related markets, and the specific harms each would incur with or without the grant of injunctive relief. The trial courts' subsequent application of the four-factor test has led to various outcomes in different industries.

This note juxtaposes the application of *eBay* in biotechnology/pharmaceutical patent infringement cases with its application in software/IT industry cases. The four-factor test is examined to ascertain how it can be applied to provide a just result in two different industries with distinguishable patent system needs. As

* J.D. Candidate, 2010, University of California, Hastings College of the Law, San Francisco, Calif.; B.S., Electrical Engineering, 2007, University of California, Los Angeles, Calif. The author would like to thank Professor Robin Feldman for her valuable feedback on this work.

1. *eBay, Inc. v. MercExchange, L.L.C.*, 547 U.S. 388 (2006).

2. *Id.*

part of this analysis, the business of patent trolls and how they operate after *eBay* will be discussed to reiterate the main goal of *eBay* despite its split in analysis of the biotech and software industries.

This analysis is composed of four parts, beginning with a brief history of the use of equitable remedies for patent infringement. Next is an analysis of the *eBay* decision within this framework, including the various amicus curiae briefs that were submitted in support of each side with a focus on the predictions, fears, and needs of each respective industry. The third section highlights notable decisions in both the biotechnology/pharmaceutical and the software/IT industries, discussing each trial court's application of the four-factor test to the particular facts and technology field. To assess the nature of non-practicing entities and their effects on each specific industry, an analysis of Justice Kennedy's concurrence follows in the fourth section. Finally, I propose a solution to harmonize the needs of each industry while still adhering to the framework of the Court's decision in *eBay*.

II. Right to Exclude

Injunctive relief was once viewed as an important remedy, central to the core value of the patent right. In *Continental Paper Bag Co.*, the Court considered the constitutional purpose of the right conferred upon a patentee, stating that the patent system must "provide for an exclusive right to inventors to make, use, and vend their inventions."³ Essentially, the patent holder receives no more from the law than what she had before, and that effective use of the patent is to restrain others from manufacturing and using that which was invented.⁴ The inventor is one who has discovered something of value and therefore it is her absolute property.⁵ If an inventor chooses to disclose his invention, as opposed to withholding knowledge from the public, she may insist upon all the advantages and benefits provided for by the patent laws.⁶ Although at first only a remedy at law was given for a violation of the patent right, a remedy in equity was available as early as 1819.⁷ However, after *eBay*, injunctive relief as a manifestation of the right of exclusivity is no

3. *Continental Paper Bag Co. v. Eastern Paper Bag Co.*, 210 U.S. 405, 423 (1908).

4. *Kewanee Oil Co. v. Bicron Corp.*, 416 U.S. 470 (1974); *United States v. American Bell Tel. Co.*, 167 U.S. 249 (1897); *Continental Paper*, 210 U.S. 405 (1908).

5. *Continental Paper*, 210 U.S. at 424.

6. *Id.*

7. *Id.*

longer automatically available to a patent holder in an infringement suit.

III. *eBay v. MercExchange* Decision

A. Background

The dispute at the center of *eBay v. MercExchange* involved MercExchange's business method patent for an electronic market designed to facilitate the sale of goods between private users by establishing a "central authority to promote trust among participants."⁸ MercExchange filed a patent infringement suit against eBay, to whom it had previously sought to license its patent,⁹ but after a jury finding of patent validity and infringement, MercExchange's motion for permanent injunctive relief was denied.¹⁰ The Court of Appeals for the Federal Circuit reversed, however, applying its "general rule that courts issue permanent injunctions against patent infringement absent exceptional circumstances."¹¹ The Supreme Court then granted certiorari to determine whether the general rule applied by the Federal Circuit was appropriate for all patent infringement cases.

B. Amicus Curiae Briefs and Predictions

Several groups had a strong interest in the relief afforded to patentees and submitted amicus curiae briefs detailing their positions on the outcome of the case and the possible implications on their respective industries. A clear divide arose between the biotechnology/pharmaceutical industry, which asked for automatic equitable relief, and the software/IT industry, which argued for a less severe remedy. In pushing for a "strong" patent system that provides automatic injunctive relief, the biotechnology/pharmaceutical industry stressed that most inventions in this field are protected by single patents.¹² Because an entire firm's viability often depends on one invention, and thus one patent, injunctive relief must be available

8. *eBay*, 547 U.S. at 390.

9. *Id.*

10. *Id.* at 391.

11. *Id.*

12. Brief for Biotechnology Industry Organization as Amicus Curiae in Support of Respondent, *eBay, Inc. et al. v. MercExchange, L.L.C.*, 547 US 388 (2006) (No. 05-130), 2006 WL 639162 [hereinafter *BIO*] at 1.

to remedy infringement.¹³ In contrast, the software/IT industry stressed the need for an evaluation by the Court to determine if money damages could be awarded in cases of infringement, as one patent in this industry often encompasses hundreds or even thousands of other patents in the field.

1. *The Argument for Permanent Injunctions – Briefs in Support of Respondent*

a. General Electric, 3M, Procter & Gamble, E.I. Du Pont De Nemours and Company, and Johnson & Johnson

In urging the Court to uphold the Federal Circuit’s decision, the amici discussed the basic right to exclude, arguing that the presumptive rule of permanent injunctive relief is correct and in accordance with the “principles of equity.”¹⁴ The amici focused on the “long-settled expectation that the patent grant is presumptively enforceable via a permanent injunction.”¹⁵ Reliance on this presumption results in the amici’s heavy investment in research and development, and influences their decisions to acquire and maintain patent portfolios.¹⁶ Essentially, the biotechnology/pharmaceutical industry’s reliance on the availability of injunctive relief is the very reason patents are obtained in the amici’s field. Disclosing in full detail “the fruits of its research and development, rather than maintaining inventions as trade secrets,” this industry bases its practices on the understanding that an enforceable right to exclude others is inherent to the patent.¹⁷ The amici also argued that if the Court adopted the petitioners’ interpretation that an exclusive right is a fundamentally a property right, the biotechnology/pharmaceutical industry’s investments and future incentives to continue investing would be greatly reduced.¹⁸

The amici concluded that alternative remedies are not “consistent with traditional equitable principles.”¹⁹ The prevailing party would be subject to either perpetual litigation, due to the patent

13. *Id.*

14. Brief for General Electric Co. et al. as Amici Curiae Suggesting Affirmance, eBay, Inc. et al. v. MercExchange, L.L.C., 547 US 388 (2006) (No. 05-130), 2006 WL 615158 [hereinafter General Electric] at 3.

15. *Id.* at 4.

16. *Id.*

17. *Id.* at 15.

18. *Id.* at 4, 6.

19. *Id.* at 14.

owner filing multiple “successive lawsuits to recover damages for as long as the infringement continues,” or to a “condemnation of a property right” should the Court order “payment for the future anticipated infringement – a compulsory license.”²⁰

b. Pharmaceutical Research and Manufacturing of America and Biotechnology Industry Organization

The Pharmaceutical Research and Manufacturers of America (“PhRMA”) is a nonprofit association representing the nation’s leading research-based pharmaceutical and biotechnology companies.²¹ The PhRMA brief focused on the critical importance of the protection of patent rights; given the time and financial expenditures of the drug development process, which can last up to fifteen years,²² it is imperative that companies be able to protect their patents. The brief also pointed to the amici’s strong interest in the protection of the right to exclude through permanent injunctions, in order to ensure “future innovation and the timely development of new medicines.”²³ This strong patent protection would help patentees recoup their particularly costly investments.²⁴

With a market perspective similar to PhRMA’s, the Biotechnology Industry Organization (“BIO”) is a trade association representing more than 1,100 companies, academic institutions, and biotechnology centers.²⁵ Members are involved in the research and development of healthcare, agricultural, and environmental products.²⁶ The BIO brief asserted that the “promise of exclusionary rights in validly patented subject matter provides the investment incentive for research and development of innovative products.”²⁷ Lack of this incentive, BIO argued, would “negatively impact the amount of research and development resources available to member-companies” and “negatively impact public health and welfare.”²⁸

20. See *General Electric*, *supra* note 14 at 13, 14.

21. Brief for Pharmaceutical Research and Manufacturers of America as Amicus Curiae in Support of Respondent, *eBay, Inc. et al. v. MercExchange, L.L.C.*, 547 US 388 (2006) (No. 05-130), 2006 WL 622122 [hereinafter *PhRMA*] at 1.

22. *Id.* at 2.

23. *Id.*

24. *Id.*

25. See *BIO*, *supra* note 12 at 1.

26. *Id.* at 1.

27. *Id.*

28. *Id.*

PhRMA's theory rested on the assertion that barring injunctive relief as a remedy for infringement would "weaken the patent system dramatically," profoundly impacting "all industries that rely upon strong patent protection."²⁹ Their position demonstrates the essential difference between the pharmaceutical/biotechnology industry's support for a stronger patent system and the software/IT industry's desire for a more fluid system that promotes licensing and provides trial courts with more discretion to decide whether injunctive relief is appropriate.

PhRMA and BIO both argued that because biotechnology companies rely on private investors to fund development of risky and expensive new products, the industry's economic growth depends on the protection offered by a strong patent system.³⁰ As BIO articulated in its brief, the majority of biotechnology companies are small with little or no operating income, and so are in constant search of investors willing to risk "hundreds of millions of dollars on a very slim chance of the therapy reaching market and turning a profit."³¹ It is through the patent's right to exclude that the incentive for expensive, high-risk research and development exists, thereby allowing members to attract requisite funds for the development of new products.³² PhRMA reiterated this point, arguing that the "high cost of research and development and the low probability of finding and marketing a successful product" merit the need for the pharmaceutical industry to have "strong assurances that any resulting intellectual property will be protected."³³ The ease of reverse engineering pharmaceutical products, combined with the profits available in this endeavor, indicate the need for injunctive relief, which "offers in many circumstances the only effective protection."³⁴

Focusing on the patent law's central purpose of incentivizing innovation and knowledge sharing, PhRMA asserted that a functioning patent system that enables inventors to profit must provide the "temporary right to exclude others from the fruits of their labors."³⁵ Alternatives to the right to exclude are "inadequate, imprecise, and ultimately inhibit the development of voluntary

29. See *PhRMA*, *supra* note 21 at 2.

30. See *PhRMA*, *supra* note 21 at 7; *BIO*, *supra* note 25 at 1-2.

31. See *BIO*, *supra* note 25 at 5.

32. See *PhRMA*, *supra* note 21 at 7.

33. *Id.* at 3.

34. *Id.*

35. *Id.*

institutions that would otherwise reduce transaction costs by allowing parties to set prices.”³⁶ With respect to the overall public interest, PhRMA concluded that the “short-term increases in competition” that would ensue from replacing automatic injunctive relief with a supposed “functioning and reliable” patent system would be of no benefit to the public or the inventor.³⁷ From PhRMA’s perspective, the long-term effects of providing pharmaceutical companies with strong incentives for future research and development investment better serves the American public than the short-term effects of cheaper, but infringing, versions of the same drugs.³⁸

One commonly noted difference between the biotechnology and software industries is the nature of their typical patents. As noted in the BIO brief, a biotechnology patent usually encompasses just a few patents in order to adequately protect an entire marketed product; a typical software/IT patent, on the other hand, covers a single component of a multi-component product.³⁹ In response to the software industry’s push for more trial court discretion with respect to enjoining the production of an infringing multi-component product, the BIO brief suggested that there is no need to alter the general right to injunctive relief because issuance of a permanent injunction is: (1) based on a presumptively valid patent being infringed; (2) rarely a surprise; (3) tailored to prevent the infringement of the “claimed invention”; and (4) granted in light of the fact that the infringer has the choices of removing the component, designing a component that does not infringe the valid patent, or waiting for the patent to expire to use the single element in the multi-component product.⁴⁰

2. *The Argument Against Injunctions with Respect to Traditional Principles of Equitable Relief*

- a. Amicus Curiae Brief in Support of Petitioner: Business Software Alliance, Software & Information Industry Association, Information Technology Industry Council and Information Technology Association of America

The Business Software Alliance is an association of the world’s leading software and hardware technology companies, responsible for

36. *Id.* at 4.

37. *See PhRMA, supra* note 21 at 4.

38. *Id.*

39. *See BIO, supra* note 25 at 15.

40. *Id.* at 16.

creating much of the software and hardware infrastructure available for personal computers and the Internet.⁴¹ The Software & Information Industry Association, the largest U.S. trade association, is committed to promoting and protecting the interests of its 700 member companies, involved in the development of software and electronic content for business, education, and consumers.⁴² Representing the leading U.S. providers of IT products and services, the Information Technology Industry Council advocates policies that foster U.S. economic growth and job creation by advancing U.S. leadership in technology and innovation.⁴³ The Information Technology Association of America provides its corporate members with global public policy, business networking, and national leadership to promote continued rapid growth of the IT industry.⁴⁴ Together, these representatives of the technology and software industries submitted an amicus brief that stressed that their industry relies heavily on the research and development of patented products.⁴⁵ They argued that their members would be significantly affected by the Federal Circuit's holding that an injunction is the appropriate remedy in response to a finding of infringement unless "exceptional circumstances" exist.⁴⁶

The amici urged the Court to adhere to the plain language of 35 U.S.C. Section 283⁴⁷ and to reject the Federal Circuit's per se rule by restoring the discretionary power at the district court level.⁴⁸ The amici asserted that the Federal Circuit's "facile blanket rule" that all patentees are guaranteed a right to an injunction without consideration of all the equitable factors, would have a "serious negative impact" on their industry.⁴⁹ The majority of patents in the software/IT industry contain hundreds of integrated parts or processes designed to conform to uniform standards in order to

41. Brief for Business Software Alliance et al. as Amici Curiae Supporting Petitioners, *eBay, Inc. et al. v. MercExchange, L.L.C.*, 547 U.S. 388 (2006) (No. 05-130), 2005 WL 2381065 [hereinafter *BSA*] at 1.

42. *Id.*

43. *Id.* at 2.

44. *Id.*

45. *Id.*

46. *BSA*, *supra* note 41 at 2-3.

47. 35 U.S.C. § 283 states that courts "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" (emphasis added).

48. *BSA*, *supra* note 41 at 5.

49. *Id.* at 4.

enable universal application and allow forward and backward compatibility.⁵⁰ Because of this interdependence, the amici argued that it would be “impractical” for firms to stop using parts or processes, as they would end up bearing the “cost of extensive redesign” or losing “uniformity and compatibility in important technology.”⁵¹ The amici asserted that if faced with automatic injunctions, innovative technology and software companies would frequently be forced into unfair license agreements.⁵²

Framing the problem as specific to the IT industry, the amicus brief stated that “compliance with industry standards may make designing around patents impossible.”⁵³ Because patent infringement suits do not typically arise until after an industry’s adoption of a uniform standard, patent holders with the right to a mandatory injunction “may have a decided advantage in bargaining power over the target technology companies providing goods and services to the public.”⁵⁴ According to the amici, these matters should be taken into account by the district court when determining the appropriateness of an injunction.

C. Decision

In a unanimous decision by the Supreme Court, the traditional four-factor test applied in courts of equity was extended to patent cases. Vacating the Federal Circuit’s holding, the Supreme Court held that courts are now required to first *evaluate* whether to issue injunctive relief rather than *automatically* grant a permanent injunction in all patent infringement cases.

Writing for the majority, Justice Thomas laid out the four factors considered when a permanent injunction is sought: “[A] plaintiff must demonstrate: (1) that it has suffered an irreparable injury; (2) that remedies available at law, such as monetary damages, are inadequate to compensate for that injury; (3) that, considering the balance of hardships between the plaintiff and defendant, a remedy in equity is warranted; and (4) that the public interest would not be disserved by a permanent injunction.”⁵⁵ The Court held that the decision to grant “permanent injunctive relief is an act of equitable discretion by the

50. *BSA*, *supra* note 41 at 4.

51. *Id.*

52. *Id.*

53. *BSA*, *supra* note 41 at 17.

54. *Id.*

55. *eBay*, 547 U.S. at 391.

district court.”⁵⁶ In his concurrence, Chief Justice Roberts stated that the historical practice of automatically granting injunctive relief upon a finding of infringement “does not entitle a patentee to a permanent injunction or justify a general rule that such injunctions should issue.”⁵⁷

The Court distinguished between the Federal Circuit’s automatic grant of injunctive relief and how the Patent Act should be interpreted in light of the principles of equity.⁵⁸ Finding nothing in the Patent Act indicating congressional intent to depart from the principles of equity in patent infringement suits,⁵⁹ the Court determined that the “Patent Act expressly provides that injunctions ‘may’ issue ‘in accordance with the principles of equity.’”⁶⁰ According to the Court, the Federal Circuit erred in assuming that the “statutory right to exclude alone justifies its general rule in favor of permanent injunctive relief”⁶¹; the Court found that there is a distinction between the creation of a right and the provision of remedies for violation of that right.⁶²

Justice Kennedy’s concurrence touched on the discretion provided to trial courts in evaluating whether a grant of injunctive relief is appropriate. In approaching these patent infringement cases, Justice Kennedy suggested that trial courts bear in mind the “nature of the patent being enforced and the economic function of the patent holder,” as they present considerations quite unlike earlier cases of infringement.⁶³ He acknowledged the recent reality of the patent industry in which firms use patents “not as a basis for producing and selling goods but, instead, primarily for obtaining licensing fees.”⁶⁴ Justice Kennedy also noted the undesirable consequence of these firms using the injunction as a bargaining tool to “charge exorbitant fees to companies that seek to buy licenses to practice the patent,” noting that in cases like these, damages would be “sufficient to compensate for infringement” and an injunction “may not serve the

56. *eBay*, 547 U.S. at 391.

57. *Id.* at 395.

58. *Id.* at 392–93.

59. *Id.* at 392.

60. *Id.*

61. *Id.*

62. *Id.*

63. *Id.* at 396.

64. *Id.*

public interest.”⁶⁵ In Justice Kennedy’s view, “the potential vagueness and suspect validity of some of these patents” would also affect the analysis under the four-factor test.⁶⁶ Additionally, he found that equitable discretion over injunctions is “well suited to allow courts to adapt to the rapid technological and legal developments in the patent system.”⁶⁷

IV. Interpretations of *eBay* in Biotechnology/Pharmaceutical Cases

Having left trial courts with the ultimate discretion to determine whether all four *eBay* requirements are met, it is helpful to view the application of these factors to subsequent biotechnology cases. Recall that biotechnology infringement cases usually involve a single component patent (vs. the multi-component patents often seen in the software industry), thus resulting in a greater need for injunctive relief to protect research and development costs.⁶⁸

A. Narrowing *eBay*: *Amgen, Inc. v. F. Hoffmann La Roche Ltd.*

Amgen’s asserted patents claim methods and reagents for expressing and purifying recombinant erythropoietin (“EPO”), a naturally occurring protein that stimulates the production of red blood cells.⁶⁹ Roche’s drug MIRCERA, which utilizes pegylation, a chemical reaction that attaches polyethylene glycol (“PEG”) to EPO via a single bond to form CERA, was found to infringe since it does not alter EPO’s amino acid sequence.⁷⁰

Applying *eBay*, the Massachusetts district court engaged in discretionary review to determine the appropriateness of injunctive relief. The court noted that although *eBay* has allowed courts to decline injunctive relief where the plaintiff is a non-practicing entity or “patent troll,” it has simultaneously “changed little where a prevailing plaintiff seeks an injunction to keep an infringing competitor out of the market.”⁷¹ In its analysis, the court found that the first three *eBay* factors yielded a result that “strongly favors a

65. *eBay*, 547 U.S. at 396.

66. *Id.* at 397.

67. *Id.*

68. See *BIO*, *supra* note 25; *PhRMA*, *supra* note 21; *General Electric*, *supra* note 14.

69. *Amgen, Inc. v. F. Hoffman La Roche Ltd.*, 581 F. Supp. 2d 160, at 166 (D. Mass. 2008).

70. *Id.* at 167.

71. *Id.* at 210.

permanent injunction because Roche's entry into the ESA market would cause immense, immeasurable, and irreparable harm, with the balance of hardships falling on Amgen."⁷² With respect to the public interest factor, the court articulated that the public interest would not be disserved by issuing an injunction because there is "no solid evidence" to suggest that patients will "suffer significant harm if the status quo is maintained."⁷³ Interestingly, the court interpreted the public interest factor not in terms of competitive market benefits, but in "a robust patent system that maintains incentives for pharmaceutical innovation," which outweighs "the highly speculative" benefits that "might occur" from a denial of an injunction.⁷⁴ Although the court thought initially that approval of MIRCERA by the Food and Drug Administration ("FDA") would serve the public interest through MIRCERA's introduction into the pharmaceutical market, the short-term effects of competitive market benefits were not weighed heavily against the innovation factor.⁷⁵

The *Amgen* court viewed the Supreme Court's holding in *eBay* not as "pathbreaking precedent," but as "little more" than a reminder to courts that "they must exercise discretion in accordance with the framework Congress approved."⁷⁶ Interpreting *eBay* as simply reemphasizing remedies granted in similar cases, the *Amgen* court concluded that allowing a competitor to enter a market appropriately merits the issuance of an injunction, holding that this equitable remedy is in line with the direct competition cases subsequent to *eBay*.⁷⁷

B. *Advanced Cardiovascular Systems, Inc. v. Medtronic Vascular, Inc.*: Considering "Head-to-Head" Market Competition and the Public Interest

In 2003, the drug-eluting stent ("DES") was introduced to the U.S. market. The first two DES on the market belonged to Cordis and BSC, but were licensed under patents held by Advanced Cardiovascular Systems ("ACS"). Medtronic's DES was third to the market, though the first to be approved by the FDA, and uses the infringing Driver stent as its platform. Shortly thereafter, ACS

72. *Amgen*, 581 F. Supp. 2d at 210.

73. *Id.*

74. *Id.*

75. *Id.* at 209–10.

76. *Id.* at 211.

77. *Id.* at 211–12.

gained FDA approval for their DES and started to compete in the U.S. DES market. Medtronic sued ACS, alleging infringement of its stent patents,⁷⁸ and ACS counterclaimed, asserting its patents against Medtronic.⁷⁹ The court granted summary judgment of non-infringement in favor of ACS and the parties went to trial for ACS's counterclaim. In 2005, a jury found ACS's stent patents valid and infringed by Medtronic.⁸⁰

As "head-to-head competitors" with Medtronic, ACS argued that infringement merits irreparable harm, thus calling for a grant of injunctive relief.⁸¹ The court conceded that, generally speaking, permanent injunctions are most appropriate in circumstances where the plaintiff practices its invention and the infringer is a direct market competitor;⁸² in this case, however, both parties put forward "a different 'relevant market' for the purpose of determining the degree to which ACS and Medtronic compete."⁸³ Medtronic asked the court to view the *overall* stent market (both bare metal stents and drug eluting stents or "DES") as the relevant market for the purposes of ACS's injunction motion, arguing that the market share accounted for by other competitors, such as Cordis and BCS, lessened Medtronic's presence as a direct competitor to ACS.⁸⁴ ACS, on the other hand, argued that the relevant market should be the bare-metal stent market only, as Medtronic and ACS were the last two standing competitors in the bare metal stent industry.⁸⁵

In analyzing the market data supplied by the parties, the court found that the stent market is indeed made up of two sub-markets: the bare-metal stent market and the DES market.⁸⁶ Although the two markets are related, the court found that they have "an inverse relationship," as the demand for DES stents lessens that for bare metal stents.⁸⁷ In light of this, the court found that the parties are head-to-head competitors only in the bare-metal stent market;

78. *Advanced Cardiovascular Sys. v. Medtronic Vascular, Inc.*, 579 F. Supp. 2d 554, 555–56 (D. Del. 2008).

79. *Id.* at 556.

80. *Id.*

81. *Id.* at 558.

82. *Id.*

83. *Advanced Cardiovascular Sys.*, 579 F. Supp. 2d at 558.

84. *Id.*

85. *Id.*

86. *Id.* at 558–59.

87. *Id.* at 559.

although the parties competed directly in both markets, they were both “greatly overshadowed” by Cordis and BSC.⁸⁸ Based on this reasoning, Medtronic’s holding of the smallest market percentage, and ACS’s failure to show lost customers as a result of Medtronic’s infringement in the bare metal stent market, the court found no irreparable harm.⁸⁹

The court determined that “ACS’s willingness to forego its patent rights for compensation supports the court’s conclusion that ACS will not suffer irreparable harm absent an injunction.”⁹⁰ ACS challenged the court’s reasoning by pointing out that they licensed their patents in exchange for cross-licenses as opposed to compensation.⁹¹ However, the court found that ACS’s selectivity regarding its licensing compensation – only to the other competitors as a means to end the infringement suits – “does not rectify the fact that ACS was willing, ultimately, to forego its exclusive rights for some manner of compensation.”⁹²

The court viewed the status of market competition and ACS’s prior licensing scheme as indications that monetary compensation is adequate, noting that “permanent injunctions are typically granted in two-competitor situations where the patentee has demonstrated an unwillingness to part with the exclusive right.”⁹³

V. The Impact of *eBay* in Software and IT Cases

A. Heavier Market Dominance, Heavier Hardship? *z4 Technologies, Inc. v. Microsoft Corporation*

z4 Technologies (“z4”) brought suit against Microsoft alleging infringement of its patents of methods to limit the unauthorized use of computer software, referred to as product activation.⁹⁴ A jury found that Microsoft’s Office and Windows software products infringed the claims of the two patents-in-suit and z4 moved to enjoin Microsoft from making, using, selling, offering for sale, and importing

88. *Advanced Cardiovascular Sys.*, 579 F. Supp. 2d at 559.

89. *Id.* at 560.

90. *Id.*

91. In April 2000, ACS licensed their stent patent to Cordis as part of the parties’ settlement of a series of patent infringement lawsuits. ACS also licensed their patents to BSC as a part of another settlement agreement. Both of these agreements involved cross-licenses to each of the parties’ patents.

92. *Advanced Cardiovascular Sys.*, 579 F. Supp. 2d at 560.

93. *Id.*

94. *z4 Techs., Inc. v. Microsoft Corp.*, 434 F. Supp. 2d 437, 438 (E.D. Tex. 2006).

its current software products that use product activation.⁹⁵ To enjoin future infringement by Microsoft, z4 proposed that Microsoft deactivate the servers controlling product activation for Microsoft's infringing products and redesign its software products (including Windows and Office) to eliminate the infringing technology.⁹⁶

Evaluating the first factor of the *eBay* test, the court analyzed z4's claim of irreparable harm. z4 relied on a "rebuttable presumption" that infringement and validity of a patent alone suggests irreparable harm;⁹⁷ the court found, however, that "applying a presumption of irreparable harm in the context of an injunction was contrary to traditional equitable principles" and held that the language of the *eBay* test "does not imply a presumption, but places the burden of proving irreparable injury on the plaintiff."⁹⁸ z4 also argued that it will suffer irreparable harm because "it made tremendous efforts to commercialize its invention prior to the suit and that its failure to succeed was partly due to Microsoft's infringement."⁹⁹ The court rejected this claim as well, finding that "there is no logical reason that a potential consumer or licensee of z4's technology would have been dissuaded from purchasing or licensing z4's product" due to Microsoft's infringement.¹⁰⁰ The court also found that Microsoft's continued infringement didn't "inhibit z4's ability to market, sell, or license" its product to other entities in the market because Microsoft did not produce product activation software that it "individually" sold to other software manufacturers or consumers.¹⁰¹ The court emphasized that Microsoft "only uses the infringing technology as a *small component* of its own software" and therefore, it would be unlikely that any consumer purchases Microsoft's products solely for their product activation functionality.¹⁰²

Regarding the adequacy of monetary damages, the court rejected z4's argument that it could not be compensated for the inability to exclude Microsoft from using its invention in the absence of an

95. *z4 Techs., Inc.*, 434 F. Supp. 2d at 439.

96. *Id.*

97. *Id.*

98. *Id.*

99. *Id.* at 440.

100. *Id.*

101. *Id.*

102. *Id.* (emphasis added)

injunction.¹⁰³ The court found that a violation of the right to exclude does not lead to the conclusion that monetary damages are not adequate compensation without first applying the principles of equity.¹⁰⁴ Relying on Justice Kennedy's concurrence in *eBay* with respect to the "nature of the patent being enforced and the economic function of the patent holder," the court here found that "product activation is a very small component" and thus not related "to the core functionality" for which the software is purchased by consumers.¹⁰⁵ The court determined that with the release of Microsoft's 2007 versions of Windows and Office, the calculation of an adequate royalty rate for any future infringement based on the sale of the older Microsoft products would be sufficient.¹⁰⁶

It is interesting to note the court's agreement with Microsoft's argument regarding the balance of hardships and why monetary damages were awarded instead of injunctive relief. Microsoft argued that removing a small component would create a "significant hardship" on Microsoft, requiring "enormous resources and expense."¹⁰⁷ Microsoft's current versions of Office and Windows, of which there are hundreds of versions in dozens of languages, would have to be "re-engineered, tested, repackaged, and then placed into the appropriate distribution channels."¹⁰⁸ Microsoft also claimed that the release of its 2007 products would be delayed due to the reallocation of resources to work on the older products.¹⁰⁹

A notable aspect of Microsoft's balance of hardships argument is its clever focus on the public repercussions; rather than leave this element to the fourth factor, Microsoft employed it early in the analysis, arguing that if it had to remove the product activation system the market would be "flooded with pirated software resulting in incalculable losses."¹¹⁰ *z4*, on the other hand, argued that its hardship would simply be Microsoft's use of its intellectual property.¹¹¹ Yet the court discounted this argument, referring to the second factor stating that infringing use can be justly compensated by

103. *z4 Techs., Inc.*, 434 F. Supp. 2d at 441.

104. *Id.*

105. *Id.*

106. *Id.* at 442.

107. *Id.*

108. *Id.*

109. *Id.* at 443.

110. *Id.*

111. *Id.*

monetary damages.¹¹² The court's acceptance of Microsoft's projected hardships seems to indicate that the analysis of this factor runs more favorably towards a firm that demonstrates its strong hold over a market than it does to a smaller firm that may not have as strong a presence. This specific balance shines some light on the usage of *eBay* and the potential of courts to weight economic presence as a deciding factor.

Although Microsoft prevailed on all four factors, it is the court's discussion with respect to the third factor that makes this case one of interest. The particular attention paid to Microsoft's universal use suggests that in the future this case can be used in favor of an infringing firm if it can establish market dominance.

B. The Effect of Direct Competitor and Market Share Nature in Application of Four-Factor Test

In a 2008 decision, the United States District Court for the District of Delaware granted a permanent injunction to Power Integrations, Inc. ("Power Integrations") against Fairchild Semiconductor International, Inc. ("Fairchild") for infringement of microchip patents.¹¹³ Adhering to the four-factor test, the court made a few observations regarding the recent applicability of the test in cases subsequent to *eBay* and its usefulness to the particular facts at hand.

The court found that there is irreparable harm to Power Integrations because of the direct competitive relationship between the companies, which would deprive Power Integrations of the benefits of the use of their own patent.¹¹⁴ With respect to the next two factors of the *eBay* analysis – whether monetary damages instead of an injunction is appropriate for compensation and the balance of hardships between both entities – the court also found in favor of Power Integrations.¹¹⁵ In reaching this conclusion, the court noted that Power Integrations is a "specialized company," as the sale of its patented microchips accounts for 90% of the company's revenue, whereas Fairchild is a large company, selling more than 20,000 different products at revenues of over a billion dollars.¹¹⁶ The court

112. *z4 Techs., Inc.*, 434 F. Supp. 2d at 443.

113. *Power Integrations, Inc. v. Fairchild Semiconductor Int'l, Inc.*, 2008 WL 5210843 (D. Del. 2008).

114. *Id.*

115. *Id.*

116. *Id.*

found that the sale of infringing products accounts for no more than a small fraction of Fairchild's overall business and that even though its reputation in the industry is at risk, this alone was not a reason to prevent the Court from granting the injunction.¹¹⁷ The analysis of the balance of harms seems to focus, therefore, on the infringing activity affecting the business' depreciation in market share rather than the potential harm of an injunction affecting reputation. The court makes it clear in its analysis of the balance of harms that the risk the firm takes when it places a potentially infringing yet profitable product on the market is not a risk the court should take into account when analyzing the balance of harms.¹¹⁸

Power Integrations is indicative of how *eBay* has been used most recently: although *eBay* removed the guarantee of automatic injunctive relief, the requisite discretion called for does not lead to a situation foreclosing injunctive relief. *Power Integrations* illustrates how the nature of both disputing entities is analyzed, from their market shares to competition with each other and intentions with respect to their patented products. Rather than impose a strict rubric as to whether an entity demonstrates all four factors, it seems that the court analyzes those factors with respect to the opposing entity in order to analyze competition and loss of market share.

VI. The Public Interest Factor Highlighted by the Pestering Patent Troll.

In light of the main goal of the decision, to promote innovation through the granting of rights to exclusion, the entities most negatively affected by the Court's denial of an automatic injunction are those that used patents solely to license products to others in the field. In his concurrence in *eBay*, Justice Kennedy spoke directly about the denial of equitable relief for those entities who merely seek licensing fees, arguing that trial courts should consider the nature of the patent being enforced and the economic function of the patent holder; instead of producing goods, these firms can use an injunction as a bargaining tool to charge exorbitant fees to companies that seek to buy licenses to practice the patent.¹¹⁹

117. *Power Integrations*, 2008 WL 5210843 at *1.

118. *Id.*

119. *eBay*, 547 U.S. at 396.

A. 'Patent Trolls' No Longer Benefit From a Toll

A non-practicing entity, often referred to as a “patent troll,” is a patent holder who, without ever practicing its inventions, uses the patent system to earn money through infringement litigation.¹²⁰ Prior to the decision in *eBay*, these non-practicing entities depended on the threat of injunctions to gain settlement leverage from their targets (entities that practice the patent that trolls claim they own) essentially forcing their targets to fight or pay.¹²¹ This being the essence of patent trolls’ business, certain software companies support the granting of automatic injunctive relief, counter to the overall goals of the software industry.

Larger companies often feel that because non-practicing entities do not invent or produce products, they are “exploiting loopholes within the patent system for personal gain at the expense of the commerce system as a whole” and “adding a hidden tax onto every sector of the economy, while at the same time hindering innovation.”¹²² Unlike a cross-licensing scheme, which allows two companies with comparable portfolios to simply trade the rights to practice each other’s respective patents, non-practicing entities do not have that same desire for mutual exchange and are a hurdle to innovation.¹²³ Generally speaking, these trolls, like MercExchange, are not entitled to an injunction because they do not practice their technology and only actively seek to license their patents. Furthermore, patent trolls run into an obstacle with respect to the public interest factor: their practice by definition counters any public interest because there is no benefit from new technology.

B. Public Interest Factor.

As seen in the cases above, after *eBay* the public interest factor is not weighted as heavily as the other three factors, but its importance is the essence of Justice Kennedy’s concurrence, which many trial courts have cited time and again. By slowing innovation and demanding injunctive relief, patent trolls inherently do a disservice to

120. Daniel J. McFeely, *An Argument for Restricting the Patent Rights of Those Who Misuse the U.S. Patent System to Earn Money Through Litigation*, 40 ARIZ. ST. L.J. 289, 289 (2008).

121. *Id.*

122. Paul M. Mersino, *Patent, Trolls, and Personal Property: Will eBay Auction Away a Patent Holder’s Right to Exclude?* 6 AVE MARIA L. REV. 307, 315–16 (2007).

123. *Id.*

the entire patent system, which negatively affects the public interest in spurring innovation and making new ideas accessible.

In *Amgen*, the court stated that the public's interest is "in a robust patent system that maintains incentives for pharmaceutical innovation."¹²⁴ In *Advanced Cardiovascular Systems*, the public interest is maintaining diversity in the coronary stent market.¹²⁵ Both of these factors demonstrate the desire for a strong patent system and show how patent trolls are essentially the antithesis of the public's interest. Under the reasoning of the *Amgen* court, so long as patent trolls stand in the way, the incentives for pharmaceutical innovation will not and cannot succeed. Even though exclusion is inherent in property rights, the Supreme Court has emphasized that patents are a unique form of property meant to promote scientific and industrial progress for public knowledge.¹²⁶ Patent trolls clearly threaten this goal, which is considered under the fourth factor of the analysis.

Although the Federal Circuit had a vision of the role of the public interest factor as limited to "exceptional circumstances" and subsequently narrowed, the Supreme Court made sure to elaborate the importance of this factor, broadening its application.¹²⁷ In its amicus curiae brief for *eBay*, the Electronic Frontier Foundation ("EFF") elaborated on this factor with regard to the First Amendment:

Patent owners who claim control over internet publishing mechanisms are in a position to threaten anyone who uses them, even for personal non-commercial purposes. Given the explosion of new communications technologies—and the simultaneous explosion of patents on these technologies—this is hardly the time to limit courts' ability to consider the benefits that a given technology brings to freedom of expression, and the concomitant chilling effects of enjoining use of that technology.¹²⁸

Adding emphasis to the public interest factor, patents are likened to a "unique form of highly circumscribed property, akin to a government subsidy, designed to achieve a specific public purpose."¹²⁹

124. *Amgen, Inc.*, 581 F. Supp. 2d, at 210.

125. *Advanced Cardiovascular Sys.*, 579 F. Supp. 2d at 554.

126. *Continental Paper Bag Co.*, 210 U.S. at 423.

127. Brief for the Electronic Frontier Foundation as Amicus Curiae Supporting Petitioners, *eBay, Inc. et al. v. MercExchange, L.L.C.*, 547 US 388 (2006) (No. 05-130), 2005 WL 2381067 [hereinafter *EFF*] at 16.

128. *Id.* at 4.

129. *Id.* at 6.

EFF used as an example a pending patent application for a method of organizational fundraising over a wide-area network; comprised of several items, the method includes the use of an informational website, the ability to solicit charitable donations via email, and a reporting function to provide financial status updates.¹³⁰ EFF argued that the patent holder “could seek injunctions against virtually every nonprofit in the nation” and the injunctive relief could potentially enjoin the use of websites by political advocates in critical times.¹³¹ Applying this logic to software and business method patents, it is clear that the use of an automatic injunctive relief harms the public. Although the public interest factor may not be explicitly stressed in most cases, it is a major factor in the Supreme Court’s reversal of the Federal Circuit’s holding in *eBay*.

VII. The Irreparable Harm Factor: Potential to Successfully Bridge the Gap Between Biotechnology/Pharmaceutical and Software/IT Industry

As demonstrated in the previously mentioned cases, direct competition, market share, public interest, and consideration of Justice Kennedy’s concurrence regarding the nature of the patent have all been pivotal to granting injunctive relief. In *z4 Technologies*, the court denied a permanent injunction when it found the opposing parties did not directly compete. As reinforced by the decision in *Power Integration*, direct competition has become a persuasive element that sways the four-factor analysis in favor of a permanent injunction.

The application of *eBay* in a way that easily permits the issuance of permanent injunctions, despite the goals of the requisite equitable analysis, proves that there does not seem to be the significant disruption predicted by the biotech/pharmaceutical industry. Recall that a “strong” patent system, which grants automatic injunctions, is preferred because most products in the biotechnology/pharmaceutical industries are one component patents and because financial investments in research are especially costly. On the other hand, the software/IT industry’s main argument relied on the fact that most of their products are multi-component and that automatic injunctive relief would mean a complete shutdown of most of the infringer’s operations, thus negatively affecting the entire industry.

130. See *EFF*, *supra* note 127 at 9.

131. *Id.* at 11.

Furthermore, the software industry is dependent on the practice of “cross-licensing” because of the mutual need for one another’s patents. At the time of *eBay*, it seemed unlikely that one doctrinal approach would satisfy the strongly opposing needs of these two powerful industries.

In the most recent cases mentioned, *Amgen* and *Power Integration*, the courts relied on Justice Kennedy’s concurrence as their guide, narrowing *eBay* to non-practicing entities and allowing for injunctive relief in cases of head-to-head competition. Trial courts can further bridge the gap between the differing needs of the biotechnology and software industries by focusing on one additional factor, proposed below.

Although the first factor of the test requires a showing of “irreparable injury,” the Supreme Court did not articulate how this injury must be demonstrated and what courts should look for when assessing what type of injury is irreparable. Specifically in biotechnology and pharmaceutical patent cases, perhaps a presumption of irreparable harm could work in the industry’s favor to generate the type of strong patent system that its products and field work require. With respect to preliminary injunctions, a demonstration of validity and infringement alone creates a presumption of irreparable harm.¹³² The *eBay* decision does not discuss the presumption of irreparable harm, although some trial courts have rejected this automatic presumption with respect to the first factor.¹³³ However, it is this factor that could lead to a more plausible means of applying *eBay* so that the outcome is fairer and better tailored to each specific industry.

In the biotechnology industry, where injunctive relief is crucial to most research and development operations of businesses, a presumption of irreparable harm can be applied. Giving special weight to Justice Kennedy’s concurrence, trial courts could look more closely at the nature of the patent at issue in order to analyze its actual components and assess the appropriate damage accordingly. The court may find a presumption of irreparable harm in cases of single component patents, as the infringement would most likely unduly burden the entire product. Alternatively, with respect to a multi-component patented product or a non-practicing patent, the burden of demonstrating irreparable harm could fall to the plaintiff,

132. *Smith International, Inc. v. Hughes Tool Co.*, 718 F.2d 1573, 1581 (Fed.Cir. 1983).

133. *See z4 Techs., Inc.*, 434 F. Supp. 2d at 440; *Paice LLC v. Toyota Motor Corp.*, 2006 WL 2385139, at *4 (E.D. Tex. 2006).

requiring her to establish how the use of a single component in the multi-component product would cause irreparable harm to the entire business operation.

Asking trial courts to analyze the structure of a patent can prove to be in accordance with the test laid out in *eBay*, as well as Justice Kennedy's concurrence and the current practice exercised by trial court judges. It might appear that this is an emergence of two separate doctrines for each industry, but analyzing patent infringement suits in this way does not separate the two industries from one another; rather, this approach addresses the concerns mentioned in each side's amicus brief. Because these concerns centered on the structure of the patent as single or multi component, it would be consistent with *eBay* for trial courts to adjudicate the first factor depending on the structure of the patent and the nature of the patent holder. This also allows for solving the problem of patent trolls without unduly burdening those who would suffer an irreparable harm. If a non-practicing entity brings a patent infringement suit, and its business practices are that of a patent troll, an automatic burden in demonstrating irreparable harm would suffice. Shifting the burden of the first factor, depending on the nature of the patent and the nature of the entity that holds the patent, would not only meet the needs of each industry, it would also manage the problem of those who solely license and therefore do not contribute to the public interest.

VII. Conclusion

In *eBay*, the Court essentially reaffirmed the traditional standards of governing injunctive relief. Granting an order to completely stop any type of activity was deemed to be an extraordinary remedy since its effects may be difficult to undo. The main fear articulated in the amicus curiae briefs were that the patent system would fail the innovation that these leading industries provide. It is clear from the opinion that the balancing called for is not to negate one industry's practice, but to stop any activity that does not further the goals of the patent system. Narrowing other forms of remedy to maintain the exclusionary right of the patent act, the Court stressed the need for trial courts to analyze the balance of hardships and for there to be a stronger showing of hardships in favor of the patent owner so that injunctive relief is necessary to rectify an injury that is irreparable and uncompensable by money damages alone.

Because it is a fairly recent opinion, *eBay* is still being interpreted by courts in different ways. Although trends in application have developed in the trial courts, including evaluation of the relevant head-to-head market competition and whether the inventor practices their patents, a different utility of the first factor might lead to a better result that addresses the concerns of both industries.

Additionally, continuing the grant of permanent injunctions after *eBay* demonstrates that all four factors can be evaluated in a way that brings about the most just result, be it an injunction or monetary compensation, which furthers the purpose of the patent system and compensates an inventor's right to exclusion.

The policy-oriented goal of *eBay* is the most important element of the entire analysis. It is understood from the opinion's entire focus on reevaluating the automatic permanent injunction and Justice Kennedy's concurrence that the need to halt the activity of patent trolls, be it in the software/IT field or the biotechnology/pharmaceutical field, is an absolute must. The factors of equity are articulated and called for in order for justice to be brought so that the patent system may continue to serve its original purpose of pure innovation. As stated previously, shifting the burden of the first factor, depending on the nature of the patent and the nature of the entity that holds the patent, would be a means to the goal of *eBay*: maintaining a fair patent system. It would not only meet the needs of each industry, but also manage the problem of those who solely license and therefore do not contribute to the public interest.

It is only through a cohesive system that rewards inventors and true novel ideas, instead of schematic and halting licensing, that the public will be served and innovation will continue to flourish.