

RETOOLING PATENTS: CURRENT PROBLEMS,
 PROPOSED SOLUTIONS, AND ECONOMIC
 IMPLICATIONS FOR PATENT REFORM

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I. INTRODUCTION

The U.S. patent system is at a crossroads. Each year the number of patent applications received by the U.S. Patent and Trademark Office (“USPTO”) grows substantially,¹ with pendency time increasing accordingly.² Any gains the USPTO has seen in efficiency in recent years have been offset by the mushrooming number of claims it must process every year.³ The federal courts have likewise seen patent litigation increase at unprecedented rates in recent years.⁴ The myriad problems resulting from the backlog at the USPTO and the overwhelming volume of litigation have led to questions as to whether the patent system in place accurately reflects the needs of a modern information-based marketplace.⁵ A growing number of critics charge that the current regime allows for abuse by some patentees, often known as “trolls.”⁶ This in turn overburdens the

1. From 1997 to 2006, the number of patent applications filed increased by 87%. U.S. PATENT & TRADEMARK OFFICE, 2006 ACCOUNTABILITY REPORT at 20 (2006), available at <http://www.uspto.gov/web/offices/com/annual/2006/2006annualreport.pdf>.

2. The average pendency time for new patent applications has increased from 18.3 months in 2003 to 22.6 months in 2006. U.S. PATENT & TRADEMARK OFFICE, USPTO PERFORMANCE AND ACCOUNTABILITY REPORT FISCAL YEAR 2006, http://www.uspto.gov/web/offices/com/annual/2006/3020100_patentperfm.html.

3. The USPTO’s solution to the problem has been to increase hiring to unprecedented rates, which is admittedly unsustainable. According to the Office:

In fiscal years 2005 and 2006 more than 2,000 examiners were hired and the Patent organization plans to hire 1,200 examiners each year from FY 2007 through FY 2012. The redesigned training programs will improve new examiners’ initial skills, but optimum examiner efficiency is still a function of experience, and it will be several years before these new hires reach their full potential. Hiring and training alone will not solve the pendency problem—policy and operational changes are also required.

Id.

4. From 1982 to 2004, the total number of patent suits filed in U.S. district courts rose steadily each year from 811 (0.4% of all federal cases) to 3075 (1.1% of federal cases), with a slight drop to 2720 patent suits commenced in 2005. Patstats.org, All P-T-C, & All Civil Actions, 1970-2007, http://patstats.org/Historical_Filings_PatentSuits_OtherSuits.doc (last visited Apr. 12, 2008).

5. See, e.g., Alan Greenspan Remarks at the 2003 Financial Markets Conference of the Federal Reserve Bank of Atlanta, Sea Island, Georgia (via satellite): Market Economies and Rule of Law (Apr. 4, 2003), available at <http://www.federalreserve.gov/BoardDocs/speeches/2003/20030404/default.htm> (“If our objective is to maximize economic growth, are we striking the right balance in our protection of intellectual property rights? . . . How appropriate is our current system—developed for a world in which physical assets predominated—for an economy in which value increasingly is embodied in ideas rather than tangible capital?”).

6. *Patent Trolls: Fact or Fiction?: Hearing Before the Subcomm. on Cts., the Internet, & Intell. Prop. of the H. Comm. on the Judiciary*, 109th Cong. 1 (2006) (opening statement of Rep. Lamar Smith, Chairman, Subcomm. on Cts., the Internet, and Intell. Prop.) (“According to its critics, the troll is an individual who invents a patent[ed] product or process of suspect legal integrity or who acquires such a patent from a third party. The

federal courts,⁷ provides excessive damages for infringement,⁸ impedes innovation,⁹ and disadvantages American companies on the whole.¹⁰ Many experts and observers therefore see broad-based legislative reform as inevitable for repairing the most harmful systemic problems.¹¹

Support for various reform efforts has come from both sides of the congressional aisle,¹² and coalitions of academic and business interests are speaking up, both to promote and to dissuade certain proposed changes to patent law.¹³ Bills introduced during every congressional session since 2005 have proposed sweeping reform, which would carry long-term consequences for a range of American industries, most notably biotechnology and information technology.¹⁴ To complicate matters, the disparate business interests of these industries often result in conflicting ideals in terms of patent policy.¹⁵ Any significant changes to patent law will therefore involve tactful compromise and seemingly limitless weighing and forecasting of interests, both for domestic business and foreign trade policy.¹⁶

owner is characterized as someone who makes money by extorting a license from a manufacturer who allegedly has infringed the patent.”).

7. See Patstats.org, All P-T-C, & All Civil Actions, 1970-2007, http://patstats.org/Historical_Filings_PatentSuits_OtherSuits.rev2doc (last visited Apr. 12, 2008); see generally *Amendment in the Nature of a Substitute to H.R. 2795, the “Patent Act of 2005”*: *Hearing Before the Subcomm. on Cts., the Internet, & Intell. Prop. of the H. Comm. on the Judiciary*, 109th Cong. 6-9 (2005) [hereinafter *Hearing on Amendment*] (statement of Emery Simon, Counsel, Business Software Alliance).

8. *Hearing on Amendment*, *supra* note 7, at 8 (statement of Emery Simon, Counsel, Business Software Alliance).

9. See KEITH E. MASKUS, COUNCIL ON FOREIGN RELATIONS, REFORMING U.S. PATENT POLICY: GETTING THE INCENTIVES RIGHT, CSR No. 19, at 15-16 (2006), <http://www.cfr.org/content/publications/attachments/PatentCSR.pdf>.

10. See Brief for Computer & Comm’ns Indus. Ass’n. as Amicus Curiae Supporting Petitioner, *KSR Int’l Co. v. Teleflex, Inc.*, 127 S. Ct. 1727 (Aug. 22, 2006) (No. 04-1350) [hereinafter Brief for CCIA], 2006 WL 2452364 at *1.

11. See generally FEDERAL TRADE COMMISSION, TO PROMOTE INNOVATION: THE PROPER BALANCE OF COMPETITION AND PATENT LAW AND POLICY, ch. 5, at 23-24 (Oct. 2003) [hereinafter TO PROMOTE INNOVATION] (recommending legislation establishing post-grant reviews); see also Sarah Lai Stirland, *U.S. Patent Reform: Could 2007 Be The Year?*, INTELL. PROP. WATCH, Sept. 25, 2006, <http://ip-watch.org/weblog/wp-trackback.php?p=405>.

12. The Patent Reform Act of 2006 was introduced by Orrin Hatch (R-Utah) and co-sponsored by Patrick Leahy (D-Vt.). See Patent Reform Act of 2006, S. 3818, 109th Cong. (2006). Similarly, the Patent Reform Act of 2005 was a bipartisan effort. See Patent Reform Act of 2005, H.R. 2795, 109th Cong. (2005).

13. See generally *Hearing on Amendment*, *supra* note 7, at 4-41.

14. See *id.* at 2.

15. See TO PROMOTE INNOVATION, *supra* note 11, ch. 3, at 30, 44-45; see also discussion *infra* Part V.B.

16. With ever-increasing levels of free trade, and the international reach of many American technology companies, much patent reform discussion in recent years has

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Parts II and III of this Comment contextualize the patent system within the U.S. economy. Part IV discusses the importance of selected cases recently before the Supreme Court, highlighting the particular issues that each case has exposed. Part V addresses patent quality, a central issue in much of the reform debate. Part VI discusses legislative changes that have been proposed, with an analysis of the various responses that stemmed from Congress' reform efforts. This Comment concludes that, while strong patent protection is indeed essential to the functioning of many businesses, the protections which currently benefit certain industries are overbroad to the point of impeding progress in others. Accordingly, Congress must consider the interests of all parties in order to implement effective reform which accurately reflects the realities of a modern economy.

II. PATENT POLICY AND COMPETITION IN THE U.S. ECONOMY

The federal courts have identified three primary purposes of the patent system: to promote and reward invention, to provide disclosure of innovation in the arts for further advancement upon expiration or license of the patent, and to assure that innovations remain in the public domain for public benefit and common knowledge.¹⁷ The individual value of a patent, as in all intellectual property rights, is often referred to as the "right of exclusion."¹⁸ That is, maintenance of the inventor's rights to protect¹⁹ his or her own innovations is central to patent law policy. Further, because of the inherent public benefit of

centered on harmonization of patent policy with that of other major industrial countries. See, e.g., Gerald J. Mossinghoff & Vivian S. Ku, *World Patent System Circa 20XX, A.D.*, 38 *IDEA* 529, 534 (1998).

17. See *Kewanee Oil Co. v. Bicron Corp.*, 416 U.S. 470, 480-81 (1974).

18. *Id.* at 477-78.

19. The nature of patent ownership has also been described as "negative," that is, encompassing the privilege to exclude, but not necessarily the right to exploit one's own patented invention. For example, if a patent is an improvement on a previously patented technology, the patentee may have a valid claim on excluding others from using his innovation, but may not himself be allowed to use, manufacture, or otherwise exploit his own invention without license from the owner of the patent on which his invention was based. See *St. Regis Paper Co. v. Winchester Carton Corp.*, 410 F. Supp. 1304 (D. Mass. 1976) (citing *Temco Elec. Motor Co. v. Apco Mfg. Co.*, 275 U.S. 319 (1928)); see also JOHN GLADSTONE MILLS III, DONALD C. REILEY III, AND ROBERT C. HIGHLEY, *PATENT LAW FUNDAMENTALS* § 1.10 ("Rights conferred by letters patent are negative rights. A consequence of securing to inventors . . . the right to *prevent others* from exercising like privileges without the consent of the patentee.") (emphasis in original).

technological advancement, optimizing the incentives to develop and invent is of utmost importance to the USPTO.²⁰

Patent law works hand-in-hand with antitrust law to provide a crucial balance between market security for innovators and competition among firms.²¹ Ideally, this relationship is symbiotic, protecting business interests while benefiting consumers.²² In practice, however, conflicts often arise between antitrust and patent law. One reason is the difference in goals between the two regimes: while relative market power is central to antitrust law, an innovation's "likely competitive significance" is not taken into account for purposes of patentability.²³ Therefore, when issues of questionable patentability arise, the effects often translate into problems for the market.²⁴ Recognizing the situation's potential economic precariousness, the Supreme Court has held that patent protection is limited

20. The USPTO's self-described mission, until recently, was "to help customers get patents." U.S. PATENT & TRADEMARK OFFICE, CORPORATE PLAN 2001, at 23, *available at* <http://www.uspto.gov/web/offices/com/corpplan/pt04.pdf>. This has since been broadened to "ensur[ing] that the Intellectual Property system contributes to a strong global economy, encourag[ing] investment in innovation, and foster[ing] entrepreneurial spirit." U.S. Patent & Trademark Office, Mission and Organization of the USPTO, (last visited Apr. 12, 2008). The USPTO's future plans look to be even more holistic in scope: The draft mission statement states that the purpose is "To foster innovation and competitiveness by: [p]roviding high quality and timely examination of patent and trademark applications, [g]uiding domestic and international intellectual property policy, and [d]elivering intellectual property information and education worldwide," with the "strategic goals" of "optimiz[ing] patent quality and timeliness," while "improv[ing] intellectual property protection and enforcement domestically and abroad." U.S. Patent & Trademark Office, Draft Strategic Plan 2007-2012, http://www.uspto.gov/web/offices/com/strat2007/stratplan2007-2012_04.htm.

21. *See* Atari Games Corp. v. Nintendo of Am., Inc., 897 F.2d 1572, 1576 (Fed. Cir. 1990). The degree to which innovation follows from high levels of market competition, rather than concentration, is largely unknown, however. The well-known yet controversial Schumpeterian Hypothesis posits that large firms in less competitive markets contribute more to innovation than do smaller firms in more competitive markets. TO PROMOTE INNOVATION, *supra* note 11, ch. 2, at 12-15 (summarizing several studies and expert statements collected at FTC hearings regarding JOSEPH SCHUMPETER, CAPITALISM, SOCIALISM AND DEMOCRACY (1942)). This hypothesis rests on the assumption that the economies of scale on which larger firms operate promote research and development at lowered cost. *Id.* at 12-13. This puts smaller firms at a competitive disadvantage, and their research and development efforts are therefore less effective. *Id.* at 13. While economists are split on the overall applicability of the Schumpeterian Hypothesis, it is generally agreed that it probably holds true for at least certain industries and under certain conditions. *See id.* at 14.

22. Timothy J. Muris, Former-Chairman, Federal Trade Commission, Remarks at the American Bar Association Antitrust Section, Fall Forum 2: Competition and Intellectual Property Policy: The Way Ahead, (Nov. 15, 2001), <http://www.ftc.gov/speeches/muris/intellectual.htm> (stating that "properly understood, IP law and antitrust law both seek to promote innovation and enhance consumer welfare."); *see also* ROBERT L. HARMON, PATENTS AND THE FEDERAL CIRCUIT § 1.2, at 12 (5th ed. 2001).

23. TO PROMOTE INNOVATION, *supra* note 11, ch. 1, at 12.

24. *See id.* ch. 5, at 2-3.

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entirely to the purview of federal law, and that states may not offer additional protections that effectively expand these rights.²⁵

III. PATENTS GENERALLY

The Constitution grants Congress the power “[t]o 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.”²⁶ Currently, patent rights, limitations and enforcement procedures are set out by statute, collectively known as the Patent Act of 1952.²⁷

The three general requirements for patentability are novelty, utility and non-obviousness.²⁸ Section 101 of Title 35 broadly grants the patent right to anyone who “invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof.”²⁹ Section 102 limits this broad grant, excluding entitlement to a patent in certain cases of prior use, manufacture, literature about, or knowledge of, the claimed invention in this country and in some cases a foreign country.³⁰

Section 103(a) provides that an invention is not patentable unless, based on the prior art, the claimed innovation would not have been obvious “at the time the invention was made to a person having ordinary skill in the art.”³¹ The Supreme Court interpreted § 103 in *Graham v. John Deere Co.*, in which it provided three factors to consider in determining obviousness: 1) “the scope and content of the prior art,” 2) the “differences between the prior art and the claims at issue,” and 3) “the level of skill in the art.”³² The Court further provided that “secondary

25. *Bonito Boats, Inc. v. Thunder Craft Boats, Inc.*, 489 U.S. 141, 151-52 (1989).

26. U.S. CONST. art. I, § 8, cl. 8.

27. Patent Act of 1952, Pub. L. No. 82-593, 66 Stat. 792 (codified as amended at 35 U.S.C. (2000)).

28. See 35 U.S.C. §§ 101-103; see also *Graham v. John Deere Co.*, 383 U.S. 1, 12 (1966). The nonobviousness requirement is also referred to as an “inventive step.” See, e.g., MASKUS, *supra* note 9, at 9.

29. 35 U.S.C. § 101.

30. See *id.* § 102.

31. *Id.* § 103(a); see also *Graham*, 383 U.S. at 13-14. This standard is sometimes referred to as the “PHOSITA.” See, e.g., Jessica Silbey, *The Mythical Beginnings of Intellectual Property*, 15 GEO. MASON L. REV. 319, 319 (2008).

32. *Graham*, 383 U.S. at 17; see also Examination Guidelines for Determining Obviousness Under 35 U.S.C. 103 in View of the Supreme Court Decision in *KSR Int’l Co. v. Teleflex Inc.*, 72 Fed. Reg. 57,526, 57,527 (Oct. 10, 2007) [hereinafter Examination Guidelines], reprinted in U.S. PATENT & TRADEMARK OFFICE, MANUAL OF PATENT EXAMINING PROCEDURE § 2141 (2007), available at http://www.uspto.gov/web/offices/pac/mpep/mpep_efr6_2100.pdf.

considerations,” such as “commercial success, long felt but unsolved needs, failure of others, etc.,” should be taken into account in ruling on obviousness.³³ Courts have employed and characterized these secondary considerations through the years, with the purported benefits of helping to avoid the pitfall of seeing inventions as obvious in hindsight,³⁴ and providing context to the time and place of invention.³⁵ Secondary considerations have recently met harsh criticism, as some have alleged that they invite courts and the USPTO to be too permissive in upholding questionable patents.³⁶

IV. RECENT ADJUDICATION OF PATENT CASES IN THE SUPREME COURT

Prior to the establishment of the Court of Appeals for the Federal Circuit in 1982,³⁷ the Supreme Court heard a modest number of cases on patentability.³⁸ But from 1982 to 2004, the Court accepted very few patent cases.³⁹ Over the last two years, however, the Supreme Court has shown renewed interest in patent cases relative to that of its previous several terms.⁴⁰ Perhaps due to rumors of obsolescence in the patent system,⁴¹

33. *Graham*, 383 U.S. at 17-18.

34. Many have noted that hindsight carries the risk of “declaring true inventions merely unpatentable combinations of old elements.” Brief for Amicus Curiae Bar Ass’n of the Dist. of Columbia – Patent, Trademark & Copyright Section in Support of Neither Party at 5, *KSR Int’l Co. v. Teleflex, Inc.*, 127 S. Ct. 1727 (Apr. 30, 2007) (No. 04-1350). Indeed “virtually all [inventions] are combinations of old elements.” *Id.* at 5-6. (quoting *Env’tl. Designs, Ltd. v. Union Oil Co.*, 713 F.2d 693, 698 (Fed. Cir. 1983)).

35. *See id.* at 7.

36. *See* discussion *infra* Part V.B.

37. About the Court, <http://www.cafc.uscourts.gov/about.html> (last visited Feb. 11, 2008) (giving history and purpose of U.S. Court of Appeals for the Federal Circuit).

38. Between 1972 and 1982 the Supreme Court heard eight cases affecting substantive patent law, whereas between 1983 and 1993 the Court heard three. Donald S. Chisum, *The Supreme Court and Patent Law: Does Shallow Reasoning Lead to Thin Law?*, 3 MARQ. INTELL. PROP. L. REV. 1, 23-24 (1999); *see also* Mark D. Janis, *Patent Law in the Age of the Invisible Supreme Court*, 2001 U. ILL. L. REV. 387 (2001); Rebecca S. Eisenberg, *The Supreme Court and the Federal Circuit: Visitation and Custody of Patent Law*, 106 MICH. L. REV. FIRST IMPRESSIONS 28 (2007), available at <http://www.michiganlawreview.org/firstimpressions/vol106/eisenberg.pdf>.

39. *Cf.* Chisum, *supra* note 38, at 2 (“Since the creation of the Federal Circuit in 1982, we have all said that the Federal Circuit is the Supreme Court of patent law because they have virtually exclusive appellate jurisdiction over patent matters. Consequently, there is no point in thinking about the Supreme Court. This may be beginning to change.”).

40. From 2000 to 2004, the Court granted certiorari to a total of only three cases involving patents. For the 2005 and 2006 terms, the Court accepted seven patent cases. *See Oyez: U.S. Supreme Court Media*, <http://oyez.org/cases/?group=2000-2009>.

41. *See, e.g.*, ADAM B. JAFFE & JOSH LERNER, INNOVATION AND ITS DISCONTENTS: HOW OUR BROKEN PATENT SYSTEM IS ENDANGERING INNOVATION AND PROGRESS, AND

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the Court accepted three patent cases for the 2005 term.⁴² Its first decision, *Illinois Tool Works v. Independent Ink*, overturned older precedent to the effect that a patent confers a presumption of market power in the patent owner.⁴³ The Court's holding affects tying arrangements⁴⁴ between patentees and licensees.⁴⁵ While not per se unlawful, these arrangements may now be proven illegal if the licensee can demonstrate that the patentee has power in the relevant market.⁴⁶

The Court's highest-profile patent case for the 2005 term was *eBay v. MercExchange*, in which it ruled on the availability of permanent injunctions in patent infringement suits, offering more thorough criteria for issuing injunctions based on infringement.⁴⁷ The Court's holding requires stricter scrutiny in awarding injunctions for infringement suits, likely preventing

WHAT TO DO ABOUT IT (Princeton Univ. Press 2004) (dissecting and critiquing the patent system, ultimately recommending broad changes).

42. See Oyez: U.S. Supreme Court Media, *supra* note 40.

43. *Ill. Tool Works Inc. v. Indep. Ink, Inc.*, 547 U.S. 28, 30 (2006) (discussing and rejecting as an antiquated long-held doctrine — repeated in such cases as *Jefferson Parish Hosp. Dist. No. 2 v. Hyde*, 466 U.S. 2, 16 (1984) — that “it is fair to presume that the inability to buy [a patented] product [from anyone but the patentee] gives the seller market power.”).

44. Tying arrangements in the patent context are a form of licensing of patent rights in which the patentee conditions the license of patented materials on a licensee's agreement to purchase non-patented goods from the patentee. BLACK'S LAW DICTIONARY 1557 (8th ed. 2004).

45. These were previously deemed monopolistic and unnecessary to legitimate business purposes. *Standard Oil Co. v. United States*, 337 U.S. 293, 305-06 (1949). The Court has since backed off from this position and consistently held that such arrangements are not antitrust violations per se. *U.S. Steel Corp. v. Fortner Enters., Inc.*, 429 U.S. 610, 620-22 (1977); see also *Jefferson Parish Hosp.*, 466 U.S. at 14-16.

46. *Ill. Tool Works*, 547 U.S. at 44-46.

47. *eBay, Inc. v. MercExchange, L.L.C.*, 547 U.S. 388, 391 (2006). The Court rejected a Federal Circuit ruling that would have automatically granted an injunction following the finding that a patent had been infringed. *Id.* at 392-93. The Federal Circuit had applied its own precedent that a “permanent injunction will issue once infringement and validity have been adjudged.” *MercExchange, L.L.C. v. eBay, Inc.*, 401 F.3d 1323, 1338 (Fed. Cir. 2005) (citing *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1246-47 (Fed. Cir. 1989)). But rather than presuming irreparable harm to an aggrieved patent holder, the Court construed the ambiguous “principles of equity,” as required under 35 U.S.C. § 283 differently. *eBay, Inc.*, 547 U.S. at 391. According to the Court, “well-established principles of equity” dictated that the familiar four-factor test for an injunction also applied in patent infringement cases. *Id.* This test considers whether the plaintiff has demonstrated:

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

Id. The holding also represents a significant grant of authority to the district courts, which will now apply this test to make the determination of whether to enjoin in infringement cases, which is a decision reviewable only for abuse of discretion. *Id.*

the proliferation of such large-scale commercial disruptions as almost occurred recently in *NTP, Inc. v. Research in Motion, Ltd.*,⁴⁸ in which the manufacturer of BlackBerry devices narrowly avoided an interruption of its services by permanent injunction from an infringement action.⁴⁹ A third 2005 patent case was scheduled to be argued, but the writ of certiorari was later dismissed as improvidently granted.⁵⁰

For its October, 2006 term, the Supreme Court accepted three cases on patent law,⁵¹ two of which are discussed below. Each addressed issues of vital importance to not only the patent system, but to the industries involved in the cases, and ultimately to the U.S. economy at large.

A. *A revised standard for obviousness: KSR v. Teleflex*

Under 35 U.S.C. § 103, a patent is invalid “if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.”⁵² However, the standard for obviousness has recently come into question, with calls that the Court update its standards for clarity and reflect current realities in the market.⁵³

The issue was presented to the Supreme Court in *KSR International Co. v. Teleflex, Inc.*,⁵⁴ with the promise of answering whether the courts were operating under a workable inquiry for obviousness. In that case, Teleflex claimed that KSR manufactured adjustable gas pedal assemblies, which infringed on its patent.⁵⁵ The district court granted summary judgment⁵⁶ in favor of defendant KSR after holding Teleflex’s patent invalid

48. *NTP, Inc. v. Research in Motion, Ltd.*, 418 F.3d 1282 (Fed. Cir. 2005).

49. *Id.* at 1325-26. After finding that the district court had improperly deemed plaintiff NTP’s claims to be infringement, the Federal Circuit vacated the district court’s injunction order. It did not, however, criticize the district court’s method for arriving at injunction as a proper remedy. *Id.*

50. *Lab. Corp. of Am. Holdings v. Metabolite Labs, Inc.*, 126 S. Ct. 2976 (2006).

51. See Supreme Court of the United States Granted and Noted List, Oct. Term 2006, <http://www.supremecourtus.gov/orders/06grantednotedlist.html> (listing all Supreme Court cases for the Oct. 2006 term) (last visited Mar. 14, 2008).

52. 35 U.S.C. § 103(a) (2000).

53. See, e.g., Editorial, *Patent System Veers Off Track: High Court Should Return Common Sense to System*, SAN JOSE MERCURY NEWS, Dec. 4, 2006, at A1, available at 2006 WLNR 20885521.

54. 127 S. Ct. 1727 (2007).

55. Brief for Petitioner, *KSR Int’l Co. v. Teleflex, Inc.*, 127 S. Ct. 1727 (2007) (No. 04-1350), 2006 WL 2515631.

56. See *Teleflex, Inc. v. KSR Int’l Co.*, 298 F. Supp. 2d 581, 596 (E.D. Mich. 2003).

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due to obviousness under § 103(a).⁵⁷ The Federal Circuit reversed,⁵⁸ and the Supreme Court granted KSR's cert. petition.⁵⁹

In its brief, KSR claimed that the Federal Circuit had misapplied its long-employed teaching-suggestion-motivation (TSM) test.⁶⁰ Viewed by some as unduly lenient towards patentability, the TSM test effectively presumes validity of a challenged patent,⁶¹ unless it is shown that some "suggestion, teaching, or motivation' . . . would have led a person [having] ordinary skill in the art ["PHOSITA"] to combine the relevant prior art teachings in the manner claimed."⁶² Application of the test results in a relatively high rate of validation, and, critics charge, the frequent approval of questionable patents which the USPTO should have deemed obvious from the start.⁶³ Underlining the high stakes of the contentious issue at hand, numerous academic, professional, and industry groups filed amicus briefs in support of each side.⁶⁴

The Court agreed with KSR that the patent claim in question represented no more than "a design step well within the grasp of a person of ordinary skill in the relevant art" and that the benefit of doing so would be obvious.⁶⁵ In clarification, the Court added that "[a] court must ask whether the improvement is more than the predictable use of prior art elements according to their established functions."⁶⁶

57. 35 U.S.C. § 103(a) (stating that "[a] patent may not be obtained . . . if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.").

58. See *Teleflex, Inc. v. KSR Int'l Co.*, 119 Fed. App'x 282, 288 (Fed. Cir. 2005) (reversing on the grounds that "the district court's analysis applied an incomplete teaching-suggestion-motivation test in granting KSR summary judgment.").

59. *KSR Int'l Co. v. Teleflex, Inc.*, 127 S. Ct. 1727, 1735 (2007).

60. See *id.* at 1734-35.

61. See *Teleflex, Inc.*, 119 F. App'x at 285 (discussing the presumed validity of patents in the context obviousness standards, including TSM).

62. *Id.* For further rationale supporting the teaching-suggestion-motivation analysis, see *Alza Corp. v. Mylan Labs., Inc.*, 464 F.3d 1286, 1290-91 (Fed. Cir. 2006).

63. See ANN MILLS & PATTI TERESKERZ, BIOTECHNOLOGY INDUS. ORG., PROPOSED PATENT REFORM LEGISLATION: LIMITATIONS OF EMPIRICAL DATA USED TO INFORM THE PUBLIC POLICY DEBATE 14 (2008), http://bio.org/ip/domestic/UVA_Limitations_of_Empirical_Data.pdf.

64. See, e.g., Brief for CCIA, *supra* note 10, at 21; Brief of Intell. Prop. Law Professors as Amici Curiae in Support of Petitioner at 28, *KSR Int'l Co.*, 127 S. Ct. 1727 (No. 04-1350), 2006 WL 2452369; Brief of Biotech. Indus. Org. ("BIO") as Amicus Curiae in Support of Respondents at 30, *KSR Int'l Co.*, 127 S. Ct. 1727 (No. 04-1350), 2006 WL 2983166.

65. *KSR Int'l Co.*, 127 S.Ct. at 1746.

66. *Id.* at 1740.

Therefore, the Court stated, the Federal Circuit's application of the TSM test was needlessly limiting; it did not allow for consideration of prior art other than that related to the particular problem that the inventor was trying to solve at the time. Accordingly, the Court advised that when determining whether a teaching, suggestion, or motivation existed that would have rendered the invention obvious, "the analysis need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ."⁶⁷

But the Court stopped just short of throwing out the Federal Circuit's standard entirely, stating that "[t]here is no necessary inconsistency between the idea underlying the TSM test and the *Graham* analysis," the test the Court had initially laid out for assessing obviousness.⁶⁸ The error of the Federal Circuit, the high Court explained, was in "transform[ing] the general principle into a rigid rule that limits the obviousness inquiry."⁶⁹ The Court offered that, as long as the TSM test is not applied as a "rigid and mandatory" formula, it can still provide "helpful insights" to an obviousness inquiry without being "incompatible with [Supreme Court] precedents."⁷⁰

The Court first found that the proper inquiry was broader than the Federal Circuit had allowed: "[u]nder the correct analysis, any need or problem known in the field of endeavor at the time of invention and addressed by the patent can provide a reason for combining the elements in the manner claimed."⁷¹ Second, the court below had incorrectly assumed that an inventor would be led "only to those elements of prior art designed to solve the same problem" she was trying to solve.⁷² In the real world, the Court argued, "familiar items may have obvious uses beyond their primary purposes, and in many cases a person of ordinary skill will be able to fit the teachings of multiple patents together like pieces of a puzzle."⁷³ Therefore, someone trying to invent the patented invention at issue would not have ignored prior art just because it applied to a slightly different problem, as "[a] person of ordinary skill is also a person of ordinary creativity, not an

67. *Id.* at 1741.

68. *KSR Int'l Co.*, 127 S. Ct. at 1741.

69. *Id.*

70. *Id.*

71. *Id.* at 1742.

72. *Id.*

73. *Id.*

automaton.”⁷⁴ Finally, the Court found that the Federal Circuit had acted too cautiously to prevent the acknowledged evil of hindsight bias; however, the Court admonished, “[r]igid preventative rules that deny factfinders recourse to common sense . . . are neither necessary under our case law nor consistent with it.”⁷⁵

How will a post-*KSR* world look? While it is still too early to give a definitive answer, the change will likely be subtle, and any analysis will depend on the significance one gives to obviousness determinations. The American Bar Association (“ABA”) had offered its opinion in *KSR* as amicus curiae on behalf of Teleflex, expressing great apprehension that any significant change in this part of the law could be tumultuous, both for the courts and for the USPTO.⁷⁶ The ABA cautioned against removing the TSM test, which, it claimed, provides a flexible standard that brings predictability in obviousness determinations.⁷⁷ According to the ABA, removing this objectivity from the inquiry could overburden the USPTO, which would be left with little guidance on making obviousness determinations, and the courts would receive an overwhelming flood of appeals from decisions based on the previous standard.⁷⁸ Furthermore, transaction costs and litigation would skyrocket, as parties would not know what to expect from the courts.⁷⁹

But the Court managed to strike a balance in *KSR*: instead of throwing out the standard, the justices merely adjusted it, clarifying the scope of § 103.⁸⁰ Contrary to the fears of the ABA, within six months of the holding, the USPTO had adjusted its practices accordingly, issuing revised examination guidelines to coincide with *KSR*,⁸¹ and the USPTO’s Board of Patent Appeals and Interferences had already disposed of many cases citing *KSR*.⁸² The Court’s continued reliance on the general framework of the TSM test, even if now somewhat broader and more flexible, should allow for ongoing stability in courts applying the new

74. *Id.*

75. *Id.* at 1742-43.

76. See Brief for American Bar Ass’n as Amicus Curiae Supporting Respondents at 3, *KSR Int’l Co.*, 127 S. Ct. 1727 (No. 04-1350), 2006 WL 2967757 [hereinafter ABA Brief].

77. See *id.* at 3-10.

78. *Id.* at 8-9.

79. *Id.*

80. See *KSR*, 127 S. Ct. at 1740.

81. See Examination Guidelines, *supra* note 32.

82. See Joseph Miller, *The Nonobviousness Standard* (May 3, 2007), <http://www.thefireofgenius.com/the-nonobviousness-standard> (last visited Apr. 12, 2008). The Board hears appeals by patent applicants of adverse decisions of examiners. 35 U.S.C. § 6(b) (2000).

standard. Finally, the courts will, more likely than not, see a decline in litigation if more cases are dismissed on summary judgment—as was the case with the patent at issue in *KSR*⁸³—rather than proceeding through costly protracted litigation.⁸⁴ That said, patent disputes that end by adjudication (as opposed to settlement by parties) represent a relatively small number of all cases,⁸⁵ and, of those that conclude by adjudication, a relatively small proportion of those carry obviousness as an issue.⁸⁶ The results of *KSR* will likely vary among industries, and some commentators are already speculating as to which areas will be affected the most.⁸⁷ Furthermore, the magnitude of *KSR*'s eventual reach is still uncertain, as many of its long-term effects could continue to unfold over the course of several years. However, the net effects of *KSR*, like any single holding—even if later seen as a turning point for the courts on a significant issue—may never be measurable to any degree of accuracy.⁸⁸

83. *Teleflex Inc. v. KSR Int'l Co.*, 298 F. Supp. 2d 581, 596 (E.D. Mich. 2003).

84. A few statistics are worth noting here, to provide some context. First, calendar year 2006 through the first quarter of 2007 saw a relatively higher proportion of obviousness decisions in favor of the alleged infringer (34 out of 75 cases, about 45%), when compared to cases concluded from 2000 to 2005 (100 out of 269, or 37% in favor of alleged infringer). Patstats.org, U.S. Patent Litigation Statistics, <http://www.patstats.org/patstats2.html> (last visited Apr. 12, 2008). For 2000 through 2005, the summary judgment rates for obviousness (51 out of 269, or about 19% of adjudications) were relatively low compared to summary judgments in all patent cases for years 2004 and 2005 (which came to 317 of 647, or about 49% of all adjudications). *Id.* So after *KSR*, it will be interesting to see whether 1) a higher proportion of total cases are decided on obviousness grounds, and for which party, and 2) whether more of these cases are disposed on summary judgment. This is not to mention the possible changes in rejection rates at the application stage.

85. Adjudications represented 314 out of 2231, or 14%, of all cases that concluded in 2005. Patstats.org, Historical Disposition Modes for Patent Cases, http://www.patstats.org/Historical_Disposition_Modes_for_Patent_Cases.rev2.doc (last visited Apr. 12, 2008).

86. Forty, or 12.7%, of the 314 cases adjudicated in 2005 involved claims of obviousness under § 103. Patstats.org, Decisions for 2005, <http://www.patstats.org/2005rev2.htm>.

87. *See A Panel Discussion on Obviousness in Patent Litigation: KSR v. Teleflex*, 6 J. MARSHALL REV. INTELL. PROP. L. 595, 600 (2007) (comments of Prof. David L. Schwartz) (“Industries that use mechanical inventions or computer science inventions are going to be hit harder by this, and it is going to be harder for companies in those industries to obtain patents and to protect their patents that already issued. However, in the life science and pharmaceuticals industries, which concern technologies known as “unpredictable arts,” I think that the impact generally is going to be less.”).

88. But thus far, it appears as though patentees have been placed at a significant disadvantage: since around the time *KSR* was decided (for the last three quarters of 2007), the alleged infringer won in 50 out of 76 cases, almost 66% of all decisions. See Patstats.org, 2Q 2007 Report, <http://www.patstats.org/2Q07%20posting.htm> (last visited Apr. 12, 2008); Patstats.org, 3Q 2007 Report, <http://www.patstats.org/3Q07%20posting.htm> (last visited Apr. 12, 2008); Patstats.org, 4Q 2007 Report, <http://www.patstats.org/4Q07%20posting.htm> (last visited Apr. 12, 2008).

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B. *Exporting Components Under § 271(f): Microsoft v. AT&T*

A second noteworthy development in the Supreme Court in 2007 centered on an obscure yet potentially important provision in patent law. Its seed was planted over thirty years ago when, in *Deepsouth Packing Co. v. Laitram Corp.*, the Supreme Court held that shipping components of a patented invention separately with the intent and instructions that they be reassembled overseas did not constitute infringement.⁸⁹ Recognizing the potential dangers this could represent to patentees, Congress eventually passed § 271(f), specifically deeming such action infringement.⁹⁰ While the *Deepsouth* holding could well become the law again, as a recent bill proposed repeal of § 271(f),⁹¹ the Supreme Court recently heard *Microsoft Corp. v. AT&T Corp.*,⁹² in which the effect of § 271(f) may have been weakened significantly.⁹³ *Microsoft* demonstrates at least one problem that has arisen as a result of modern technology and trade practice, and the Court's holding could influence any upcoming legislative reforms.⁹⁴

AT&T owned a patent on a method for encoding and compressing digital audio,⁹⁵ which Microsoft employed without license in its Windows operating system.⁹⁶ Microsoft's method of copying the software for use overseas is crafted to comply with § 271(f);⁹⁷ the firm typically creates a master version of the software in question in the United States and ships it overseas, where the master version is then copied and installed on third-

89. See *Deepsouth Packing Co. v. Laitram Corp.*, 406 U.S. 518, 529-30 (1972).

90. 35 U.S.C. § 271(f) (2000). This statute bans supplying components of a patented invention from the United States in such manner as to actively induce foreign combination of the components, if the action would constitute infringement if performed within the United States. *Id.* When it passed § 271(f), Congress emphasized its intention "to avoid encouraging manufacturing outside the United States." Patent Law Amendments of 1984, Pub. L. No. 98-622, 1984 U.S.C.C.A.N. (98 Stat. 3383) 5827.

91. Patent Act of 2006, S. 3818, 109th Cong. § 273 (2006); see also discussion *infra* Part VI.C.

92. *Microsoft Corp v. AT&T Corp.*, 127 S. Ct. 1746 (2007).

93. See Shane Brunner, *Supreme Court Limits Foreign Reach of U.S. Patents*, WISCONSIN TECHNOLOGY NETWORK, May 16, 2007, http://wistechology.com/article.php?id=3928#Scene_1.

94. See Kirkland & Ellis, LLP, *Microsoft Corp. v. AT&T Corp.—The Supreme Court Clarifies the Reach of 35 U.S.C. § 271(f)*, May 16, 2007, <http://www.kirkland.com/siteFiles/Publications/C5AB770689767D2C1A0F3230AF39E148.pdf>.

95. U.S. Reissue Patent No. 32,580 (issued Jan. 19, 1988).

96. *Microsoft v. AT&T*, 127 S. Ct. at 1750-51.

97. Section 271(f)(1) provides that a company is liable for infringement if it "supplies . . . from the United States . . . components of a patented invention . . . in such manner as to actively induce the combination of such components . . ."

party hardware.⁹⁸ The parties agreed that if the end users did this in the United States, it would constitute infringement under § 271(a),⁹⁹ but Microsoft contended that since doing so in Europe would not implicate the U.S. patent, its distribution of the software there was legal under § 271(f).¹⁰⁰ Microsoft added that the software code itself is intangible, and therefore not a “component” of AT&T’s patented invention.¹⁰¹ Further, Microsoft argued, the contested act did not infringe on AT&T’s patent because the company did not technically *supply* software when the machines which actually go to market contain copies of Windows installed from a disc created overseas.¹⁰²

The Federal Circuit majority held in favor of AT&T,¹⁰³ but the dissent agreed with Microsoft’s position on the issue of copying components overseas, and would have held that merely duplicating software outside the U.S. for use overseas falls beyond U.S. jurisdiction.¹⁰⁴ According to the lone dissenter, Judge Rader, the majority had conflated copying code with supplying parts, and Microsoft could not be held liable under U.S. patent law.¹⁰⁵

In its amicus brief for the United States, the Solicitor General’s Office also favored Microsoft’s position.¹⁰⁶ Articulating the economic impetus for construing § 271(f) so as to permit Microsoft’s actions in this case, the Solicitor General stated that any expansion of § 271(f) would overreach U.S. patent law, and would put many U.S. companies at a competitive disadvantage abroad, by placing U.S. patents in their way, while the same U.S. patents would not be an obstacle to foreign software producers

98. Petition for Writ of Certiorari at 6-7, *Microsoft*, 127 S. Ct. 1764 (No. 05-1056), 2005 WL 835463.

99. Brief of Plaintiff-Appellee at 1-2, *AT&T Corp. v. Microsoft Corp.*, 414 F.3d 1366 (Fed. Cir. 2004) (No. 04-1285), 2004 WL 4990676.

100. Brief of Petitioner at 11-13, *Microsoft*, 127 S. Ct. 1746 (No. 05-1056), 2006 WL 2515631.

101. *AT&T Corp.*, 414 F.3d at 1366. Although the Federal Circuit agreed with the district court’s holding that software code *is* patentable, *id.* at 1369, Microsoft said, “Section 271(f) plainly was not intended to prohibit the export of intangible items.” Petition for Writ of Certiorari, *supra* note 98, at 15 (citing *Union Carbide Chems. & Plastics Tech. Corp. v. Shell Oil Co.*, 434 F.3d 1357, 1358 (Fed. Cir. 2005) (Lourie, J., dissenting)).

102. Brief of Petitioner, *supra* note 100, at 19.

103. *AT&T Corp.*, 414 F.3d at 1372 (Rader, J., dissenting).

104. *Id.* at 1372-76.

105. *Id.*

106. Brief of United States as Amicus Curiae Supporting Petitioners at 7, *Microsoft Corp.*, 127 S. Ct. 1746 (No. 05-1056), 2006 WL 2453601.

who were not shipping master disks from the United States.¹⁰⁷ For purposes of § 271(f), the Solicitor claimed that sending one copy of an unlicensed patented program which is later duplicated is a qualitatively different act from sending an unlicensed copy that is itself installed on a computer and sold.¹⁰⁸ Foreign patent protection is therefore the only remedy for such extraterritorial actions.¹⁰⁹ Moreover, allowing § 271(f) to function in cases such as this could overburden American software firms, among other high-tech companies doing business overseas, which would consequently impede the progress of business and thus hinder innovation.¹¹⁰

Such business policy considerations led the Solicitor General to the conclusion that initiating such a broad reading of § 271(f) would likely provide an incentive to American companies to move their research and development (and concomitant master disk production) overseas, which certainly would frustrate the purpose of the law.¹¹¹ The case certainly posed a dilemma: while the “horror of extraterritoriality” looms,¹¹² certain patent protections could be rendered meaningless if firms could outsource their dirty work to overseas subsidiaries, as AT&T claimed was Microsoft’s practice.¹¹³

The Supreme Court, however, held in favor of Microsoft.¹¹⁴ Likening the software company’s ubiquitous Windows operating system to a mere “blueprint” until reduced to tangible form, the

107. *Id.* at 17-18 (“Congress must provide a ‘clear . . . indication of intent to extend the patent privilege’ abroad before the patent laws will be construed to govern extraterritorially.” (quoting *DeepSouth Packaging Co. v. Laitram Corp.*, 406 U.S. 518, 532 (1972))).

108. *Id.* at 13 (“As the Federal Circuit has explained in other contexts, ‘§ 271(f) is clear on its face. It applies only when components of a patent[ed] invention are *physically present* in the United States and then either sold or exported.’”) (quoting *Pelligrini v. Analog Devices, Inc.*, 375 F.3d 1113, 1117 (emphasis added), *cert. denied*, 543 U.S. 1003 (2004)).

109. Brief of United States as Amicus Curiae Supporting Petitioners, *supra* note 106, at 17.

110. *Id.* at 16. (quoting the Circuit dissent, “petitioner is subjected to open-ended liability in the United States ‘for products manufactured entirely abroad’”).

111. See generally David Wilson, *The Golden Master and the Horror of Extraterritoriality: The Sensational Saga of AT&T v. Microsoft and the Specter of Global Liability under 35 U.S.C. § 271(f)*, 7 HOUS. BUS. & TAX L. J. 424 (2007) (providing an excellent overview of the curious path the case took en route to the Supreme Court).

112. The Federal Circuit long ago coined the phrase “horror of extraterritoriality” as shorthand for the “horror of giving extraterritorial effect to United States patent protection.” *Paper Converting Mach. Co. v. Magna-Graphics Corp.*, 745 F.2d 11, 17 (Fed. Cir. 1984).

113. In the alternative, the companies wishing to protect their innovations outside the U.S. entirely could apply for patents in those other countries.

114. *Microsoft Corp. v. AT&T Corp.*, 127 S. Ct. 1746 (2007).

Court rejected AT&T's conception of software in the abstract as constituting a "component" under § 271(f):¹¹⁵ "Abstract software code is an idea without physical embodiment, and as such, it does not match § 271(f)'s categorization: 'components' amenable to 'combination.'"¹¹⁶

"Congress might have included within § 271(f)'s compass, for example, not only a patented invention's combinable 'components,' but also 'information, instructions, or tools from which those components readily may be generated.' It did not."¹¹⁷ Because Microsoft's activity did not fall within the ambit of § 271(f), the Court was not at liberty to provide AT&T with a remedy.¹¹⁸

Furthermore, the "presumption against extraterritoriality" inherent in U.S. patent law weighs against deeming Microsoft's conduct infringement.¹¹⁹ Holding otherwise, the Court said, would frustrate the purpose of the statute: "[g]iven the expanded extraterritorial thrust AT&T's reading of § 271(f) entails, the patent-protective determination AT&T seeks must be left to Congress."¹²⁰

In closing, the Court took note of AT&T's contention that § 271(f) creates a "loophole" for potential infringers to exploit patented software.¹²¹ But the Court deliberately avoided overstepping Congressional intent: "we are not persuaded that dynamic judicial interpretation of § 271(f) is in order. The 'loophole,' in our judgment, is properly left for Congress to consider, and to close if it finds such action warranted."¹²²

V. PATENT QUALITY

A. *The U.S. System Relative to those in Europe*

One of the most consistent criticisms of U.S. patent law in recent years has been an alleged complacency towards low-quality, or questionable, patents. While encouraging truly genuine innovation is the stated purpose of the system, critics point to higher approval rates as evidence of overall lower patent

115. *Id.* at 1755.

116. *Id.*

117. *Id.* at 1748, 1756.

118. *Id.* at 1758-59 (stating AT&T's remedy lies in receiving foreign patents).

119. *Id.* at 1758.

120. *Id.* at 1749-50.

121. *Id.*

122. *Id.*

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quality in recent years.¹²³ They further warn that such a state can be counterproductive and result in a remarkably inefficient system.¹²⁴

First, excessive numbers of low-quality patents can prevent healthy rates of innovation. For fear of being sued for infringement, inventors must assume existing patents are valid—regardless of their actual validity—because defense litigation is expensive.¹²⁵ In theory, this could deter innovation by keeping would-be competitors from breaking into a market, and often results in few patent-owning companies in given markets.¹²⁶ These companies in turn can charge excessive licensing fees, thereby increasing transaction costs and blocking would-be innovators seeking to acquire licenses on the patented innovation for further development.¹²⁷

Many have suggested that a possible cure for the problem would come with a more extensive post-grant opposition system, including the possibility of third parties being able to submit prior art to aid in obviousness determinations.¹²⁸ The Bayh-Dole Act of 1980 provided for limited reexamination of granted patents, but it proved relatively ineffective and is seldom used.¹²⁹ While the Bayh-Dole Act gave third parties a limited role, many have found little incentive to take advantage of the provision.¹³⁰

Litigation is always an option to challenge patents suspected of invalidity, but its costs are burdensome. One recent survey reported that average costs of pursuing a significant infringement case to judgment is about \$5.5 million.¹³¹

123. TO PROMOTE INNOVATION, *supra* note 11, ch. 3, at 36.

124. See Brownwyn Hall, et al., *Prospects for Improving Patent Quality via Postgrant Opposition in INNOVATION POLICY AND THE ECONOMY* 3-5 (Adam Jaffe, Joshua Lerner & Scott Stern eds., MIT Press 2004), available at <http://econwpa.wustl.edu/eps/le/papers/0401/0401002.pdf>.

125. See Josh Lerner, *Patenting in the Shadow of Competitors*, 38 J.L. & ECON. 463, 465, 489-90 (1995).

126. *Id.*

127. TO PROMOTE INNOVATION, *supra* note 11, ch. 2, at 29.

128. See, e.g., Patent Reform Act of 2006, S. 3818, 109th Cong. § 6 (2006).

129. Challengers can request that the USPTO reconsider a newly-granted patent group in light of new evidence (commonly prior patent or user rights), but only if a “substantial new question” has arisen. 35 U.S.C. §§ 301-307 (2000).

130. Although the participation of third parties in reexamination proceedings is very limited compared to the patentee, initiating a reexamination is costly: \$10,000–\$100,000, depending on complexity. Hall et al., *supra* note 124, at 7.

131. American Intellectual Property Law Association, *AIPLA Report of the Economic Survey* 2007, at 90-91 (inclusive mean costs for pursuing a case through litigation with more than \$25 million at risk). However, when considering the cost simply through the end of discovery, the median price tag is only \$3.34 million for similar cases. The costs drop considerably for litigation involving less-valuable patents, totaling, on average, \$2.645 million (inclusive) and \$1.589 million (through discovery) when \$1–25 million is at

Additionally, cases can take a long time to conclude, with estimated average duration ranging from 400 days¹³² to 31 months.¹³³ Even after these expenses, 95 percent of all cases result in settlement.¹³⁴

While fundamentally similar in goals and standards for patent protection, several key procedural differences between the American and European patent systems yield markedly different results. These differences manifest themselves in terms of ensuring issuance of accurate and consistent patents, while keeping costs relatively reasonable for the parties involved. European innovators have a choice between applying for patents at a national office (to keep costs low) or with the European Patent Office (“EPO”) (for coverage in most European countries).¹³⁵ Instead of having applicants perform their own prior art search, the EPO performs the search, which is published in its bulletin.¹³⁶ The application is then examined, provided the applicant requests examination within six months.¹³⁷ Within nine months of grant, any third party can oppose the patent with the EPO.¹³⁸ The office provides a chamber of three members to review the opposition, after which the patent is either upheld, changed, or revoked.¹³⁹

The oppositional system is a likely factor in very low litigation rates in most of the EPO.¹⁴⁰ European patent litigation, however, has to be done at the national level, country by country, unlike patent challenges which apply in all member states, and are likely an additional factor in the unpopularity of litigating claims.¹⁴¹

risk, and \$767,000 and \$461,000, respectively, when the litigant risks less than \$1 million. *Id.*

132. Joseph P. Cook, *On Understanding the Increase in U.S. Patent Litigation* 9 (Am. L. & Econ. Assoc. 15th Annual Meeting, Working Paper 4, 2005), available at <http://law.bepress.com/alea/15th/art4/>.

133. Hall et al., *supra* note 124, at 8.

134. *Id.* (citing J. L. Lanjouw & M. Schankerman, *Characteristics of Patent Litigation: A Window on Competition*, 32 RAND J. ECON. 129 (2001)).

135. *Id.* at 8-9. At present, the European Patent Office has thirty-four contracting states, including the twenty-seven states that comprise the E.U., along with seven non-E.U. countries. See Member States of the European Patent Organisation, <http://www.epo.org/about-us/epo/member-states.html>; Europa.eu, Member States of the European Union, http://europa.eu/abc/european_countries/eu_members/index_en.htm.

136. Hall et al., *supra* note 124, at 9.

137. *Id.*

138. *Id.*

139. *Id.* at 10.

140. *Id.* at 11. Litigation rates (number of cases over number of patents granted for a given period) have been estimated at 1%, compared to 1.9% in the U.S., but could be as high as 2.1% in Germany. *Id.*

141. *Id.* at 10-11.

Several results follow from the procedural differences between the two systems, including a 0.2% reexamination rate in the U.S. (where 44% of reexaminations are initiated by the patent owner himself), compared to 8% in the EPO.¹⁴² Thus, the EPO system, while slower in many respects, ultimately handles more challenges at a lower cost to the patentee.¹⁴³

On the whole, the adversarial nature of the EPO system gives less default benefit to patent holders: patentees assert less control over proceedings, and opponents need not show clear and convincing evidence to overturn a patent at trial.¹⁴⁴ But statistical analysis indicates that the oppositional system is less expensive, in terms of cost avoided to all parties, than the reexamination system employed in the U.S., and the oppositional system is thus more efficient in at least one respect.¹⁴⁵

B. *Is the Federal appeals system at fault for low patent quality?*

The suggestion has arisen that the introduction of the Court of Appeals for the Federal Circuit (CAFC)—the sole forum for patent appeals under the Supreme Court—has itself contributed to the higher approval rates and consequential problems of low-quality patents throughout a range of industries.¹⁴⁶ Because patent approval rates have increased since the introduction of the CAFC, some commentators have accused the court of becoming complicit with, or even approving of, a substantially lowered set of standards for patent validity.¹⁴⁷ One such critic has argued that a doctrinal shift over the past two decades has led courts to focus more on “secondary considerations” than on the traditional four-factor test from *Graham*,¹⁴⁸ and, as a result, the CAFC now effectively assumes non-obviousness. Even so, the validity of patents in cases before the CAFC is rarely even addressed because most cases are disposed of on infringement

142. *Id.* at 11.

143. *Id.* at 11-12.

144. *Id.* at 8 (stating that the standard of proof to invalidate a U.S. patent is “clear and convincing evidence,” rather than merely “preponderance of the evidence”).

145. *Id.* at 15.

146. See Alexander E. Silverman, *Intellectual Property Law and the Venture Capital Process*, 5 HIGH TECH. L.J. 157 (1989-90).

147. See WILLIAM M. LANDES & RICHARD A. POSNER, *THE ECONOMIC STRUCTURE OF INTELLECTUAL PROPERTY LAW* 338 (2003) (citing rise in Federal courts’ upholding of patent validity from 35% pre-CAFC, to 67% in first ten years of CAFC).

148. Glynn S. Lunney, Jr., *E-Obviousness*, 7 MICH. TELECOMM. TECH. L. REV. 363, 376-79 (2001), available at <http://www.mttl.org/volseven/lunney.html>.

grounds.¹⁴⁹ The result, these critics claim, is a decidedly plaintiff system, which clearly breaks from Supreme Court precedent,¹⁵⁰ encourages excessive litigation,¹⁵¹ and perpetuates a regime that is (at least in theory) absurdly circular in self-approval.¹⁵²

However, the claims of these critics could very well be off-base, as statistics do not seem to support their conclusions. Generally, when the district courts decide issues of infringement, patentees are far less successful than alleged infringers: in the 2,923 infringement rulings made from 2000 to 2007, patentees lost a total of 2,160 rulings, or 73.9% of the time.¹⁵³ So unless the CAFC's rate of reversal on appeal grows exponentially, the overall rates of success for alleged infringers vis-à-vis patentees will remain decidedly in favor of the former.

VI. CALLS FOR LEGISLATIVE REFORM

In 2003, the Federal Trade Commission issued a long-awaited report.¹⁵⁴ This report was the result of the Commission's extensive research project on patent law in the modern economy.¹⁵⁵ The Commission ultimately recommended ten broad changes to the patent system in order to best serve its supposed purposes.¹⁵⁶ These included checks on patent quality (such as enactment of a post-grant review process and tightening of obviousness standards)¹⁵⁷ and various administrative reforms (such as increased funding to the USPTO, publication of all

149. *Id.* at 383 (contrasting the CAFC, which decided 43.82% of all cases solely on infringement grounds during its 1993-94 session, with the pre-Federal Circuit era, in which only 10% of cases were decided similarly.)

150. *See* *Cardinal Chem. Co. v. Morton Int'l, Inc.*, 508 U.S. 83, 100-01 (1993) (criticizing the CAFC for breaking with *Blonder-Tongue Labs., Inc. v. Univ. of Ill. Found.*, 402 U.S. 313 (1971)).

151. Lunney, *supra* note 148, at 384 (concluding that the reduced risk of bringing suit, due to infrequent findings of invalidity, causes more suits of "less plausible infringement claims").

152. *Id.* at 377-78 ("[T]o the extent that commercial success becomes an important factor in determining a patent's validity, the very fact that the patent is worth litigating should establish its validity." (citing Edmund Kitch, *Graham v. John Deere Co.*: *New Standards for Patents*, 1966 SUP. CT. REV. 293)).

153. While these numbers take into account ten separate infringement issues, direct infringement (both literal and equivalents) claims make up the vast majority of these cases, with other issues, such as inducing infringement and affirmative defenses comprising the remainder of the cases. Patstats.org, U.S. Patent Litigation Statistics, <http://patstats.org/Patstats2.html> (last visited Apr. 12, 2008).

154. *See supra* note 11.

155. TO PROMOTE INNOVATION, *supra* note 11, Executive Summary, at 1.

156. *Id.* Executive Summary, at 7-17.

157. *Id.* at 7-10.

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patent applications 18 months after filing, and other rule changes to the USPTO's procedures).¹⁵⁸ The commission recommended legislation as the best means for achieving many of these goals.¹⁵⁹

A short time later, the National Academy of Sciences released a report¹⁶⁰ following a comprehensive study of the patent system performed by a committee of experts from a wide range of backgrounds to surround the issue.¹⁶¹ Despite the different approaches of the two studies, their conclusions overlapped considerably,¹⁶² and were understood by many observers as important starting points for reform efforts to come.¹⁶³

A. *Lessons from H.R. 2795, the Patent Act of 2005*

The first of recent serious attempts to reform the patent system finally surfaced as the Patent Act of 2005, which Lamar Smith, chairman of the House Subcommittee on the Courts, the Internet and Intellectual Property, introduced in June, 2005.¹⁶⁴ Hailed as “without question, the most comprehensive change to

158. *Id.* at 16-17.

159. *See id.* at 7-10, 15-17 (indicating five of the ten recommendations given call for enacting legislation).

160. NAT'L RESEARCH COUNCIL, A PATENT SYSTEM FOR THE 21ST CENTURY 2 (Stephen A. Merrill, Richard C. Levin, & Mark B. Myers, eds., Nat'l Academies Press 2004) [hereinafter NAS REPORT].

161. The Committee on Intellectual Property Rights in the Knowledge-Based Economy, as it was called, included economists, legal practitioners and scholars, scientists, research and development professionals, and a former federal judge, and even a former Commissioner of the USPTO. *Id.* at 2, 10-11.

162. *Id.* at 13.

163. *See generally* AM. INTELL. PROP. L. ASS'N, AIPLA RESPONSE TO THE NATIONAL ACADEMIES REPORT ENTITLED “A PATENT SYSTEM FOR THE 21ST CENTURY”, http://www.aipla.org/Content/ContentGroups/Issues_and_Advocacy/Comments2/Patent_and_Trademark_Office/2004/NAS092304.pdf; AM. INTELL. PROP. L. ASS'N, AIPLA RESPONSE TO THE OCTOBER 2003 FEDERAL TRADE COMMISSION REPORT: “TO PROMOTE INNOVATION: THE PROPER BALANCE OF COMPETITION AND PATENT LAW AND POLICY”, http://www.aipla.org/Content/ContentGroups/Issues_and_Advocacy/Comments2/Patent_and_Trademark_Office/2004/ResponseToFTC.pdf.

164. Patent Reform Act of 2005, H.R. 2795, 109th Cong. (2005). A precursor to this bill, Patent Quality Assistance Act, H.R. 5299, 108th Cong. (2004), was introduced the previous fall, “with the intent of framing the debate going into the 109th Congress, and with every intention of passing legislation in the next two years.” 150 CONG. REC. E1935 (statement of Rep. Berman). Though more limited in scope, many of its features were similar to those that would later be included in the Patent Reform Act of 2005. Introduced at the end of the session, the bill was referred to committee, but no further action was taken.

U.S. patent law since Congress passed the 1952 Patent Act,”¹⁶⁵ the bill was itself the result of months of consultation and compromise with various industry experts and practitioners.¹⁶⁶ The bill was promoted ambitiously, seeking to improve the quality of patents while benefiting “all businesses, small and large,” and curbing excessive litigation.¹⁶⁷

The bill’s two broad categories of reform (and the two broad areas of patent law) pertained to the application process and enforcement proceedings.¹⁶⁸ In the application arena, the change to a “first- to-file” system was one of the most fundamental reforms, eliminating the remaining significance of the invention date in the statute. The provision would have two opposing prongs to it: (i) against the inventor, removing the current grace period which helps inventors who have invented something and failed to file for a patent until after someone else does; (ii) helping the inventor, by eliminating attack on a granted patent by a defendant asserting a third party invented the subject matter earlier.¹⁶⁹ The bill also changed the following in the application process: added applicant’s duty of candor and good faith towards the USPTO, for which violations would be adjudicated exclusively by the USPTO, not in the courts at present;¹⁷⁰ eliminated the requirement that applicants disclose

165. Press Release, Rep. Lamar Smith, Smith Introduces Patent Reform Bill (Jun. 8, 2005) <http://lamarsmith.house.gov/News.asp?FormMode=Detail&ID=699>, [hereinafter Smith Press Release].

166. A draft version, labeled the “Committee Print,” was distributed in April 2005, and the Committee held hearings to gather public comments. STAFF OF H. COMM. ON THE JUDICIARY, 109TH CONG., PATENT QUALITY IMPROVEMENT (Comm. Print 2005), available at <http://judiciary.house.gov/media/pdfs/printers/109th/20709.pdf> [hereinafter PATENT QUALITY IMPROVEMENT REPORT].

167. Smith Press Release, *supra* note 165.

168. Patent Reform Act of 2005, H.R. 2795, 109th Cong. §§ 3-4, 6-8 (2005).

169. Section 102(g)(1) limits the right to a patent if another inventor, up to one year after the filing date, can establish that he or she was actually the first to invent what was claimed in the application. 35 U.S.C. § 102(g)(1). The Patent Reform Act of 2005 withheld such a provision in its overhaul of § 102, but the right to a patent is still limited by prior art, such as previous description in a patent application or printed publication, or being “otherwise publicly known” more than one year before the filing date. Patent Reform Act of 2005 § 3 (amending § 102).

170. Similarly to the current rules, violations would include failure to disclose information “known to [applicant] to be material to any issue before the Office in connection with the application or patent, and to not materially misrepresent information.” Patent Reform Act of 2005, H.R. 2795 § 5 (adding § 136(a) to Title 35). Currently, a duty of candor is imposed under the Duty of Disclosure in the USPTO’s regulations, at 37 C.F.R. § 1.56(a) (2008) [R-2], and infractions may be addressed by either the courts or by the USPTO. Actions that are deemed violative of this policy render relevant patent(s) unenforceable. Patent Reform Act of 2005, H.R. 2795 § 5 (adding § 136(d) to Title 35).

the “best mode” for carrying out the claimed invention;¹⁷¹ made minor changes to continuation applications;¹⁷² and established an intricate post-grant review system, whereby aggrieved parties claiming right to the patented invention could contest a new patent within a given time period after its grant.¹⁷³ This included both a “first window” of nine months to file opposition after a patent issues and a controversial “second window,” allowing alleged infringers to commence opposition proceedings up to six months after a patent holder has notified them of infringement.¹⁷⁴

Furthermore, the bill proposed several significant changes to infringement litigation, including the following: stricter standards for calculating the apportionment of damages;¹⁷⁵ increased standards for proof of damages, especially with regard

171. Section 112 sets forth the requirements for what must be contained in a patent application: a written description of the invention, which would enable any person skilled in the relevant art to make or use it, “and shall set forth the best mode contemplated by the inventor of carrying out his invention.” 35 U.S.C. § 112. Section 4 of Patent Act of 2005 would have amended this section of the code by striking the last clause. Patent Reform Act of 2005, H.R. 2795 § 4. In general, the biotechnology sector approved of, and the information technology industry disagreed with, the provision.

172. Under 35 U.S.C. § 120, before a patent application is abandoned or terminated, the applicant can refile and the patent will carry the same exclusionary effect “as though filed on the date of the prior application.” 35 U.S.C. § 120. Section 8(a) of the Patent Reform Act of 2005 would have allowed the Director of the USPTO to limit the circumstances under which a continuation application may be filed under § 120, as long as affected applicants were still afforded “an adequate opportunity to obtain claims for any invention disclosed in an application for patent.” Patent Reform Act of 2005, H.R. 2795 § 8(a). This was aimed at curbing abuse of the continuation process, which is frequently misused by applicants, unduly siphoning valuable USPTO resources. *The Patent System: Today and Tomorrow: Hearing Before the Subcomm. on Cts., the Internet & Intell. Prop. of the S. Comm. on the Judiciary*, 109th Cong. (2005) (statement of Hon. Jon W. Dudas, Dir. USPTO).

173. The bill went as far as to add an entire chapter regulating post-grant review. Patent Reform Act of 2005, H.R. 2795 § 7(f). Any third party wishing to invalidate a recently-granted patent (up to nine months from date of grant, or six months from date of notice of infringement) could file an opposition request with the USPTO. *Id.* (adding §§ 321, 323). In the event that the USPTO Director finds a “substantial question of patentability” as to one or more claims in the challenged patent, an opposition hearing would be commenced shortly thereafter, and the case heard by a panel of three patent judges. *Id.* (adding § 325). The patent owner could then either issue a response to the opposition, amend his/her claims, or both. *Id.* (adding § 327). Interested parties would depose the opposing side, with the possibility for more discovery, if needed. *Id.* (adding § 328). Following submission of briefs, and a possible oral hearing, the panel would issue a decision up to two weeks after the hearing, and the losing party would retain limited rights to appeal the decision. *Id.* (adding §§ 330, 331, 334).

174. *Id.*

175. The bill provided detailed guidance for determining the reasonable royalties infringers would owe to patent owners. Patent Reform Act of 2005, H.R. 2795 § 6 (amending 35 U.S.C. § 284).

to punitive damages for willful infringement;¹⁷⁶ and limited imposition of injunctions by requiring courts to consider overall fairness to both parties.¹⁷⁷

Although the House Subcommittee on Courts, the Internet, and Intellectual Property held a series of hearings on the bill, the Patent Reform Act of 2005 never reached the full judiciary committee in either house.¹⁷⁸ Following its initial round of hearings on the original bill,¹⁷⁹ the subcommittee created and circulated a draft amended version of the bill,¹⁸⁰ again holding hearings to gather public opinion the following September.¹⁸¹ The substitute bill removed several of the more controversial provisions present in the original bill, such as changes regarding continuation applications,¹⁸² extended post-grant opposition procedures (including the “second window” for opposing patent issuance),¹⁸³ and changes to injunctive relief.¹⁸⁴ Finally (and

176. Under 35 U.S.C. § 284 (2000), damages are awarded as follows: “[w]hen damages are not found by a jury, the court shall assess them. In either event the court may increase the damages up to three times the amount found or assessed.” While the statute does not specify any condition for augmenting the damages, the case law has become well settled that willful infringement is necessary to trigger them. *Read Corp. v. Portec, Inc.*, 970 F.2d 816, 826 (1992). The proposed legislation would have provided a detailed description of which acts constitute willful infringement. Patent Reform Act of 2005, H.R. 2795 § 6(b).

177. Under the current version of the Patent Act, courts hearing an infringement action are allowed to exercise wide discretion in granting “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.” 35 U.S.C. § 283. The Patent Reform Act of 2005 would have included the overall fairness to both parties as an additional consideration in granting an equitable injunction. Patent Reform Act of 2005 § 7. Actual implementation of the injunction would be stayed pending appeal. *Id.* These added criteria are less specific than the four-part test the Court recently required in *eBay, Inc. v. MercExchange, L.L.C.*, 547 U.S. 388 (2006), and future reform bills may or may not likely include the Supreme Court’s four-part test for ruling on injunctions.

178. See Library of Congress, THOMAS, <http://Thomas.loc.gov/cgi-bin/bdquery/z?d109:H.R.2795> (last visited Apr. 12, 2008).

179. *Patent Act of 2005: Hearing on H.R. 2795 Before the Subcomm. on Cts., the Internet, and Intell. Prop. of the H. Comm. on the Judiciary*, 109th Cong. (2005) [hereinafter *Hearing on H.R. 2795*].

180. Patent Reform Act of 2005, H.R. 2795 (as amended by Rep. Smith, Chairman of the House Subcommittee on Courts, the Internet and Intellectual Property) http://promotetheprogress.com/ptpfiles/patentreform/patentact2005/Patentact2005_draftamendsubst.pdf.

181. See generally *Hearing on Amendment, supra* note 7.

182. Ron Harris, Understanding United States Patent Reform Proposals, Address Before the AIPLA Committee-IP Practice in the Far East Seminar in Hong Kong (May 12, 2006), available at http://www.ipd.gov.hk/eng/promotion_edu/public_lecture/20060512/ppt_ron_harris.pdf.

183. Memorandum from the Antitrust Modernization Commission Staff to the Antitrust Modernization Commission Commissioners 33 (June 14, 2006) [hereinafter AMC Memorandum], available at <http://www.amc.gov/pdf/meetings/NewEcon-Patents%20DiscMemo060614-final.pdf>. At least one member of the subcommittee disapproved of

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significantly), the bill contained a restriction on choice of venue, so that an infringement claim may only be brought in a district for which the defendant satisfies certain minimum qualifications to be haled into court that are much more strict than under current law.¹⁸⁵

As part of its September 2005 hearings, the subcommittee also heard comments on another modified version of the bill known as the “Coalition Print.”¹⁸⁶ The result of an ad hoc alliance of firms and industry groups spanning various technology sectors, the Coalition Print represented something of a compromise among its members’ divergent interests.¹⁸⁷ Relative to the Substitute Bill, the Coalition Print further strengthened the effect of the damage apportionment provision,¹⁸⁸ but retreated slightly on the proposal to restrict

this omission. See *Hearing on Amendment, supra* note 7, at 3-4 (statement of Rep. Berman).

184. See AMC Memorandum, *supra* note 183, at 46.

185. See Patent Reform Act of 2005, H.R. 2795 § 9 (as amended by Rep. Smith, Chairman of the House Subcommittee on Courts, the Internet and Intellectual Property). Under 28 U.S.C. § 1400, the current regime provides no additional restriction on venue particular to patent cases, but allows suit to be brought in any venue where damages are alleged to have occurred, thereby allowing for what critics deem to be excessive forum shopping. Patent holders typically are able to choose among several districts in which to bring suit. 28 U.S.C. § 1400(b) (2000). Since a corporate defendant “resides” for venue purposes wherever it has minimum contacts (the same type of test as for personal jurisdiction), venue in most patent cases is nationwide. 28 U.S.C. § 1400(b). A plaintiff can choose either the “judicial district where the defendant resides, or where the defendant has committed acts of infringement and has a regular and established place of business.” 28 U.S.C. §§ 1391, 1400(b) (2000). Under the substitute bill, corporate residence is greatly restricted, and venue would in most instances be limited to districts where “has committed infringement and has a regular and established place of business.” 28 U.S.C. § 1400(b). The Eastern District of Texas, for example, is one district which could be significantly affected by such a provision becoming law. The district’s Marshall division has become well-known for its high rate of pro-plaintiff verdicts (78%, compared to 59% nationwide) and quick disposition of patent cases (known as a “rocket docket” after special rules adopted by Judge T. John Ward). Julie Creswell, *So Small a Town, So Many Patent Suits*, N.Y. TIMES, Sep. 24, 2006 at Sec. 3, p. 1, available at 2006 WLNR 16557844.

186. *A Coalition for 21st Century Patent Law Reform: Balanced Initiatives to Advance Quality and Provide Litigation Reforms* (Sept. 1, 2005) [hereinafter *Coalition Print*] available at http://www.aipla.org/Content/ContentGroups/Legislative_Action/109th_Congress/House1/CoalPrintofHR2795.pdf.

187. See *id.* The coalition included a wide array of firms, such as General Electric and Motorola (for information technology), as well as Pfizer and GlaxoSmithKline (for pharmaceuticals), and Intellectual Property Owners Association (for independent inventors). See Letter from Coalition for Patent Reform to Lamar S. Smith, Chairman, H. Subcomm. on Cts., the Internet & Intell. Prop. (Sept. 1, 2005), available at http://www.aipla.org/Content/ContentGroups/Legislative_Action/109th_Congress/House1/Coalletter.pdf.

188. See *Coalition Print, supra* note 186, § 6. While this provision remained unchanged in the Substitute, the coalition would have had courts consider a wider range of factors in determining the portion of the infringer’s product that relied on the patent

choice of venue.¹⁸⁹ Furthermore, the Coalition Print proposed repealing 35 U.S.C. § 271(f), regarding shipment of patented components for assembly overseas, as addressed in *Microsoft v. AT&T*.¹⁹⁰

In the context of the entire Coalition Print, the controversial “second window” for post-grant opposition and a repeal of § 271(f) could underscore the desire of the information technology sector to have these particular changes included in a final bill. Information technology groups have voiced support both for extended post-grant opposition procedures¹⁹¹ and for repeal of § 271(f).¹⁹² In this light, other provisions in the Coalition Print—namely the lightened venue restriction and attenuated damage apportionment provision—likely represent concessions by the biotechnology and pharmaceutical sectors for the sake of either information technology’s interests or the enterprise as a whole. It bears noting, however, that virtually all of the changes proposed in both the 2005 bill and the “coalition print”—from post-grant opposition to venue restrictions to injunctive changes—restricted, in one way or another, the rights of patent owners.

B. *Responses to the Patent Act of 2005 as reflections of market peculiarities*

The congressional hearings exposed support for, and resistance to, the bill’s proposals from an array of industry advocates, representing an even wider array of business interests. Interested parties fall into two broad categories:

being infringed. The coalition further advocated that a determination of “willfulness” should be made by a court rather than a jury. *See id.*

189. Where the Substitute would have allowed for defendants to safely limit their choice of venue to a few select (favorable) forums, the coalition simply would have allowed for transfer to a more appropriate forum (i.e. a district with “substantial evidence or witnesses”) under certain circumstances. *See Coalition Print, supra* note 186, § 9.

190. *Microsoft Corp. v. AT&T Corp.*, 127 S. Ct. 1746, 1750-51 (2007). Evidently, the Supreme Court’s holding in *Microsoft* that the company had not infringed when it sent master copies of its software overseas to be copied onto machines for sale abroad, may now have appeased the parties who were concerned that § 271 would become a more common ground for infringement allegations. *See discussion infra* Part IV.B.

191. *See* PATENT QUALITY IMPROVEMENT REPORT, *supra* note 166, at 20 (testimony of Richard J. Lutton, Jr., on behalf of Business Software Alliance) (“This second window is essential to allow companies to challenge a patent when, and if, it is asserted even if a prior search would never have revealed a threat from that patent.”).

192. With regard to the appellate reading of § 271(f) in *Microsoft v. AT&T*, which would allow damages for infringement when a U.S.-developed copy is made abroad from a master disk, a spokesman for the industry stated, “We believe this reading . . . creates an unintended incentive to make valuable development activity outside the U.S. and should be removed from the law.” *Hearing on Amendment, supra* note 7, at 6 (statement of Emery Simon, on behalf of Business Software Alliance).

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information technology (IT), including hardware and software developers and manufacturers, who wanted patent rights restricted; and biotechnology, including biotech device and pharmaceutical developers and manufacturers, who depend heavily on patents and did not want to see them weakened.¹⁹³

The information technology sector is comprised of two broad industries: the hardware and semiconductor industry on the one hand, and the software and Internet industries on the other.¹⁹⁴ While they share many common ideals and face generally similar problems regarding patents,¹⁹⁵ the industries, because of their respective inherent features, maintain distinct issues and needs in patent protection.¹⁹⁶

The hardware and semiconductor industry, a major component of the IT sector, is among the least reliant on patent protection of all high-tech industries.¹⁹⁷ R&D in the software industry, as with most of IT, is relatively inexpensive, and development occurs at a rapid rate.¹⁹⁸ According to many in the computer hardware and software industries, competition is a greater driver of innovation than is patent protection.¹⁹⁹ In fact, many firms rely more heavily on trade secret protection than they do on patents.²⁰⁰

A key reason for this relative aversion to patent protection is the industry's particular susceptibility to "patent thickets," masses of overlapping patents arguably covering various features of a large software product.²⁰¹ Patent thickets pose a number of problems for the firms that are forced to navigate them. First, obtaining and maintaining patents is expensive, but becomes necessary for defensive purposes, and to avoid infringement.²⁰² Second, when rights become uncertain, the risk of innovating is raised, and investment capital for research and development is likely to fall.²⁰³

193. See TO PROMOTE INNOVATION, *supra* note 11, ch. 3, at 15.

194. See *id.* at 30, 44.

195. See *id.* at 2-3.

196. See *id.* 30, 44-45.

197. See *id.* at 1-2.

198. See *id.* at 2.

199. See *id.*

200. See *id.*

201. *Id.* at 52.

202. *Id.* at 35. At the FCC's hearings for its 2003 report, Robert Barr of Cisco Systems, Inc., said, "The only practical response to this problem of unintentional and sometimes unavoidable patent infringement is to file hundreds of patents each year ourselves." *Id.* at 35 & n.219.

203. *Id.* at 37.

Further complicating multiple protections in certain areas of IT, and the hardware and semiconductor industry in particular, are non-practicing entities (NPEs).²⁰⁴ These entities exist almost solely to create patents, profiting through licensing and enforcement, selling virtually no actual goods.²⁰⁵ This puts them at a competitive advantage over typical manufacturing firms, who must worry about the threat of infringing the patents of others, or risk having the sale of their goods stopped through injunction.²⁰⁶

On the other side of the IT sector is the software and internet industry. Some experts are quick to characterize many of the industry's software²⁰⁷ and business processes²⁰⁸ as overbroad and questionable.²⁰⁹ This is likely attributable to the rapid pace of development, as well as the unavailability of information for patent examiners on the latest technology.²¹⁰ As in the hardware and semiconductor industry, competition in this area tends to be driven primarily through commercial competition rather than by patents.²¹¹ Firms often rely instead on copyright protection²¹² or even forego intellectual property protection (almost) entirely by creating open-source software.²¹³

204. *Id.* at 38.

205. *Id.*

206. *Id.* at 40 (discussing the fact that the validity of patents owned by NPEs is rarely challenged, as discussed *infra* Part IV). It will be interesting to see, in light of stricter standards for injunctions imposed by the Supreme Court in *eBay v. MercExchange*, 547 U.S. 388 (2006) whether NPEs retain the same amount of power long into the future, now having less leverage from threat of injunction. In the short term, however, NPEs remain a force with which to be reckoned. See Nicholas Varchaver, *Who's Afraid of Nathan Myhrvold?*, FORTUNE, July 10, 2006.

207. See *Diamond v. Diehr*, 450 U.S. 175 (1981) (holding a computer program is patentable subject matter).

208. See *State St. Bank & Trust v. Signature Fin. Group*, 149 F.3d 1368 (Fed. Cir. 1998), *cert. denied*, 525 U.S. 1093 (1999) (deeming business method patentable subject matter).

209. TO PROMOTE INNOVATION, *supra* note 11, ch 3, at 44.

210. *Id.* at 45-46.

211. *Id.* at 46.

212. *Id.* at 46-47; Copyright therefore protects the programmer's mode of expression in the program (i.e. the particular syntax used), but not the underlying concept in the program. See 17 U.S.C. § 102(b) (2000). Authorities are split on whether copyrights are generally better means of protecting software development. Compare Peter S. Menell, *An Analysis of the Scope of Copyright Protection for Application Programs*, 41 Stan. L. Rev. 1045, 1079 (1989) (explaining that copyright is the predominant form of legal protection for software), with Jacqueline D. Lipton, *IP's Problem Child: Shifting the Paradigms for Software Protection*, 58 Hastings L.J. 205, 248 (2006) (stating that there is sufficient evidence to suggest that copyright protection does not work well for software). Having two IP regimes is also confusing for innovators, and for the industry in general. TO PROMOTE INNOVATION, *supra* note 11, ch 3, at 46-47.

213. TO PROMOTE INNOVATION, *supra* note 11, ch. 3, at 47-48. "In the context of software, [open source] generally refers to [the] programming code that is freely available

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Patent thickets appear often in this area of technology, preventing efficient follow-on development,²¹⁴ and unduly increasing start-up costs, which can impede competition at healthy levels.²¹⁵

The information technology sector has stood at the forefront of many reform efforts, notably damage apportionment.²¹⁶ IT firms, while dependent upon patent rights, are frequent targets for infringement suits because their products often comprise thousands of patented components, on which the patents are often difficult (if not practically impossible) to identify and obtain licenses under.²¹⁷ Because of this confusion, many IT companies expend great resources on defending themselves against patent infringement actions.²¹⁸ Consequently, the industry tends to view patent protection as something of an unjustified burden on progress.²¹⁹ Therefore, the industry has supported measures typically seen as “pro-defendant” or weakening of patent rights: post-grant review, limits on continuation, venue restriction, and damage apportionment.²²⁰

The biotechnology and pharmaceutical industries have been the most prominent among detractors to many of the reform measures in the bills thus far presented. Like the multifaceted

in source form for modification and redistribution.” ALAN STERN, *OPEN SOURCE LICENSING* 198 (PLI Patents, Copyrights, Trademarks, and Literary Property, Course Handbook Series No. 11389, 2007).

214. TO PROMOTE INNOVATION, *supra* note 11, ch. 3, at 50-51.

215. *Id.* at 51.

216. See Letter from Coalition for Patent Reform to Lamar S. Smith, Chairman, H. Subcomm. on Cts., the Internet & Intell. Prop. (Sept. 1, 2005), available at http://www.aipla.org/Content/ContentGroups/Legislative_Action/109th_Congress/House1/Coalletter.pdf.

217. TO PROMOTE INNOVATION, *supra* note 11, ch 3, at 52.

218. See, e.g., *id.* at 33, 35-36 (discussing the “defensive” nature of many IT patents, wherein firms flood the USPTO with patent applications, to stake their claim via overlapping patent protection, and to use “patents as bargaining chips in cross-licensing negotiations”). Microsoft, a company often sued for infringement, has good reason to favor weakened patent protection. A February, 2007, judgment against the company in the unprecedented sum of \$1.52 billion included damages for infringement, both for software sold in the United States and sold abroad under § 271(f). *Lucent Techs. Inc. v. Gateway Inc.*, 470 F. Supp. 2d 1163 (S.D. Cal. 2007); see also Jeff St. Onge & Bill Callahan, *Microsoft Told to Pay Alcatel-Lucent \$1.52 Billion*, BLOOMBERG, Feb. 22, 2007, <http://www.bloomberg.com/apps/news?pid=conewsstory&refer=conews&tkr=MSFT:US&sid=av7iqh15TYUs>; Elizabeth Montalbano, *Jury Orders Microsoft to Pay Alcatel-Lucent \$1.5 billion*, NETWORK WORLD, Feb. 22, 2007, <http://www.networkworld.com/news/2007/022207-jury-orders-microsoft-to-pay.html>.

219. See generally TO PROMOTE INNOVATION, *supra* note 11, ch. 3, at 50-55 (discussing the drawbacks and consequences of protecting innovation through patents in the software and Internet industries).

220. PATENT QUALITY IMPROVEMENT REPORT, *supra* note 166, at 17 (statement of Richard J. Lutton, Jr., Chief Patent Counsel, Apple Corp.).

IT sector, these industries share many similar features and common interests, but are not in lock step on every reform issue.

Utilizing “cellular and molecular (i.e. biological) processes to address problems or make products,” the biotech industry is, more than any other high-tech industry, heavily reliant on R&D investment.²²¹ Progress is expensive, takes place slowly, and the industry is highly regulated, so products often take years to come to market.²²² Consequently, patent protection (rather than competition) drives much of the innovation,²²³ and is of vital importance for the industry’s many young firms to survive.²²⁴ Because of the discrete nature of biotech innovations, firms sometimes rely on the disclosure function of the patent system to continue innovation, but not nearly to the extent the pharmaceutical industry does.²²⁵

Members of the industry often work closely with pharmaceutical firms in licensing their patented technologies.²²⁶ While patent thickets are seldom problems for biotech firms, experts have pointed to patent quality as a significant concern in the area and have blamed limited resources at the USPTO for these problems.²²⁷ Some have suggested that an opposition system, such as the EPO uses, would mitigate these problems.²²⁸

The Biotechnology Industry Organization (“BIO”) is a prominent representative for hundreds of biotechnology firms, as well as scores of academic institutions.²²⁹ According to BIO, its industry relies heavily on the value of its patents, and is one of the most prolific filers of patent claims.²³⁰ In fact, much of the industry’s research depends on investment secured through the promise of patents.²³¹ For many firms, fewer patents would decrease investment, the social costs of which could potentially be significant.²³² Biotechnology has a unique problem, in that

221. TO PROMOTE INNOVATION, *supra* note 11, ch. 3, at 15-16.

222. *Id.* at 16.

223. *Id.* at 17.

224. *See id.* at 17-18 (discussing the role of patents as assets for not-yet-profitable companies).

225. *Id.* at 18.

226. *Id.* at 17.

227. *Id.* at 20.

228. *Id.* at 23.

229. *Hearing on Amendment*, *supra* note 7, at 20 (statement of Robert B. Chess, on behalf of BIO).

230. *Id.*

231. *Id.*

232. In its amicus brief in *KSR*, the industry supported an objective standard based on the TSM test, which would promote predictability while avoiding hindsight. Brief of BIO *supra* note 64, at 2. The association feared that many developments in the industry

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litigation on its patents can often take years to develop due to the commercial longevity of many industry innovations.²³³ Thus, the industry is particularly susceptible to obviousness invalidations due to hindsight, a problem not common in the computer and software industries, whose products have considerably shorter lifecycles.²³⁴ Furthermore, research and development in biotechnology is an arduous, time-consuming process with great social benefits, but also incorporates a high failure rate.²³⁵

At congressional hearings on the 2005 patent bill, BIO admonished the committee against inclusion of several of the bill's provisions which would weaken patent rights, claiming these would likely result in widespread problems for many companies in the biotechnology industry.²³⁶ Many nascent, research-oriented biotech firms depend heavily on investment based on the promise of patents, and actually sell little, if any, products.²³⁷ Therefore, BIO stated, any change in the law to weaken patent rights would harm more of its members than it would help.²³⁸ Specifically, BIO opposed a broadened, post-grant review process, which it claimed "would create uncertainty and confusion in the law," thus deterring investment and harming business.²³⁹ The group also resisted the proposed limitations on continuation practice,²⁴⁰ damage apportionment,²⁴¹ and any new

could be deemed obvious "merely because they are combinations of pre-existing elements or methods." *Id.* at 4.

233. *Id.* at 7.

234. *Id.* at 8.

235. *Id.* at 5-7.

236. *Hearing on Amendment, supra* note 7, at 28.

237. *Id.* at 26. Curiously, however, BIO did not cite the typical strategic uses for patent protection—exclusionary rights and licensing potential—as central to its members' needs. Rather, the industry representative presented the problem as one of perception, as stable investment can be difficult for upstart companies to find. *See also* Eliot Marshall, *Biotechnology: How a Bland Statement Sent Stocks Sprawling*, 287 *SCIENCE* 2127, 2127 (2000) (describing biotechnology investors as fickle, under-informed, and at times fixated on trivial or irrelevant issues regarding patents).

238. *Hearing on Amendment, supra* note 7, at 31.

239. *Id.* at 28. American Intellectual Property Lawyers Association (AIPLA) has also voiced opposition to a second window provision. *Hearing on H.R. 2795, supra* note 179 (statement of Gary L. Griswold, President, Intellectual Property Owners Association).

240. *Hearing on Amendment, supra* note 7, at 29. BIO stressed that this limitation on flexibility would "undermine the quality of patent applications and deny inventors the ability to obtain the appropriate scope of protection." *Id.* at 7. BIO seems to have overstated the power that would have been granted to the USPTO, however, cynically claiming that the provision in H. 2795 "would have provided the USPTO *unlimited* authority to regulate continuation practice." *Id.* (emphasis added). In fact, though, the provision would have only provided for limited discretion by the USPTO. *Id.*

241. *Hearing on Amendment, supra* note 7, at 9 (statement of Philip S. Johnson, Chief Patent Counsel, Johnson & Johnson, on behalf of the Pharmaceutical Research and Manufacturers of America) (warning that, with damage the apportionment provision in

restriction on choice of venue for bringing an infringement action.²⁴²

In general, pharmaceutical companies and medical device manufacturers generate substantial revenues from the sales and licensing of their products, and thus are focused less on R&D than the biotech industry.²⁴³ Patent protection, however, is still indispensable with pharmaceutical companies. More so than the biotech industry firms, pharmaceutical firms rely on the disclosure function of patents to create follow-on innovation.²⁴⁴ Disclosure also aids companies, particularly generic drug makers, in “designing around” patented pharmaceuticals, providing for competition between brand-name and generic firms.²⁴⁵ Innovation in this industry is less cumulative than in any other high-tech industry, so a single patent generally can carry the potential for its market value to last a longer period of time.²⁴⁶ Further, because of the relatively discrete nature of their patents, pharmaceutical companies rarely experience problems with patent thickets.²⁴⁷

With fewer of their resources directly dedicated to research and development, minor added restrictions on the ease of obtaining and enforcing patents is expected to affect pharmaceutical business only marginally.²⁴⁸ The Pharmaceutical Researchers and Manufacturers of America (“PhRMA”), one representative of such firms before Congressional hearings, has stated acceptance for restrictions on venue, without opposing changes in continuation practice.²⁴⁹ But PhRMA does oppose many of the same causes as groups such as BIO, most notably damage apportionment.²⁵⁰

H.R. 2795, “[p]atent damages would be trivialized in most cases and unfairly awarded in almost all.”)

242. *Id.* at 31 (statement of Robert Chess on behalf of BIO) (citing potential abrogation of patent enforcement rights, BIO’s members fear that a venue restriction would “significantly shift[] the advantage in patent litigation in favor of the defendant” and mean increased litigation costs for patent-holding biotechnology companies, which often have limited resources compared to their opponents in such actions).

243. Christopher M. Holman, *Biotechnology’s Prescription for Patent Reform*, 5 J. MARSHALL REV. INTELL. PROP. L. 318, 325 (2006).

244. TO PROMOTE INNOVATION, *supra* note 11, ch. 3, at 9-10.

245. *Id.* at 10-11.

246. *Id.* at 5.

247. *Id.* at 5-6.

248. Holman, *supra* note 243, at 325-26.

249. *Hearing on Amendment, supra* note 7, at 9-10 (statement of Philip S. Johnson, Chief Patent Counsel, Johnson & Johnson).

250. *Id.* at 10.

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Biotechnology and pharmaceutical industry groups have clearly stood as the chief roadblock to most reform efforts thus far.²⁵¹

C. *A Second Try: S. 3818, the Senate's Patent Act of 2006*

While the House researched possible compromises through 2005, the Senate Judiciary committee was likewise at work on a viable solution to the patent reform dilemma.²⁵² After first holding oversight hearings to address particular issues in the reform debate,²⁵³ the Senate committee waited to write a bill until the house subcommittee had garnered some idea on public opinion. Senators Hatch and Leahy finally released S. 3818 (the "Patent Reform Act of 2006") late in the session, and no formal action was taken on the bill.²⁵⁴ However short-lived the Senate's first try, it served as a vital continuation of ongoing efforts by both houses, represented the results of months of compromise, and was therefore a jumping block for the 110th Congress.²⁵⁵

The Senate's first such bill contained several of the same proposals as H.R. 2795, with a few key modifications, roughly along the lines of the changes presented in the Coalition Print. Regarding the application process, a "first-to-file" system was

251. Holman, *supra* note 243, at 325.

252. *Patent Law Reform: Injunctions and Damages Hearing Before the Subcomm. on Cts., the Internet & Intell. Prop. of the S. Comm. on the Judiciary*, 108th Cong. (2005); *Perspectives on Patents: Harmonization and Other Matters: Hearing Before the S. Comm. on the Judiciary*, 108th Cong. (2005) [hereinafter *Hearing on Patent Reform*].

253. *Hearing on Patent Reform*, *supra* note 252, at 1-25.

254. Patent Reform Act of 2006, S. 3818, 109th Cong. (2006).

255. Prior to the 2007 Session, Senator Leahy, cosponsor of S. 3818, indicated his continuing support for a bipartisan effort to pick up where the previous Congress left off in reform legislation:

Reforming our patent system will . . . be an enormous, but critically important, project in the new Congress Our patent system was created in another century, and we need to update it. It must serve the 21st Century industries that have made us the envy of the world, just as it well served the smokestack industries of an earlier era.

Senator Patrick Leahy, Incoming Chairman, Sen. Judiciary Comm., Address at Georgetown University Law Center: Ensuring Liberty And Security Through Checks And Balances: A Fresh Start For The Senate Judiciary Committee In The New 110th Congress (Dec. 13, 2006) (transcript available at <http://leahy.senate.gov/press/200612/121306.html>). The 110th Congress' first step towards improving the system was passing an uncontroversial bill to initiate a pilot program educating federal judges on patent law. H.R. 34, 110th Cong. (2007). The bill aimed "to enhance training and staffing for judges who have the desire and aptitude to hear more patent cases, while preserving the principle of random assignment to help avoid forum shopping." Press Release, Rep. Darrell Issa, House Approves Issa/Schiff Patent Pilot Bill (Feb. 12, 2007), available at http://issa.house.gov/index.cfm?FuseAction=PressOffice.View&ContentRecord_id=433&CFID=26358543&CFTOKEN=83071029.

retained,²⁵⁶ and the “best mode” requirement would not have been repealed from the Patent Reform Act of 2006.²⁵⁷ Post-grant procedures, to be tried through the patent office, were expanded from the final version of H.R. 2795.²⁵⁸ The “second window” provision was revived,²⁵⁹ and the “first window” for challenge was expanded to twelve months following patent grant.²⁶⁰

Similar to previous versions: S. 3818 repealed the § 271(f) venue restriction, the provision relied on in *Microsoft v. AT&T*;²⁶¹ so that cases may only be brought (1) “where either party resides,” or (2) “in the judicial district where the defendant has committed acts of infringement and has a regular and established place of business.”²⁶²

Two notable inclusions were unique to S. 3818. First, the bill added an amendment to provide for interlocutory appeals as a matter of right on all claim-construction rulings by district courts,²⁶³ as well as a penalty for frivolous litigation.²⁶⁴ The latter would require the loser of an infringement case to pay attorney’s fees and costs for the other side if his or her position was not “substantially justified.”²⁶⁵

Previous proposed changes to injunction procedures or continuation applications, and the tightening of inequitable conduct defenses, were omitted from the Senate’s bill.

D. *The Closest Shot Yet: The Patent Reform Act of 2007-08*

Advocates and sponsors of a comprehensive patent bill made continued steps towards change in 2007. In its final revision before passage in the House of Representatives, the 2007 bill included most of the provisions included in the 2006 bill, with

256. Patent Reform Act of 2006, S. 3818, 109th Cong. § 3(a) (2006). The “first-to-file” provision contains the relatively uncontroversial advantage of eliminating the often stifling step of holding interference hearings to determine who the actual first inventor of a particular innovation was. See Holman, *supra* note 243, at 335.

257. Patent Reform Act of 2006, S. 3818, 109th Cong. (2006).

258. *Id.* § 6.

259. Compare Patent Reform Act of 2005 § 9, and discussion *supra* Part IV.A., with Patent Reform Act of 2006, S. 3818, 109th Cong. § 3(a) (2006) (the “second window” was to be available only for a petitioner who can “establish[] a substantial reason to believe that the continued existence of the challenged claim causes or is likely to cause significant economic harm.”).

260. Patent Reform Act of 2006, S. 3818, 109th Cong. § 6(a)(1) (2006).

261. *Microsoft Corp v. AT&T Corp.*, 127 S. Ct. 1746 (2007).

262. Patent Reform Act of 2006, S. 3818, § 8(a).

263. *Id.* § 8(b) (2006) (amending 28 U.S.C. § 1292 to allow for appeals following an interlocutory order determining construction of claims in an infringement suit).

264. *Id.* § 5(b).

265. *Id.*

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several notable additions. Among the significant carryovers were the first-to-file system,²⁶⁶ strictly defined determination of damages,²⁶⁷ post-grant review (this time with the “second window” of possible invalidation eliminated entirely),²⁶⁸ and severe venue restrictions.²⁶⁹ Additionally, the 2007 bill included an outright bar on patenting of tax methods,²⁷⁰ a weak attempt to narrow inequitable conduct before the USPTO as a defense to infringement,²⁷¹ and imposition of several studies regarding several aspects of patent system functionality.²⁷²

On September 7, 2007, the House passed H.R. 1908 on a vote of 220–175.²⁷³ In a vote transcending party lines, passage came amid dissent from an array of groups believing that the Act would weaken patent rights to the point of rendering their assets essentially worthless.²⁷⁴ Citing threats to American innovators

266. Patent Reform Act of 2007, H.R. 1908, 110th Cong. § 3 (2007).

267. Under the bill, 35 U.S.C. § 284 would allow the court to impose damages based on only one of three categories, depending on the facts of the case: 1) “relationship of damages to contributions over prior art,” that is, applying damages only in the amount necessary to represent the value of the patent with respect to prior art, 2) “entire market value,” when the “patent’s specific contribution over the prior art is the predominant basis for market demand for an infringing product or process,” or 3) terms of any nonexclusive licensing of the invention, as well as any other relevant factors. Patent Reform Act of 2007, H.R. 1908, § 5. This section also allows for increased damages when infringement is found to have been willful, with “willfulness” strictly defined. *Id.*

268. *Id.* § 6.

269. Generally, suit for infringement may only be brought: 1) where defendant resides or has committed substantial acts of infringement and has a regular and established physical facility, 2) where plaintiff resides (for educational entities and their affiliated nonprofits), 3) where plaintiff has a place of business with certain significant ongoing activities, or 4) where plaintiff resides if he has not licensed the patent to a third party. *Id.* § 11.

270. *Id.* § 10. Tax planning methods, many of which have been patented as business methods, have received widespread criticism for allegedly limiting the access of all unlicensed parties to access to provisions of the Tax Code, thereby interfering with the general precept of tax law that all taxpayers should have equal footing before the IRS. See generally Craig E. Groeschel, Comment, *Tax Strategy Patents Considered Harmful*, 8 *HOUSTON BUS. & TAX. L. J.* (forthcoming 2008) available at http://www.hbtlj.org/content/HBTLJ_Symposium2007_E-Binder.pdf.

271. Patent Reform Act of 2007, H.R. 1908, § 12 (2007) (providing, as a defense to infringement, clear and convincing evidence that patentee “with a duty of disclosure to the Office, with the intent to mislead or deceived [sic] the patent examiner, misrepresented or failed to disclose material information to the examiner during examination of the patent.”).

272. *Id.* § 8 (study on efficacy of reexamination proceedings); *id.* § 16 (study on relative benefits of Special Masters in patent litigation); *id.* § 17 (study on workplace conditions for examiners at the USPTO); *id.* § 19 (study on patent damages).

273. Final Vote Results for Roll Call 863 (Sept. 7, 2007), available at <http://clerk.house.gov/evs/2007/roll863.xml>.

274. Prior to the vote, Rep. Dana Rohrabacher read a list of hundreds of companies and other entities—including large biotechnology, chemical, and pharmaceutical companies, as well as major research universities—that had stated opposition to the bill.

from international companies that would take advantage of weakened patent protection, Rep. Michael Michaud characterized the bill as “fundamentally flawed.”²⁷⁵ Lamenting the decreased value of patents that would result because “patent holders will no longer be able to receive the fair market value of their patent when infringed upon,”²⁷⁶ Rep. Don Manzullo criticized the apportionment of damages provision, which, he charged, ignores “all the other market factors considered in infringement cases.”²⁷⁷

VII. CONCLUSION

With long-term results far from certain, we are left with more questions than answers at this stage. Will Congress’ efforts provide a net benefit to those served by the patent system? As evidenced by House debates prior to passage, various groups still oppose certain changes in the patent system, despite the bipartisan compromises involved in every incarnation of a patent reform act. Of course, no single solution will produce truly optimal results for every interested party. Like any broad-based reform effort, widespread change to an area of the law with which various parties have learned to successfully comply will yield a distinct possibility that one or more provisions will carry unpopular, if not seriously detrimental, implications for other major players involved.

Moreover, one might question the timeliness and persistence of congressional reform efforts. Without having yet realized the full implications of recent actions in the Supreme Court, has Congress acted in haste by continuing to insist on comprehensive reform? Only time will tell whether the proposed solutions, taken as a whole, will indeed have been advantageous for academia, inventors, and the diverse industries affected, or whether change should have come through another avenue of reform.

Kevin R. Davidson

See 153 CONG. REC. H10,218-19 (Sept. 6, 2007) (comments of Rep. Michael Michaud on the House floor).

275. 153 CONG. REC. H10,222 (Sept. 6, 2007) (comments of Rep. Michael Michaud on the House floor).

276. *Id.* at H10,221 (Sept. 6, 2007) (comments of Rep. Don Manzullo on the House floor).

277. *Id.*