

**ASSESSING BIAS IN PATENT INFRINGEMENT CASES: A
REVIEW OF INTERNATIONAL TRADE COMMISSION
DECISIONS**

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I. INTRODUCTION

The International Trade Commission (“ITC”) — one of the two venues in which a firm can enforce its U.S. patent rights — awards patent holders nearly automatic injunctive relief if it finds infringement.¹ Yet an important new strand of academic literature demonstrates that awarding injunctive relief to patent holders, even when their patents are infringed, is often inconsistent with the socially optimal result.² In particular, when the patent covers a small component of an end product or when the patent holder is a non-practicing entity, the award of — or even the threat of — injunctive relief can lead to settlements at inflated royalty rates that are then passed on to end users in the form of higher prices.³ In these cases, monetary fines or rea-

1. See 19 U.S.C. § 1337(d) (2000) (providing as remedy for infringement an exclusion order unless certain exceptions are satisfied); 19 U.S.C. § 1337(f) (providing for cease and desist orders in addition or in lieu of exclusion orders).

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

3. See *id.* at 1994–2010.

sonable royalty rates will typically be better than injunctions at improving economic efficiency.⁴

A recent dispute in the ITC brought these issues sharply into focus. Broadcom, a U.S. company that makes communications-related technology, filed a complaint in the ITC against Qualcomm, another U.S. company that is a world leader in wireless communications technology.⁵ In June 2007, the ITC imposed a limited exclusion order against Qualcomm chipsets, preventing the importation of many new, popular EV-DO handsets into the United States.⁶ This action demonstrates the power of the ITC in influencing relations between domestic litigants.⁷ The ITC's ruling has potentially far-reaching repercussions on the entire wireless industry, which may include increased costs,⁸ the exclusion of more products, and the creation of precedent for future lawsuits.⁹

This Article presents the results of an empirical examination of ITC patent litigation. The ITC, which has jurisdiction to hear patent disputes under section 337 of the Smoot-Hawley Tariff Act of 1930¹⁰ ("section 337"), is likely to play an increasingly important role in the resolution of such disputes, not only because of the types of relief it can award, but because it has grown in popularity as a patent litigation venue.¹¹ Figure 1 shows the number of section 337 cases alleging pat-

4. *See id.* at 2037–39. By economic efficiency, we mean maximizing overall social welfare, typically equal to the sum of consumer surplus and producer surplus.

5. *See* Baseband Processor Chips and Chipsets, Transmitter and Receiver (Radio) Chips, Power Control Chips, and Products Containing Same, Including Cellular Telephone Handsets, Inv. No. 337-TA-543 (U.S. Int'l Trade Comm'n June 21, 2005). To view section 337 investigations, see ITC, Section 337 Investigations, <http://info.usitc.gov/ouii/public/337inv.nsf/All> (last visited May 12, 2008) [hereinafter ITC Database], and click on the hyperlink corresponding to the last three digits of the investigation number.

6. *See* Baseband Processor Chips and Chipsets, Transmitter and Receiver (Radio) Chips, Power Control Chips, and Products Containing Same, Including Cellular Telephone Handsets, Inv. No. 337-TA-543 (U.S. Int'l Trade Comm'n June 7, 2007) (exclusion order).

7. The President retains the power to veto an ITC decision, though this power is very rarely exercised. *See* 19 U.S.C. § 1337(j)(2) (2000). In the Qualcomm case, the U.S. Trade Representative, acting with presidential authority, chose not to exercise a veto. A deal Verizon agreed to with Broadcom may have played a part in the President's course of action. Corey Boles & Roger Cheng, *No USTR Veto on ITC Ruling on Broadcom-Qualcomm Dispute*, DOW JONES NEWSWIRES, Aug. 6, 2007.

8. *See* Boles & Cheng, *supra* note 7; Brian Deagon, *Ruling Goes Against Qualcomm in Its Broadcom Patent Dispute*, INVESTOR'S BUS. DAILY, Aug. 6, 2007, at A4. Verizon summarily agreed to a deal with Broadcom in light of the ruling, paying six dollars per EV-DO handset to ensure its phones could continue to be imported. Several phone makers, including LG Electronics and Samsung Electronics, also face bans on their most expensive and profitable phones. *See* Boles & Cheng, *supra* 7; Deagon, *supra*.

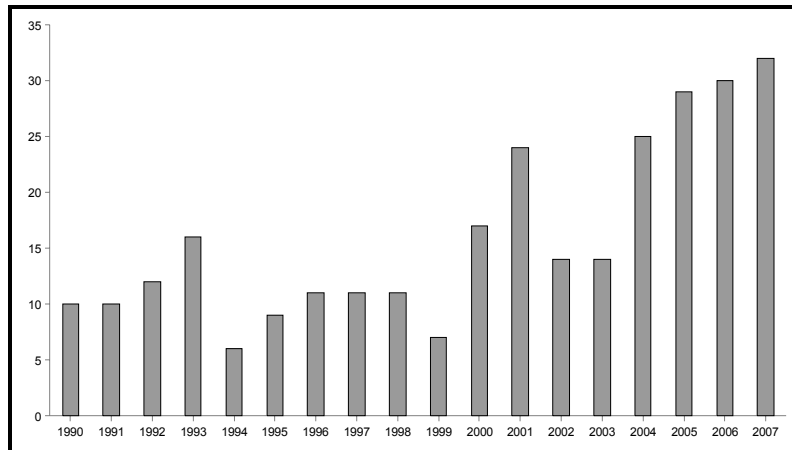
9. Nokia recently has requested that the ITC ban import of Qualcomm chips that include Nokia patents. Matt Richtel, *Nokia Seeks U.S. Aid in Patent Fight*, N.Y. TIMES, Aug. 18, 2007, at C2 (reporting that Nokia is claiming infringement of patented "technology used to improve performance of wireless devices, reduce product size and manufacturing costs, and increase battery life").

10. 19 U.S.C. § 1337 (2000 & Supp. V 2005).

11. The increase in litigation in ITC mirrors a broader trend — increases in the numbers of patents issued and increases in patent litigation in district courts. The spike in 2000 and

ent infringement by year. The average number of patent cases filed at the ITC was ten per year in the 1990s; since 2000, the number of cases has doubled to an average of twenty-three per year.¹²

Figure 1: Number of Section 337 Patent Investigations, 1990–2007¹³



The ITC has assumed an increasingly prominent role in adjudicating patent disputes in recent years. It has become an attractive venue for patent cases involving electronic products, since electronics are primarily manufactured overseas. A review of the ITC Database of section 337 investigations (“ITC Database”) suggests that other important industries are affected by the ITC’s role in patent law, including computers, semiconductors, and communications systems.¹⁴ These three “high technology” sectors of the economy are highly dependent on intellectual property and have been implicated in recent ITC patent cases.¹⁵ Combined, these sectors contributed nearly half a trillion dol-

2001, the dip in 2002 and 2003, and the upswing in 2004 likely reflect the tail end of the technology boom, the technology bust, and the recent improvement in the sector, respectively. See Tyson Winkarski & Kristin Carden, *ITC Filings Surge in 2004*, INTELL. PROP. STRATEGIST, Nov. 2004, at 1, 7.

12. These averages were calculated by reviewing investigations in the ITC Database. See ITC Database, *supra* note 5.

13. This data was compiled by counting the number of patent infringement investigations listed in the ITC Database each year from 1990 to 2007. See ITC Database, *supra* note 5.

14. See *id.*

15. See, e.g., Baseband Processor Chips and Chipsets, Transmitter and Receiver (Radio) Chips, Power Control Chips, and Products Containing Same, Including Cellular Telephone Handsets, Inv. No. 337-TA-543 (U.S. Int’l Trade Comm’n June 21, 2005); Portable Digital Media Players, Inv. No. 337-TA-573 (U.S. Int’l Trade Comm’n June 14, 2006).

lars to U.S. gross domestic product in 2005.¹⁶ Thus, while the number of actual section 337 cases at the ITC may be small relative to the number of patent cases in district courts, a single ITC case, such as the Broadcom versus Qualcomm case, can have far-reaching effects for an entire industry.¹⁷ Moreover, if the ITC becomes a safe haven for so-called “patent trolls,”¹⁸ then the number of cases could increase significantly, further adding to the social costs of the patent resolution process.¹⁹

Commentators have identified three institutional advantages of the ITC that might explain why the ITC has become a favored venue for patent holders.²⁰ First, jurisdiction under section 337 derives from the mere act of importation,²¹ which eliminates wrangling over complex jurisdiction and venue issues that are common in district court proceedings. Second, ITC procedures sharply limit the time available for discovery, making it possible for the ITC to resolve cases more quickly than district courts.²² Third, in cases involving process patents, certain defenses available in district court are not available at the ITC,²³ despite the terms of section 337(c), which provide that a respondent in an ITC complaint proceeding may raise “[a]ll legal and equitable defenses.”²⁴

The perception that patent holders enjoy an advantage at the ITC²⁵ is reinforced statistically. Patent holders are more likely to win

16. See Bureau of Econ. Analysis, U.S. Dep’t of Commerce, Gross-Domestic-Product-by-Industry Accounts, http://www.bea.gov/industry/gpotables/gpo_action.cfm?anon=61954&table_id=20848&format_type=0 (last modified Feb. 20, 2008).

17. See Editorial, *Smoot-Hawley’s Revenge*, WALL ST. J., Aug. 23, 2006, at A10 (“Depending on how the cases are ultimately decided, millions of cell phones could be barred from the U.S. market at a cost to the phone makers and network operators of billions of dollars”).

18. Some commentators have used the “patent troll” label to refer to non-practicing entities (“NPEs”) that enforce patents for the sole purpose of gaining revenue. See, e.g., John M. Golden, “Patent Trolls” and Patent Remedies, 85 TEX. L. REV. 2111 (2007).

19. High-value patents are often at stake in ITC decisions and have very high exposure to litigation risk. See Jean O. Lanjouw & Mark Schankerman, *Characteristics of Patent Litigation: A Window on Competition*, 32 RAND J. ECON. 129 (2001) (finding a statistical relationship between high litigation risk and high-value patents).

20. See, e.g., Bryan A. Schwartz, *Where the Patent Trials Are: How the U.S. International Trade Commission Hit the Big Time as a Patent Litigation Forum*, INTELL. PROP. L. NEWSL. (ABA, Chi., Ill.), Winter 2002, at 1.

21. See Tariff Act of 1930 § 337, 19 U.S.C. § 1337 (2000 & Supp. V 2005).

22. See 19 C.F.R. §§ 210.1–20 (2007). Limiting discovery time systematically favors complainants, who are able to prepare their case and develop evidence before filing a complaint. A respondent surprised by a complaint will have little time to develop and prepare a defense.

23. See Rodney R. Sweetland III & Michael G. McManus, *Patently Better Odds*, LEGAL TIMES, May 22, 2006, at 66; see also *Kinik Co. v. Int’l Trade Comm’n*, 362 F.3d 1359, 1361–63 (Fed. Cir. 2004).

24. 19 U.S.C. § 1337(c); see also *Kinik*, 362 F.3d at 1362 (rejecting plaintiffs argument that the language of section 337 allows all the same defenses to patent infringement in ITC investigations as are available in courts).

25. See, e.g., Sweetland & McManus, *supra* note 23.

their cases at the ITC than in district court. Between 1975 and 1988, the complainant prevailed — achieved a favorable decision or a settlement — in 65% of patent cases brought to the ITC, compared with a 40% to 45% win rate for patent plaintiffs in federal district courts.²⁶ In more recent years, the ITC “has decided 54 percent of contested cases in favor of the patent holder. This compares positively with win rates for district court patent cases.”²⁷

Furthermore, a patent holder at the ITC has substantial leverage over an alleged infringer when negotiating a settlement. The remedies available to the ITC are injunctive in nature — exclusion orders banning the importation of infringing products, and cease and desist orders barring the continued sale of imported articles.²⁸ In contrast, a district court can issue injunctions, impose monetary damages, or mandate a reasonable royalty.²⁹ As described below, in the absence of alternative remedies, the ITC is extremely likely to issue injunctive relief following a finding of infringement. The virtual certainty of injunctive relief is a major advantage for complainants.

A key objective of this Article is to determine whether the ITC is a biased venue for resolving patent disputes. When the average outcome across all decisions in a venue does not equal the average outcome of an efficient system, the venue is biased. In contrast, in an unbiased venue, the average across all decisions is equal to the average outcome of an efficient system, though any particular decision may be incorrect.³⁰

To determine whether a particular venue is biased, one needs to compare it against a benchmark. If one chooses an inappropriate benchmark, the comparison could lead to meaningless or misleading results. We used outcomes in district courts as the benchmark because, as a matter of theory, district court decisions in patent cases are likely to be less biased than those at the ITC.

26. Reiko Aoki & Thomas J. Prusa, *International Standards for Intellectual Property Protection and R&D Incentives*, 35 J. INT'L ECON. 251, 252 (1993). Whole number percentages are used throughout this Article.

27. Sweetland & McManus, *supra* note 23.

28. 19 U.S.C. § 1337(d) (providing as remedy for infringement an exclusion order unless certain exceptions are satisfied); *id.* § 1337(f) (providing for cease and desist orders in addition or in lieu of exclusion orders). The ITC can issue two types of exclusion orders. The first, known as a “limited” exclusion order, authorizes the ITC to block importation by a specific person who has been shown to have violated section 337. *Id.* § 1337(d)(1). The second, known as a “general” exclusion order, authorizes the ITC to bar importation of a class of articles, but only when “necessary to prevent circumvention of an exclusion order limited to products of named persons” or when “there is a pattern of violation of this section and it is difficult to identify the source of infringing products.” *Id.* § 1337(d)(2).

29. 35 U.S.C. §§ 283–284 (2000).

30. To make this concept more concrete, assume that the average win rate for plaintiffs, however a win is defined, over a large set of cases in an efficient system is 20%. If the average win rate for plaintiffs in a given venue is 40%, then one would conclude that the venue is biased in favor of plaintiffs. If the average win rate for plaintiffs in a given venue is 20%, then one would conclude that the venue is not biased.

In addition to the three institutional advantages the ITC affords plaintiffs, there is a theoretical basis for believing that the ITC may be biased: Congress designed the ITC to protect domestic manufacturers.³¹ As an independent federal agency, the ITC is exposed to political pressure from legislators that control the agency's budget.³² Because congresspersons care about political costs and benefits more than economic costs and benefits,³³ one would expect congressional influence over the ITC to favor domestic firms seeking to enforce their patents against foreign rivals, because domestic firms are better able to provide political benefits. This theory is supported by prior empirical research on the ITC's role in imposing antidumping duties, which suggests that the ITC is influenced by political factors.³⁴ Likewise, the win rate for plaintiffs at the ITC is highest when a domestic plaintiff sues a foreign defendant, and the loss rate is highest when a foreign plaintiff sues a domestic defendant, suggesting favoritism toward domestic litigants.³⁵

31. See Keith B. Anderson, *Agency Discretion or Statutory Direction: Decision Making at the U.S. International Trade Commission*, 36 J.L. & ECON. 915, 931 (1993) (“[T]he ITC differs from other agencies in that its statute directs it to focus solely on the effects on the competing domestic industry, rather than balancing the effects on consumers and producers as other agencies are directed to do.”).

32. See Benjamin H. Liebman, *ITC Voting Behavior on Sunset Reviews*, 140 REV. WORLD ECON. 446, 464 (2004) (noting that previous research suggests that congressional influence “stems . . . from its control over the agency's budget”). Congressional influence might also stem from its role in appointing commissioners, but prior empirical work shows that this is a less important factor than congressional control of the budget. See *id.*

33. See Sam Peltzman, *Toward a More General Theory of Regulation*, 19 J.L. & ECON. 211 (1976); George J. Stigler, *The Theory of Economic Regulation*, 2 BELL J. ECON. & MGMT. SCI. 3 (1971).

34. See Robert E. Baldwin & Jeffrey W. Steagall, *An Analysis of ITC Decisions in Anti-dumping, Countervailing Duty and Safeguard Cases*, 130 REV. WORLD ECON. 290 (1994) (finding that employment levels affect ITC decision-making and suggesting this indicates political bias); James M. DeVault, *Economics and the International Trade Commission*, 60 S. ECON. J. 463, 477 (1993) (finding that the size of domestic industry has a significant effect on ITC decisions); J.M. Finger et al., *The Political Economy of Administered Protection*, 72 AM. ECON. REV. 452, 459 (1982) (finding that international political considerations do not influence ITC decisions, but that domestic ones — such as an industry's size — may have a slight influence); Wendy L. Hansen & Thomas J. Prusa, *The Economics and Politics of Trade Policy: An Empirical Analysis of ITC Decision Making*, 5 REV. INT'L ECON. 230 (1997) (finding that House members on trade-related committees can influence ITC decision-making and political action committee contributions can influence outcomes in the ITC); Mark G. Herander & J. Brad Schwartz, *An Empirical Test of the Impact of the Threat of U.S. Trade Policy: The Case of Antidumping Duties*, 51 S. ECON. J. 59, 68 (1984) (using the number of firms in an industry as a proxy for lobbying strength and finding a strong correlation between this variable and ITC outcomes); Michael O. Moore, *Rules or Politics? An Empirical Analysis of ITC Antidumping Decisions*, 30 ECON. INQUIRY 449, 460, 465 (1992) (finding that Senate subcommittees on trade have a significant influence on ITC decisions). But see Anderson, *supra* note 31, at 928 (finding political variables are not significant determinants of ITC decision-making).

35. We base this conclusion on our own analysis of the ITC Database. See ITC Database, *supra* note 5. We find that plaintiffs win in 25% of domestic-versus-foreign cases, but only 23% of domestic-versus-domestic cases, 15% of foreign-versus-foreign cases, and 0% of foreign-versus-domestic cases. See *infra* Part V.A.1.

In contrast, district courts are not exposed to the same sort of direct political pressures. District court judges have life tenure, which is intended to insulate them from political influence after their appointment.³⁶ Nonetheless, preferences of interest groups may affect district court judges in a number of ways. Initially, interest groups can influence the confirmation process.³⁷ They can also have a more direct impact on particular district court decisions by initiating or funding litigation, thus creating or enhancing asymmetries in litigation power between parties.³⁸ Lack of patent expertise could also affect outcomes. One would not, however, expect these factors to result in systematic favoritism of plaintiffs or defendants in patent cases. Unlike the pressures on the ITC, which lead it to favor domestic industry in patent disputes, the factors influencing district courts do not primarily favor one constituency over others.

In this Article, we assume that it is reasonable to use decisions of district courts as a benchmark for comparison with ITC outcomes. We begin by comparing win rates at the two patent venues, the ITC and district courts. After finding what appears to be a bias in favor of complainants at the ITC, we test the hypothesis of a pro-complainant bias at the ITC. This analysis supports our initial finding of bias in favor of complainants.

Part II of this Article reviews the empirical literature that has examined the section 337 process. Part III discusses the use of injunctive relief in patent infringement cases. Part IV assesses three purported benefits of the section 337 process. Part V presents our results on bias in section 337 investigations. We find evidence that the ITC favors patent holders vis-à-vis district courts by a significant margin. We also find that the ITC grants injunctive relief as a remedy for infringement more often than district courts. Part VI proposes reforms to the ITC's role in patent enforcement that are consistent with the goal of social welfare maximization. Part VII concludes.

II. PRIOR EMPIRICAL RESEARCH ON SECTION 337 INVESTIGATIONS

There are only a handful of economic studies that analyze the section 337 process.³⁹ These studies provide insights into the type of pat-

36. See, e.g., THE FEDERALIST NO. 78 (Alexander Hamilton).

37. See Einer R. Elhauge, *Does Interest Group Theory Justify More Intrusive Judicial Review?*, 101 YALE L.J. 31, 81–83 (1991).

38. *Id.* at 66–79.

39. In contrast, many legal studies about the section 337 process exist. See, e.g., Terry Lynn Clark, *The Future of Patent-Based Investigations Under Section 337 After the Omnibus Trade and Competitiveness Act of 1988*, 38 AM. U. L. REV. 1149 (1989); Daniel J. Plaine et al., *Protection of Competitors or Protection of Competition: Section 337 and the Antitrust Laws*, 56 ANTITRUST L.J. 519 (1987); William A. Zeidler, *A Preventative Ap-*

ents litigated in the ITC and the economic value of those patents. Three basic findings arise from the empirical literature: (1) patents litigated at the ITC under section 337 tend to be more valuable than patents litigated elsewhere; (2) complaining firms at the ITC are larger, have more product lines, have spent more on research and development (“R&D”) and advertising, and are more profitable than their peer firms; and (3) a section 337 ruling affects R&D spending at the firm and industry level.

A. The Value of ITC Litigated Patents

To study the value of ITC litigated patents, Catherine Co constructed a matched sample by randomly pairing each patent in a sample of patents litigated in the ITC with a patent from the National Bureau of Economic Research patent database⁴⁰ with the same technology class and application year.⁴¹ Co found that patents litigated under section 337 that belonged to the 1995 to 1997 cohort were cited in subsequent patents approximately five times more often than all other patents in this cohort.⁴² According to Co, the number of times that a patent is cited by subsequent patents is an accepted measure of patent value.⁴³ Co also compared the value of patents litigated under section 337 to patents litigated in district court and determined that patents litigated under section 337 were more valuable.⁴⁴

B. Characteristics of Firms Utilizing the Section 337 Process

John Mutti and Bernard Yeung studied the characteristics of firms utilizing the section 337 process by compiling a database of all 262 section 337 cases from 1977 to 1990.⁴⁵ In ninety-two cases, financial information was available for the publicly traded firms involved in the

proach to Import-Related Disputes: Antidumping, Countervailing Duty, and Section 337 Investigations, 28 HARV. INT’L L.J. 69 (1987).

40. The NBER database contains information on all patents, including both patents that are litigated and patents that are not litigated. See The NBER U.S. Patent Citations Data File, <http://www.nber.org/patents/> (last visited May 12, 2008); Bronwyn H. Hall et al., *The NBER Patent Citation Data File: Lessons, Insights and Methodological Tools* (Nat’l Bureau of Econ. Research, Working Paper No. 8498, 2001).

41. Catherine Y. Co, *How Valuable Are Patents Behind Section 337 Cases?*, 27 WORLD ECON. 525, 528–31 (2004).

42. *Id.* at 530.

43. *Id.* at 529.

44. *Id.* at 532.

45. John Mutti & Bernard Yeung, *Section 337 and the Protection of Intellectual Property in the United States: The Complainants and the Impact*, 78 REV. ECON. & STAT. 510, 512 (1996).

litigation.⁴⁶ These firms were compared to their “peer firms” (those public firms in the same industry).⁴⁷ Mutti and Yeung found that complaining firms at the ITC (1) are larger and have more product lines than peer firms in their industry,⁴⁸ (2) have spent more on R&D and advertising than their peers,⁴⁹ and (3) are slightly more profitable than their peers.⁵⁰ They also determined that a favorable ITC ruling for a complainant in an R&D-intensive industry has no positive effect on the R&D spending of that complainant.⁵¹ However, an adverse ruling for a complainant in an R&D-intensive industry has a large negative effect on the R&D spending of that complainant, although the ruling has a positive effect on the entire industry’s R&D spending.⁵²

A follow-up study by Mutti and Yeung focused on how a section 337 decision affects R&D within an industry.⁵³ They found that a section 337 ruling in favor of a complainant appears to induce other firms with the most R&D spending in that industry to reduce this spending.⁵⁴ They posited that this reduction reflects concerns about a potentially blocking patent.⁵⁵ They also found weaker evidence that a section 337 ruling against a complainant invigorates a patent race among other firms.⁵⁶ Based on their findings, Mutti and Yeung speculated that the section 337 process may provide opportunities for collusion among domestic firms.⁵⁷

III. APPROPRIATENESS OF INJUNCTIVE RELIEF IN PATENT CASES

Usually, strong patent enforcement, such as the use of injunctive relief, can promote the public interest.⁵⁸ However, this is not always

46. *Id.* at 512.

47. *Id.* at 512–13.

48. *Id.* at 514.

49. *Id.* at 515.

50. *Id.*

51. *Id.* at 518.

52. *Id.*

53. See John Mutti & Bernard Yeung, *Section 337 and the Protection of Intellectual Property in the U.S.: The Impact on R&D Spending*, in QUIET PIONEERING 71 (Keith E. Maskus et al. eds., 1997).

54. See *id.* at 86.

55. *Id.* at 87.

56. *Id.* at 91.

57. *Id.*

58. The literature assumes that if patent holders lack confidence that their property rights will be firmly enforced, then they will have a reduced incentive to innovate. Without sufficient protection against infringing patents, U.S. firms will not invest at socially optimal levels in innovative activities. See, e.g., Bronwyn H. Hall & Rosemarie Ham Ziedonis, *The Patent Paradox Revisited: An Empirical Study of Patenting in the U.S. Semiconductor Industry, 1979–1995*, 32 RAND J. ECON. 101 (2001) (finding some empirical support for the idea that stronger patent enforcement creates positive effects in the U.S. semiconductor

the case. Professors Lemley and Shapiro employed bargaining theory⁵⁹ to show that the mere threat of obtaining a permanent injunction can lead “to royalty rates that exceed a natural benchmark range based on the value of the patented technology and the strength of the patent.”⁶⁰ In particular, they demonstrate that “the negotiated royalty rate for a single patent tends to be greatly elevated above a reasonable benchmark level if the value of the patented feature is small relative to the total value associated with the product.”⁶¹ The benchmark level for reasonable royalties is meant to reflect the royalty rate that would have been negotiated prior to any infringement action if the patent were known to be valid.⁶² The benchmark royalty rate is the product of the following elements:⁶³ the patent strength,⁶⁴ the bargaining power of the patent holder,⁶⁵ and the “[v]alue per unit of the patented feature to the downstream firm in comparison with the next best alternative technology.”⁶⁶ The authors claim that when the costs and time needed for redesign are not significant, courts can reduce the holdup problems caused by the threat of injunctions by issuing stays to allow the defendant time to redesign an infringing product.⁶⁷ This finding supports their recommendation that a court should not grant a permanent injunction when: (1) the patent suit concerns only one of several components within the product, and (2) the defendant developed the technology independently and did not copy it from the plaintiff.⁶⁸

The debate over the social costs of permanent injunctions in patent infringement suits is not confined to academia. In *eBay Inc. v. MercExchange, L.L.C.*,⁶⁹ the Supreme Court held that patent holders

industry); Adam B. Jaffe & Josh Lerner, *Reinventing Public R&D: Patent Policy and the Commercialization of National Laboratory Technologies*, 32 RAND J. ECON. 167 (2001) (finding that the intellectual property rights policy changes had a substantial and positive effect on laboratory patenting); Walter G. Park & Juan Carlos Ginarte, *Intellectual Property Rights and Economic Growth*, 15 CONTEMP. ECON. POL'Y 51 (1997) (finding that intellectual property protection is a significant determinant of physical and R&D capital accumulation, even after controlling for market freedom).

59. See Lemley & Shapiro, *supra* note 2, at 1995–96 (“Using the standard economic theory of Nash bargaining, the negotiated royalty rate depends upon the payoff that each party would obtain if the negotiations break down, i.e., on each party’s threat point in the licensing negotiations.”); see also John F. Nash, *The Bargaining Problem*, 18 ECONOMETRICA 155 (1950).

60. Lemley & Shapiro, *supra* note 2, at 1991.

61. *Id.* at 2001–02.

62. *Id.* at 2007.

63. *Id.* at 1999.

64. *Id.* at 1996.

65. *Id.* at 1997.

66. *Id.* at 1996.

67. *Id.* at 2038.

68. *Id.* at 2036–37.

69. 126 S. Ct. 1837 (2006).

seeking permanent injunctions against patent infringers must satisfy the traditional four-factor test required to obtain an injunction.⁷⁰ Although the Court rejected categorical approaches to determining when to grant injunctive relief,⁷¹ Justice Kennedy's concurring opinion gave an example of a situation in which injunctive relief may not be consistent with the public interest:

When the patented invention is but a small component of the product the companies seek to produce and the threat of an injunction is employed simply for undue leverage in negotiations, legal damages may well be sufficient to compensate for the infringement and an injunction may not serve the public interest.⁷²

The factors identified by Kennedy are analogous to those identified by Lemley and Shapiro.⁷³

The *eBay* decision represents a marked shift from prior judicial practice. According to FTC Chairman Deborah Majoras, before the *eBay* decision, lower courts regularly granted permanent injunctions in patent suits.⁷⁴ Majoras explains that when courts consider, as they must under *eBay*, whether the plaintiff suffered an irreparable injury and whether remedies at law are adequate to compensate for that injury, an important factor is whether the patentee uses its patent exclusively or non-exclusively.⁷⁵ She notes that an injunction may allow the patent owner to appropriate more than the full value of its invention; for example, when a non-practicing entity "that sells no products and licenses non-exclusively asserts its patent after the accused infringer has sunk substantial costs into design, development, and commercialization of the accused product."⁷⁶ Majoras also explains that holdup is likely to occur in industries with patent thickets — those industries with complex products covered by hundreds or even thousands of patents.⁷⁷

70. *Id.* at 1839. Under the traditional test, a plaintiff must show that (1) it suffered an irreparable injury; (2) remedies at law are inadequate to compensate for that injury; (3) an injunction is warranted in light of the balance of hardships between the plaintiff and the defendant; and (4) the public interest would not be disserved by a permanent injunction. *Id.*

71. *See id.* at 1841.

72. *Id.* at 1842 (Kennedy, J., concurring).

73. *See* Lemley & Shapiro, *supra* note 2, at 1991.

74. Deborah Platt Majoras, Chairman, FTC, A Government Perspective on IP and Antitrust Law, Address at the American Antitrust Institute Annual National Conference: The IP Grab 4 (June 21, 2006) (transcript available at <http://www.ftc.gov/speeches/majoras/060621aai-ip.pdf>).

75. *Id.* at 8.

76. *Id.* at 6.

77. *Id.* at 7–8.

IV. PURPORTED BENEFITS OF SECTION 337 INVESTIGATIONS

In 1987, Congress amended section 337 of the Smoot-Hawley Tariff Act of 1930⁷⁸ to “strengthen the effectiveness of section 337 in addressing the growing problems being faced by U.S. companies from the importation of articles which infringe U.S. intellectual property rights.”⁷⁹ The core purpose of section 337 is to provide U.S. companies with a remedy against foreign companies that fail to respect patents and other U.S. intellectual property.⁸⁰ This intended benefit of section 337 is referred to in this Article as “protectionism.” In addition to this justification, two other purported benefits of the section 337 process are that it quickly resolves patent disputes and fills gaps in district court jurisdiction. In this Part we first explore the protectionism rationale and then proceed to evaluate the merits of the other justifications.

A. Protectionism

Congress passed the Smoot-Hawley Tariff Act of 1930, which conferred jurisdiction upon the ITC to review patent infringement claims, primarily to protect domestic industry from unfair foreign competition.⁸¹ ITC complaints, however, are not confined to cases that protect domestic industries from unfair foreign imports. In fact, the only jurisdictional prerequisites for an ITC complaint are (1) that the defendant import articles⁸² and (2) that the complaint satisfy the “domestic industry” requirement of section 337(a)(2).⁸³ A foreign firm can satisfy the second condition if it has “(A) significant investment in plant and equipment; (B) significant employment of labor or capital; or (C) substantial investment in its exploitation, including engineering, research and development, or licensing” in the United States.⁸⁴ As a result of these liberal requirements, the ITC has jurisdiction over many cases only involving domestic firms, such as the Broadcom–Qualcomm case discussed above.⁸⁵ The ITC also adjudicates many disputes involving only foreign firms. In 2001, four cases

78. 19 U.S.C. § 1337 (2000 & Supp. V 2005).

79. S. REP. NO. 100-71, at 128 (1987).

80. *See id.* at 127–28.

81. *See* Tariff Act of 1930, Pub. L. No. 71-361, § 337, 46 Stat. 590, 703 (codified as amended at 19 U.S.C. § 1337 (2000 & Supp. V 2005)).

82. 19 U.S.C. § 1337(a)(1)(B). A section 337 action can be initiated not only against foreign companies, but also against any domestic company that imports articles. *See id.*

83. 19 U.S.C. § 1337(a)(2).

84. *Id.*

85. Baseband Processor Chips and Chipsets, Transmitter and Receiver (Radio) Chips, Power Control Chips, and Products Containing Same, Including Cellular Telephone Handsets, Inv. No. 337-TA-543 (U.S. Int’l Trade Comm’n June 21, 2005).

were brought by foreign companies against other foreign companies.⁸⁶ In other cases, foreign firms may bring complaints against domestic companies. For example, Creative Laboratories, a Singaporean company, brought a complaint against Apple Computer, a U.S. company, seeking to bar importation of the iPod.⁸⁷

To examine the protectionism justification systematically, we categorized each case in the ITC Database according to the nationality of the complainant and respondent.⁸⁸ We found a decrease over time in the number of section 337 cases with a domestic complainant and foreign respondent (“domestic-versus-foreign cases”). In the 1980s, domestic-versus-foreign cases accounted for about 83% (156 of 187) of all section 337 patent cases. In the 1990s, this category declined to 74% (74 of 100) of all cases. From 2000 through 2006, domestic-versus-foreign cases fell further to approximately 66% (97 of 148). This trend away from domestic-versus-foreign suggests that the ITC is increasingly deviating from its traditional role and original mission of protecting U.S. manufacturers from foreign infringers.⁸⁹

86. Video Cassette Devices and Television/Video Cassette Combination Devices and Methods of Using Same, Inv. No. 337-TA-464 (U.S. Int’l Trade Comm’n Sept. 14, 2001); Personal Watercraft and Components Thereof, Inv. No. 337-TA-452 (U.S. Int’l Trade Comm’n March 14, 2001); Semiconductor Light Emitting Devices, Components Thereof, and Products Containing Same, Inv. No. 337-TA-444 (U.S. Int’l Trade Comm’n Jan. 16, 2001); Flooring Products, Inv. No. 337-TA-443 (U.S. Int’l Trade Comm’n Jan. 5, 2001).

87. Portable Digital Media Players, Inv. No. 337-TA-573 (U.S. Int’l Trade Comm’n June 14, 2006).

88. Companies were classified as either foreign or domestic based on the location of their headquarters or their country of incorporation. We relied primarily on the classification system used in the ITC Database, which categorizes most companies by country. *See* ITC Database, *supra* note 5. If the ITC failed to provide country information for a party, the nationality of the company was classified using publicly available information. We looked first to the company’s own website and then turned to other publicly available sources including financial listings, SEC filings, and online reference sources. Companies with headquarters in the United States were classified as domestic, except for subsidiaries of foreign-based companies. A company was considered a subsidiary if at least 50% of its equity was owned by a foreign company. Publicly traded companies were not considered subsidiaries. If an individual was listed as the complainant or respondent, his or her primary country of residence was used for classification purposes. Cases with multiple companies were classified as foreign if a single foreign company was included. Five cases could not be classified due to an inability to identify the nationality of either the complainant or the respondent. These cases are excluded from our analysis in this Article.

89. The first patent case brought in the ITC was in 1972. By the end of 1975, only eleven patent cases had been initiated in the ITC. Given the small sample size for the 1970s (sixty-six cases), the distribution of cases from the 1970s is not included in our analysis. The win rates for that decade were 24% for domestic-versus-domestic cases, 71% for domestic-versus-foreign cases, 5% for foreign-versus-foreign cases, and 0% for foreign-versus-domestic cases. The sample size for other decades was 187, 100, and 148 for 1980s, 1990s, and 2000s, respectively.

B. Speed in Resolving Patent Disputes

Complainants may benefit from the ITC's speed, but speed is not necessarily desirable for society if it comes at the expense of careful deliberation, accuracy, or other more important goals that adjudication serves. If the ITC is biased in favor of injunctive remedies, as our data suggest, harm may be intensified by the earlier imposition of potentially unwarranted injunctions.

Even if the benefits of greater speed outweigh its costs, the data suggest that the ITC's speed advantage over district courts may be exaggerated. Resolution of patent cases filed in district courts takes on average between ten to twenty-three months.⁹⁰ A typical ITC investigation lasts between twelve and eighteen months.⁹¹ In district court, litigants have two options unique to that forum, which may allow for rapid relief or adjudication of patent suits. First, patent holders can obtain preliminary injunctions in as little as several weeks.⁹² Second, some district courts have developed expedited procedures for patent cases, commonly referred to as "rocket dockets."⁹³

C. Filling Gaps in District Court Jurisdiction

There are two narrow situations in which federal courts may not be able to hear cases involving infringing imports. First, an infringing foreign manufacturer may lack sufficient contacts with the United

90. See Jay P. Kesan & Gwendolyn G. Ball, *How Are Patent Cases Resolved? An Empirical Examination of the Adjudication and Settlement of Patent Disputes*, 84 WASH. U. L.R. 237, 288 tbl.13 (2006) (showing that the median days to resolve a dispute in district court is less than 300 and that among cases resolved by a final ruling, the median days to resolution were between 564 and 685).

91. See U.S. INT'L TRADE COMM'N, SECTION 337 INVESTIGATIONS: ANSWERS TO FREQUENTLY ASKED QUESTIONS 21 (2004), available at http://www.usitc.gov/trade_remedy/int_prop/pub3708.pdf (stating that "[h]istorically, the Commission has strived to complete most investigations in 12 to 15 months"); BRIAN BUSEY & JOHN L. KOLAKOWSKI, MORRISON & FOERSTER LLP, ITC SECTION 337 CASE FILINGS ON PACE TO SET RECORD (June 2006), <http://www.mofo.com/news/updates/files/update02194.html> (stating that "[m]ost Section 337 proceedings are scheduled by the ITC for final determination within 12 to 14 months after institution"); THOMAS E. TONER, SMITH & HOPEN, P.A., HOW DO WE PREVENT INFRINGING PRODUCTS FROM ENTERING THE UNITED STATES? (Mar. 2005), http://www.smithhopen.com/faq_display.asp?faq_id=42 (stating that the "turnaround time between filing and conclusion [in the ITC is] approximately 18 months").

92. See Steven E. Shapiro, *Preliminary Injunction Motions in Patent Litigation*, 33 IDEA 323, 324–26 (1993) (noting that "preliminary injunction motions have become effective tools in patent infringement actions and the courts have shown an increased willingness to grant such motions" and emphasizing the speed of these proceedings by stating that "applications [for preliminary injunctions] may be heard within days or weeks after filing of the patent action").

93. See, e.g., Julie Creswell, *So Small a Town, So Many Patent Suits*, N.Y. TIMES, Sept. 24, 2006, § 3, at 1 ("The changes turned Marshall's federal court into a 'rocket docket' — a place where the time between filing and trying a lawsuit became significantly shorter than in other districts.").

States to provide a basis for personal jurisdiction.⁹⁴ Second, a U.S. company may not know the source of infringing goods imported into the United States and therefore not have a party to sue in district court.⁹⁵ In either of these situations, a patent holder can seek relief only at the ITC under section 337. Indeed, after considering all three purported benefits of the section 337 process, we conclude that the ITC's ability to fill gaps in district court jurisdiction is the only compelling benefit.

V. EMPIRICAL RESULTS ON POSSIBLE BIASES IN SECTION 337 INVESTIGATIONS

This Part describes the results of our empirical research of possible biases in the ITC's decision-making process. We first considered whether the ITC is more likely than district courts to rule in favor of patent holders. We utilized the fact that a patent holder can assert patent rights against an allegedly infringing import in either venue and the fact that appeals from both venues are heard by the same appellate court. We estimated the win rate of complainants at the ITC compared to the win rate of plaintiffs in district courts. In addition, we estimated the rate at which decisions in both venues are upheld on appeal by the Federal Circuit. Although it is possible that patent holders' initial win rate at the ITC exceeds the win rate in district courts because of selection bias — that is, if ITC complaints are systematically stronger than district court complaints — such selection bias should not affect rates of reversal on appeal. The data, however, show that the ITC is reversed more frequently than district courts. This result suggests that selection bias does not explain our results. To further assess the reliability of ITC decision-making, we focused our analysis on thirty-two parallel cases that were heard both by the ITC and a district court.

We then considered a second, potentially more serious type of bias in favor of complainants: the ITC's tendency to award injunctive relief once it finds patent infringement. We thus compared the frequency of injunctive relief awarded by the ITC and the district courts in cases where patent infringement was found.

94. Although the nuances of jurisdiction are beyond the scope of this Article, an example in which such jurisdiction may be lacking is when a foreign infringer manufactures a product abroad and sells it to another foreign firm that then incorporates it into a product that is then imported into the United States. *See, e.g., Sealed Air Corp. v. U.S. Int'l Trade Comm'n*, 645 F.2d 976, 985 (C.C.P.A. 1981) ("An exclusion order operates against goods, not parties [and is] not contingent upon a determination of personal or 'in personam' jurisdiction over a foreign manufacturer.").

95. *See* Vivek Koppikar, *Evaluating the International Trade Commission's Section 337 Investigation*, 86 J. PAT. & TRADEMARK OFF. SOC'Y 432, 434 (2004).

A. Does the ITC Rule in Favor of Complainants Too Frequently?

1. Percentage of Favorable Outcomes for Complainants in ITC Proceedings

The win rate for complainants in patent cases heard by the ITC is generally higher than the rate for patent holders in district courts. Between 1975 and 1988, the complainant prevailed in 65% of patent cases brought before the ITC, compared with a 40% to 45% win rate for plaintiffs in district court.⁹⁶ More recent data suggest that complainants continue to enjoy a high win rate at the ITC. For example, a previous study of section 337 investigations between 1995 and 2000 shows that complainants won 72% of cases.⁹⁷

Our review of the ITC Database identified 467 completed proceedings that mention “patent” in the unfair acts alleged through July 2006. Table 1 summarizes the results.

96. See Aoki & Prusa, *supra* note 26, at 252.

97. We calculated this win rate for complainants by combining the percentage of violations found with the percentage of settlements reported by Schwartz. See Schwartz, *supra* note 20, at 5 (reporting that 23% of cases resulted in a violation and 49% of cases resulted in a settlement).

<i>Type of Case</i>	<i>Disposition</i>
Complaint withdrawn	51 (11%)
Violation found	109 (23%)
No violation found	85 (18%)
Case settled	211 (45%)
Other	11 (2%)
Total	467

The ITC found a violation in 23% of completed cases (109 of 467).⁹⁹ When settlements and the finding of a violation are categorized as favorable outcomes for the complainant, the complainant received a favorable outcome in roughly 69% of patent cases brought before the ITC.¹⁰⁰ This is very similar to the 72% win rate calculated using the data reported by Schwartz.¹⁰¹

One possible explanation for the observed bias in favor of complainants is that the ITC is subject to political influence. Political economy theory predicts that political influence is channeled in support of domestic manufacturers. Accordingly, under that theory, a domestic complainant facing a foreign respondent (“domestic-versus-foreign cases”) should secure findings of infringement more frequently than a foreign complainant facing a domestic respondent (“foreign-versus-domestic cases”). Further, a domestic complainant facing a foreign respondent should secure findings of infringement more frequently than both a domestic complainant facing a domestic respondent (“domestic-versus-domestic cases”) and a foreign complainant facing a foreign respondent (“foreign-versus-foreign cases”). In the latter two situations, it is reasonable to assume that the political influence exerted on behalf of complainants and respondents would be comparable, thereby leading to no systematic bias in the outcome.¹⁰²

98. Data collected on investigations from 1972 through September 2006 found in the ITC Database. *See* ITC Database, *supra* note 5.

99. This number is conservative because it excludes cases in the database that show a remedy being granted but that do not specify that a violation was found. Even with this conservative number, conditioned on the ITC reaching a final ruling, the ITC finds in favor of the complainant 56% of the time.

100. We found that 18 cases have both a violation found and a settlement. We excluded these duplicates from our calculations.

101. *See* Schwartz, *supra* note 20, at 5.

102. One would expect Congress to take a keener interest in domestic-versus-domestic cases than in foreign-versus-foreign cases.

As Table 2 shows, the data appear to support this political economy hypothesis.

<i>Pairing of Litigant Types</i>	<i>Completed cases</i>	<i>Findings of Infringement</i>	<i>Rate of Infringement</i>
Domestic-versus-domestic	56	13	23%
Domestic-versus-foreign	348	88	25%
Foreign-versus-foreign	55	8	15%
Foreign-versus-domestic	3	0	0%
Not categorized	5	0	0%
Total	467	109	23%

The fact that the ITC reached a finding of infringement in domestic-versus-foreign cases much more frequently than it did in foreign-versus-foreign cases suggests that the ITC is subject to political influence by representatives of domestic firms.¹⁰⁴ In district courts there is similar evidence of bias against foreigners for the subset of patent cases tried by jury.¹⁰⁵ However, the same research finding this bias did not find evidence of bias by judges,¹⁰⁶ which suggests that there is minimal political pressure in district courts. Therefore, the bias against foreigners in district courts seems to arise from the xenophobia of juries, whereas the ITC bias may result from either political pressure or the xenophobia of ITC judges.

To determine whether the empirical rate of infringement or “win rate” at the ITC is high or low, one needs an appropriate benchmark. We compared the overall win rate of complainants at the ITC with the overall win rate of plaintiffs at district courts. While we found that the overall rate at which the ITC finds infringement is 23%, prior research shows that district courts found infringement in only about 6% of all

103. Data collected on investigations from 1972 through September 2006 found in the ITC Database. *See* ITC Database, *supra* note 5.

104. A one-sided test of proportions allows one to conclude that the rate of a finding of infringement for domestic-versus-foreign cases is greater than the rate of a finding of infringement for foreign-versus-foreign cases at the 5% level of significance.

105. *See, e.g.*, Kimberly A. Moore, *Xenophobia in American Courts*, 97 NW. U. L. REV. 1497, 1509 (2003) (“Domestic parties won 64% of the cases decided by a jury when their adversary was foreign, while foreign parties prevailed in the remaining 36% of such cases.”).

106. *Id.* at 1509–10 (finding that “in cases decided by judges, the patentee win rate is almost identical, with domestic patentees winning 35% of the time against foreign infringers, and foreign patentees winning 31% of the time against domestic infringers.”).

patent cases.¹⁰⁷ This simple difference in win rates supports the inference that the ITC is biased in favor of complainants relative to the district courts. Differences in procedure may account for a portion of the difference in win rates across the two patent venues, as district court patent cases often do not advance to a stage where a finding of infringement can occur. If patent holders do have a trial at the district court, however, they enjoy on average win rates in excess of 50% (49% in cases decided by a judge and 63% in cases decided by juries).¹⁰⁸ However, only a very small percentage of patent cases at district courts go to trial.¹⁰⁹ Regardless of the source, procedural or otherwise, there is a significant difference in the rate at which the ITC and district courts make findings of infringement.

Benchmarking against the win rates at district courts would be inappropriate if the district courts themselves were biased. Given the rates at which each venue finds infringement in patent cases, there are three hypotheses to consider: (1) the ITC and the district courts are biased in favor of complainants, but the bias at the ITC is stronger; (2) the ITC is biased in favor of complainants and the district courts are biased in favor of respondents; and (3) the ITC and the district courts are biased in favor of respondents, but the bias at the district courts is stronger. The initial inference that the ITC is biased in favor of complainants is false only if the third hypothesis is true. Based on our review of the literature, however, no theory or associated data currently exists that support the claim that the ITC is biased in favor of defendants.

Using win rates at district courts as a benchmark would also be inappropriate if there were a significant selection bias. In other words, the difference in the win rates might be explained by differences between the type of cases that appear before the two patent venues. If the difference were attributable to the ITC hearing more domestic-

107. See Kesan & Ball, *supra* note 90, at 275. The authors found that (1) an explicit final ruling of infringement or a judgment for the patent holder that could be interpreted as an infringement ruling was found in about 6% (82 of 1369) of all cases in 1995, 5.9% (103 of 1756) of all cases in 1997, and 4.4% (91 of 2081) of all cases in 2000. *Id.* The authors also found that many (2) consent agreements (nine in 1995, six in 1997, nine in 2000) as well as (3) definitive settlements (fifteen in 1995, fourteen in 1997, and fifteen in 2000) included an explicit ruling of infringement in the docket to formalize the agreement. *Id.* at 275 n.227. We computed the 6% finding of infringement rate for 2000 by summing the number of (1) explicit final rulings of infringement or judgments for the patent holder that could be interpreted as a finding of infringement, with (2) consent agreements, and (3) definitive settlements with an explicit ruling of infringement, and then dividing by the total number of cases.

108. Kimberly A. Moore, *Judges, Juries, and Patent Cases — An Empirical Peek Inside the Black Box*, 99 MICH. L. REV. 365, 386 (2000).

109. *Id.* at 384 n.79 (“[I]n 1998, 24% of cases were resolved without court action, 59% of cases were resolved by court order or judgment on a motion, 12.5% were resolved after the pre-trial conference but before trial, and 4.5% of all cases were resolved during or after a trial.”)

versus-foreign patent cases, then it is possible that if the district courts were to hear more of those types of cases, and if those cases were tried by juries rather than judges, then the win rate for plaintiffs in district courts would increase. The two factors, however, do not seem to explain the magnitude of the difference in win rates between the ITC and the district courts. Even if all cases in district courts were domestic-versus-foreign and all of those cases were heard by juries rather than judges, the likelihood of a finding of infringement in district courts would not increase enough to eliminate the gap in win rates between the ITC and district courts.¹¹⁰ An alternative theory is that the ITC may hear stronger patent cases than the district courts. This theory posits that if the district court were to hear those stronger cases, the win rate at district court would increase — a result that our results do not support. If the difference in win rates was solely the result of selection issues, then the observed win rate at the district court should increase as decided ITC patent cases move to the district court.

2. Frequency with Which the ITC is Overturned on Appeal

The higher initial rate of success for patent holders at the ITC might be attributed to selection bias if the ITC heard cases with particularly strong infringement claims.¹¹¹ To test this hypothesis, we compared the rate at which ITC and district court decisions in patent cases are upheld on review.¹¹² The U.S. Court of Appeals for the Federal Circuit handles the appeals of both ITC and district court decisions in patent cases. Thus, a higher rate of reversal for ITC decisions as compared with district courts would tend to suggest that district court decisions are more accurate than ITC decisions. A higher rate of reversal for ITC decisions involving findings of patent infringement compared to other ITC and district court decisions would indicate bias in favor of patent holders. If disputes brought to the ITC were particularly clear cases of infringement, then one would expect there to be fewer reversals of ITC decisions than of district court decisions. In-

110. The win rate at district courts across all patent cases initiated would increase by less than 2%. This was calculated by finding the product of (1) the difference between the win rate in cases decided by a jury when the plaintiff was domestic and their adversary was foreign (64%) and the win rate in cases decided by a judge when the plaintiff was domestic and their adversary was foreign (35%), and (2) the probability of a case reaching a trial (roughly 5%). See Moore, *supra* note 105, at 1509–12.

111. For example, this could be true if ITC cases typically involved outright piracy of patented goods by foreign producers. We have found no evidence to support that hypothesis.

112. One might argue that selection effects determine which cases are appealed and that this undermines the validity of looking at appellate outcomes to judge whether bias exists. See, e.g., George L. Priest & Benjamin Klein, *The Selection of Disputes for Litigation*, 13 J. LEGAL STUD. 1 (1984) (suggesting that selection effects determine which cases are appealed). However, because similar selection effects influence the decision to appeal for different types of cases, selection effects should not drive differences in outcomes.

stead, the data support the hypothesis that district court decisions are more accurate and that ITC decisions are biased in favor of patent holders.

There is some dispute over the precise reversal rate for district court patent cases appealed to the Federal Circuit. Between 1995 and 2000, the average overall reversal rate for district court patent cases before the Federal Circuit was around 19%.¹¹³ Although others have put the number slightly higher,¹¹⁴ a 20% to 25% reversal rate for patent cases is a reasonable assumption. This also corresponds to the raw numbers for issue-specific reversals between 2000 and 2004.¹¹⁵ Comparing the survival rate (the rate at which lower court decisions are affirmed on appeal) of district court patent decisions (75% to 80%) with the survival rate of ITC section 337 decisions reported by Foley & Lardner's Larry Shatzer (66%),¹¹⁶ it appears that district courts fare better than the ITC on appeal.

Shatzer's finding of a 66% reversal rate for section 337 patent decisions was based on an analysis of cases that were appealed between 1986 and 1999.¹¹⁷ We updated Shatzer's statistics using the ITC Database through September 2006. Although the ITC Database does not include some relevant district court decisions, it does appear sufficient to track the frequency with which the ITC is reversed on appeal. Table

113. See Kimberly A. Moore, *Are District Court Judges Equipped to Resolve Patent Cases?*, 15 HARV. J.L. & TECH. 1, 15 tbl.1 (2001) (averaging Federal Circuit reversal rates in patent cases from 1995 to 2000).

114. See Christian A. Chu, *Empirical Analysis of the Federal Circuit's Claim Construction Trends*, 16 BERKELEY TECH. L.J. 1075, 1099–1100 (2001) (finding a reversal rate of around 37%). Chu says his figures, excepting summary affirmances, track the 53% reversal rate identified by Judge Rader in *Cybor Corp. v. FAS Technologies, Inc.*, 138 F.3d 1448, 1476 (Fed. Cir. 1998) (Rader, J., dissenting). Chu, *supra*, at 1098–1100. However, Judge Rader's figures, which are based on the Federal Circuit's own statistics, include both full and partial reversals on all issues. *Cybor Corp.*, 138 F.3d at 1476. As Judge Rader notes, the statistics show the Federal Circuit only fully reverses the district court 27% of the time in patent cases. *Id.*

115. The University of Houston Law School tracks the appellate treatment of patent suits by issue. See University of Houston Law Center, Patent Statistics: Decisions for 2000–2004, [http://www.patstats.org/Composite%20Table%20\(2000-2004\).html](http://www.patstats.org/Composite%20Table%20(2000-2004).html) (last visited May 12, 2008). For literal infringement (category 23), the sum of all reversals and affirmances, corresponds to a reversal rate of 22%. See *id.* Broken down by party, the numbers show a 55% survival rate (on this issue alone) for the plaintiff, and a 90% survival rate for the alleged infringer. See *id.* The numbers are similar for infringement under the doctrine of equivalents (category 24). See *id.* Summing all reversals and affirmances shows a 22% reversal rate. See *id.* Note, however, that these statistics apparently include ITC determinations. That said, given the disparity between the number of cases decided by the ITC and by the district courts (dozens versus hundreds), the inclusion of ITC cases is unlikely to skew the figures.

116. See Larry Shatzer, Partner, Foley & Lardner, Presentation at the Annual Meeting of the International Trade Commission Trial Lawyers Association (Nov. 5, 1999) (presentation notes on file with the *Harvard Journal of Law & Technology*); see also Jenna Greene, *The Little Agency That Could: How ITC Became Prime Venue in Intellectual Property Cases*, LEGAL TIMES, June 18, 2001, at 1 (“Between 1986 and 1999, according to an analysis by Foley & Lardner, the Federal Circuit affirmed ITC decisions 66 percent of the time”).

117. See sources cited *supra* note 116.

3 summarizes these results. According to the ITC Database as of September 2006, ITC determinations have been appealed in sixty-three investigations.¹¹⁸ In that group, the ITC determination was affirmed forty-one times (65%), which supports Shatzer's reported figure of a 66% survival rate. Thirteen cases in which infringement was found were upheld. For twenty-two investigations, the ITC determination was overturned.¹¹⁹ In these cases, the Federal Circuit decided in favor of the complainant ten times and in favor of the respondent twelve times.¹²⁰

<i>ITC Ruling</i>	<i>Appealed ITC Decisions (A)</i>	<i>Overturned (B)</i>	<i>Upheld (C)</i>	<i>Survival Rate = (C) / (A)</i>
In Favor of Complainant	25	12	13	52%
In Favor of Respondent	38	10	28	74%
Total	63	22	41	65%

Table 3 shows that ITC cases decided in favor of the respondent have a higher survival rate on appeal (74%) than do ITC cases decided in favor of the complainant (52%). The survival rate of ITC cases in favor of respondents is nearly identical to the overall survival rate of appealed district court cases (74% for the ITC compared to 75% to 80% for district courts). In contrast, when the ITC rules in favor of a complainant, the survival rate is much lower than for district court (52% for the ITC compared to 75% to 80% for district courts). This suggests that ITC rulings in favor of a complainant are less reliable predictors of ultimate outcomes than rulings in favor of respondents, which is consistent with our hypothesis of ITC bias.

One could argue that differences in institutional factors between the two patent venues, such as standards of review or the extent of the record, could influence the likelihood of a decision's survival on ap-

118. The ITC Database lists sixty-seven records with relevant Federal Circuit or Court of Customs and Patent Appeals cases. See ITC Database, *supra* note 5. Only sixty-three contain a clear affirmance or rejection of an ITC decision. Of these sixty-three cases, sixty-two have been decided on appeal, and one case is back before the ITC on remand. We treat the single case that was remanded to the ITC as a reversal.

119. These twenty-two cases include instances in which the ITC's decision was affirmed in part, vacated in part, reversed in part, reversed or vacated.

120. In one case, an appeal of the ITC's decision in *Lens-Fitted Film Packages*, Inv. No. 337-TA-406 (U.S. Int'l Trade Comm'n Mar. 25, 1998), the Federal Circuit ruled partially in favor of both the complainant and respondent. See *Jazz Photo Corp. v. Int'l Trade Comm'n*, 264 F.3d 1094 (Fed. Cir. 2001) (limiting the scope of the ITC determination somewhat, but upholding the exclusion order).

121. Data collected on investigations from 1972 through September 2006 found in the ITC Database. See ITC Database, *supra* note 5.

peal to the Federal Circuit. If differences did exist they could distort straightforward comparisons of survival rates. These differences, however, are minimal. The standard of review for claim construction is a matter of law and is reviewed *de novo* regardless of where the appeal originates.¹²² For factual findings, the standard of review is substantial evidence for both ITC and district court decisions.¹²³ Furthermore, all evidence should be available to the Federal Circuit regardless of the originating venue, since federal courts keep transcripts during trials and the ITC records its proceedings. Accordingly, these factors are unlikely to be important for explaining differences in survival rates.

3. Comparing Outcomes in Parallel District Court and ITC Proceedings

Another way to control for possible selection bias is to analyze patents that have been the subject of litigation in both the ITC and a district court. The ITC Database contains several examples of parallel or related district court cases.¹²⁴ Our research identified thirty-two cases in which proceedings involving the same (or closely related) patent issues were instituted in both the ITC and the district courts. Of this group, twenty-two had final determinations and thus could be used for this comparison.¹²⁵

122. *Compare* *DePuy Spine, Inc. v. Medtronic Sofamor Danek, Inc.*, 469 F.3d 1005, 1013 (Fed. Cir. 2006) (reviewing a district court's claim construction *de novo*), *with* *Gemstar-TV Guide Int'l, Inc. v. Int'l Trade Comm'n*, 383 F.3d 1352, 1360 (Fed. Cir. 2004) (reviewing the ITC's claim construction *de novo*).

123. *Compare* *Dystar Textilfarben GmbH & Co. v. C.H. Patrick Co.*, 464 F.3d 1356, 1360 (Fed. Cir. 2006) (stating that factual findings in district courts are reviewed for substantial evidence), *with* *Sorenson v. Int'l Trade Comm'n*, 427 F.3d 1375, 1378 (Fed. Cir. 2005) ("This court reviews the factual determination of infringement by the International Trade Commission for substantial evidence.").

124. *See* ITC Database, *supra* note 5. Since the ITC Database is incomplete, we conducted searches in both Westlaw and Lexis federal district court databases on September 21, 2006. In Westlaw we searched the DCT ("U.S. District Court Cases") database using the following search phrase: "International Trade Commission" and 337. This produced 190 cases. We then surveyed the results to remove cases dealing with dumping, countervailing duties, trademark, or copyright violations. On September 21, 2006 we also searched the Lexis GENFED;DIST ("US District Court Cases, Combined") database with the following search phrase: "International Trade Commission" and 337 and not (countervailing or dumping). That search produced eighty-three cases, some of which were unique to Lexis.

125. We attempted to categorize these cases into four major groups: (1) the ITC and district court both ruled for the complainant; (2) the ITC and district court both ruled for the respondent; (3) the ITC ruled for the complainant and the district court ruled for the respondent; (4) the ITC ruled for the respondent and the district court ruled for the complainant. Of the thirty-two potential parallel cases, ten cases did not fit into any of the above four categories (primarily due to settlements and withdrawn complaints). District court decisions on procedural grounds were included in the results. Our findings are further detailed in Appendix 1.

In six cases both the ITC and the district court ruled in favor of the complainant; in seven cases both the ITC and the district court ruled in favor of the respondent. In five cases the ITC ruled in favor of the complainant while the district court ruled in favor of the respondent; in four cases the ITC ruled in favor of the respondent while the district court ruled in favor of the complainant. Table 4 summarizes these results.

<i>ITC Ruling</i>	<i>Parallel Cases (A)</i>	<i>Same Result (B)</i>	<i>Different Result (C)</i>	<i>Survival Rate = (B) / (A)</i>
In Favor of Complainant	12	7	5	58%
In Favor of Respondent	11	7	4	64%
Total	23	14	9	61%

An ITC decision in favor of the complainant matched the outcome in the district court 58% of the time, whereas an ITC decision in favor of the respondent matched the outcome in the district court 64% of the time. Although this sample is small, it does lend some support the argument that ITC decisions in favor of respondents are more likely to match district court outcomes than ITC decisions in favor of complainants. It further suggests that the ITC may deviate from the standards used by district courts when it rules in favor of a complainant.

The difference in survival rate widens when one considers two parallel cases, *Intel Corp. v. VIA Technologies, Inc.*¹²⁷ and *Thomson Licensing S.A. v. BenQ Corp.*,¹²⁸ that resulted in a settlement at the ITC but a decision for the respondent in district court.¹²⁹ To the extent that these cases could be considered reversals of ITC decisions in favor of complainants, the survival rate for such pro-complainant decisions falls from 58% to 50% (seven cases out of fourteen cases), further increasing the disparity in survival rates between ITC decisions in favor of complainants (50%) and ITC decisions in favor of respondents (64%).

126. Data collected from searches of Westlaw and Lexis federal district court databases and the ITC Database. See ITC Database, *supra* note 5; *supra* note 124.

127. 174 F. Supp. 2d 1038 (N.D. Cal. 2001).

128. No. 3:05-CV-01005-JSW, 2005 WL 1039030, at *1 (E.D. Cal. May 4, 2005).

129. *Compare Intel*, 174 F. Supp. 2d at 1055 (ruling in favor of respondent), with *Integrated Circuit Chipsets, Components Thereof and Products Containing Same*, Inv. No. 337-TA-428 (U.S. Int'l Trade Comm'n Feb. 11, 2000) (resulting in a settlement); *compare Thomson*, 2005 WL 1039030, at *1 (granting a stay), with *Color Television Receivers and Color Display Monitors, and Components Thereof*, Inv. No. 337-TA-534 (U.S. Int'l Trade Comm'n Mar. 29, 2005) (finding for complainant).

Given the structure of the patent process, it is possible that the types of cases that are brought in both patent venues are not representative of most patent cases brought in just one of those venues. When a case is pursued in both venues, the district court often stays the district court case for the duration of the ITC process, after which the parties may move to have the court vacate the stay. A patent holder could learn through the ITC determination that its case is strong or weak, and then settle the district court case accordingly. Thus, the data set of parallel cases may consist of only a skewed set of cases that did not settle in response to a final ITC decision. Of the thirty-two parallel cases considered here, however, only four involved settlements. Of the group, only *Intel* settled at the ITC before the district court ruled.¹³⁰ Notwithstanding these considerations, an analysis of parallel cases is a reasonable way of correcting for selection bias and the results support the initial inference that the ITC is biased in favor of complainants.

B. Does the ITC Grant Injunctive Relief Too Often?

Patentees can use the threat of injunctive relief during settlement negotiations to extract high royalty rates from an accused infringer.¹³¹ If the odds of securing an injunction are high, then that threat is credible. If the odds of securing an injunction are low, the threat is less credible and the resulting royalty rate will be lower.¹³²

Under section 337(d), the ITC is directed to issue an exclusion order when it finds that a respondent has violated section 337, unless “after considering the effect of such exclusion upon the public health and welfare, competitive conditions in the United States economy, the production of like or directly competitive articles in the United States, and United States consumers, it finds that such articles should not be excluded from entry.”¹³³ As an empirical matter, a determination that an exclusion order is not in the public interest is rare; according to a 2005 study, the ITC has found an injunction to be inconsistent with the public interest in only three cases, compared with 113 patent cases

130. See Integrated Circuit Chipsets, Components Thereof and Products Containing Same, Inv. No. 337-TA-428 (U.S. Int’l Trade Comm’n Feb. 11, 2000); *Intel*, 174 F. Supp. 2d at 1055.

131. Lemley & Shapiro, *supra* note 2, at 1991.

132. *Id.* Social welfare is also impacted as the threat and use of injunctions skews payoffs to stronger companies vis-à-vis weaker rivals. See generally Jean O. Lanjouw & Josh Lerner, *Tilting the Table? The Use of Preliminary Injunctions*, 44 J.L. & ECON. 573 (2001) (showing that injunction requests in a litigation setting allow a stronger plaintiff to extract even greater profit by raising the costs of legal disputes, favoring large, profitable firms and tilting payoffs against weaker firms in favor of more financially secure rivals).

133. 19 U.S.C. § 1337(d)(1) (2000).

in which the ITC has issued an exclusion order of some kind.¹³⁴ The President has the power to veto ITC remedies for policy reasons, but such vetoes are also rare: there have been only five since 1978 and none since 1987.¹³⁵

The ITC's strong inclination towards awarding injunctive relief may partly reflect the agency's lack of authority to impose alternative remedies after a finding of patent infringement. If the ITC finds a violation of section 337, it can only impose a limited or general exclusion order, accompanied in some cases by a cease-and-desist order.¹³⁶ The district courts, in contrast, have more remedial options at their disposal in patent infringement cases. Although district courts undoubtedly make extensive use of injunctive relief to forestall future infringement, they also can impose monetary damages, which, depending on the violation, may be more economically appropriate.¹³⁷

To determine whether the ITC is more inclined to award injunctive relief because of its limited arsenal of remedies, we compared the incidence of injunctive relief at the ITC after a finding of infringement — which is extremely high — with the imposition of injunctive relief in a particular group of district court cases. Prior to *eBay*, many district courts failed to take sufficient account of public interest considerations militating against injunctive relief.¹³⁸ Despite this practice, we determined that district courts that do find infringement impose injunctive relief in only 29% of cases.¹³⁹ In light of the four-part test mandated by *eBay*,¹⁴⁰ district courts are likely impose injunctive relief even less frequently in the future. This will potentially make the ITC an even more attractive forum for patent disputes, leading to more inappropriate injunctions that result in a net harm to social welfare.

1. Frequency of Injunctive Relief in the ITC and District Courts

The ITC almost always grants injunctive relief if it finds a patent was infringed. As of September 2006, the ITC Database identified 467 completed, patent-related section 337 investigations. Of those, a

134. DONALD KNOX DUVAL ET AL., UNFAIR COMPETITION AND THE ITC: ACTIONS BEFORE THE INTERNATIONAL TRADE COMMISSION UNDER SECTION 337 OF THE TARIFF ACT OF 1930 § 7:20 (2005).

135. *Id.* §§ 8:4–8:8.

136. 19 U.S.C. § 1337(d) (providing as remedy for infringement an exclusion order unless certain exceptions are satisfied); *id.* § 1337(f) (providing for cease and desist orders in addition or in lieu of exclusion orders). Non-compliance can result in fines of not more than the greater of \$100,000 a day or twice the value of the infringing imports for each day in violation. *id.* § 1337(f)(2). The ITC also has authority to enter a consent order, whereby the alleged violator agrees to comport with certain conditions in lieu of other relief, which the ITC retains authority to enforce. *id.* § 1337(c).

137. *See* 35 U.S.C. §§ 283–284 (2000).

138. *See, e.g.*, Majoras, *supra* note 74, at 3–4.

139. *See infra* Part V.B.1

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

violation was found in 109 cases (23%). Of the 109 completed patent cases in which a violation was found, the ITC issued injunctive relief in 103 cases (94%).¹⁴¹ Excluding the two cases in which the ITC did not impose any remedy,¹⁴² this percentage increases to 96% (103 of 107).

In contrast, district courts issue injunctive relief less frequently. One study examined the adjudication and settlement of district court patent disputes during 1995, 1997, and 2000.¹⁴³ The study found an explicit final ruling of infringement, or a judgment for the patent holder that could be interpreted as an infringement ruling, in 277 cases.¹⁴⁴ Of those 277 rulings, 145 occurred after a trial.¹⁴⁵ Permanent injunctions were issued after a trial in forty-two cases.¹⁴⁶ Thus, after a finding of infringement, the district court granted injunctive relief in 29% of cases (42 of 145).

A comparison of these statistics indicates that after a finding of infringement, the ITC grants injunctive relief more than three times as often as the district courts do (96% versus 29%). This difference is likely to have a large impact on negotiations between a patent holder and an accused infringer. When a patent case is before the ITC, the patent holder can more credibly threaten to pursue injunctive relief to extract a higher royalty rate. This greater leverage in bargaining may induce “patent trolls” to file claims at the ITC more often than they otherwise would.

2. Does the ITC Issue Injunctive Relief in Cases That Likely Would Not Satisfy the *eBay* Test?

In Part III we identified two situations where injunctive relief may be inconsistent with the public interest: (1) when the product to be enjoined contains multiple components, of which only one is the subject of the patent suit; and (2) when the patentee is a non-practicing entity (“NPE”) that asserts its patent after the accused infringer has sunk substantial costs into design, development, and commercialization of the accused product.¹⁴⁷ In ITC cases where the complainant received injunctive relief and at least one of the two situations was relevant, the complainant might not have withstood

141. Injunctive relief is comprised of both exclusion orders and cease and desist orders.

142. We eliminated the following cases from the sample because the ITC did not have the opportunity to impose injunctive relief: Hand-Held Mobile Computing Devices, Components Thereof and Cradles Thereof, Inv. No. 337-TA-544 (U.S. Int’l Trade Comm’n Aug. 3, 2005) (complaint withdrawn); Steel Rod Treating Apparatus and Components Thereof, Inv. No. 337-TA-097 (U.S. Int’l Trade Comm’n Jan. 28, 1981) (settlement).

143. See Kesan & Ball, *supra* note 90.

144. *Id.* at 275.

145. *Id.* at 277.

146. *Id.* at 279 n.244.

147. Lemley & Shapiro, *supra* note 2, at 2036–37.

application of the Supreme Court's four-part test described in *eBay*, the current test for injunctive relief in district courts.¹⁴⁸ We refer to cases in which the ITC granted injunctive relief when such relief was not consistent with the public interest as involving Type II errors.¹⁴⁹

We limited our search for Type II errors to patent cases initiated between 1990 and 2000 that resulted in an exclusion order or a settlement. The twenty-two cases that resulted in an exclusion order are listed in Appendix 2. For each case, we examined whether multiple components were involved, of which only one is the subject of the patent suit ("component condition") and whether the patentee was an NPE ("NPE condition"). Of the twenty-two cases, sixteen satisfied the component condition, and none satisfied the NPE condition. The fifty-four cases that resulted in a settlement but not an exclusion order are listed in Appendix 3. For each case we again examined whether the component or NPE conditions were satisfied. Of the fifty-four cases, thirty-seven satisfied the component condition, and of those four also likely satisfied the NPE condition. Thus, nearly 70% of recently settled cases at the ITC appear to satisfy conditions under which injunctive relief may not have been appropriate. This statistic suggests that patent holders may be exploiting the ITC's willingness to award injunctive relief. The greater availability of injunctive relief in these categories suggests that patent holders may be bringing cases in the ITC rather than district court because the ITC offers them greater leverage to secure a settlement. The ITC's propensity to award injunctive relief in these cases means that it may be committing a large number of Type II errors.

One could argue that the ITC already considers the component condition when awarding relief and thus no reform of the ITC process is needed. One way the ITC considers the condition is by distinguishing exclusion orders that apply to the infringing article itself from exclusion orders that apply to products that contain the infringing article as a component ("downstream" exclusion orders).¹⁵⁰ When a complainant seeks to exclude downstream products, the ITC applies a balancing test. The ITC originally formulated the test in the *Erasable Programmable Read Only Memories, Components Thereof, Products Containing Such Memories, and Processes for Making Such Memo-*

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

149. A Type II error is a false negative. See B. S. EVERITT, *THE CAMBRIDGE DICTIONARY OF STATISTICS* 404 (3d ed. 2006) (defining a Type II error as "[t]he error that results when the null hypothesis is falsely accepted"). In the context of the ITC, a Type II error is a ruling *for* a complainant when the ITC should have ruled *against* the complainant. Type II errors result in the ITC granting injunctive relief where such relief is not in the public interest.

150. See *Erasable Programmable Read Only Memories, Components Thereof, Products Containing Such Memories, and Processes for Making Such Memories*, USITC Pub. 2196, Inv. No. 337-TA-276 (May 1989) [hereinafter EPROM Order].

ries (EPROM) case,¹⁵¹ which was upheld by the Federal Circuit in *Hyundai Electronics Industries Co. v. U.S. International Trade Commission*.¹⁵²

The *EPROM* test requires consideration of several factors, including the value of the component compared to the value of the downstream product, the difficulty of enforcement, the marginal value of downstream exclusion to the complainant, the incremental detriment to the respondent, the burden on third parties, and the possibility of evasion absent the exclusion order.¹⁵³ Ostensibly, the *EPROM* test is designed to allow the ITC to circumscribe an exclusion order in the interests of fairness by crafting a remedy with “sensitivity and objectivity,” as described by the Federal Circuit in *Hyundai*.¹⁵⁴ However, the *EPROM* test applies only when an infringing article is incorporated into a downstream product.¹⁵⁵ It does not apply in situations where a single article encompasses many inventions and the patented invention contributes only insignificant incremental value. For example, an integrated circuit may implicate hundreds of patents, but if it is found to infringe a single patent, the integrated circuit is treated as an infringing article. Because the *EPROM* test does not apply in this situation, the ITC is likely to grant an exclusion order.

Injunctive relief awarded by the ITC in component or NPE cases can have detrimental effects on consumer welfare in two ways. First, if the exclusion order is actually issued, consumers are no longer able to purchase the excluded products, bear the potentially high costs of switching to using a less desirable substitute product, and potentially pay higher prices for and consume less of the substitute product if the exclusionary order reduces competition. Second, even if it is not issued, the mere threat of an exclusionary order can lead to higher prices, lower output, or both due to the costs associated with settlement. One reason for these detrimental effects is that patent holders have excessive leverage over respondents because of the ITC’s nearly automatic injunction remedy. If the exclusion order is issued, then respondents will have to either (1) cease production of their product, (2) pay fees to use the patented product, or (3) bear the switching costs of using a potentially less desirable substitute product for the patented product. Injunctions can often have positive social effects if used judiciously, but the essentially automatic nature of injunctive relief in ITC proceedings, even when such injunctions are not warranted, causes social harm.

151. *Id.*

152. 899 F.2d 1204, 1209 (Fed. Cir. 1990).

153. See EPROM Order, *supra* note 150. A review of cases applying this test is presented in Appendix 4.

154. See *Hyundai*, 899 F.2d at 1209.

155. See *id.*; EPROM Order, *supra* note 150.

VI. POSSIBLE REFORMS OF THE ITC SECTION 337 PROCESS

When the ITC's primary benefit (its ability to protect intellectual property in cases where the district courts lack jurisdiction) is weighed against its primary pitfall (the risk of unnecessary injunctive relief) the need for reform becomes clear. This Part suggests reforms that would minimize the sum of (1) the social costs of errors committed by the ITC and (2) any administrative costs associated with implementing the reforms.

To address the cost-minimization objective, we offer two basic reforms. The first reform would eliminate the ITC's jurisdiction over any patent dispute in which a district court has jurisdiction over the parties. The second reform would leave ITC jurisdiction unchanged, but would require the ITC to apply the same test for imposition of an exclusion order as a district court applies for imposition of other types of injunctive relief.

A. Minimizing the Social Costs of Errors Committed by the ITC and Administrative Costs Associated with Implementing Reforms

Our proposed reforms are designed to minimize two types of costs. The first are the large social costs created by the ITC when it grants injunctive relief in those cases where such relief is not consistent with the public interest. Erroneously granting injunctive relief can result in higher end-user prices and reduced output. Our reforms are designed to reduce these social costs by minimizing the number of Type II errors that the ITC commits.¹⁵⁶

As discussed in Part II.B, Mutti and Yeung's two studies¹⁵⁷ suggest that Type II errors create more social costs than Type I errors.¹⁵⁸ Their 1996 study shows that an adverse ruling against a complainant has a negative effect on that firm's R&D spending.¹⁵⁹ Their 1997 study shows that such a ruling also leads to increased R&D spending by the complainant's competitors.¹⁶⁰ Therefore, the net social costs of a Type I error may be small because the effect on the complainant and its competitors may cancel out. In contrast, the net social costs of a Type II error may be large. Their 1996 study shows that there is, at best, no positive effect (and potentially a large negative effect) on a

156. See *supra* note 149.

157. See Mutti & Yeung, *supra* note 45; Mutti & Yeung, *supra* note 53.

158. A Type I error is a false positive. See EVERITT, *supra* note 149, at 404 (defining a Type I error as "[t]he error that results when the null hypothesis is falsely rejected"). In the context of the ITC, a Type I error is a ruling *against* a complainant in a section 337 proceeding when the ITC should have ruled *for* the complainant. Type I errors result in the ITC failing to grant injunctive relief where such relief is in the public interest.

159. See Mutti & Yeung, *supra* note 45, at 519.

160. See Mutti & Yeung, *supra* note 53, at 86–87.

patent holder's R&D spending if it is granted an injunction.¹⁶¹ Their 1997 study shows there is a large negative effect on competitors' R&D spending if the patent holder is given an injunction.¹⁶² Since a Type II error results in reduced R&D spending for both the complainant and its competitors, the net social cost may be significant. Thus, the general objective of minimizing the social costs of errors committed by the ITC may simplify to the goal of minimizing only the Type II errors.¹⁶³

The second consideration relates to the administrative costs of implementing the proposed reform. One important consideration is whether district court litigation is more or less expensive than ITC litigation. This Article does not attempt to assess whether litigation of patent disputes in the ITC is more or less expensive than litigation in district courts. However, there are other administrative costs that are worth noting. First, broad ITC jurisdiction may frequently encourage duplicative litigation, which increases administrative costs. Second, if measured by the amount of judicial supervision required, damages are a cheaper remedy than injunctions.

B. Reform Proposals

1. Restrict the ITC's Jurisdiction Over Patent Cases

One way to minimize the social costs from Type II errors is to give district courts exclusive jurisdiction over any patent law claim for which they have jurisdiction over the parties. Under this approach, the ITC would only adjudicate those patent cases for which the accused infringer is not subject to the district court's jurisdiction or cannot be identified. As cases are adjudicated in district courts, there are likely to be fewer findings of infringement. Even when there is an infringement finding in a district court, injunctive relief will be granted less frequently in those cases. Thus, the frequency of Type II errors across all patent cases would decline.

It seems likely that this proposed reform will also tend to reduce administrative costs. By eliminating the overlapping jurisdiction of the ITC and the district courts, this proposal prevents simultaneous and serial litigation of the same patent disputes. Thus, it will result in substantial savings for both the ITC and the parties to the litigation.

161. See Mutti & Yeung, *supra* note 45, at 518.

162. See Mutti & Yeung, *supra* note 53, at 86–87.

163. Our proposed reforms of the ITC process would not necessarily increase Type I errors. Even if they did lead to an increase, the benefits of the ITC committing fewer Type II errors are likely to offset the costs of the ITC committing more Type I errors. Although after our reforms the ITC will be less likely to grant injunctive relief in some cases, these cases are likely to be those where injunctive relief is not in the public interest (i.e., those involving the component or NPE conditions).

This reform will also lower monitoring costs, because district courts can impose damages rather than injunctions.

2. Require the ITC to Apply the *eBay* Test Before Granting Injunctive Relief

Another solution involves internal reform to the ITC. The ITC could retain its current jurisdiction, but adopt the same test for injunctive remedies used by district courts (as set forth by the Supreme Court in *eBay*). Under this proposal, a complainant at the ITC seeking an exclusion or cease-and-desist order should be required to show that (1) it suffered an irreparable injury, (2) remedies at law are inadequate to compensate for that injury, (3) an importation ban is warranted in light of the balance of hardships between the plaintiff and the defendant, and (4) the public interest would not be disserved by an importation ban.¹⁶⁴ When applying this test, the ITC should explicitly consider the availability of remedies in district court. In other words, as long as the respondent is subject to the jurisdiction of a federal court, the availability of damages (and other relief) should be considered when deciding whether to impose an exclusion order.

The advantage of this second reform is that it could be implemented without legislative action. The language of the Tariff Act of 1930 already authorizes the ITC to take such equitable considerations into account. Section 337(c) provides that the Commission must consider “[a]ll legal and equitable defenses . . . in all cases,” and the language of section 337(d)(1) — although given a narrow reading by the ITC in the past¹⁶⁵ — would appear to require consideration of public interest factors before imposition of any exclusion order.¹⁶⁶

A second potential advantage of this reform is that it would not include the use of juries, which as noted earlier, may be biased.¹⁶⁷ Admittedly, this advantage would need to be weighed carefully against possible bias in ITC decision-making relative to bias in district courts. This proposed reform would also have minimal administrative costs. During the transition phase, the ITC would have to study how district courts have implemented the test articulated in *eBay*. By limiting the cases in which injunctions are granted, this reform would limit the administrative costs of monitoring those injunctions.

164. See *eBay Inc. v. MercExchange, L.L.C.*, 126 S. Ct. 1837, 1839 (2006). The language of the test has been modified slightly to reflect the remedies available at the ITC.

165. See *supra* Part V.B.

166. See Tariff Act of 1930 § 337(c)–(d)(1), 19 U.S.C. § 1337(c)–(d)(1) (2000).

167. See *supra* Part IV.A.1.

VII. CONCLUSION

The ITC's propensity to find infringement in patent cases compared with that of district courts indicates a bias in the ITC's decision-making. Although this comparison may be affected by selection bias issues, two tests that attempted to control for selection support the claim that the ITC is biased in favor of complainants.

A second indicator of bias relates to the type of remedies that the ITC and the district courts impose when each respectively finds infringement. We found that the ITC imposes injunctions — the most favorable remedy for patent holders — at three times the rate of district courts (96% versus 29%). This result could induce patent trolls to take advantage of the section 337 process. In the wake of the Supreme Court's *eBay* decision, one might expect the differential to widen, as district courts are now likely to award injunctive relief less frequently. The resulting adverse selection may exacerbate the holdup problem in future patent disputes.

Reform of the ITC process should be aimed at minimizing social and administrative costs. Giving district courts exclusive jurisdiction over patent cases whenever they have jurisdiction over the parties would have this effect. Under this solution, the ITC would still adjudicate patent disputes that could not be brought in district court. An alternative reform would be for the ITC to retain its current jurisdiction but to modify its analysis for awarding injunctive relief to more closely reflect the *eBay* test applied by district courts.

APPENDIX 1: PARALLEL DISTRICT COURT/ITC
PROCEEDINGS¹⁶⁸

ITC Inv. No.	Complainant(s)	Respondent(s)	ITC Disposition	Category
337-TA-004	W.L. Gore & Assocs., Inc.	Johnson & Johnson, Inc. et al.	No violation found.	r/r
Related Federal Court Case(s): W. L. Gore & Assocs., Inc. v. Oak Materials Group, Inc., 424 F. Supp. 700 (D. Del. 1976).				
District Court Disposition: District court held that it had no jurisdiction to decide case because the complainant had disaffirmed all claims to the patent. The court also held that the respondent did not present enough evidence to entitle them to attorney's fees and costs.				
ITC Inv. No.	Complainant(s)	Respondent(s)	ITC Disposition	Category
337-TA-018	Engelhard Minerals and Chems. Corp.	Volkswagenverk A.G. et al.	Settlement.	s/c
Related Federal Court Case(s): World-Wide Volkswagen Corp. v. U.S. Int'l Trade Comm'n, 414 F. Supp. 713 (D.D.C. 1976).				
District Court Disposition: District court dismissed action by distributors, who were not parties to ITC proceeding, for lack of jurisdiction over the interlocutory order.				
ITC Inv. No.	Complainant(s)	Respondent(s)	ITC Disposition	Category
337-TA-037	Richard L. Stevenson	New Zeal Enter. Co. et al.	Violation found; general exclusion order.	c/r
Related Federal Court Case(s): Stevenson v. Grentec, Inc., 652 F.2d 20 (9th Cir. 1981).				
District Court Disposition: District court found for the respondents on the issue validity of the patent after the U.S. Court of Customs and Patent Appeals reversed the determination of the ITC. The Ninth Circuit affirmed.				

168. Each investigation/case was categorized as follows: (c/c) the ITC and district court both ruled for the complainant; (r/r) the ITC and district court both ruled for the respondent; (c/r) the ITC ruled for the complainant and the district court ruled for the respondent; (r/c) the ITC ruled for the respondent and the district court ruled for the complainant; (s) settlement; and (w) withdrawn complaint. For further explanation of this Appendix, see *supra* Part V.A.3.

ITC Inv. No.	Complainant(s)	Respondent(s)	ITC Disposition	Category
337-TA-097	Morgan Constr. Co.	Korf Industries & Handle GmbH et al.	Violation found; settlement.	c/r
Related Federal Court Case(s): Ashlow Ltd. v. Morgan Constr. Co., 672 F.2d 371 (4th Cir. 1982); Ashlow Ltd. v. Morgan Constr. Co., 213 U.S.P.Q. 671 (D.S.C. 1982).				
District Court Disposition: District court reversed the ITC in favor of respondents, but this decision was overturned on appeal.				
ITC Inv. No.	Complainant(s)	Respondent(s)	ITC Disposition	Category
337-TA-162	Medtronic, Inc.	Telectronics et al.	Other (ITC found the existence of a license and, therefore, no violation).	r/r
Related Federal Court Case(s): Telectronics Proprietary, Ltd. v. Medtronic, Inc., 687 F. Supp. 832 (S.D.N.Y. 1988).				
District Court Disposition: District court granted alleged infringer's motion to dismiss antitrust and RICO counterclaims. The court also held that the unclean hands defense was not available for antitrust claims, and that the defense of license was barred by res judicata or collateral estoppel after the ITC proceeding.				
ITC Inv. No.	Complainant(s)	Respondent(s)	ITC Disposition	Category
337-TA-171	Glasstech, Inc.	AB Kyro Oy & Tamglass, Inc.	Violation found; limited exclusion order.	c/c
Related Federal Court Case(s): Glasstech, Inc. v. AB Kyro Oy, 635 F. Supp. 465 (N.D. Ohio 1986).				
District Court Disposition: District court granted preliminary injunction against respondent. It did not address the merits of the infringement claim, although it did consider the ITC finding of a violation in the "success on the merits" prong of the preliminary injunction test.				
ITC Inv. No.	Complainant(s)	Respondent(s)	ITC Disposition	Category
337-TA-189	Corning Glass Works	Sumitomo Electric Indus., Ltd. & Sumitomo Elec. U.S.A., Inc.	No violation found.	r/c
Related Federal Court Case(s): Corning Glass Works v. Sumitomo Electric U.S.A., Inc., 671 F. Supp. 1369 (S.D.N.Y. 1987).				
District Court Disposition: District court found patents valid and infringed.				

ITC Inv. No.	Complainant(s)	Respondent(s)	ITC Disposition	Category
337-TA-212	Diversified Prods. Corp.	H.C. Enter. Co. et al.	No violation found.	r/r
Related Federal Court Case(s): <i>In re</i> Convertible Rowing Exerciser Patent Litigation, 817 F. Supp. 434 (D. Del. 1993).				
District Court Disposition: District court did not directly rule on patent validity, but gave preclusive effect to the ITC's factual determinations. It refused to grant summary judgment for respondents on invalidity claims.				
ITC Inv. No.	Complainant(s)	Respondent(s)	ITC Disposition	Category
337-TA-215	Tandon Corp.	Mitsubishi Elec. Corp., et al.	No violation; settlement.	r/?
Related Federal Court Case(s): Tandon Corp. v. Mitsubishi Elec. Corp. (C.D. Cal. Apr. 30, 1986).				
District Court Disposition: The district court order cannot be located.				
ITC Inv. No.	Complainant(s)	Respondent(s)	ITC Disposition	Category
337-TA-228	Rotron, Inc.	Matsushita Elec. Indus. Corp. & Matsushita Elec. Indus. Corp. of America	Violation found; limited exclusion order.	c/c
Related Federal Court Case(s): Comair Rotron, Inc. v. Matsushita Elec. Corp. of Am., 31 F.3d 1177 (Fed. Cir. 1994).				
District Court Disposition: District court found patents valid and infringed after Federal Circuit had reversed ITC decision.				
ITC Inv. No.	Complainant(s)	Respondent(s)	ITC Disposition	Category
337-TA-242	Texas Instruments, Inc.	Fujitsu, Ltd. et al.	Violation found; limited exclusion order; settlement.	c/c
Related Federal Court Case(s): Texas Instruments, Inc. v. Hyundai Elecs. Indus., Co., 49 F. Supp. 2d 893 (E.D. Tex. 1999).				
District Court Disposition: District court rejected respondents' affirmative defenses, including the claim of patent misuse.				

ITC Inv. No.	Complainant(s)	Respondent(s)	ITC Disposition	Category
337-TA-266	Minigrip, Inc.	A.G. Enter. Pte. Ltd. et al.	Violation found; general exclusion order.	c/r
Related Federal Court Case(s): Meditech Int'l Co. v. Minigrip, Inc., 648 F. Supp. 1488 (N.D. Ill. 1986).				
District Court Disposition: District court denied respondent's motion to dismiss, but stayed the proceeding until the ITC reached a final determination on complainant's claims.				
ITC Inv. No.	Complainant(s)	Respondent(s)	ITC Disposition	Category
337-TA-281	Amgen, Inc.	Chugai Pharm. Co. & Chugai U.S.A., Inc.	No violation found.	r/c
Related Federal Court Case(s): Amgen, Inc. v. Chugai Pharm. Co., 706 F. Supp. 94 (D. Mass. 1989).				
District Court Disposition: District court found the patent valid and infringed.				
ITC Inv. No.	Complainant(s)	Respondent(s)	ITC Disposition	Category
337-TA-306	Baldwin Hardware Corp.	Franksu Enter. Corp.	Consent order.	c/c
Related Federal Court Case(s): Baldwin Hardware Corp. v. Franksu Enter. Corp., 24 U.S.P.Q.2d 1700 (C.D. Cal. 1992).				
District Court Disposition: District court found the patent valid and infringed.				
ITC Inv. No.	Complainant(s)	Respondent(s)	ITC Disposition	Category
337-TA-315	Texas Instruments Corp.	Integrated Tech. Inc. et al.	Violation found; cease & desist order; limited exclusion order; settlement.	c/r
Related Federal Court Case(s): Texas Instruments, Inc. v. Cypress Semiconductor Corp., 39 U.S.P.Q.2d 1481 (N.D. Tex. 1995).				
District Court Disposition: District court granted judgment as a matter of law for respondents on the infringement claim.				

ITC Inv. No.	Complainant(s)	Respondent(s)	ITC Disposition	Category
337-TA-324	Greater Texas Finishing Corp. & Golden Trade, S.R.L.	Gitano Group Inc. et al.	Violation found; consent order; general exclusion order; settlement.	c/r
Related Federal Court Case(s): Levi Strauss & Co. v. Golden Trade, S.R.L., No. 92 Civ. 1667 (RPP), 1995 WL 710822, at *1 (S.D.N.Y. Dec. 1, 1995).				
District Court Disposition: District court found three patents claims invalid and denied summary judgment on other claims.				
ITC Inv. No.	Complainant(s)	Respondent(s)	ITC Disposition	Category
337-TA-358	Genentech, Inc.	Novo-Nordisk A/S et al.	No violation found.	r/c
Related Federal Court Case(s): Genentech, Inc. v. Novo Nordisk A/S, 935 F. Supp. 260 (S.D.N.Y. 1996).				
District Court Disposition: District court granted the complainant's request for a preliminary injunction.				
ITC Inv. No.	Complainant(s)	Respondent(s)	ITC Disposition	Category
337-TA-366	Minnesota Mining & Mfg. Co.	Taiwan Hopax Chem. Mfg. Co. et al.	No violation by district court defendant (Beautone). For other respondents: violation found; consent order; limited exclusion order	r/r
Related Federal Court Case(s): Minn. Mining & Mfg. Co., Inc. v. Beautone Specialties Co., 117 F. Supp. 2d 72 (D. Mass. 1999).				
District Court Disposition: District court granted respondents' motion for summary under doctrine of equivalents.				
ITC Inv. No.	Complainant(s)	Respondent(s)	ITC Disposition	Category
337-TA-406	Fuji Photo Film Co.	Achiever Indus., Ltd. et al.	Violation found; cease & desist order; general exclusion order.	c/c
Related Federal Court Case(s): Fuji Photo Film Co. v. Jazz Photo Corp., 249 F. Supp. 2d 434 (D.N.J. 2003); Fuji Photo Film Co. v. Jazz Photo Corp., 173 F. Supp. 2d 268 (D.N.J. 2001).				
District Court Disposition: District court ruling in 2003 accords with the eventual ITC finding that some cameras are permissibly repaired and not impermissibly refurbished.				

ITC Inv. No.	Complainant(s)	Respondent(s)	ITC Disposition	Category
337-TA-428	Intel Corp.	VIA Techs., Inc. et al.	Settlement.	s/r
Related Federal Court Case(s): Intel Corp. v. VIA Techs., Inc., 174 F. Supp. 2d 1038 (N.D. Cal. 2001).				
District Court Disposition: District court found the patent valid, but ruled in favor of respondent because of ambiguity in the license.				
ITC Inv. No.	Complainant(s)	Respondent(s)	ITC Disposition	Category
337-TA-432	Tessera, Inc.	Texas Instruments Inc. et al.	Settlement.	s/c
Related Federal Court Case(s): Tex. Instruments Inc. v. Tessera, Inc., 192 F.R.D. 637 (C.D. Cal. 2000).				
District Court Disposition: District court denied complainant's motion for a preliminary injunction to prevent respondent from maintaining an action in the ITC, finding little chance that the complainant would succeed in arguing that the ITC proceedings were covered under a forum selection clause.				
ITC Inv. No.	Complainant(s)	Respondent(s)	ITC Disposition	Category
337-TA-434	Medrad, Inc.	Nemoto Kyorindo Co. et al.	No violation.	r/r
Related Federal Court Case(s): Medrad, Inc. v. Tyco Healthcare Group LP, 391 F. Supp. 2d 374 (W.D. Pa. 2005).				
District Court Disposition: District court held that complainant could not use a reissue statute to correct procedural mistake made during prosecution of predecessor patent.				
ITC Inv. No.	Complainant(s)	Respondent(s)	ITC Disposition	Category
337-TA-439	PCTEL, Inc.	Smart Link Ltd. et al.	Settlement.	s/r
Related Federal Court Case(s): PCTEL, Inc. v. Agere Sys., Inc., No. C03-02474 MJJ, 2006 WL 734385, at *1 (N.D. Cal. Mar. 20, 2006).				
District Court Disposition: District court differed in part from the ITC decision on claim construction by favoring the respondent.				
ITC Inv. No.	Complainant(s)	Respondent(s)	ITC Disposition	Category
337-TA-445	Bd. of Trs. of Univ. of Ill. & Competitive Techs., Inc.	Fujitsu Ltd. et al.	Complaint withdrawn.	w/r
Related Federal Court Case(s): Competitive Techs. v. Fujitsu Ltd., 286 F. Supp. 2d 1161 (N.D. Cal. 2003).				
District Court Disposition: District court found for respondents based on their invalidity defense.				

ITC Inv. No.	Complainant(s)	Respondent(s)	ITC Disposition	Category
337-TA-474	U.S. Philips Corp.	Acme Prod. Indus. et al.	No violation found; cease & desist order; general exclusion order.	r/c
Related Federal Court Case(s): U.S. Philips Corp. v. Princo Corp., 361 F. Supp. 2d 168 (S.D.N.Y. 2005).				
District Court Disposition: District court granted summary judgment in favor of the complainant on infringement claims and patent misuse counterclaim.				
ITC Inv. No.	Complainant(s)	Respondent(s)	ITC Disposition	Category
337-TA-477	Climax Molybdenum Co.	Molychem LLC, et al.	No violation found.	r/r
Related Federal Court Case(s): Climax Molybdenum Co. v. Molychem, L.L.C., 414 F. Supp. 2d 1007 (D. Colo. 2005).				
District Court Disposition: District court permitted respondent to maintain antitrust claims, and refused to bifurcate antitrust and patent issues into separate actions.				
ITC Inv. No.	Complainant(s)	Respondent(s)	ITC Disposition	Category
337-TA-497	Chamberlain Group, Inc.	Skylink Techs., Inc. et al.	No violation found.	r/r
Related Federal Court Case(s): Chamberlain Group, Inc. v. Skylink Techs., Inc., 292 F. Supp. 2d 1040 (N.D. Ill. 2003).				
District Court Disposition: District court granted partial summary judgment in favor of respondent on copyright claims. Patent claims were adjudicated by the ITC.				
ITC Inv. No.	Complainant(s)	Respondent(s)	ITC Disposition	Category
337-TA-506	Zoran Corp. & Oak Tech., Inc.	Artronix Tech., Inc. et al.	Cease & desist order; limited exclusion order.	c/c
Related Federal Court Case(s): Zoran Corp. v. MediaTek, Inc., No. C-04-02619 RMW, 2005 WL 3448070, at *1 (N.D. Cal. Dec. 15, 2005).				
District Court Disposition: District court denied respondents' motion for summary judgment, which relied on the invalidity defense.				
ITC Inv. No.	Complainant(s)	Respondent(s)	ITC Disposition	Category
337-TA-512	OSRAM GmbH & OSRAM Opto Semiconductors GmbH	Dominant Semi- conductors Sdn. Bhd. et al.	Violation found; limited exclusion order.	c/c
Related Federal Court Case(s): Citizen Elecs. Co. v. OSRAM GmbH, 377 F. Supp. 2d 149 (D.D.C. 2005).				
District Court Disposition: District court granted motion to dismiss a non-party competitor's suit for declaratory judgment on the issue of infringement.				

ITC Inv. No.	Complainant(s)	Respondent(s)	ITC Disposition	Category
337-TA-524	Verve LLC	Thales e-Transactions, Inc. et al.	Complaint with- drawn.	w/r
Related Federal Court Case(s): Verve, L.L.C. v. Verifone, Inc., No. C04-03659JF, 2004 WL 2600452, at *1 (N.D. Cal. Nov. 15, 2004).				
District Court Disposition: District court granted respondents' motion to stay.				
ITC Inv. No.	Complainant(s)	Respondent(s)	ITC Disposition	Category
337-TA-534	Thomson Licensing, S.A. & Thomson Licensing Inc.	BenQ Corp. et al.	Settlement.	s/r
Related Federal Court Case(s): Thomson Licensing S.A. v. BenQ Corp., No. 3:05-CV-01005-JSW, 2005 WL 1039030 (E.D. Cal. May 4, 2005).				
District Court Disposition: District court granted respondents' motion to stay the proceeding until the ITC made a determination.				
ITC Inv. No.	Complainant(s)	Respondent(s)	ITC Disposition	Category
337-TA-535	Ciena Corp.	Nortel Networks Corp. et al.	Complaint with- drawn.	w/r
Related Federal Court Case(s): Ciena Corp. v. Nortel Networks, Inc., No. 2:05 CV 14, 2005 WL 1189881, at *1 (E.D. Tex. May 19, 2005).				
District Court Disposition: District court granted respondent's motion to force the complainant to withdraw from the ITC proceedings.				

APPENDIX 2: CANDIDATES FOR TYPE II ERRORS BY THE
ITC — CASES THAT RESULTED IN AN EXCLUSION ORDER
(WITHOUT SETTLEMENTS) BETWEEN 1990 AND 2000¹⁶⁹

ITC Inv. No.	Investigation Title	Component Condition	Non-Practicing Entity Condition
337-TA-314	Battery-Powered Ride-On Toy Vehicles and Components Thereof	Yes	No
337-TA-320	Rotary Printing Apparatus Using Heated Ink Composition, Components Thereof, and Systems Containing Said Apparatus and Components	Yes	No
337-TA-333	Woodworking Accessories	No	No
337-TA-334	Condensers, Parts Thereof and Products Containing Same, Including Air Conditioners for Automobiles	Yes	No
337-TA-344	Cutting Tools for Flexible Plastic Conduit and Components Thereof	Yes	No
337-TA-354	Tape Dispensers	No	No
337-TA-364	Curable Fluoroelastomer Compositions and Precursors Thereof	Yes	No
337-TA-365	Audible Alarm Devices for Divers	No	No
337-TA-366	Microsphere Adhesives, Process for Making Same, and Products Containing Same, Including Self-Stick Repositionable Notes	Yes	No
337-TA-372	Neodymium-Iron-Boron Magnets, Magnet Alloys, and Articles Containing the Same	Yes	No
337-TA-376	Variable Speed Wind Turbines and Components Thereof	Yes	No
337-TA-382	Flash Memory Circuits and Products Containing Same	Yes	No
337-TA-383	Hardware Logic Emulation Systems and Components Thereof	No	No
337-TA-391	Toothbrushes and the Packaging Thereof	Yes	No

169. For an explanation of this appendix, see *supra* Part V.B.2.

ITC Inv. No.	Investigation Title	Component Condition	Non-Practicing Entity Condition
337-TA-395	EPROM, EEPROM, Flash Memory, and Flash Microcontroller Semiconductor Devices, and Products Containing Same	Yes	No
337-TA-406	Lens-Fitted Film Packages	Yes	No
337-TA-413	Rare-Earth Magnets and Magnetic Materials and Articles Containing the Same	Yes	No
337-TA-416	Compact Multipurpose Tools	No	No
337-TA-422	Two-Handle Centerset Faucets and Escutcheons, and Components Thereof	Yes	No
337-TA-430	Integrated Repeaters and Products Containing the Same	Yes	No
337-TA-435	Integrated Repeaters, Switches, Transceivers, and Products Containing Same	Yes	No
337-TA-440	4-Androstenediol	No	No

APPENDIX 3: CANDIDATES FOR TYPE II ERRORS BY THE
ITC — CASES THAT RESULTED IN A SETTLEMENT (WITHOUT
EXCLUSION ORDER) BETWEEN 1990 AND 2000¹⁷⁰

ITC Inv. No.	Investigation Title	Component Condition	Non-Practicing Entity Condition
337-TA-309	Athletic Shoes with Viewing Windows	No	No
337-TA-310	Pyrethroids and Pyrethroid-Based Insecticides	No	No
337-TA-312	Dynamic Random Access Memories, Static Random Access Memories, Components, and Products Containing Same	Yes	No
337-TA-316	Power Transmission Chains, Chain Assemblies, Components Thereof, and Products Containing Same	Yes	No
337-TA-318	Anti-Knock Ignition Systems and Automobiles or Automobile Component Parts Containing Same	Yes	Likely Yes
337-TA-322	Microporous Nylon Membrane and Products Containing Same	Yes	No
337-TA-323	Monoclonal Antibodies Used for Therapeutically Treating Humans Having Gram Negative Bacterial Infections	No	No
337-TA-325	Static Random Access Memories and Integrated Circuit Devices Containing Same, Processes for Making, Components, and Products Containing Same	Yes	No
337-TA-326	Scanning Multiple-Beam Equalization Systems for Chest Radiography and Components	Yes	No
337-TA-329	Vacuum Cleaners	No	Likely Yes
337-TA-331	Microcomputer Memory Controllers, Components Thereof and Products Containing Same	Yes	No
337-TA-332	Translucent Ceramic Orthodontic Brackets	No	No
337-TA-336	Single In-Line Memory Modules and Products Containing Same	Yes	No

170. For an explanation of this appendix, see *supra* Part V.B.2.

ITC Inv. No.	Investigation Title	Component Condition	Non-Practicing Entity Condition
337-TA-338	Bulk Bags and Process for Making Same	No	No
337-TA-339	Commercial Food Portioners, Components Thereof, Including Software, and Process Thereof	Yes	Possibly Yes
337-TA-341	Static Random Access Memories, Components Thereof and Products Containing Same	Yes	No
337-TA-342	Circuit Board Testers	No	No
337-TA-345	Anisotropically Etched One Megabit and Greater DRAMs, Components Thereof, and Products Containing Such DRAMs	Yes	No
337-TA-348	In-Line Roller Skates with Ventilated Boots and In-Line Roller Skates with Axle Aperture Plugs and Components Parts Thereof	Yes	No
337-TA-350	Sputtered Carbon Coated Computer Disks and Products Containing Same, Including Disk Drives	Yes	Yes
337-TA-356	Integrated Circuit Devices, Processes for Making Same, Components Thereof, and Products Containing Same	Yes	No
337-TA-357	Sports Sandals and Components Thereof	Yes	No
337-TA-359	Dielectric Miniature Microwave Filters and Multiplexers Containing Same	Yes	No
337-TA-362	Methods of Assembling Plastic Ball Valves and Components Thereof	Yes	No
337-TA-367	Facsimile Machines	No	No
337-TA-368	Rechargeable Nickel Metal Hydride Anode Materials and Batteries, and Products Containing Same	Yes	No
337-TA-373	Low-Power Computer Hard Disk Drive Systems and Products Containing Same	Yes	No
337-TA-381	Electronic Products, Including Semiconductor Products, Manufactured by Certain Processes	Yes	No

ITC Inv. No.	Investigation Title	Component Condition	Non-Practicing Entity Condition
337-TA-385	Random Access Memories, Processes for the Manufacture of Same, and Products Containing Same	Yes	No
337-TA-386	Global Positioning System Coarse Acquisition Code Receivers and Products Containing Same	Yes	No
337-TA-387	Self-Powered Fiber Optic Modems	No	No
337-TA-388	Dynamic Random Access Memory Controllers and Certain Multi-Layer Integrated Circuits, as Well as Chipsets and Products Containing Same	Yes	No
337-TA-389	Diagnostic Kits for the Detection and Quantification of Viruses	No	No
337-TA-394	Screen Printing Machines, Vision Alignment Devices Used Therein, and Component Parts Thereof	Yes	No
337-TA-400	Telephonic Digital Added Main Line Systems, Components Thereof, and Products Containing Same	Yes	No
337-TA-401	CD-ROM Controllers and Products Containing Same	Yes	No
337-TA-402	Integrated Circuits and Products Containing Same	Yes	No
337-TA-404	SDRAMs, DRAMs, ASICs, RAM-and Logic Chips, Microprocessors, Microcontrollers, Processes for Manufacturing Same and Products Containing Same	Yes	No
337-TA-405	Automotive Scissors Jacks	No	No
337-TA-407	Remodulating Channel Selectors and Systems Containing Same	Yes	No
337-TA-408	Recombinantly Produced Hepatitis B Vaccines and Products Containing Same	Yes	No
337-TA-414	Semiconductor Memory Devices and Products Containing Same	No	No
337-TA-417	Code Hopping Remote Control Systems, Including Components and Integrated Circuits Used Therein	No	No

ITC Inv. No.	Investigation Title	Component Condition	Non-Practicing Entity Condition
337-TA-421	Enhanced DRAM Devices Containing Embedded Cache Memory Registers, Components Thereof, and Products Containing Same	No	No
337-TA-425	Amino Fluoro Ketone Compounds	No	No
337-TA-427	Downhole Well Data Recorders and Components Thereof	Yes	No
337-TA-429	Bar Clamps, Bar Clamp Pads, and Related Packaging, Display, and Other Materials	No	No
337-TA-431	Synchronous Dynamic Random Access Memory Devices, Microprocessors, and Products Containing Same	Yes	Yes
337-TA-432	Semiconductor Chips with Minimized Chip Package Size and Products Containing Same	Yes	Possibly Yes
337-TA-433	Safety Eyewear and Components Thereof	Yes	No
337-TA-436	WAP-Compatible Wireless Communication Devices, Components Thereof, and Products Containing Same	Yes	No
337-TA-438	Plastic Molding Machines with Control Systems Having Programmable Operator Interfaces Incorporating General Purpose Computers, and Components Thereof	No	No
337-TA-439	HSP Modems, Software and Hardware Components Thereof, and Products Containing Same	Yes	No
337-TA-441	Field Programmable Gate Arrays and Products Containing Same	Yes	No

APPENDIX 4: ITC CASES INVOLVING THE *EPROM* TEST¹⁷¹

ITC Inv. No.	Investigation Title	Exclusion Order Scope	Downstream
337-TA-276	Erasable Programmable Read Only Memories, Components Thereof, Products Containing Such Memories, and Processes for Making Such Memories	Applied broadly downstream to most of respondents' electronic equipment containing the infringing component, but not to automobiles.	Limited Application
Exclusion Order: Erasable Programmable Read Only Memories, Components Thereof, Products Containing Such Memories, and Processes for Making Such Memories, USITC Pub. 2196, Inv. No. 337-TA-276 (May 1989).			
Additional Information: This is the actual case formulating the nine-prong <i>EPROM</i> test.			
ITC Inv. No.	Investigation Title	Exclusion Order Scope	Downstream
337-TA-315	Plastic Encapsulated Integrated Circuits	Applied to downstream motherboards, but not to the consumer.	Limited Application
Exclusion Order: Plastic Encapsulated Integrated Circuits, USITC Pub. 2574, Inv. No. 337-TA-315 (Nov. 1992).			
ITC Inv. No.	Investigation Title	Exclusion Order Scope	Downstream
337-TA-334	Condensers, Parts Thereof and Products Containing Same, Including Air Conditioners for Automobiles	Applied to air conditioner kits, but not to automobiles.	Limited Application
Exclusion Order: Condensers, Parts Thereof and Products Containing Same, Including Air Conditioners for Automobiles, USITC Pub. 3063, Inv. No. 337-TA-334 (Sept. 1997).			
Additional Information: The ITC found that the respondents had quality control systems in place, such that the burden would be high on importers of motor vehicles, and the value compared to finished product was very low.			

171. This appendix summarizes investigations where the ITC issued an exclusion order and applied the *EPROM* test in order to determine whether to include downstream products in the exclusion order. See *EPROM* Order, *supra* note 150. "Limited Application" indicates that the exclusion order was applied to a limited subset of downstream products, while "Not Limited" means that the exclusion order applied to all downstream products. For further explanation of this appendix, see *supra* Part V.B.2.

ITC Inv. No.	Investigation Title	Exclusion Order Scope	Downstream
337-TA-337	Integrated Circuit Telecommunication Chips and Products Containing Same, Including Dialing Apparatus	Extended to “low end” telephones containing the chips that are produced by five domestic respondents.	Limited Application
Exclusion Order: Integrated Circuit Telecommunication Chips and Products Containing Same, Including Dialing Apparatus, USITC Pub. 2670, Inv. No. 337-TA-337 (Aug. 1993).			
Additional Information: The ITC admitted that the value of downstream product could “far exceed” tone dialer chips.			
ITC Inv. No.	Investigation Title	Exclusion Order Scope	Downstream
337-TA-366	Microsphere Adhesives, Process for Making Same, and Products Containing Same, Including Self-Stick Repositionable Notes	Applied to portfolios and other similar products containing Post-It notes.	Not Limited
Exclusion Order: Microsphere Adhesives, Process for Making Same, and Products Containing Same, Including Self-Stick Repositionable Notes, USITC Pub. 2949, Inv. No. 337-TA-366 (Jan. 1996).			
ITC Inv. No.	Investigation Title	Exclusion Order Scope	Downstream
337-TA-374	Electrical Connectors and Products Containing Same	Applied to downstream motherboards.	Limited Application
Exclusion Order: Electrical Connectors and Products Containing Same, USITC Pub. 2981, Inv. No. 337-TA-366 (July 1996).			
Additional Information: The ITC noted that the downstream motherboard could be worth significantly more than the infringing component, which constitutes between two and three percent of the motherboard’s value.			
ITC Inv. No.	Investigation Title	Exclusion Order Scope	Downstream
337-TA-382	Flash Memory Circuits and Products Containing Same	Extended to all circuit boards and carriers.	Limited Application
Exclusion Order: Flash Memory Circuits and Products Containing Same, USITC Pub. 3046, Inv. No. 337-TA-382 (June 1997).			
Additional Information: The ITC reversed the administrative law judge’s decision which extended the limited exclusion order to all downstream products, including finished consumer electronic units. The ITC did, however, extend the exclusion order to circuit boards and carriers containing infringing circuits.			

ITC Inv. No.	Investigation Title	Exclusion Order Scope	Downstream
337-TA-395	EPROM, EEPROM, Flash Memory, and Flash Microcontroller Semiconductor Devices and Products Containing Same	Applied to all circuit boards containing the infringing component, but not to finished electronics.	Limited Application
Exclusion Order: EPROM, EEPROM, Flash Memory, and Flash Microcontroller Semiconductor Devices and Products Containing Same, USITC Pub. 3392, Inv. No. 337-TA-395 (Feb. 2001).			
ITC Inv. No.	Investigation Title	Exclusion Order Scope	Downstream
337-TA-435	Integrated Repeaters, Switches, Transceivers, and Products Containing Same	Applied to all circuit boards and carriers that include the infringing component.	Limited Application
Exclusion Order: Integrated Repeaters, Switches, Transceivers, and Products Containing Same, USITC Pub. 3547, Inv. No. 337-TA-435 (Oct. 2002).			
Additional Information: The ITC disregarded the <i>EPROM</i> factors in extending the order to circuit boards and carriers.			
ITC Inv. No.	Investigation Title	Exclusion Order Scope	Downstream
337-TA-450	Integrated Circuits, Processes for Making Same, and Products Containing Same	Applied to chips, chipsets, and motherboards incorporating those same items.	Limited Application
Exclusion Order: Integrated Circuits, Processes for Making Same, and Products Containing Same, USITC Pub. 3624, Inv. No. 337-TA-450 (Aug. 2003).			
Additional Information: The ITC limited the exclusion order to only the motherboards made by or on behalf of the infringer.			
ITC Inv. No.	Investigation Title	Exclusion Order Scope	Downstream
337-TA-481; 337-TA-491	Display Controllers with Upscaling Functionality and Products Containing Same; Display Controllers and Products Containing Same	Applied to downstream LCD monitors and circuit boards.	Limited Application
Exclusion Order: Display Controllers with Upscaling Functionality and Products Containing Same; Display Controllers and Products Containing Same, Inv. Nos. 337-TA-481, 337-TA-491 (U.S. Int'l Trade Comm'n Aug. 20, 2001) (exclusion order), <i>available at</i> http://info.usitc.gov/ouii/public/337inv.nsf/RemOrd/491/\$File/337TA481_491.pdf .			
Additional Information: The exclusion order did not apply to LCD televisions.			

ITC Inv. No.	Investigation Title	Exclusion Order Scope	Downstream
337-TA-541	Power Supply Controllers and Products Containing Same	Applied to infringing power supply controllers and downstream LCD monitors containing those same components.	Not Limited
<p>Exclusion Order: Power Supply Controllers and Products Containing Same, Inv. No. 337-TA-541 (U.S. Int'l Trade Comm'n Aug. 11, 2006) (exclusion order), <i>available at</i> http://info.usitc.gov/ouii/public/337inv.nsf/RemOrd/541/\$File/337-ta-541.pdf.</p>			
<p>Additional Information: The ITC acknowledged the significant value of the downstream products relative to the infringing component (eighteen to twenty-two cents versus hundreds of dollars), but it also dismissed concerns about the application of the order to non-respondent manufacturers.</p>			