

The Impact of the Creation of the Court of Appeals for the Federal Circuit on the Availability of Preliminary Injunctive Relief Against Patent Infringement

The Court of Appeals for the Federal Circuit (CAFC) lowered the threshold standards required for the acquisition of preliminary injunctions against patent infringement.¹ The opinions of the CAFC reflect a belief that a strong patent system will encourage investment in research and development, that this investment is required to promote the reindustrialization of the United States, and that strengthening the system requires an increased availability of injunctions against infringement. However, since the creation of the CAFC, investment in technology has slowed.² The CAFC has been quick to preliminarily enjoin defendants from continuing activities aimed at developing technologies patented by others without first completing the comprehensive determinations of validity and infringement that would occur during a trial. This tendency of the court to "shoot first and ask questions later" creates a hardship for business. Furthermore, rather than supporting research and development efforts, this tendency has discouraged investment in the development of the technologies involved.

This Note contains the results of a study of patent cases, both at the district court level and at the appellate level, that have addressed

1. H.H. Robertson Co. v. United Steel Deck, Inc., 820 F.2d 384, 387 (Fed. Cir. 1987) ("The standards applied to the grant of a preliminary injunction are no more nor less stringent in patent cases than in other areas of the law."); Atlas Powder Co. v. Ireco Chemicals, 773 F.2d 1230, 1233 (Fed. Cir. 1985):

The burden upon the movant should be no different in a patent case than for other kinds of intellectual property, where, generally, only a "clear showing" is required. Requiring a "final adjudication," "full trial," or proof "beyond question" would support the issuance of a permanent injunction and nothing would remain to establish the liability of the accused infringer. That is not the situation before us. We are dealing with a provisional remedy which provides equitable *preliminary* relief.

Id. (Emphasis in the original); In re Certain Fluidized Supporting Apparatus & Components Thereof, 225 U.S.P.Q. 1211, 1213 n.7 (U.S.I.T.C. 1984) ("[T]he CAFC has moved patent cases from their peculiar position toward the mainstream of the jurisprudence of preliminary injunctions."). See also Foster, *The Preliminary Injunction - A "New" and Potent Weapon in Patent Litigation*, 68 J. PAT. & TRADEMARK OFF. SOC'Y 281 (1986); Metcalf, *Preliminary Injunctions and their Availability: How to Defend Against the Early Injunction*, 15 AIPLA Q.J. 104 (1987). But cf. Schwartz, *Injunctive Relief in Patent Cases*, 50 ALB. L. REV. 565 (1986) (noting the "misconception" that injunctions are granted more now than they were in the past in patent cases).

2. Clark and Malabre, *Eroding R & D: Slow Rise in Outlays for Research Imperils U.S. Competitive Edge*, Wall St. J., Nov. 16, 1988, at A1, col. 6.

motions for preliminary injunctions against patent infringement. The study shows that the success rate of these motions has been 52% since the creation of the CAFC, a rate that is statistically significantly different from the 36% success rate of the preceding twenty-nine years.

This Note will review the requirements for obtaining preliminary injunctions within the framework of the patent law, it will present and statistically analyze the CAFC's performance with respect to preliminary injunctions against infringement, and it will present an analysis of the written opinions of CAFC to provide insight into the application of the law of preliminary injunctions to patent infringement actions by CAFC.

I. THE PATENT LAW

American patent law evolved from the English Statute of Monopolies³ of 1623. Section VI of this anti-monopoly statute provided an exception for

letters patents and grants of privilege of the sole working or making of any new manufactures within this realm, to the true and first inventor or inventors, of such manufactures, so as also they be not contrary to the law, nor mischievous to the state by raising prices of commodities at home or hurt of trade, or generally inconvenient.⁴

The drafters of the Statute of Monopolies recognized that establishing patent protection created a delicate statutory balance between encouraging technical innovation and creativity and restricting the competitive process.⁵

The United States Constitution, which grants Congress the power "[t]o promote the progress of science and useful arts, by securing for limited times to authors and inventors the exclusive right to their re-

3. The Statute of Monopolies, 21 Jac. 1, ch. 3 (1623-4).

4. L. WOOD, PATENTS AND ANTITRUST LAW 9 n.39 (1942). The Statute of Monopolies codified the existing common law, adding little to the law. *Id.* at 1-11. "[T]he first famous legal expression of the right of every subject to freedom of trade relieved of the restraint of patent monopoly" was *Darcy v. Allein*, 11 Coke 84 B. 77 Eng. Rep. 1260 (K.B. 1602), 1 Abbot Patent Cases 1, better known as the *Case of Monopolies*. *Id.* at 8, n.34 and accompanying text.

5. L. SCHWARTZ, J. FLYNN & H. FIRST, FREE ENTERPRISE AND ECONOMIC ORGANIZATION: ANTITRUST 936, (6th ed. 1983):

The Statute of Monopolies provided for letters patent to the "true and first inventor" so long as the patent "be not contrary to the law, nor mischievous to the state, by raising prices of commodities at home, or hurt of trade, or generally inconvenient." Thus the statute recognized the tension between patents as reward for invention and patents as restriction on the competitive process. *Id.* (quoting from the Statute of Monopolies, 21 Jac. 1, ch. 3 (1623-4)).

spective writings and discoveries "authorizes patent protection."⁶ A patent provides the holder with the right "to exclude others from making, using or selling" the patented invention in the United States for seventeen years.⁷

To obtain a patent, an inventor must file an application describing the invention with the Patent and Trademark Office (PTO).⁸ A patent examiner determines whether the invention is entitled to patent protection.⁹ The inventor receives a patent if the examiner concludes that the invention is entitled to patent protection.¹⁰ The inventor whose application is rejected by the examiner may amend the application and request that the PTO examine it again.¹¹

The dissatisfied applicant may appeal to the Board of Appeals of the PTO, which may reverse the decision of the examiner.¹² If the Board does not reverse the examiner's decision, the applicant may either appeal to the Court of Appeals for the Federal Circuit, or the applicant may bring a civil action in the District Court for the District of Columbia against the Commissioner of Patents seeking issuance of the patent.¹³

Processing a patent application is a lengthy procedure requiring about two years to complete.¹⁴ About 60% of the applications submitted to the PTO are approved.¹⁵ Roughly 0.2% of issued patents have their validity attacked in litigation, and between 50% and 60% of these patents are found to be invalid.¹⁶

II. PRELIMINARY INJUNCTIONS

A preliminary injunction is "issued to protect plaintiff from irreparable injury and to preserve the court's power to render a meaningful

6. U.S. CONST. art. I, § 8, cl. 8.

7. 35 U.S.C. § 154 (1982).

8. 35 U.S.C. §§ 111-22 (1982).

9. 35 U.S.C. §§ 101-04 (1982).

10. 35 U.S.C. § 131 (1982).

11. 35 U.S.C. § 132 (1982).

12. 35 U.S.C. § 134 (1982).

13. 35 U.S.C. §§ 141-45 (1982); 28 U.S.C. §§ 1295 (a)(4)(A), 1254 (1982).

14. In 1987 the PTO required, on the average, approximately 22 months to process an application. 1989 OMB BUDGET OF THE UNITED STATES GOVERNMENT app. at I-F20. It has been estimated that between 6 months and 4 years are required to process an application, depending on its complexity. Schellin, *The Innovating Process*, 8 AIPLA Q.J. 155, 168 (1980).

15. 1989 OMB BUDGET OF THE UNITED STATES GOVERNMENT app. at I-F20. The PTO's annual report indicated that in 1986 and 1987 62% and 63% of the applications resulted in issued patents; the report estimated 65% for 1988 and 1989. *Id.* See also Adams, *The Court of Appeals for the Federal Circuit: More than a National Patent Court*, 49 Mo. L. REV. 43, 52 (1984); Koenig, *Patent Invalidity: A Statistical and Substantive Analysis*, 3-14 to -15 & n.6 and 4-4 to -5 (1980).

16. Adams, *supra* note 15, at 54.

decision after a trial on the merits."¹⁷ Rule 65 of the Federal Rules of Civil Procedure authorizes federal courts to grant motions for preliminary injunctions.¹⁸ The Rules are silent as to the conditions or circumstances that must be met to justify the grant of such motions. This determination is left to the discretion of the trial court¹⁹ and has resulted in a fragmented and specialized common law.²⁰

A. *Preliminary Injunctions Generally*

A preliminary injunction issued before a trial on the merits is an extraordinary remedy that carries the risk of imposing an unwarranted burden on a defendant.²¹ Rule 65 (a)(2) requires that a hearing be held before a preliminary injunction may be issued.²²

17. 11 C. WRIGHT, A. MILLER & M. KANE, *Federal Practice and Procedure* § 2947, at 423 (1973 & Supp. 1988) [hereinafter WRIGHT & MILLER].

18. FED. R. CIV. P. 65. Sub-sections (a) and (d) state:

(a) Preliminary injunction.

(1) *Notice*. No preliminary injunction shall be issued without notice to the adverse party.

(2) *Consolidation of hearing with trial on merits*. Before or after the commencement of the hearing of an application for a preliminary injunction, the court may order the trial of the action on the merits to be advanced and consolidated with the hearing of the application. Even when this consolidation is not ordered, any evidence received upon an application for a preliminary injunction which would be admissible upon the trial on the merits becomes part of the record on the trial and need not be repeated upon the trial. This subdivision (a)(2) shall be so construed and applied as to save to the parties any rights they may have to trial by jury.

...

(d) *Form and scope of injunction or restraining order*. Every order granting an injunction and every restraining order shall set forth the reasons for its issuance; shall be specific in terms; shall describe in reasonable detail, and not by reference to the complaint or other document, the act or acts sought to be restrained; and is binding only upon the parties to the action, their officers, agents, servants, employees, and attorneys, and upon those persons in active concert or participation in them who receive actual notice of the order by personal service or otherwise.

FED. R. CIV. P. 65. The comments that accompany this rule are silent as to these sections. There is no indication as to the circumstances under which a preliminary injunction is appropriate.

19. 35 U.S.C. § 283 ("The several courts having jurisdiction of cases under this title may grant injunctions in accordance with the principles of equity to prevent the violation of any right secured by patent, on such terms as the court deems reasonable."). See generally WRIGHT & MILLER, *supra* note 17.

20. See Leubsdorf, *The Standard for Preliminary Injunctions*, 91 HARV. L. REV. 525, 525 (1978).

21. WRIGHT & MILLER, *supra* note 17, at 424.

22. FED. R. CIV. P. 65(a).

Although a preliminary injunction is a form of interlocutory relief, Congress found that the safeguard of immediate appellate review of these decisions was required to reduce the risk of potentially harsh consequences stemming from the grant of an injunction prior to a trial on the merits.²³ The standard for appellate review of decisions on motions for preliminary injunctive relief is whether the trial court has abused its discretion.²⁴ It may also need to be determined on appeal whether the trial court committed an error of law, and the trial court's underlying findings of fact are subject to the clearly erroneous standard of Rule 52(a).²⁵

The formulations for deciding whether to grant a preliminary injunction vary from circuit to circuit.²⁶ The most commonly evaluated factors include (1) the threat of irreparable harm to the plaintiff if the injunction is not granted, (2) the balance between the potential harm to the plaintiff if the injunction is not granted and the potential harm to the defendant if the injunction is granted, (3) the public interest, and (4) the likelihood that the plaintiff will prevail at the trial on the merits.²⁷

The threat of irreparable harm carries more weight than the other factors.²⁸ The movant must show that harm will occur before a trial

23. See 28 U.S.C. § 1292 (a)(1) (1982). The 1982 enactment of the Federal Courts Improvement Act (FICA) granted exclusive jurisdiction to the Court of Appeals for the Federal Circuit in patent infringement actions. Pub. L. No. 97-164, § 125, 96 Stat. 36 (codified at 28 U.S.C. §§ 1292 (c)(1)(1982), 1295 (1982)).

Wright & Miller noted that "[A] preliminary injunction is an extraordinary and drastic remedy, one that should not be granted unless the movant, by a clear showing, carries the burden of persuasion." WRIGHT & MILLER, *supra* note 17, at 428-29. Moore added that:

An injunction is a powerful and generally effective remedy. This is due in large measure to the court's power to punish disobedience by civil contempt, which is remedial in nature and designed to coerce obedience and to compensate the complainant for losses sustained; and, in a proper case, by criminal contempt whose purpose is to vindicate the court's authority and dignity.

7 J. MOORE, J. LUCAS & K. SINCLAIR, JR., MOORE'S FEDERAL PRACTICE § 65.02[3] at 65-19 (2d ed. 1989).

24. *Smith Int'l., Inc. v. Hughes Tool Co.*, 718 F.2d 1573, 1579 (Fed. Cir. 1983) ("[T]he scope of review of a district court's decision involving the denial of an injunction is narrow. One denied a preliminary injunction must meet the heavy burden of showing that the district court abused its discretion, committed an error of law, or seriously misjudged the evidence."). See generally J. MOORE, *supra* note 23, at 65-70 to 65-77.

25. FED. R. CIV. P. 52(a). See *Eli Lilly & Co. v. Premo Pharm. Labs., Inc.*, 630 F.2d 120, 136 (3rd Cir. 1980) ("[W]e must affirm the order of the district court unless the court abused its discretion, committed an error of law, or seriously misjudged the evidence."); see also J. MOORE, *supra* note 23, at 65-78.

26. See Leubsdorf, *supra* note 20, at 525-26; J. MOORE, *supra* note 23, at 65-32 to 65-54 (providing a detailed analysis by circuit).

27. E.g., *American Can Co. v. Mansukhami*, 742 F.2d 314, 325 (7th Cir. 1984).

28. WRIGHT & MILLER, *supra* note 17, at 431 and 436-37.

on the merits can be completed.²⁹ The movant must also show that there is no adequate alternate remedy at law.³⁰ Speculative injury and economic loss are normally not sufficiently harmful for a court to find irreparable harm,³¹ though economic losses that threaten to end a movant's business may satisfy this requirement.³²

The analysis of the balance between the potential harm to the plaintiff if the injunction does not issue and the potential harm to the defendant if the injunction does issue requires the consideration of: (1) whether the grant of the preliminary injunction would provide the plaintiff with all or most of the relief that plaintiff would be entitled to if successful after a trial on the merits,³³ and (2) whether the defendant is being ordered to affirmatively act.³⁴ The presence of either of these factors weighs against the issuance of preliminary relief.³⁵ The purpose of a

29. *Roper Corp. v. Litton Sys., Inc.*, 757 F.2d 1266, 1273 (Fed. Cir. 1985) (The court did not grant the injunction, stating, "[T]here is nothing in the record establishing . . . an *immediate* threat. . . . Thus, the *status quo* is maintained without injunctive relief *pendente lite*."') (emphasis in original).

30. *Lametti & Sons, Inc. v. City of Davenport, Iowa*, 432 F. Supp. 713, 1714-15 (S.D. Iowa 1975) (if contractor could demonstrate the city's improper acceptance of another bid, it would have an adequate remedy at law, and therefore could not enjoin the city from accepting the allegedly improper bid).

31. As to speculative injury, see *Roper*, 757 F.2d at 1273 (Roper has demonstrated mere apprehension of potential future infringement, primarily from the possibility of Litton's sale of its oven technology to a company that might infringe. Without more, such fears cannot justify the issuance of preliminary equitable relief.); *Chemical Eng'g Corp. v. Marlo, Inc.*, 754 F.2d 331, 334 (Fed. Cir. 1984) ("No authority anywhere supports the notion that a preliminary injunction against infringement may issue in response to rumors of a threat of infringement.").

For cases stating that economic loss is normally not sufficient to preliminarily enjoin a party, see *Lametti & Sons, Inc. v. City of Davenport, Iowa*, 432 F. Supp. 713, (D.C. Iowa 1975) (contractor was denied a preliminary injunction enjoining the city from accepting an allegedly improper bid because it could recover the cost of the preparation of its bid if successful on the merits); *A.L.K. Corp. v. Columbia Pictures Indus., Inc.*, 440 F.2d 761 (3d Cir. 1971) (a theatre owner was denied a preliminary injunction when he sued a film distributor for performance of a contract to provide first run movies because the court found that its potential losses were readily measurable).

32. *Semmes Motors, Inc. v. Ford Motor Co.*, 429 F.2d 1197, 1205, (2d Cir. 1970) ("[T]he right to continue a business . . . is not measurable entirely in monetary terms. . . ."); *but cf. Tele-Controls, Inc. v. Ford Indus., Inc.*, 388 F.2d 48, (7th Cir. 1967) (the fact that plaintiff included lost dollar amounts in the complaint demonstrated that the loss of plaintiff's dealership could be compensated with damages and that equitable relief was not required).

33. *Knapp v. Walden*, 367 F. Supp. 385, 388 (S.D.N.Y. 1973); *Bailey v. Romney*, 359 F. Supp. 596, 600 (D.D.C. 1972) (the burden on the plaintiff to show the likelihood of success on the merits increases as the preliminary relief sought begins to resemble the relief expected after a trial on the merits).

34. *Wetzel v. Edwards*, 635 F.2d 283, 286 (4th Cir. 1980).

35. *Bricklayers, Masons, Marble and Tile Setters, Protective and Benevolent Union*

preliminary injunction is to maintain the *status quo* and to protect the court's ability to render a meaningful decision for either party.³⁶ Courts have been reluctant to force parties to act to protect the court's ability to render a meaningful decision when this action would disrupt the *status quo*.³⁷

The CAFC warned that *status quo* does not mean "the last uncontested status which preceded the pending controversy."³⁸ A state of affairs that permits the alleged injury to continue at its present rate, requiring only that this rate is not exceeded, is not maintaining the *status quo*. The CAFC held that maintaining the *status quo* would require that the trespasses stop "cold turkey."³⁹

A court will consider the public interest when faced with a motion for preliminary injunctive relief. This allows it to address policy issues that bear on whether the motion should be granted.⁴⁰ The public interest may be defined in a statute,⁴¹ and the importance of this factor will grow when government policy or regulations are brought into issue.⁴²

The likelihood that a movant will succeed on the merits is considered because the propriety of issuing a preliminary injunction is based on the validity of the movant's claim.⁴³ In most jurisdictions the movant must demonstrate a reasonable probability of success.⁴⁴ The degree of likelihood of success is not dispositive of the motion. It must be balanced with the comparative injuries of the parties, creating a sliding scale for the importance of this factor based on the injunction's potential impact and the need for the injunction.⁴⁵

No. 7 of *Neb. v. Luedeg Const. Co.*, 346 F. Supp. 558, 561 (D. Neb. 1972). See generally WRIGHT & MILLER, *supra* note 17, at 329-48.

36. *Atlas Powder Co. v. Ireco Chem.*, 773 F. 2d 1230, 1232 (Fed. Cir. 1985) ("[A] preliminary injunction preserves the status quo if it prevents future trespasses but does not undertake to assess the pecuniary or other consequences of past trespasses.").

37. *La Chemise Lacoste v. General Mills, Inc.*, 487 F.2d 312 (3d Cir. 1973).

38. *Atlas*, 773 F.2d at 1231.

39. *Id.* at 1232.

40. *In re Uranium Antitrust Litig.*, 617 F.2d 1248 (7th Cir. 1980) (enjoining defendants in a price fixing case from removing their assets from the United States supported the public interest in having effective antitrust laws).

41. *United States v. Nutrition Serv., Inc.*, 227 F. Supp. 375 (W.D. Pa. 1965). The Food, Drug, and Cosmetic Act defined the public interest.

42. *Spiegel v. City of Houston*, 636 F.2d 997, 1002 (5th Cir. 1981) (all requirements for a preliminary injunction were met, but the injunction against certain police methods was denied because it would have hindered good faith law enforcement, thereby disserving the public interest).

43. *Delaware & Hudson Ry. Co. v. United Transp. Union*, 450 F.2d 603, 619 (D.C. Cir. 1971) (The weighing of the factors that determine the outcome of a motion for preliminary injunctive relief "depend on underlying premises as to the substantive law defining legal rights.").

44. WRIGHT & MILLER, *supra* note 17, at 329-48.

45. *Hybritech Inc. v. Abbot Labs.*, 849 F.2d 1446, 1451 (Fed. Cir. 1988). While

There are rhetorical differences among the jurisdictions with respect to the standards used by each, but these differences do not seem to carry substantive significance.⁴⁶

The standard for the exercise of this immense power suffers from inconsistent formulations. Some authorities do no more than list relevant factors - typically the plaintiff's likelihood of success on the merits, the prospect of irreparable harm, the comparative hardship to the parties of granting or denying relief, and sometimes the impact of the relief on the public interest. Others state combinations of these factors that will warrant relief. Still others lay down a four-fold test, whose folds differ from one formulation to the next. Irreparable injury may or may not be mentioned. Sometimes the injunction must not disserve the public interest, sometimes it must serve the public interest, and sometimes only the equities of the parties count. . . .

The dizzying diversity of formulations, unaccompanied by an explanation for choosing one instead of another, strongly suggests that the phrases used by the courts have little impact on the result in particular cases.⁴⁷

The difficulty in gauging the impact of the rhetorical differences between jurisdictions is confounded by additional requirements that must be established for various substantive areas of the law. Historically, additional requirements for acquiring a preliminary injunction under the patent law have made it difficult to acquire preliminary injunctive relief in these cases.

B. Preliminary Injunctions Against Patent Infringement

A preliminary injunction is a potent weapon for enforcing a patent holder's monopoly. To obtain a preliminary injunction a movant must show the threat of irreparable harm, that the balance of potential harms weighs against him, that permitting the injunction is in the public interest, and that he is likely to succeed on the merits. In a patent infringement

discussing the factors that are considered when reviewing a decision to grant or deny a preliminary injunction, the court noted that "[t]hese factors, taken individually, are not dispositive; rather, the district court must weigh and measure each factor against the other factors and against the form, and magnitude of the relief requested." *See also* Packard Instrument Co. v. ANS, Inc., 416 F.2d 943, 945 (2d Cir. 1969).

46. Leubsdorf, *supra* note 20. *See also* WRIGHT & MILLER, *supra* note 17, at 451-452. For a detailed discussion of the formulations used in each circuit, see Moore, *supra* note 25, at 65-32 to 65-54. For a general presentation of the relevant factors *see* MOORE, *supra* note 25, at 65-54 to 65-70.

47. Leubsdorf, *supra* note 20, at 525-26.

case, the movant must also show his title in the patent, the validity of the patent, and the infringement of the patent.⁴⁸ The required showing of the movant's likelihood of success on the merits is particularly strong when the claims of infringement are disputed, though often these disputes cannot be properly resolved without a full trial on the merits.⁴⁹

Irreparable harm is presumed in patent cases when the strength of the showing of the likelihood of success on the issues of validity and infringement is considerable.⁵⁰ Also, the analyses of the public interest and the balance of harms normally include the effect that the decision will have on the strength and integrity of the patent system.⁵¹

1. *Validity and Infringement.*—By statute patents are presumed to be valid.⁵² But invalidity may be raised as a defense to a claim of infringement. Traditionally, plaintiffs seeking preliminary injunctions in patent infringement cases were required to establish the elements of validity and infringement beyond question.⁵³ The CAFC relaxed this requirement by holding that only a clear showing of validity and infringement is necessary.⁵⁴

48. *Jenn-Air Corp. v. Modern Maid Co.*, 499 F. Supp. 320, 322 (D. Del. 1980).

While the requisite showing on the merits in other types of cases is the probability of success, the party seeking preliminarily to enjoin infringement must demonstrate "beyond question" that the patent is valid, that the patent is infringed and that the party seeking such relief has valid title to the patent. In other respects, the standard for granting a preliminary injunction against infringement in a patent suit is the same as that applicable to other types of cases.

Id. at 322 (citations omitted). See also 5 D. CHISUM, PATENTS, A TREATISE ON THE LAW OF PATENTABILITY, VALIDITY AND INFRINGEMENT, § 20.04 (1987 & Supp. 1988).

49. D. CHISUM, *supra* note 48, at 20-288 to 20-289.

50. *Roper Corp. v. Litton Systems, Inc.*, 757 F.2d 1266, 1271 (Fed. Cir. 1985) (In order to raise the presumption of irreparable harm, the showing of the likelihood of success on the merits "must be not merely a reasonable but a strong showing indeed.").

51. *Atlas Powder Co. V. Ireco Chem.*, 773 F.2d 1230, 1234 (Fed. Cir. 1985) (no abuse of discretion when the district court determined that possible supply problems for the mining industry, the loss of 66% of Ireco's sales, and layoff of 200 people, all expected to be caused by the grant of the preliminary injunction, were not as important as maintaining Atlas' patent rights).

52. 35 U.S.C. § 282 (1982 & Supp. 1986).

53. *Jenn-Air*, 499 F. Supp. at 322 ("[T]he party seeking preliminarily to enjoin infringement must demonstrate 'beyond question' that the patent is valid, that the patent is infringed, and that the party seeking such relief has valid title to the patent.>"). See also D. CHISUM, *supra* note 48, at 20-276 to -278.

54. *Atlas Powder*, 773 F.2d at 1233:

The burden upon the movant should be no different in a patent case than for other kinds of intellectual property, where, generally, only a "clear showing" is required. Requiring a "final adjudication," "full trial," or proof "beyond question" would support the issuance of a permanent injunction and nothing

The statutory presumption of patent validity⁵⁵ gained theoretical legitimacy in 1836 with the creation of the Patent Office and an examination procedure.⁵⁶ Still, it has been advanced that “[t]he presumption of validity is too slim a reed to support a preliminary injunction in a patent case.”⁵⁷ Judge Learned Hand provided two theories to justify being wary of the presumption of a patent’s validity. The first is that a patent is not even *prima facie* valid until a judge, apart from an administrative official, has adjudged its validity.⁵⁸ The second is that “[e]xaminers have neither the time nor the assistance to exhaust the prior art; nothing is more common in a suit for infringement than to find that all the important references are turned up for the first time by the industry of a defendant whose interest animates his search.”⁵⁹

The CAFC has noted that the burden is always on the movant to prove that it deserves injunctive relief, but the burden of proving invalidity is with the party attacking validity.⁶⁰

2. *Irreparable Harm and the Public Interest.*—Irreparable harm must be proven when a preliminary injunction is sought in a patent infringement case, but the circuit courts of appeals were inconsistent in the level of the showing that they required.⁶¹ In response, the CAFC

would remain to establish the liability of the accused infringer. That is not the situation before us. We are dealing with a provisional remedy which provides equitable *preliminary* relief. Thus, when a patentee “clearly shows” that his patent is valid and infringed, a court may, after a balance of all of the competing equities, preliminarily enjoin another from violating the rights secured by the patent.

(emphasis in the original) (citations omitted). See also *H.H. Robertson, Co. v. United Steel Deck, Inc.*, 820 F.2d 384, 387 (Fed. Cir. 1987) (“The standards applied to the grant of a preliminary injunction are no more nor less stringent in patent cases than in other areas of the law.”).

55. 35 U.S.C. § 282 (1982 and Supp. 1986). See also *Radio Corp. of Am. v. Radio Eng’g Lab., Inc.*, 293 U.S. 1 (1934) (“A patent regularly issued . . . is presumed to be valid until the presumption has been overcome by convincing evidence of error.”).

56. D. CHISUM, *supra* note 48, at 20-270.

57. *Mayview Corp. v. Rodstein*, 480 F.2d 714, 718 (9th Cir. 1973). See also *T. J. Smith and Nephew Ltd. v. Consolidated Medical Equip., Inc.*, 821 F.2d 646, 648 (Fed. Cir. 1987) (presumption of validity “is procedural, not substantive”); *H. H. Robertson*, 820 F.2d at 388 (Fed. Cir. 1986) (“[T]he burden is always on the movant to demonstrate entitlement to preliminary relief. Such entitlement, however, is determined in the context of the presumptions and burdens that would inhere at trial on the merits.”).

58. *Rosenberg v. Groov-Pin Corp.*, 81 F.2d 46, 47 (2d Cir. 1936).

59. *Id.* Judge Hand added that “[i]t is a reasonable caution not to tie the hands of a whole art until there is at least the added assurance which comes from such an incentive.” *Id.*

60. *H. H. Robertson*, 820 F.2d at 387.

61. *Compare Nuclear-Chicago Corp. v. Nuclear Data, Inc.*, 465 F.2d 428, 429 n.1 (7th Cir. 1972) (“Proof of irreparable harm is always a requirement for issuance of a

ruled that if both validity and infringement are "clearly established," irreparable harm is to be presumed.⁶² The CAFC explicitly ruled that to clearly establish validity does not require a prior adjudication of the patent.⁶³

When considering public policy, the CAFC held that the plaintiff must demonstrate that the granting of the injunction will not disserve the public interest.⁶⁴ Prior to the CAFC's ruling, the jurisdictions were split between this standard and a more stringent standard requiring that movants show that the injunction would serve the public interest.⁶⁵

The public interest seldom plays a substantial role in the consideration of preliminary injunctions in patent infringement actions, though occasionally it is the basis for the decision. In *Scripps Clinic and Research Foundation v. Genentech*,⁶⁶ after finding that Genentech infringed Scripps' patent, the court noted that there were two advantages for hemophiliacs from Genentech's recombinant Factor VIII:C as compared to plasma-derived Factor VIII:C. The recombinant Factor VIII:C was unlikely to contain infectious agents such as the AIDS virus, and there was a possibility of an economic advantage to the recombinant Factor VIII:C. The court stated that the possibility of the occurrence of these advantages was sufficient to block the preliminary injunction and to give Genentech an opportunity to present its case for invalidity of the patent.⁶⁷

preliminary injunction.") *with* *Teledyne Indus., Inc. v. Windmere Prods., Inc.* 433 F. Supp. 710, 40 (S.D. Fla. 1977) (permitting infringement during the course of the litigation would be to force patentee to accept a licensee for that period).

62. *Smith Int'l, Inc. v. Hughes Tool Co.*, 718 F.2d 1573, 1581 (Fed. Cir. 1983) ("The very nature of the patent right is the right to exclude others. Once the patentee's patents have been held to be valid and infringed, he should be entitled to the full enjoyment and protection of his patent rights.").

63. *H. H. Robertson*, 820 F.2d at 388 (prior adjudication of a patent's validity against a defendant not a party to the current action merely provides evidence, to which substantial weight may be given, of the validity of the patent claims litigated during the prior adjudication).

64. *Hybritech, Inc. v. Abbot Labs.*, 849 F.2d 1446, 1448 (Fed. Cir. 1988) ("[T]he focus of the district court's public interest analysis should be whether there exists some critical public interest that would be injured by the grant of preliminary relief.").

65. *D. CHISUM*, *supra* note 48, at 20-296.

66. 666 F. Supp. 1379 (N.D. Cal. 1987).

67. *Id.* See also *Eli Lilly and Co. v. Premo Pharm. Labs., Inc.*, 630 F.2d 120 (3d Cir. 1980). This case presented a more typical treatment of the public policy question in patent infringement preliminary injunction decisions:

In enacting patent laws, Congress recognized that it is necessary to grant temporary monopolies on inventions in order to induce those skilled in the "useful arts" to expend the time and money necessary to research and develop new products and to induce them "to bring forth new knowledge," . . . sacrificing short-term price competition in order to foster creativity and improvement of products in [the] long run.

III. THE COURT OF APPEALS FOR THE FEDERAL CIRCUIT

A. *The Need for the CAFC*

Patent law inconsistencies that evolved between the circuits prior to the creation of the CAFC undermined the constitutional objective of the patent law "to promote the progress of science"⁶⁸ Businesses found it to be risky to develop technologies that were not uniformly protected. They found it difficult to plan the use of technologies in the face of protections and restrictions which were uncertain and that varied from jurisdiction to jurisdiction.⁶⁹ According to Chief Judge Howard T. Markey while he was Chief Judge of the Court of Customs and Patent Appeals:

A major problem addressed and solved in H.R. 2405 [the House version of the Federal Courts Improvement Act (FCIA), the act that spawned the CAFC⁷⁰] is the non-uniformity in interpretation and application of the patent laws of our Nation, and the unseemly and costly forum shopping facilitated thereby. . . . Indeed, the report accompanying H.R. 3806 in the 96th Congress described the problem: "Patent litigation long has been identified as a problem area, characterized by undue forum shopping and unsettling inconsistency in adjudications."

. . . .

The need for a law of patents on which our people may rely is even greater when our nation is faced with a need to reindustrialize, to improve a productivity growth rate now approaching zero, to reverse a falling status in international trade, and to encourage the investment in innovative products and new

. . . .

"Viewed in these terms, the patent grant . . . functions as a means of raising the expected return to be gained from basic drug research sufficiently to overcome the investor firm's risk aversion and induce it to invest additional funds in research instead of alternative investment opportunities such as production process improvement programs, advertising, increased customer service, or the like."

Id. at 137 (quoting Note, *Standards of Obviousness and the Patentability of Chemical Compounds*, 87 HARV. L. REV. 607, 620 n.54 (1974)).

68. U.S. CONST. art I, § 8, cl. 8.

69. Sward & Page, *The Federal Courts Improvement Act: A Practitioner's Perspective*, 33 AM. U. L. REV. 385, 387 (1984). According to Sward and Page: "More detrimental than the battles over the forum, however, was that the different interpretations of the patent law discouraged innovation and made business planning difficult and investment uncertain." *Id.* at 387.

70. The Federal Courts Improvement Act of 1982 (FCIA), enacted Pub. L. No. 97-164, § 125, 96 Stat. 36 (codified at 28 U.S.C. §§ 1292 (c)(1)(1982), 1295 (1982)).

technology so necessary to achieve those goals.

. . . .

The chairman may be aware that 10 years ago the United States was No. 1 in international trade with 24 percent. Two years ago, the last year for which I have seen figures, we were No. 6 with 14 percent. And that trend must be reversed. It has always rested on innovation, advances in technology. We need to reverse that falling status in international trade.⁷¹

Compared to Judge Markey's vision of a stronger industrialized America energized by a strong patent system, Congress sought only two modest improvements from the creation of the CAFC: (1) An improvement in patent law uniformity as a result of one court hearing appeals from patent cases,⁷² and (2) a reduction of the workload in the other circuit courts of appeals. "Although patent cases are a small percentage of the cases that the regional courts of appeal handle, they are particularly complex, difficult, and time-consuming."⁷³ Congress designed the CAFC to meet these goals.

B. The Court

The CAFC is an intermediate appellate court of restricted subject matter jurisdiction. Congress assigned to it the exclusive jurisdiction of appeals from the federal district courts throughout the United States in patent cases.⁷⁴ "The Federal Circuit . . . is a compromise between specialization, which can produce uniformity, and generalization, which can prevent stagnation. . . ."⁷⁵

To balance these interests, Congress created a commission chaired by Senator Roman Hruska to examine the federal appellate system.⁷⁶ The inconsistency of the patent law among the circuits was one aspect of the inquiry.⁷⁷ The commission advocated against creating a specialized court.⁷⁸ It feared that judges on a specialized court would acquire "tunnel

71. *Court of Appeals for the Federal Circuit, 1981: Hearings on H.R. 2405 Before the Subcomm. on Courts, Civil Liberties, and the Administration of Justice of the House Comm. on the Judiciary, 97th Cong., 1st Sess. 6 (1981)* (statement of Howard T. Markey, Chief Judge of the Court of Customs and Patent Appeals).

72. Sward & Page, *supra* note 69, at 388.

73. *Id.*

74. Adams, *supra* note 15, at 44.

75. Sward & Page, *supra* note 69, at 387.

76. *Commission on Revision of the Federal Court Appellate System, Structure and Internal Procedures: Recommendations for Change, reported in 67 F.R.D. 195, 234 (1975)* (Senator Roman L. Hruska, Chairman) [hereinafter *Hruska Report*].

77. *Id.*

78. *Id.*

vision,' seeing the cases in a narrow perspective without the insights stemming from broad exposure to legal problems in a variety of fields.'⁷⁹ The commission also argued that a specialized court would promote an increase in judicial activism in the area of specialization,⁸⁰ that if only one court was to pass on an issue its written opinions would contain only legal conclusions with little analysis,⁸¹ that the dilution of regional influences would be detrimental,⁸² that the loss of breadth of experience suffered both by judges on the specialized court and by judges that would no longer be hearing cases within the area of specialization would be felt,⁸³ and that a specialized court would not attract objective, quality judges.⁸⁴

During the CAFC's brief history it has gained the reputation of being biased toward plaintiffs with a tendency to adopt pro-patent positions.⁸⁵ During the court's first three years of operation sixty-nine section 103 cases were appealed to the CAFC. The district courts found 30% of these patents to be valid,⁸⁶ while 54% of these were found to be valid by the CAFC on appeal.⁸⁷ Additionally, district courts found infringement in 60% of their seventy-five appealed decisions, while the CAFC found infringement in only 52% of these cases.⁸⁸

At least one author has used this data to conclude that the CAFC has shown no bias for plaintiffs. Using the section 103 holdings as an example, the author reasoned that the court has approached neutrality because it has found patents to be valid in about half of the cases it has decided.⁸⁹ The implicit argument is as follows: (1) Half of the parties in patent litigation are defendants, half of them are plaintiffs. (2) Half of the parties to patent litigation will be arguing that the patent in question is valid, half will be arguing that it is invalid. (3) A neutral court will favor neither plaintiffs nor defendants. (4) A neutral court will find for plaintiffs half the time and defendants half the time. (5)

79. *Id.* at 234-35.

80. *Id.* at 235.

81. *Id.*

82. *Id.*

83. *Id.*

84. *Id.*

85. *Protection for High Technology Reviewed at Patent Law Conference*, 30 PAT. TRADEMARK & COPYRIGHT J. (BNA) No. 753, 682-683 (Oct. 31, 1985). Comments made by one speaker at this conference suggested that the CAFC was holding 60-70% of patent claims valid and 80-90% of patents infringed.

86. Dunner, *Introduction (Statistics on Federal Circuit Patent Cases)*, 13 AIPLA Q.J. 185, 186 (1985).

87. *Id.*

88. *Id.*

89. *Id.*

The CAFC has found 54% of the patents that it has adjudged to be valid. (6) Therefore, "the percentage of validity holdings at the Federal Circuit level is close enough to 50% to suggest no bias in either direction."⁹⁰

However, step (4) in the argument is faulty. To explain why, it must first be accepted that some percentage of issued patents are invalid. Of course, validity is dependent upon the subjective determinations of the fact finder and the completeness of the search for prior art, but theoretically only a certain percentage of patents that have been issued meet the threshold requirements for patent protection and are truly valid. Conversely, a certain percentage of the issued patents do not meet the threshold requirements. These patents were granted because the patent examiner had imperfect or incomplete information when it was decided that the invention deserved patent protection. These inventions are unworthy of the patent protections given to them and are not truly valid.

Hypothetically, if 99% of the patents issued are valid it is not reasonable to expect that only half of the section 103 holdings will result in a finding of validity. If only 1% of the patents issued are valid, it is not reasonable to expect that more than a few of the section 103 holdings will result in a finding of validity.

Nobody knows how many of the patents issued are truly valid. It is reasonable to assume that most patents that are infringed or attacked in court are chosen because the infringer/attacker believes that the patent does not meet the threshold requirements for patent protection and is invalid. The number of section 103 holdings in favor of validity will be lower if only the weaker patents are litigated and the unquestionably valid patents are not litigated.

Step (4) of the argument above is faulty because there is no basis for assuming that half of the defendants are right and that half of the plaintiffs are right. The data as presented above provides no framework for gauging the CAFC's performance, it provides no baseline to judge against, and it provides absolutely no basis for claiming that the CAFC is approaching neutrality because it finds for plaintiffs only half of the time.

However, a baseline has been established that will provide an indication of the Federal Circuit's attitude toward preliminary injunctions against patent infringement.⁹¹ The question of whether the creation of the CAFC has caused a shift in the availability of patent preliminary injunctions is addressed below.

90. *Id.*

91. Dorr & Duft, *Patent Preliminary Injunctive Relief*, 60 J. PAT. OFF. SOC'Y 597 (1983).

IV. THE COURT OF APPEALS FOR THE FEDERAL CIRCUIT AND PRELIMINARY INJUNCTIONS AGAINST INFRINGEMENT

A. *The Statistical Test*⁹²

Hypothesis testing is a statistical technique for comparing sets of data to determine whether the differences between them are due merely to the expected random data fluctuations or if the differences are significant and due to some assignable cause.⁹³ Random differences in the number of preliminary injunctions against infringement granted from year to year occur whether or not changes are made to the patent system. Possible assignable causes for detected non-random changes from year to year could include precedent generated between the years considered, different philosophies of judges ruling on injunctions, and changes in the number of valid patents for which injunctions are sought.

The inquiry made in this Note is whether the increase in the percentage of motions for preliminary injunctions that are granted in patent infringement cases since the creation of the CAFC is due to the expected random variation or if there has indeed been a change in the availability of these injunctions.

The calculations performed as part of a hypothesis test provide a probability that an observed result is due merely to random variations in the data.⁹⁴ Traditionally, researchers in the social sciences are willing to declare that a difference is significant if there is a 5% or smaller chance that the difference is due merely to randomness.⁹⁵ Another way to phrase this is that researchers are traditionally willing to declare that a difference between two sets of data is significant - that it is real - if there is a 95% or greater probability that the difference is not due to random chance.

Statistical data comes in many forms.⁹⁶ The form of the data is important in defining the test statistic that is appropriate for hypothesis

92. See generally D. L. HARNETT, *STATISTICAL METHODS*, (3d ed. 1982) (for a discussion of hypothesis testing, non-parametric statistics, and a discussion of the statistical test to be used herein); J. M. JURAN & F. M. GRINA, JR., *QUALITY PLANNING AND ANALYSIS*, chs. 3-4 (2d ed. 1980) (for a brief statistical background); B. OSTLE, C. R. HICKS, G. W. McELRATH, *APPLIED STATISTICS IN QUALITY CONTROL* (1985) (for an in-depth discussion of hypothesis testing).

93. HARNETT, *supra* note 92, at 345-64.

94. *Id.* at 360-62.

95. *Id.* at 393-97.

96. HARNETT, *supra* note 92, at 693-96. Harnett explained: "The four major levels of measurement are represented by nominal, ordinal, interval, and ratio scales." A nominal scale is based on a categorization of objects into representative qualitative groups. There is no quantitative significance to the classifications. The data dealt with in this article is

testing.⁹⁷ In the analysis herein, the comparison made is the number of preliminary injunctions granted in one time period to some expected number of preliminary injunctions. The number of preliminary injunctions that were expected is determined from past data.⁹⁸ The appropriate test statistic for testing hypotheses with this type of data is the chi-square test statistic. "The chi-square variable is used . . . to test how closely a set of observed frequencies corresponds to a given set of frequencies."⁹⁹

nominal, a grant of a preliminary injunction is not quantifiable; it is not greater than or less than a denial. Grants and denials are merely two different possible outcomes.

Another way to classify data is as parametric or non-parametric data. Parametric data is that which will allow an observer to calculate means and standard deviations. When performing hypothesis tests on parametric data, there are certain assumptions about the data that must hold true. Among these assumptions is that the data must be normally distributed. With small data sets, like the data considered in this article, this would represent a critical flaw. Since a non-parametric test, the "chi-square" test, will be used in this article, the assumptions necessary for parametric tests are rendered moot.

97. *Id.* at 693.

Most . . . statistical tests . . . have specified certain properties of the parent population which must hold before these tests can be used. . . . Although most of these tests are quite "robust," in the sense that the tests are still useful when the assumptions about the parent population are not exactly fulfilled, there are still many circumstances when the researcher cannot or does not want [to] make such assumptions. The statistical methods appropriate in these circumstances are called nonparametric tests because they do not depend on any assumptions about the parameters of the parent population.

Id.

98. The expected number of granted and denied preliminary injunctions was found by multiplying the fraction of injunctions granted in the earlier period by the number of injunctions that were decided upon in the later period. For example, the number of preliminary injunctions considered from January 1953 to September 1982 included twenty-eight that were granted and fifty that were denied. This is a total of seventy-eight preliminary injunctions. The fraction of injunctions granted is twenty-eight divided by seventy-eight or 0.36. The number of injunctions granted from October 1982 to October 1988 was thirty, and the number denied was twenty-eight, for a total of fifty-eight preliminary injunctions sought.

The expected number of granted and denied injunctions was calculated as:

$$\begin{aligned} \text{granted} &= (0.36) \times (58) = 21 \\ \text{denied} &= 58 - 21 = 37 \end{aligned}$$

99. HARNETT, *supra* note 97, at 708. This author stated:

The chi-square variable is used . . . to test how closely a set of observed frequencies corresponds to a given set of expected frequencies. The expected frequencies can be thought of as the average number of values expected to fall in each category, based on some theoretical probability distribution. . . . The observed frequencies can be thought of as a sample of values from some probability distribution. The chi-square variable can be used to test whether the observed and expected frequencies are close enough so we can conclude they came from the same probability distribution.

Id.

B. *The Data for Comparison*¹⁰⁰

The data from the past used to calculate the expected number of preliminary injunctions is found in an article written by Dorr and Duft.¹⁰¹ Dorr and Duft surveyed cases reported in the United States Patent Quarterly from January 1953 to September 1978. Their survey did not include non-published decisions. Dorr and Duft found that:

First, contrary to the popular belief that preliminary injunctions are infrequently granted, of those applied for, *over 41% were granted* by the federal district courts. The choice of *forum* in which to seek preliminary relief can be crucial - only 8% of the motions for preliminary injunction were granted (and upheld upon appeal) in the Second Circuit, whereas 86% were granted (and upheld upon appeal) by the Fifth Circuit. . . . Notably, the two most common reasons for denying preliminary relief were that the movant did not prove the patent to be probably *valid* and did not demonstrate sufficient *irreparable harm*.¹⁰²

A data set has been compiled with the Dorr and Duft data plus data from October 1, 1978 to October 1, 1982. October 1, 1982 is the effective date of the creation of the CAFC.¹⁰³ This "supplemented Dorr and Duft data" will allow for comparisons of the pre-CAFC data (January 1953 through October 1982) to the post-CAFC data (including decisions from October 1, 1982 through October 1, 1988),¹⁰⁴ for all cases that were subject to appellate review, for all decisions as they issued

100. Listings of appellate decisions involving preliminary injunctive relief in patent infringement cases that were decided by the CAFC from October 1982 to October 1988, appellate decisions involving preliminary injunctive relief in patent infringement cases that were decided from September 1978 to October 1982, district court decisions involving preliminary injunctive relief in patent infringement cases that were decided since the creation of the CAFC, and district court decisions involving preliminary injunctive relief in patent infringement cases that were decided from September 1978 to October 1982 are available upon request from the Indiana Law Review. Also available are detailed listings of the chi-squared calculations performed herein.

101. Dorr & Duft, *supra* note 91.

102. *Id.* at 599 (emphasis in original).

103. The supplemented Dorr and Duft data contains all of the preliminary injunction data from the Dorr and Duft article (from January 1953 to September 1978) along with the pre-CAFC data from October 1978 to October 1982. The supplemented Dorr and Duft data set is the data set with preliminary injunction information that spans January 1953 to October 1982.

104. This data was collected through several computerized searches on both LEXIS and WESTLAW, with a follow-up of cases found for new cases that were not discovered as part of the computer searches. This same procedure was used to find cases cited in periodical articles. The search seems to have been thorough, but there doubtless are cases that were missed.

from the district courts, and for an accumulation of all final decisions.

C. Results of the Chi-Square Analysis

The first comparison will determine whether preliminary injunctions against infringement have been easier to attain since the creation of the CAFC than they were in the preceding twenty-nine years for cases that were subject to appellate review. The pre-CAFC data shows that eight out of nineteen, or 42%, of the patent preliminary injunction decisions that were appealed and heard outside of the CAFC were granted and survived appellate review. Since the CAFC's creation, eight of fourteen, or 57%, of the patent preliminary injunctions that were appealed through the CAFC were granted and survived appellate review.

Results from a chi-square analysis show that this difference is statistically significant at the 0.44 level. In other words, there is a 44% probability that this difference is due to the expected random variation in the data. Since researchers in the social sciences are traditionally willing to claim that a significant difference exists only when there is a probability of 5% or less that the difference is due to random fluctuations in the data, the conclusion cannot be drawn that there has been a significant change in the number of preliminary injunctions granted against patent infringement at the appellate level since the effective date of the CAFC. There is a 44% probability that the noted increase is merely the result of expected random variation of the data.

Before the creation of the CAFC the district courts were granting preliminary injunctions at a 42% rate. This increased to 53% after the creation of the CAFC. This change is significant only at the 0.071 level and is not a significant difference using the traditional 5% or less criteria.

The overall success rate of preliminary injunctions is the number of successful motions in the district courts that are not appealed plus the number of successful motions that are granted and upheld on appeal or denied and reversed on appeal. These are the final adjudications of all motions seeking preliminary injunctions against patent infringement.

From 1953 to 1982, before the creation of the CAFC, the overall success rate of preliminary injunctions against patent infringement was 36%, after the creation of the CAFC it rose to 52%. This yields a probability of 1.5% that the difference is due to random chance, or a probability of 98.5% that there was a true change in the availability of preliminary injunctions between the two periods, a difference that is statistically significant.

Preliminary injunctions against infringement have been more available since the creation of the CAFC than they were in the preceding twenty-nine years. The significant difference in the availability of preliminary injunctions against infringement since the creation of the CAFC suggests

that the creation of the CAFC is the assignable cause of the increase in the availability of preliminary injunctions.

Dorr and Duft concluded that with a success rate of 41% of all motions for preliminary injunctions granted at the district court level and a success rate of 32% when combined with all decisions at the appellate level, preliminary injunctions were more than just "rarely granted" in patent infringement cases.¹⁰⁵ Since the creation of the CAFC, with a success rate of 53% at the district court level and a success rate of 52% when combined with all decisions at the appellate level, it can be concluded that preliminary injunctions against patent infringement are readily available and that their availability has increased since the creation of the CAFC.

D. District Court Uniformity

The chi-square analysis can also be used to determine whether the creation of the CAFC improved the uniformity of decisions from the district courts, here grouped by circuit. According to the supplemented Dorr and Duft data, the district courts within three circuits granted preliminary injunctions in patent infringement cases at a rate that was significantly different from the combined rate of 42% in seventy-eight decisions produced by all of the district courts. District courts in the Second Circuit granted only 16% of the thirty-two motions they ruled upon, district courts in the Fifth Circuit granted 87% of the eight motions they ruled upon, and the district courts in the Ninth Circuit granted 78% of the nine motions they ruled upon.¹⁰⁶

An overall chi-square value comparing district courts in all circuits yields a probability of 0.006, or 0.6%, that the variations between the district courts were due to random changes in the data. This means that there is a 99.4% chance that the inconsistencies between the success rates of motions for preliminary relief against infringement between district courts in each circuit from 1958 until the creation of the CAFC were not due to random chance but to some difference in criteria between

105. Dorr & Duft, *supra* note 91, at 601.

106. Prior to the creation of the CAFC, comparing the Second Circuit's district courts' rates of granting preliminary injunctions in patent infringement actions to the rate that all district courts granted preliminary injunctions in patent infringement actions, the difference between the two is significant at less than the 0.005 level—in other words there is a probability of less than 0.5% that the difference between the Second Circuit's district courts and all district courts is due to random fluctuation in the data and a greater than 99.5% chance that the difference reflected a true difference in the way that the district courts sitting in the Second Circuit dispositioned these motions. The same is true for the district courts sitting in the Fifth Circuit and the Ninth Circuit.

the circuits. This was believed to be true,¹⁰⁷ and the statistical test confirms that a uniformity problem existed.

Since the creation of the CAFC, none of the groups of district courts have behaved significantly differently than the combined performance of the district courts. The overall chi-square value for the district courts since the creation of the CAFC yields a probability of 44% that the variations between the district courts, grouped by circuits, are due merely to random variations.

Dorr and Duft concluded that a patentee should consider the forum the most important consideration when deciding whether to seek a preliminary injunction in a patent infringement case.¹⁰⁸ Since the creation of the CAFC, the forum has become an unimportant consideration.

V. ANALYSIS OF OPINIONS FROM THE CAFC

Dorr and Duft found that appellate courts reversed over half of the preliminary injunctions that were granted by the district courts. They concluded that it was advantageous for losing defendants to appeal their decisions.¹⁰⁹

Seventeen decisions have been appealed to the CAFC, twelve were affirmed and five were vacated. Of these seventeen, eight were denied in the district courts (five were affirmed, one was reversed, and two were remanded), and nine were granted in the district courts (seven were affirmed and two were vacated). It is no longer as advantageous for either losing party to appeal.

A. *Preliminary Injunctions that Were Remanded by the CAFC*

Three cases were returned by the CAFC to the district courts with no determination on the motion for preliminary relief.¹¹⁰ There is little to be learned from these cases. In *Roche Products, Inc. v. Bolar Pharmaceutical Co.*,¹¹¹ the patent expired after the briefs were filed but before oral arguments, rendering the need for a preliminary injunction against

107. Sward & Page, *The Federal Courts Improvement Act: A Practitioner's Perspective*, 33 AM. U. L. REV. 385, 387 (1984). The lack of uniformity in patent law has long been recognized as a serious problem in American jurisprudence.

108. Dorr & Duft, *supra* note 91, at 602. Dorr & Duft concluded: "Although we operate under a system of government which sought to eliminate 'Balkanism,' we can certainly say . . . that such a state now reigns among the circuits, at least regarding the allowance or denial of preliminary patent requests." *Id.* at 629.

109. *Id.* at 602.

110. *Pretty Punch Shopettes, Inc. v. Hauk*, 844 F.2d 782 (Fed. Cir. 1988); *Chemlawn Serv. Corp. v. GNC Pumps, Inc.*, 823 F.2d 515 (Fed. Cir. 1987); *Roche Prod., Inc. v. Bolar Pharm. Co.*, 733 F.2d 858 (Fed. Cir. 1984).

111. 733 F.2d 858 (Fed. Cir. 1984).

infringement moot.¹¹² The other two cases were remanded because the district courts failed to enter findings of fact and conclusions of law with the preliminary injunctions¹¹³ as required by Rule 52 of the Federal Rules of Civil Procedure.

B. *Preliminary Injunctions that Were Reversed by the CAFC*

Two cases were reversed by the CAFC. In *Digital Equipment Corp. v. Emulex Corp.*,¹¹⁴ the CAFC vacated a preliminary injunction because the district court failed to hold a hearing prior to granting the injunction as required by Rule 65 of the Federal Rules of Civil Procedure.

In *Smith International, Inc. v. Hughes Tool Co.*,¹¹⁵ the district court denied a preliminary injunction against infringement. After appeal the CAFC remanded the case with instructions to issue a preliminary injunction.¹¹⁶ Smith, the alleged infringer, brought this action seeking a declaratory judgment that would declare Hughes' patents to be invalid. Hughes counterclaimed, alleging Smith's infringement of the patents and seeking damages. Smith asserted in its answer to the counterclaim that it manufactured and sold products that were described by the patent, and it claimed the invalidity of the patent as its defense.¹¹⁷

After trial the district court concluded that the patents were invalid, and Hughes' counterclaim was dismissed. Hughes appealed to the Court of Appeals for the Ninth Circuit.¹¹⁸ The Ninth Circuit reversed, finding that all of the patents were valid.¹¹⁹ The case was remanded for further proceedings on the counterclaim. Hughes sought a preliminary injunction against infringement, but the court chose not to grant the motion until the nature and scope of Smith's infringement could be determined.¹²⁰ Hughes appealed to the CAFC, and the motion was granted.

In *Smith*, the trial court erred by seeking information about the extent of Smith's infringement before granting the injunction instead of granting the injunction based on the fact of Smith's infringement as contained in the admission.¹²¹

112. *Id.* at 865.

113. *Pretty Punch*, 844 F.2d at 784; *Chemlawn*, 823 F.2d at 517.

114. 805 F.2d 380 (Fed. Cir. 1986).

115. 718 F.2d 1573 (Fed. Cir.), *cert. denied* 464 U.S. 996 (1983).

116. *Id.* at 1582.

117. *Id.* at 1575.

118. 664 F.2d 1573 (9th Cir. 1982).

119. *Id.* at 1577.

120. *Id.*

121. *Id.* at 1580.

C. *Preliminary Injunctions that Were Affirmed by the CAFC*

The CAFC affirmed twelve of the seventeen cases that came before it on appeal of motions for preliminary injunctions. The district courts had denied five of these preliminary injunctions and had granted seven.

1. *Injunctions Denied in the District Courts and Affirmed by the CAFC.*—Three of the injunctions were denied because the movants failed to make sufficient showings of irreparable harm.¹²² Instead of making a separate showing of irreparable harm, each movant relied on the presumption of harm that arises from a clear showing of the likelihood of success on the merits.

In each case, the court found weaknesses in the showings of the likelihood of success. Instead of explaining the weaknesses, the court merely noted that the movants failed to make a showing of irreparable harm, and it concluded that even assuming that the movants showed validity and infringement, the showings were not strong and clear enough to raise the presumption of irreparable harm. Since the movants did not make a separate showing of irreparable harm, and since the presumption failed, their cases failed.¹²³

The court stated that for the likelihood of success to raise the presumption of irreparable harm “it must be not merely a reasonable but a strong showing indeed.”¹²⁴ The lesson from these cases is that a movant should make a showing of irreparable harm regardless of the strength of its case on the merits.

The injunction sought in *Roper Corp. v. Litton Systems, Inc.*¹²⁵ was denied because Litton no longer manufactured the infringing “common cavity” oven and it had no plans to resume production; Roper was not manufacturing the oven and it had no plans to start. The court found that Roper made no showing of an immediate threat of renewed infringement. It also found that the *status quo* would be maintained without a preliminary injunction.¹²⁶

2. *Injunctions Granted in the District Courts and Affirmed by the CAFC.*—The seven cases in which granted injunctions were affirmed provide the most insight into the expectations of the court. Three of these injunctions were affirmed with no published opinion.¹²⁷

122. *T. J. Smith and Nephew, Ltd. v. Consolidated Medical Equip., Inc.*, 821 F.2d 646 (Fed. Cir. 1987); *Datascope Corp. v. Kontron, Inc.* 786 F.2d 398 (Fed. Cir. 1986); *Roper Corp. v. Litton Sys., Inc.* 757 F.2d 1266 (Fed. Cir. 1985).

123. *Nephew*, 821 F.2d at 647-48; *Datascope*, 786 F.2d at 400; *Roper*, 757 F.2d at 1271-73.

124. *Roper*, 757 F.2d at 1271.

125. 757 F.2d 1266 (Fed. Cir. 1985).

126. *Id.* at 1273.

127. *Amicus, Inc. v. American Cable Co.*, 848 F.2d 1245 (Fed. Cir. 1988); *American*

a. *Likelihood of success on the merits.*

The four published opinions involved patents that had been the subject of prior litigation which determined that the patents were valid. The CAFC stated that a prior adjudication with similar issues, upholding a patent after a fully litigated trial, offers strong support for issuing a preliminary injunction. There is no *res judicata* problem because the prior adjudication is merely evidence that supports the likelihood of success on the merits.¹²⁸

The court instructed that patent claim construction is reviewed as a matter of law, though the interpretation may depend on issues of fact. Since the district court must resolve the disputes required to make a decision on the motion, the CAFC will review those findings with the clearly erroneous standard.¹²⁹

In *H.H. Robertson Co. v. United Steel Deck, Inc.*,¹³⁰ the patent was for a bottomless subassembly for producing an under-floor electrical cable trench. After several experts testified for each side, the district court determined the "key portion of the trench remain[ed] bottomless, *i.e.*, the portions giving direct access to the cells."¹³¹ Defendant argued that its trenches were not truly bottomless and that the claims in the patent should be interpreted to exclude trenches that are only partially bottomless. Finding that the district court was not clearly in error, the CAFC noted that a preliminary injunction may issue even though infringement is not proven beyond all question and even though there is evidence supporting the accused infringer. "The grant turns on the likelihood that [the movant] will meet its burden at the trial."¹³²

b. *Irreparable harm to the movant.*

The CAFC clearly settled an intra-circuit conflict surrounding the irreparable harm element in *Atlas Powder Co. v. Ireco Chemicals*.¹³³ The accused infringer argued that all of Atlas' possible damages were compensable with money, and for this reason there was no irreparable harm that required the granting of a preliminary injunction. The court

Parking Meter Advertising Corp. v. Visual Media, Inc., 848 F.2d 1244 (Fed. Cir. 1988); Colt Indus. Operating Corp. v. Springfield Armory, Inc., 732 F.2d 168 (Fed. Cir. 1984).

128. *H.H. Robertson Co. v. United Steel Deck, Inc.*, 820 F.2d 384, 388 (Fed. Cir. 1987). See also *Atlas Powder Co. v. Ireco Chem.*, 773 F.2d 1230, 1232 (Fed. Cir. 1985).

129. *H.H. Robertson Co.*, 820 F.2d at 388.

130. 820 F.2d 384 (Fed. Cir. 1987).

131. *Id.* at 389 (quoting the district court's slip opinion, *H.H. Robertson Co. v. United States Steel Deck, Inc.*, No. 84-533F (D.N.J. 1986)).

132. *Id.* at 389-90.

133. 773 F.2d 1230 (Fed. Cir. 1985).

responded that “[i]f monetary relief were the sole relief afforded by the patent statute then injunctions would be unnecessary and infringers could become compulsory licensees for as long as the litigation lasts.”¹³⁴

The court illuminated its requirements for a finding of irreparable harm in *Hybritech, Inc. v. Abbot Laboratories*¹³⁵ by providing a list of factors it considered while arriving at its decision. It considered that: the movant made a strong showing of validity and infringement, the technological field covered by the patent was new, there was substantial competition in this field, the accused was a strong competitor in the field, technology was changing quickly in this field, a great deal of research was performed in this field, the patent could help to favorably position the plaintiff in the market, there was a strong possibility that by the time the litigation was complete technology would bypass the patent causing it to lose value, the potential injury to the plaintiff was unpredictable, and in the absence of an injunction other potential infringers would be encouraged to infringe.¹³⁶

Although a movant’s delay in seeking preliminary relief often undercuts its claims of irreparable injury, the court in *Hybritech* stated that a delay in seeking relief against one accused infringer while seeking relief against another infringer was excusable, especially in light of *Hybritech*’s limited financial resources.¹³⁷

c. The balance of harms.

The court has stated that the balancing of harms must be considered even when a clear showing of validity and infringement raises a presumption of irreparable harm, and even when the accused infringer does not attempt to rebut the presumption. This is necessary because “a preliminary injunction improvidently granted may impart undeserved value to an unworthy patent.”¹³⁸ The court has also stated, though, that the “protection of patents furthers a strong public policy . . . advanced by granting preliminary injunctive relief when it appears that, absent such relief, patent rights will be flagrantly violated.”¹³⁹

In *Hybritech* the court decided that neither party had a distinct advantage in this balance, but that the balance was merely one of four factors to consider and was not a prerequisite to gaining a preliminary

134. *Id.* at 1233.

135. 849 F.2d 1446 (Fed. Cir. 1988).

136. *Id.* at 1456.

137. *Id.* at 1457-58.

138. *H. H. Robertson Co. v. United Steel Deck, Inc.*, 820 F.2d 384, 391 (Fed. Cir. 1987).

139. *Id.* (quoting the district court’s slip opinion from the preliminary injunction hearing).

injunction.¹⁴⁰ In *Robertson* the court weighed the disruption of defendant's business, the loss of business for defendant, and the loss of jobs for defendant's workers against plaintiff's business needs and patent rights. The court found that plaintiff's business needs and patent rights were more important.¹⁴¹

In *Atlas Powder Co. v. Ireco Chemicals*¹⁴² the defendant argued that the balance of harms was in its favor because of the irreparable injury that it and the mining industry would suffer if the court granted the injunction. Ireco claimed that the allegedly infringing product produced 66% of its sales, and that if the injunction was granted it would be forced to lay off 200 people. Ireco further argued that the plaintiff's harm if the injunction was not granted was lessened by the fact that the patent would expire in less than one year. The court responded that patent rights do not "peter out" toward the expiration date and that the plaintiff's business needs and the injury to plaintiff's patent rights outweighed the injury to Ireco.¹⁴³

There has not yet been a patent preliminary injunction case through the CAFC in which the balance of harms was sufficiently in favor of the accused infringer to block a preliminary injunction.

d. The public interest.

The public interest was important in *Hybritech*. The patent involved a technique for detecting certain medical conditions, such as pregnancy, cancer, growth hormone deficiency, or hepatitis. The accused infringer, Abbot, developed test kits that employed the technique described in Hybritech's patent.¹⁴⁴ Abbot argued that the medical community relied on its ability to supply the kits, that it would be a waste of the public's resources to force Abbot's customers to switch vendors, and that supply shortages might result as indicated by Hybritech's past delivery problems.¹⁴⁵ The court decided that the public interest was best served by the continued availability of the cancer test kit and the hepatitis test kit, and these were excused from the injunction.¹⁴⁶

The court's easing of the showing required for success on the merits from "beyond question" to "clear showing," its creation of a presumption of irreparable harm when there is a strong probability of

140. *Hybritech*, 849 F.2d at 1458.

141. *Robertson*, 820 F.2d at 391.

142. 773 F.2d 1230 (Fed. Cir. 1985).

143. *Id.* at 1234.

144. *Hybritech*, 849 F.2d at 1448.

145. *Id.* at 1458.

146. *Id.*

success on the merits, and its consistent tipping of the scales toward patentee's business needs and patent rights while balancing prospective harms to the parties may account for the increase in the number of preliminary injunctions granted since the creation of the CAFC. There is evidence that this strengthening of the patent system is not having the anticipated effects of reindustrializing America through innovation and through increased research spending for advances in technology.

VI. STRENGTHENING THE PATENT SYSTEM — A MYOPIC APPROACH TO ECONOMIC IMPROVEMENT

It has been advanced that having a strong patent system with sure and consistent treatment of the laws will improve the nation's economic competitiveness by encouraging technological advancement.¹⁴⁷ But in 1988, six years after the CAFC's creation, the rate of increase in corporate research and development spending is slowing. One writer believes that the slow-down is the result of the "frenzied pace of corporate change in the U.S. through acquisitions and restructurings."¹⁴⁸

Most of the recent rash of restructuring deals have sharply increased debt servicing costs of the corporations involved and this has led to a curtailing of outlays in areas such as research and development. Because R & D has higher risks and longer-term payoffs than most expenditures, it's a highly postponable spending item - a handy target for cost cutters.¹⁴⁹

These authors cited the prospectus of Duracell Inc., which was recently acquired in a leveraged buy-out, as an example of the problem. Duracell is in a field where technological competence is a key to survival, and Duracell has had to rely on its R & D to endure. "But the prospectus issued in the buy-out observes that the heavy debt-servicing obligations incurred in the acquisition could hurt the company's 'ability to respond adequately to technological developments.'"¹⁵⁰

While increasing the strength of the patent law by increasing the availability of provisional remedies, it is important to avoid the tunnel vision that the Hruska commission feared.¹⁵¹ It is necessary to maintain

147. *Court of Appeals for the Federal Circuit, 1981: Hearings on H.R. 2405 Before the Subcomm. on Courts, Civil Liberties, and the Administration of Justice of the House Comm. on the Judiciary, 97th Cong., 1st Sess. 6 (1981)* (statement of Howard T. Markey, Chief Judge of the Court of Customs and Patent Appeals).

148. Clark and Malabre, *Eroding R & D: Slow Rise in Outlays for Research Imperils U.S. Competitive Edge*, Wall St. J., Nov. 16, 1988, at A1, col. 6.

149. *Id.*

150. *Id.* at A8, col. 1.

151. *Hruska Report, supra* note 76, at 235.

an awareness of economic interactions beyond the simplistic models espoused by courts. The strengthening of the patent system has not increased research spending. The economy is more complicated than this. Growth in research spending has slowed in recent years despite the strengthening of patent enforcement, despite the increased availability of preliminary injunctions against patent infringement, and despite the consistency of the patent decisions of the district courts.

The strengthening of the patent system has restrained competition. As the patent system grows stronger, the equilibrium between it and antitrust law shifts. Under the present treatment of preliminary injunctions against infringement, it would be folly for a corporation to invest in technology that is patented by another, even if it believes in good faith that the patent is invalid.

The presently increased possibility of the grant of a preliminary injunction, prior to a litigated determination on the issues of validity and infringement, greatly increases the risk imposed on any business considering the development of a technology confined by a patent that the business believes to be invalid. This greater risk provides a strong incentive against the development of any technology colorably protected by a patent.

The Supreme Court stated that "[i]t is as important to the public that competition should not be repressed by worthless patents, as that the patentee of a really valuable invention should be protected in his monopoly" ¹⁵² The potential impact on a firm of the grant of "the extraordinary remedy of preliminary injunctive relief" ¹⁵³ must play a key role in the determination of the motion. Otherwise, the intolerable level of risk generated will prevent firms from developing technologies that are colorably protected by patents, ultimately to the detriment of the public.

VII. CONCLUSION

The availability of preliminary injunctive relief against patent infringement has increased since the creation of the Court of Appeals for the Federal Circuit. Prior to the existence of this court, 36% of the motions for preliminary injunction against infringement were granted. Since the creation of the CAFC, 52% of the injunctions sought have been granted. This difference is statistically significant, suggesting that

152. *Lear, Inc. v. Adkinson*, 395 U.S. 653, 663-64 (1969) (quoting *Pope Mfg. Co. v. Gormully*, 144 U.S. 224, 234 (1892)).

153. *Pride v. Community School Board*, 488 F.2d 321, 324 (2d Cir. 1973). *See also Meeham v. PPG Indus.*, 802 F.2d 881, 883 (7th Cir. 1986) ("Even this limited monopoly right has extensive social and economic consequences for the public").

there has been a conscious shift in favor of patent holders in the philosophy of the courts when faced with motions for preliminary injunctions against patent infringement.

Chief Judge Markey, while testifying in favor of the Federal Courts Improvement Act, stated that a strong patent system was needed "to encourage the investment in innovative products and new technology. . . ." ¹⁵⁴ However, this expectation has not been realized. In 1988, six years after the creation of the CAFC, and at a time when preliminary injunctions are granted at a rate that is 44% higher than before the creation of the CAFC, the growth rate of research and development spending is falling. ¹⁵⁵ It may be that the system's present bias discourages investors from pursuing technologies in which another owns the patent, regardless of the investor's determination of the validity of the patent.

When changing the rules in the nation's economy, and the increased availability of patent preliminary injunctions is a dramatic example of a rule that has changed, clear and thorough consideration of the costs and benefits, and their constant re-evaluation, is a responsibility that cannot be ignored.

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154. *Court of Appeals for the Federal Circuit, 1981: Hearings on H.R. 2405 Before the Subcomm. on Courts, Civil Liberties, and the Administration of Justice of the House Comm. on the Judiciary, 97th Cong., 1st Sess. 6 (1981)* (statement of Howard T. Markey, Chief Judge of the Court of Customs and Patent Appeals).

155. Clark and Malabre, *supra* note 148, at A1, col. 6.

