

IN SEARCH OF INSTITUTIONAL IDENTITY: THE FEDERAL CIRCUIT COMES OF AGE

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I. INTRODUCTION

The establishment of the Federal Circuit was greeted with both hope and anxiety. Prior to its formation, the explosive growth in federal litigation was slowing the administration of justice.¹ In addition, dispersed adjudication of patent disputes—coupled with the extreme variability of pat-

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1. *See generally* Commission on Revision of the Federal Court Appellate System, Structure and Internal Procedures: Recommendations for Change, *reprinted in* 67 F.R.D. 195, 219-21 (1975).

ent decisions within the regional circuits—was impairing patent value.² It was thought that if patent appeals were channeled to a single court, the federal docket would be more manageable and the quality of decisions in patent disputes would improve.³ At the same time, however, it was argued that concentrating patent litigation in a “specialized” (in fact, centralized⁴) forum would favor repeat players and special interests, produce tunnel vision, and foster laws and practices far removed from the mainstream.⁵

The Federal Circuit is now a quarter-century old and has proved to be a success in many important ways.⁶ The court freed regional circuit judges from the complexity of patent appeals.⁷ For patent law, forum shopping—

2. See Pauline Newman, *The Sixth Abraham L. Pomeranz Lecture: Commentary on the Paper by Professor Dreyfuss*, 61 BROOK. L. REV. 53, 55-56 (1995).

3. As Judge Markey, who was to become the Federal Circuit's first Chief Judge, put it: “[I]f I am doing brain surgery every day, day in and day out, chances are very good that I will do your brain surgery much quicker, or a number of them, than someone who does brain surgery once every couple of years.” *Court of Appeals for the Federal Circuit: Hearings Before the Subcomm. on Courts, Civil Liberties and the Administration of Justice of the H. Comm. on the Judiciary*, 97th Cong., 42-43 (1981) [hereinafter *Hearings*] (statement of the Honorable Howard T. Markey, C.J., Court of Customs and Patent Appeals).

4. Although the court is generally referred to as specialized and that convention is maintained in this Article, the court is in reality a forum where adjudication is centralized. It was established to hear virtually all patent appeals, but it was given other categories of cases as well to avoid overspecialization. See Daniel J. Meador, *Glimpses of the Federal Circuit's Birth*, IPL NEWSL. (ABA Sec. of Intell. Prop. Law, Chicago, Ill.), Summer 2007, at 1, available at <http://www.abanet.org/intelprop/newsletter/IPLSummer07.pdf>. However, the court's other judicial business is not as significant to the economy as patent cases. Nor does it provide the court with a particularly comprehensive view of the federal docket. See 28 U.S.C. § 1295(a)(3) (2000) (giving the court authority over appeals from the International Trade Commission, the Merit System Protection Board, and appeals involving other particularized areas of federal law). Accordingly, it is not surprising that the literature would refer to the court as specialized.

5. See generally Rochelle Cooper Dreyfuss, *The Federal Circuit: A Continuing Experiment in Specialization*, 54 CASE W. RES. L. REV. 769 (2004) [hereinafter Dreyfuss, *Continuing Experiment*]; Rochelle Cooper Dreyfuss, *Specialized Adjudication*, 1990 BYU L. REV. 377 [hereinafter Dreyfuss, *Specialized Adjudication*]; Rochelle Cooper Dreyfuss, *The Federal Circuit: A Case Study in Specialized Courts*, 64 N.Y.U. L. REV. 1 (1989) [hereinafter Dreyfuss, *Case Study*].

6. See, e.g., Donald R. Dunner, *A Retrospective of the Federal Circuit's First 25 Years*, IPL NEWSL. (ABA Sec. of Intell. Prop. Law, Chicago, Ill.), Summer 2007, at 1, available at <http://www.abanet.org/intelprop/newsletter/IPLSummer07.pdf> (expressing the views of practitioners that a specialized patent court has been successful).

7. At the hearings on the formation of the Federal Circuit, it was opined that patents were “the most unattractive thing about being a Federal judge.” *Hearings, supra* note 3, at 46 (statement of Rep. Sawyer).

at least at the appellate level—is now barely possible.⁸ Procedural developments, such as the *Markman* hearing, have brought down litigation costs, at least for a time.⁹ Patent law is not only more uniform across the nation, it is also considerably more determinate in that it is easier to predict outcomes.¹⁰

Nonetheless, observers of the patent system have voiced increasingly vociferous complaints about the state of patent jurisprudence, and by extension about the Federal Circuit. In two studies, the National Academies suggested that the standard for nonobviousness is too low, that the utility requirement is under-enforced, that doctrinal changes have inhibited follow-on invention, and that subjective elements in patent doctrine (willfulness, inequitable conduct, and best mode) increase costs and discourage inventors from conducting library research.¹¹ Along the same lines, the Federal Trade Commission (FTC) warned that the proliferation of “questionable” patents (i.e., patents on insufficiently inventive contributions) creates thickets of rights that are hard and expensive to clear, endanger competition, and ultimately impede scientific progress.¹² Joined by the

8. See Kimberly A. Moore, *Forum Shopping in Patent Cases: Does Geographic Choice Affect Innovation?*, 79 N.C. L. REV. 889, 932-34, 937 (2001) (suggesting, however, that there is now forum shopping at the district court level). Because of *Christianson v. Colt Industries Operating Corp.*, 486 U.S. 800 (1988), and *Holmes Group, Inc. v. Vornado Air Circulation Systems, Inc.*, 535 U.S. 826 (2002), it is possible to frame cases involving patent law issues in ways that makes the entire case appealable to a regional circuit. However, this method of forum shopping does not seem heavily utilized.

9. *Markman v. Westview Instruments, Inc.*, 517 U.S. 370 (1996) (holding that claim interpretation is an issue for the judge, not the jury). See JEAN O. LANJOUW & MARK SCHANKERMAN, *Enforcement of Patent Rights in the United States*, in PATENTS IN THE KNOWLEDGE-BASED ECONOMY 145 (Wesley M. Cohen & Stephen A. Merrill eds., 2003); see also John R. Allison & Mark A. Lemley, *The (Unnoticed) Demise of the Doctrine of Equivalents*, 59 STAN. L. REV. 955 (2007) (suggesting that *Markman* led to a reduction in claims based on the doctrine of equivalents, which would also reduce costs). But see JAMES BESSEN & MICHAEL J. MEURER, PATENT FAILURE: HOW JUDGES, BUREAUCRATS, AND LAWYERS PUT INNOVATORS AT RISK (2008) (suggesting that the costs of litigation are beginning to overtake the monetary rewards of the patent system).

10. See *infra* text accompanying notes 27-30.

11. NAT'L RESEARCH COUNCIL, A PATENT SYSTEM FOR THE 21ST CENTURY, (Stephen A. Merrill et al. eds., 2004) [hereinafter PATENT SYSTEM]; NAT'L RESEARCH COUNCIL, REAPING THE BENEFITS OF GENOMIC AND PROTEOMIC RESEARCH: INTELLECTUAL PROPERTY RIGHTS, INNOVATION, AND PUBLIC HEALTH (Stephen A. Merrill & Anne-Marie Mazza eds., 2006).

12. FED. TRADE COMM'N, TO PROMOTE INNOVATION: THE PROPER BALANCE OF COMPETITION AND PATENT LAW AND POLICY (2003), available at <http://www.ftc.gov/os/2003/10/innovationrpt.pdf>.

Department of Justice, the FTC also criticized the way the Federal Circuit handles cases at the interface between patent and antitrust law.¹³

Other critiques come from the academy. Economists suggest that the patent system is at a point where it is undermining innovation.¹⁴ Legal analysts are dissatisfied with both substantive and procedural aspects of the court's decisionmaking. For example, many observers believe that the court's approach to evaluating the capacity of ordinary artisans for purposes of deciding such issues as nonobviousness and the adequacy of disclosure creates a poor fit between patent doctrine and particular technological pursuits.¹⁵ On procedural issues, some say that the court is making a mistake by deferring too little to the district courts' decisions on claim construction;¹⁶ another commentator suggests that the court's mistake lies in deferring too much.¹⁷ Various scholars have questioned the court's position on applying U.S. patent law to foreign activities.¹⁸ Finally, there are

13. U.S. DEP'T OF JUSTICE & FEDERAL TRADE COMM'N, ANTITRUST ENFORCEMENT AND INTELLECTUAL PROPERTY RIGHTS: PROMOTING INNOVATION AND COMPETITION (2007), available at <http://www.ftc.gov/reports/innovation/P040101PromotingInnovationandCompetitionrpt0704.pdf>.

14. See *infra* text accompanying notes 31-33.

15. See, e.g., Rebecca S. Eisenberg, *Obvious to Whom? Evaluating Inventions from the Perspective of PHOSITA*, 19 BERKELEY TECH. L.J. 885, 888 (2004) (concerned that the Federal Circuit "excludes from consideration the judgment, intuition and tacit knowledge of ordinary practitioners in the field that cannot be documented in the written record"); Dan L. Burk & Mark A. Lemley, *Policy Levers in Patent Law*, 89 VA. L. REV. 1575, 1650 (2003) [hereinafter Burk & Lemley, *Policy Levers*] (noting that "if the court is trying to apply the PHOSITA standard neutrally, it is not doing a very good job"); Dan Burk & Mark A. Lemley, *Is Patent Law Technology-Specific?* 17 BERKELEY TECH. L.J. 1155, 1157 (2002) (arguing that the PHOSITA standard "provides needed flexibility for patent law" but that the Federal Circuit "has not applied that standard properly in either the biotechnology or computer software fields").

16. This critique is largely aimed at the de novo review accorded claim construction under *Cybor Corp. v. FAS Technologies, Inc.*, 138 F.3d 1448, 1451, 1456 (Fed. Cir. 1998). See, e.g., Kimberley A. Moore, *Markman Eight Years Later: Is Claim Construction More Predictable?*, 9 LEWIS & CLARK L. REV. 231, 231 n.2 (2005).

17. Jeffrey A. Lefstin, *Claim Construction, Appeal, and the Predictability of Interpretive Regimes*, 61 U. MIAMI L. REV. 1033 (2007); see also Michael Risch, *The Failure of Public Notice in Patent Prosecution*, 21 HARV. J.L. & TECH. 179 (2007) (suggesting that the problem lies in the differences between PTO and court approaches to claim construction).

18. See, e.g., Melissa Feeney Wasserman, *Divided Infringement: Expanding the Extraterritorial Scope of Patent Law*, 82 N.Y.U. L. REV. 281 (2007); Katherine E. White, *The Recent Expansion of Extraterritoriality in Patent Infringement Cases*, 2007 UCLA J. L. & TECH. 2; Mark A. Lemley et al., *Divided Infringement Claims*, 6 SEDONA CONF. J. 117 (2005); Rochelle C. Dreyfuss, *Resolving Patent Disputes in a Global Economy*, in

those who are frustrated by the quality of decisions. Formalistic case-parsing, refusals to consider policy arguments, and reluctance to revise positions once taken are, it is said, particularly inappropriate in a court established for the express purpose of orchestrating the development of patent jurisprudence.¹⁹

Perhaps most damning, the Supreme Court's unprecedented activity in the patent arena indicates that it too is concerned about the Federal Circuit's performance. Indeed, because the Supreme Court has either reversed or vacated virtually all the Federal Circuit patent decisions that it has recently reviewed, "dissatisfied" may be a more accurate description of its attitude.²⁰ Congress, along with many practitioners and members of the creative community, appear to agree with that assessment: a project to reform the system statutorily has been underway for several years. Significantly, the change on which there is the most agreement is to shift some responsibility for determining patent validity from the courts to the United States Patent and Trademark Office (PTO).²¹

PATENT LAW AND THEORY: A HANDBOOK OF CONTEMPORARY RESEARCH (Toshiko Takemaka and Rainer Moufang eds., forthcoming 2008).

19. See, e.g., Craig Allen Nard, *Toward a Cautious Approach to Obeisance: The Role of Scholarship in Federal Circuit Patent Law Jurisprudence*, 39 HOUS. L. REV. 667 (2002); Dreyfuss, *Continuing Experiment*, *supra* note 5.

20. In a two-year period, the Supreme Court considered seven patent cases. See *MedImmune, Inc. v. Genentech, Inc.*, 127 S. Ct. 764 (2007) (reversing Federal Circuit); *eBay, Inc. v. MercExchange, L.L.C.*, 547 U.S. 388 (2006) (vacating the Federal Circuit's decision); *Illinois Tool Works, Inc. v. Indep. Ink, Inc.*, 547 U.S. 28 (2006) (same); *Lab. Corp. of Am. v. Metabolite Labs., Inc.*, 548 U.S. 124 (2006) (writ of certiorari dismissed as improvidently granted; dissent by Justice Breyer indicating he would have reversed); *Merck KGaA v. Integra Lifesciences I, Ltd.*, 545 U.S. 193 (2005) (vacating the Federal Circuit's decision); *KSR Int'l Co. v. Teleflex Inc.*, 127 S. Ct. 1727 (2007) (reversing Federal Circuit); *Microsoft Corp. v. AT&T Corp.*, 127 S. Ct. 1746 (2007) (same). Going back to 2002, there were two more decisions. See *Holmes Group, Inc. v. Vornado Air Circulation Sys., Inc.*, 535 U.S. 826 (2002) (vacating the Federal Circuit's decision); *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 535 U.S. 722 (2002) (same). The last time a Federal Circuit patent case was affirmed was in 2001. See *J.E.M. Ag Supply, Inc. v. Pioneer Hi-Bred Int'l, Inc.*, 534 U.S. 124 (2001). Since this article was written, the Federal Circuit endured another reversal in *Quanta Computer, Inc. v. LG Electronics, Inc.*, No. 06-937, 2008 WL 2329719 (U.S. June 9, 2008).

21. Reform bills include the Patent Reform Act of 2005, H.R. 2795, 109th Cong. (2005); the Patents Depend on Quality Act of 2006, H.R. 5096, 109th Cong. (2006); and H.R. 5418, 109th Cong. (2006). The 2007 proposals of the 110th Cong. include S. 1145, S. 3923, and H.R. 1908. In 2005, the House considered in committee two other proposals, which were never introduced as amendments or bills. Amendment in the Nature of a Substitute to H.R. 2795, Offered by Rep. Smith of Texas (July 26, 2005), available at http://www.aipla.org/Content/ContentGroups/Legislative_Action/109th_Congress/House1/chairsub-smittx_022_xml.PDF; A Coalition for 21st Century Patent Law Reform: Balanced

This Article discusses the proposals that have been made for improving the Federal Circuit's performance. Because the court's reception is mixed, I begin by identifying the nature of the problem in Part II, and move on to consider its sources: externally, in the difficulties that the judicial system has encountered in dealing with specialization at the appellate level of the judicial hierarchy, and internally, in the defensive culture spawned by the court's earliest judges. I end both pessimistically and optimistically. The Federal Circuit now appears to be well entrenched; it is unlikely that the structure of the patent judiciary will be modified in any way that would improve matters significantly. On the other hand, now that the court is established, it is no longer required to prove its bona fides. It has the luxury to step back, introspectively assess its role in patent law-making, and develop new norms and fresh approaches to crafting its decisions. I set out a variety of actions that the legislature, the courts, and the bar could undertake to hasten that process.

II. IDENTIFYING THE PROBLEM

Of course, one possibility is that there is no problem at all. Early critiques of the Federal Circuit were based on anecdotal evidence. Now that empiricists have become interested in patent adjudication, observers need to consider the "hard evidence" before they rush to the conclusion that something is wrong. Unfortunately, however, the hard evidence tends to point in different directions, and the studies in some ways do not stand up to scrutiny.

In retrospect, the early attempts to measure the Federal Circuit's work product were fairly naïve. On one side were studies arguing that because the court decided roughly as many cases for the patent holder as it did for the infringer, it was not biased, and must therefore be doing a fine job.²²

Initiatives to Advance Quality and Provide Litigation Reforms (September 1, 2005), available at http://www.fr.com/news/2005-09-14_Coalition_Draft.pdf. Most of these bills include an opposition procedure which would permit *inter partes* validity challenges in the PTO. See John E. Calfee & Claude Barfield, *Congress's Patent Mistakes*, WALL ST. J., Oct. 29, 2007, at A18, available at http://www.aei.org/publications/pubID.27031_filter.economic/pub_detail.asp (suggesting that the opposition procedure is one of the few "useful and innovative" reforms in the bills).

22. See, e.g., Donald R. Dunner, Introduction, *The United States Court of Appeals for the Federal Circuit—The First Three Years*, 13 AIPLA Q.J. 185 (1985). Another approach was to count the issues on which patentees win or lose. See Dunner, *supra* note 6, at 10 (concluding that the court's pro- and anti-patent holdings are balanced). See also Donald R. Dunner, *A Retrospective of the Federal Circuit's First 25 Years*, 17 FED. CIR. B.J. 127, 129 (2007); Donald R. Dunner, J. Michael Jakes, & Jeffrey D. Karceski, *A Statistical Look at the Federal Circuit's Patent Decisions: 1982-1994*, 5 FED. CIR. B.J. 151,

Studies of this type are inconclusive, however, because they ignore selection effects—the tendency of parties who think they will lose to drop their appeals. On the other side were studies arguing that the growth in patent litigation—or the Federal Circuit’s failure to diminish the need to go to court—demonstrated how badly the court was faring.²³ The increase in judicial business should not necessarily be taken as a sign of failure. To the contrary, it may well demonstrate success: if the court makes patent law more stable, patents increase in value; if patents become more valuable, innovation becomes a more attractive investment and more innovators will choose to rely on patents to protect their competitive positions. The upsurge in patenting translates into an expansion of the base from which litigation emerges.²⁴ Furthermore, as John Duffy has noted, “[l]itigators seek the ambiguous; that is what they litigate. . . . Lawyers direct their cases toward the flaws, ambiguities and difficult areas in the law. . . we should not necessarily think that the [Federal Circuit] is a failure merely because litigation continues to abound.”²⁵

Recent empirical work is considerably more sophisticated, and yet the evidence on the court still appears to cut both ways. For example, although the law on nonobviousness had been the subject of much hand-wringing at the time of the court’s founding,²⁶ a recent study by Lee Petherbridge and R. Polk Wagner shows that doctrinal developments have made decisions on this issue quite predictable.²⁷ Similarly, Jeffrey Lefstin has demonstrated that, at least until 2002, indeterminacy regarding other major patent law issues, such as infringement, validity, and inequitable conduct, declined.²⁸ Indeed, Lefstin suggests that even claim construction, which an-

156-57 (1995). Such studies fail to take into account the possibly differential impact of the holdings on the pro- and anti-patent sides.

23. For data on appeals in the Federal Circuit, see ADMINISTRATIVE OFFICE OF THE UNITED STATES COURTS, JUDICIAL BUSINESS OF THE UNITED STATES COURTS, *available at* <http://www.uscourts.gov/judbususc/judbus.html> (Table B-8).

24. Dreyfuss, *Case Study*, *supra* note 5, at 23-24. For data on patent filings, see WIPO REPORT, STATISTICS ON WORLDWIDE PATENT ACTIVITIES 11 (2007).

25. John F. Duffy, Comment, *Experiments After the Federal Circuit*, 54 CASE W. RES. L. REV. 803, 805 (2004).

26. Dreyfuss, *Case Study*, *supra* note 5, at 8-11; *see also* Robert P. Merges, *Commercial Success and Patent Standards: Economic Perspectives on Innovation*, 76 CALIF. L. REV. 803, 812-16 (1988) (analyzing uncertain role of secondary factors in determining nonobviousness).

27. Lee Petherbridge & R. Polk Wagner, *The Federal Circuit and Patentability: An Empirical Assessment of the Law of Obviousness*, 85 TEX. L. REV. 2051 (2007). Whether the court’s position is correct is another issue.

28. Jeffrey A. Lefstin, *The Measure of Doubt: Dissent, Indeterminacy, and Interpretation at the Federal Circuit*, 58 HASTINGS L.J. 1025 (2007).

ecdotal evidence suggests remains unpredictable, is well within the range of indeterminacy associated with other issues and is no different from the indeterminacy of contract interpretation in other circuits.²⁹ According to John Allison and Mark Lemley, the judges of the Federal Circuit have, in large part, coalesced around particular interpretations of patentability law and display few ideological differences.³⁰

At the same time, however, work by economists Adam Jaffe and Josh Lerner suggests that the patent system is in trouble: the standard of nonobviousness is now so low, new technologies spawn thickets of patent rights on marginal improvements.³¹ The cost of clearing and interpreting these “low quality” patents imposes a heavy tax on invention and discourages entry into innovative enterprises.³² Similarly, Mike Meurer and Jim Bessen argue that the increasing need to acquire patents for defensive purposes, along with the concomitant rise in litigation, have raised costs to the point where there are fields in which the cost of patenting now outweighs the benefits.³³ As noted earlier, these conclusions are in line with the perceptions of legal scholars, the National Academies, the Federal Trade Commission, the Department of Justice, and (apparently) the Supreme Court.³⁴

Once again, it is possible the studies are flawed. For example, Jaffe and Lerner never define what they mean by a “low quality” patent. Instead, their claim that the standard of patentability is too low is based on anecdotes about specific patents (including a patent on a peanut butter and jelly sandwich) that are commercially irrelevant and thus not the appropriate focus of PTO attention, on comparisons of the number of U.S. patents with the output of patent offices in countries with crucially different systems, and on a study of citation rates that examines a technology where prior art is notoriously difficult to find.³⁵ As to Meurer and Bessen’s pessimistic assessment of the cost to benefit ratio, their results appear to be heavily field-dependent.³⁶ Furthermore, their work measures the cost of

29. Lefstin, *supra* note 17.

30. John R. Allison & Mark A. Lemley, *How Federal Circuit Judges Vote in Patent Validity Cases*, 10 FED. CIR. B.J. 435 (2001).

31. ADAM B. JAFFE & JOSH LERNER, *INNOVATION AND ITS DISCONTENTS* 35 (2004).

32. *Id.*

33. BESSEN & MEURER, *supra* note 9 (studying the software sector).

34. *See supra* text accompanying notes 11-13.

35. *See* Rochelle C. Dreyfuss, *Pathological Patenting: The PTO as Cause or Cure*, 104 MICH. L. REV. 1559 (2006).

36. For example, their figures show that the benefits of patenting far outweigh cost in the chemical and pharmaceutical sectors. BESSEN & MEURER, *supra* note 9. There is also a question on how these authors determine which patents are in the software sector,

patent litigation by studying changes in stock prices. Thus, it deals only with publicly traded firms and does not shed light on the value of patents to small firms or independent inventors.

By the same token, the studies showing the stability of the law suffer from a baseline problem. They rely on comparisons with regional circuits, but fail to consider whether more should be expected of a specialized court. After all, the Federal Circuit sees almost every appellate patent case; the regional circuits do not usually entertain disputes in any one field with enough regularity to comprehend all of the law's subtleties or to fine-tune it.³⁷ More important, the consumers of patent law are likely more sensitive to intra-circuit variation than are consumers of other federal law. Because the Evarts Act permits appellate courts to interpret federal law independently,³⁸ and because many federal cases have state law components, inter-circuit variation is necessarily high. Since consumers of regional law will often not know in which circuit they will be litigating or how conflicts-of-law issues will be resolved, they must take these large inter-circuit variations into account in their planning; intra-circuit differences are unlikely to have much salience in their calculations. In contrast, patent litigants know their cases will be heard by the Federal Circuit and could plan accurately if the law were actually determinate.³⁹

But even if these studies are taken at face value, there may be less inconsistency than initially appears. The commentators who argue that the

where they find their most troubling results. For a very different analysis of this sector, see John R. Allison et al., *Software Patents, Incumbents, and Entry*, 85 TEX. L. REV. 1579 (2007).

37. Judge Rader has something of a contrary review. He suggests that Federal Circuit law appears less stable than regional circuit law because the Federal Circuit encounters issues of patent law with greater frequency than the regional circuits encounter the issues they adjudicate. He suggests that if change were computed as a function of the number of times an issue is decided, Federal Circuit law would look no less stable than regional circuit law. Randall R. Rader, *The United States Court of Appeals for the Federal Circuit: The Promise and Perils of a Court of Limited Jurisdiction*, 5 MARQ. INTELL. PROP. L. REV. 1, 4 (2001). Presumably, however, case law developments are not random. Successive decisions should begin to converge on a single approach—with more opportunities to consider an issue, stability should be achieved more quickly. And if underlying facts or policies change, the Federal Circuit should be in a better position than regional circuits to adapt the law. Unfortunately, the Circuit appears rather resistant to considering new facts. See, e.g., *infra* note 78 (on failure to make the law responsive to changing facts).

38. Judiciary (Circuit Courts of Appeals) Act of 1891, ch. 517, 26 Stat. 826.

39. Lefstin makes a related argument, suggesting that claim construction should be more predictable than contract interpretation because contracts are often drafted by laymen whereas patents are drafted by professionals. Lefstin, *supra* note 28, at 1092.

Federal Circuit is doing well largely focus on the question whether the law is *precise* and *uniform*.⁴⁰ In contrast, those who remain concerned about the court's decisions are mostly worried about whether the law is *accurate* and of high *quality*. As I explained in earlier work, these characteristics are all important, but they are all different.⁴¹ *Precise* means "reproducible—[whether] the law [is] articulated in a way that permits the PTO, lower courts, and practitioners to apply it with greater ease."⁴² *Uniform* means whether the law is the same across the nation. In contrast, *accurate* means correct—"whether the law . . . is . . . responsive to the philosophy of the Patent Act, to national competition policies, and to the needs of researchers and technology users."⁴³ Accuracy, in turn, depends on *quality*—law that is cohesive in that the elements work together to further overall policies, and decisions that are explicated in a manner that makes the policy goals the court understands the law to be achieving both transparent and persuasive.⁴⁴ Empirical evidence that the Federal Circuit has coalesced on particular positions says something about the development of precision.⁴⁵ The court's near-total control over patent law necessarily produces uniformity,⁴⁶ but attaining these characteristics says nothing about whether the law is accurate or the decisions are of high quality.

One thing that the Federal Circuit experience does show is that, although uniformity can be achieved procedurally, the lawmaking required for precision and the lawmaking required for accuracy can work at cross purposes. Nonobviousness doctrine is a good example. Prior to the Su-

40. For precision, see *supra* text accompanying notes 27-30. For uniformity, see Moore, *supra* note 8; Dunner, *supra* note 6; Craig Allen Nard & John F. Duffy, *Rethinking Patent Law's Uniformity Principle*, 101 NW. U. L. REV. 1619 (2007).

41. Dreyfuss, *Case Study*, *supra* note 5, at 5.

42. *Id.*

43. *Id.*

44. See also Stephen J. Choi et al., *Professionals or Politicians: The Uncertain Case for an Elected Rather than Appointed Judiciary* (Univ. of Chicago Law & Economics, Olin Working Paper No. 357, 2007), available at <http://ssrn.com/abstract=1008989> (high quality decisions "explain to the parties why they won or lost, but much more important, they provide guidance to future judges who face similar cases, and to people and businesses who want to avoid litigation in the first place"). Quality is a notoriously difficult characteristic to assess objectively. A common approach is to measure how often a court's decisions are cited by other courts. See *id.*; William M. Landes, et al., *Judicial Influence: A Citation Analysis of Federal Courts of Appeals Judges*, 27 J. LEGAL STUD. 271 (1998). The Federal Circuit does very badly on this index, but the statistics are not very useful because such a small part of its jurisdiction is concurrent with that of other courts. See *id.* at 303.

45. See *supra* text accompanying note 30.

46. See, e.g., Richard Linn, *The Future Role of the United States Court of Appeals for the Federal Circuit Now that It Has Turned 21*, 53 AM. U. L. REV. 731, 735 (2004).

preme Court's decision in *KSR International Co. v. Teleflex Inc.*,⁴⁷ the Federal Circuit required district courts to consider such matters as whether the patent being challenged enjoyed commercial success and, if the challenge involved more than one reference, whether there was a teaching, suggestion, or motivation to combine them.⁴⁸ Both of these considerations are likely to make decisions on nonobviousness more precise. If judges are required to stop and think about commercial success, they are less likely to use 20/20 hindsight (largely based on perceptions of their own technological abilities), to decide that "anyone could have done that." Similarly, if they must identify a specific reason to combine references, they are less likely to "cut and paste" pieces of references according to their own notions about how things fit together. However, the requirement of a specific teaching means that decisionmakers cannot easily rely on the background knowledge and common sense possessed by those in the field because commonly known information is often not codified and is thus hard to retrieve.⁴⁹ Further, the emphasis on commercial success means that patents will be especially likely to be upheld when many people are relying on the technology. In short, while these requirements make the law more precise (by reducing subjective decisions), they also make it less accurate (by upholding patents on information already in the possession of the field in cases where the cost to the system is particularly high).

Issues at the infringement stage can be viewed in an analogous fashion. In a series of opinions, the Federal Circuit sharply reduced the scope of the doctrine of equivalents.⁵⁰ Since this doctrine permits the patentee to claim more than what is literally described in the patent, application of the doctrine is resource-intensive and unpredictable. Accordingly, eliminating it makes the law more precise. Nonetheless, the doctrine is arguably important for fast-moving technologies, where modest improvements could otherwise undermine patent value; it may also be significant in immature technologies, where patentees lack enough understanding to draft adequate

47. 127 S. Ct. 1727 (2007).

48. *See, e.g., Vandenberg v. Dairy Equip. Co.*, 740 F.2d 1560, 1566-67 (Fed. Cir. 1984) (describing secondary considerations, such as commercial success, as a "fourth factual inquiry under *Graham*"); *In re Dembiczak*, 175 F.3d 994 (Fed. Cir. 1999) (teaching, suggestion, or motivation test used to reverse the rejection of a patent on a jack o'lantern made out of an orange garbage bag).

49. *See, e.g., In re Lee*, 277 F.3d 1338, 1345 (Fed. Cir. 2002) ("[Case law] did not hold that common knowledge and common sense are a substitute for evidence, but only that they may be applied.").

50. *See, e.g., London v. Carson Pirie Scott & Co.*, 946 F.2d 1534 (Fed. Cir. 1991).

claims.⁵¹ Similarly, the Federal Circuit made the law more precise by cutting back on the common law experimental use defense, which relied on fairly subjective criteria to determine when unauthorized use of a patent is permissible.⁵² But as Judge Newman pointed out in dissent, eliminating this doctrine also undermines the value of the disclosure requirement in patent law and is “ill-suited to today’s research-founded, technology-based economy.”⁵³ As to remedies, the court favors simple rules that can be applied predictably (automatic injunctions,⁵⁴ monetary relief calculated on the basis of the entire value of the invention⁵⁵). However, that approach arguably breeds patent trolls and supports their opportunistic practices.⁵⁶

The Supreme Court’s reversals and vacatur of Federal Circuit opinions can be taken as striking a different balance between precision and accuracy. In *KSR*, the Court took the Federal Circuit’s point about avoiding subjective decisionmaking, for example when it agreed that “it can be important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does.”⁵⁷ However, it essentially ruled in favor of accuracy:

The obviousness analysis cannot be confined by a formalistic conception of the words teaching, suggestion, and motivation, or by overemphasis on the importance of published articles and the explicit content of issued patents. The diversity of inventive pursuits and of modern technology counsels against limiting the analysis in this way. . . . Granting patent protection to advances that would occur in the ordinary course without real innovation retards progress and may, in the case of patents combining pre-

51. For a full discussion of this issue in the software context, see Julie E. Cohen & Mark A. Lemley, *Patent Scope and Innovation in the Software Industry*, 89 CALIF. L. REV. 1 (2001).

52. *Madey v. Duke Univ.*, 307 F.3d 1351, 1362 (Fed. Cir. 2002); *see also Embrex, Inc. v. Serv. Eng’g Corp.*, 216 F.3d 1343 (Fed. Cir. 2000).

53. *Integra Lifesciences I, Ltd. v. Merck KGaA*, 331 F.3d 860, 873 (Fed. Cir. 2003) (Newman, J., dissenting in part).

54. *See, e.g., MercExchange, L.L.C. v. eBay, Inc.*, 401 F.3d 1323 (Fed. Cir. 2005), *rev’d* 547 U.S. 388 (2006).

55. *See, e.g., Rite-Hite Corp. v. Kelley Co.*, 56 F.3d 1538 (Fed. Cir. 1995).

56. *See, e.g., H.R. REP. NO. 110-314*, at 26 (2007) (discussing “royalty stacking” and the problem of unreasonable royalties granted in litigation); Gerard N. Magliocca, *Blackberries and Barnyards: Patent Trolls and the Perils of Innovation*, 82 NOTRE DAME L. REV. 1809 (2007); Mark A. Lemley & Carl Shapiro, *Patent Holdup and Royalty Stacking*, 85 TEX. L. REV. 1991 (2007).

57. *KSR Int’l Co. v. Teleflex, Inc.*, 127 S. Ct. 1727, 1741 (2007).

vously known elements, deprive prior inventions of their value or utility.⁵⁸

Similarly, the Supreme Court chose to retain the doctrine of equivalents. Noting that “the nature of language makes it impossible to capture the essence of a thing in a patent application,” it held that the uncertainty produced is “the price of ensuring the appropriate incentives for innovation.”⁵⁹ While the Court has yet to reach the issue of the scope of the common law experimental use defense, its opinion in *Merck KGaA v. Integra Lifesciences I, Ltd.*, which expanded a statutory experimentation defense, suggests that the Court leans toward accuracy on this issue as well.⁶⁰ Moreover, in *eBay v. MercExchange*, the Court explicitly endorsed a rule of discretion for determining whether to grant injunctive relief.⁶¹ Indeed, in a concurrence, Justice Kennedy elaborated on the importance of considering the circumstances of individual cases:

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. In addition injunctive relief may have different consequences for the burgeoning number of patents over business methods, which were not of much economic and legal significance in earlier times. The potential vagueness and suspect validity of some of these patents may affect the calculus under the four-factor test.⁶²

Finally, although the Supreme Court has not recently entertained questions on monetary relief, Congress has considered an apportionment rule that would limit damages to the value of the invention.⁶³ Tellingly, the

58. *Id.*

59. *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 535 U.S. 722, 731-32 (2002); *see also* *Warner-Jenkinson Co. v. Hilton Davis Chem. Co.*, 520 U.S. 17 (1997).

60. *Merck KGaA v. Integra Lifesciences I, Ltd.*, 545 U.S. 193 (2005).

61. *eBay, Inc. v. MercExchange, L.L.C.*, 547 U.S. 388, 391 (2006).

62. *Id.* at 396-97 (Kennedy, J., concurring).

63. For example, Section 6 of the Patent Reform Act of 2005, H.R. 2795, 109th Cong. (2005), provided that when damages are set at a reasonable royalty, the court should consider “the portion of the realizable profit that should be credited to the inventive contribution as distinguished from other features of the combination, the manufacturing process, business risks, or significant features or improvements added by the infringer.” Section 7 limited awards of injunctive relief. Section 5 of the Patent Reform Act of 2007, H.R. 1908, 110th Cong. (2007), limits reasonable royalties to the incremental value of the invention over the prior art.

Chief Judge of the Federal Circuit, Paul Michel, is actively opposed to this provision on the ground that it will foster uncertainty.⁶⁴

To sum up, the problems with the Federal Circuit appear to be largely related to the question of accuracy. As to the other important criteria, uniformity is, in a sense, an automatic byproduct of centralization, and in many areas precision has been vastly improved.⁶⁵ The dichotomy in achievement may signify that the court is simply not considering whether the law is developing in a manner that reflects policies that meet the needs of the creative sector and further federal interests in promoting technological progress. Alternatively, it may be that the court is weighing precision against accuracy, but reaches a balance that differs radically from the one mandated by the Supreme Court and preferred by many observers and congressional reformers.

III. THE PROBLEMS OF INSTITUTIONAL DESIGN AND PROPOSALS FOR REFORM

It is plausible to argue that if accuracy is the problem, the solution is the one Congress is currently pursuing: statutory reform.⁶⁶ Relying exclusively on Congress is, however, a highly impractical approach for the long term. The need for reform stems, in large part, from developments in the science sector, including increasingly close connections between fundamental and applied research (which strains the patentability requirements and puts pressure on the experimental use defense), increasing participation by universities (which tends to move patents upstream), reorganization of the research sector (which influences both patenting and licensing behavior), the accelerating speed of innovation (which drives use of the doctrine of equivalents), and changes in the ratio between patents and products (which affects the possibility for opportunistic behavior and should, therefore, shape remedies law).⁶⁷ The complexity, frequency, and

64. Letter from Chief Judge Paul Michel, Chief Judge, United States Court of Appeals for the Fed. Circuit, to Senator Patrick Leahy, Chairman, Senate Judiciary Comm. & Senator Arlen Specter, Member, Senate Judiciary Comm. (June 13, 2007), *available at* [http://www.intellectualpropertylawblog.com/Michel%20letter%20to%20Senators%206-13-07\(1\).pdf](http://www.intellectualpropertylawblog.com/Michel%20letter%20to%20Senators%206-13-07(1).pdf).

65. As suggested earlier, there are observers who continue to regard claim construction as an exception. *See* Risch, *supra* note 17.

66. *See, e.g.*, Petherbridge & Wagner, *supra* note 27, at 2101.

67. *See* Rochelle Dreyfuss, *Protecting the Public Domain of Science: Has the Time for an Experimental Use Defense Arrived?*, 46 ARIZ. L. REV. 457, 462-66 (2004); Graeme B. Dinwoodie & Rochelle C. Dreyfuss, *Diversifying Without Discriminating: Complying with the Mandates of the TRIPS Agreement*, 13 MICH. TELECOMM. & TECH. L. REV. 445, 445-46 (2007).

pace of these changes far outstrip Congress's capacity to legislate.⁶⁸ The current round of reform is, after all, the first major legislative reconsideration of patent law in over a half-century. In that time, whole new sciences—biotechnology, nanotechnology, information technology (IT)—were invented.

Many of the changes required are also sector-specific. Congress not only lacks the expertise necessary to craft the particularized provisions that are arguably needed, but recent attempts at reform show that rent seeking by particular technological interests thwarts the adoption of sound rules.⁶⁹ Besides, the Patent Act bears some resemblance to the Sherman Act: it has always depended on common law elaboration. And as Dan Burk and Mark Lemley point out, it was drafted with policy levers that could facilitate flexible and responsive application.⁷⁰ Not only is there irony in tying a body of law aimed at fostering progress to the glacial pace of legislative action, the congressional approach would seem to fly in the face of the 1982 decision to fix the perceived problems in patent law by “experimenting” with a specialized court rather than by revising the 1952 Act.⁷¹

Two problems with the Federal Circuit experiment may, however, explain why the court focuses so heavily on precision (and uniformity), the reasons it deemphasizes accuracy, and how it chose the techniques that it uses to achieve precision. One problem is related to institutional design; the other might be called the karma of the courthouse. Each suggests a menu of opportunities for reform.

A. Institutional Design

From the Federal Circuit's inception, commentators have debated the proper positioning of a specialized court within the judicial hierarchy. There are two components to this problem. Considerable attention has been paid to the first, the relationship between the Federal Circuit and the

68. See Nard & Duffy, *supra* note 40, at 1639.

69. See, e.g., JAFFE & LERNER, *supra* note 32, at 160. *But see* Peter S. Menell, *A Method for Reforming the Patent System*, 13 MICH. TELECOMM. & TECH. L. REV. 487 (2007) (suggesting the problems are not insoluble).

70. See Burk & Lemley, *Policy Levers*, *supra* note 15, at 1579.

71. See, e.g., Giles Sutherland Rich, *My Favorite Things*, 35 IDEA 1, 6 (1994) (noting the court was called an experiment). This is not to say that congressional intervention is never needed. No court, for example, could conform U.S. law to international practice by changing the priority rule, 35 U.S.C. § 102(g), from first-to-invent to first-to-file, or switching from § 102(a)'s relative novelty standard to an absolute novelty standard.

district courts.⁷² Less well recognized is the problematic relationship between the Federal Circuit and the Supreme Court.

1. *The Federal Circuit and the District Courts*

a) The Problem

The crucial difficulty confronting the Federal Circuit is that it has been put in charge of patent law, but it cannot easily make full use of the expertise that it presumably develops from repeated exposure to patent cases. That expertise, after all, lies primarily in fact finding—in a capacity to comprehend complex technologies and the import of the prior art, and to assess the relationship between the claims in the patent, the prior art, and the device or practice alleged to infringe. Yet under federal law, when the court sees a technical mistake, its hands are tied by the “clearly erroneous” standard of review.⁷³

In its early years, the Federal Circuit made the most of its expertise by ignoring the clearly-erroneous standard and by construing key issues as questions of law (or mixed questions of fact and law), which it then reviewed on a de novo standard.⁷⁴ The second strategy has been somewhat effective—indeed, in *Markman v. Westview Instruments*, the Supreme Court utilized a similar approach. By categorizing claim construction as an issue of law, the Court could take it away from the jury.⁷⁵ However, the Supreme Court brought the first strategy to a halt in *Dennison Manufacturing Co. v. Panduit Corp.*⁷⁶ Significantly, that was a case in which the Federal Circuit was attempting to cabin the use of hindsight in nonobviousness determinations by reversing invalidations of patents that were, in the court’s expert view, unsupported by the evidence. Nonetheless, the Supreme Court held that because nonobviousness is predicated on a series of factual findings, trial court decisions can be reversed only when they are clearly erroneous.

Since not every factual issue can be persuasively recast as a question of law, the Federal Circuit responded to *Dennison* by changing its focus. Instead of scrutinizing substantive outcomes, it began to insist on particular analytical approaches—for example, for nonobviousness, on the use of the “teaching, suggestion or motivation” test in addition to mandatory at-

72. See, e.g., Linn, *supra* note 46; Arti K. Rai, *Engaging Facts and Policy: A Multi-Institutional Approach to Patent System Reform*, 103 COLUM. L. REV. 1035 (2003); Dreyfuss, *Case Study*, *supra* note 5.

73. FED. R. CIV. P. 52(a).

74. See Dreyfuss, *Case Study*, *supra* note 5, at 46-52.

75. 517 U.S. 370 (1996).

76. 475 U.S. 809 (1986) (per curiam).

tention to secondary considerations (such as commercial success); for claim construction, it has experimented with rigid interpretative methodologies and specific forms of evidence.⁷⁷ These requirements certainly satisfy the court's obligation to make the law *precise*. However, as *KSR* suggests, the rigidity of these rules gives trial courts insufficient room to respond to individual circumstances; the law becomes less *accurate*.⁷⁸

Quality also suffers. Thus, one might have thought that quality decisions—that is, opinions that set out the policies the court is trying to achieve, discuss alternative approaches, and delineate why the chosen position was considered the best suited to attain the court's objectives—would bridge the gap between accuracy and precision. The elaboration of policy would make the law more comprehensible, and thus easier to apply reproducibly.⁷⁹ At the same time, clarification and transparency would promote coherence—the development of legal doctrines that work well together. Instead, because the Federal Circuit puts its emphasis on the district court's analytical approach, the impact of its decisions is obscured. In some situations, the result is overkill. For example, the Federal Circuit has narrowed patent scope in three different ways, through its interpretation of the doctrine of equivalents, enablement, and written description—all without any real discussion of what these restrictions have done to patent value.⁸⁰ In other circumstances, the court takes positions that work at cross purposes. For instance, the law on inequitable conduct and willful infringement promotes library research—but it also discourages it.⁸¹ Obscuring policy also makes it difficult for practitioners to know when the court is changing direction and when it is not. As a result, the court winds up frustrated by appeals built around minor changes in the wording of par-

77. See, e.g., *Vitronics Corp. v. Conceptoronic, Inc.*, 90 F.3d 1576 (Fed. Cir. 1996). See generally R. Polk Wagner & Lee Petherbridge, *Is the Federal Circuit Succeeding? An Empirical Assessment of Judicial Performance*, 152 U. PA. L. REV. 1105 (2004). To be sure, some of this ended with the en banc opinion in *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005), but the greater flexibility supplied by *Phillips* arguably decreased the court's control over claim construction.

78. Another example of the way that an emphasis on analytics detracts from accuracy is the standard of skill the court uses for the ordinary bioengineer, which has remained the same despite rapid advances in the technology for sequencing DNA and in understanding the vocabulary of the nucleotides. See, e.g., Helen M. Berman & Rochelle C. Dreyfuss, *Reflections on the Science and Law of Structural Biology, Genomics, and Drug Development*, 53 U.C.L.A. L. REV. 871 (2006).

79. See Choi et al., *supra* note 44.

80. See *supra* text accompanying notes 50-52; Berman & Dreyfuss, *supra* note 78, at 897-98.

81. See PATENT SYSTEM, *supra* note 11, at 119.

ticular holdings.⁸² The bottom line, in other words, is exactly the one that the empiricists have found: less indeterminacy but a jurisprudence that is insufficiently attentive to national interests.⁸³

b) Solutions

There are several ways to reconfigure the system to avoid the need for rules that produce precision but reduce accuracy and quality. One approach is to create specialized trial courts with sufficient expertise to make correct—rather than not clearly erroneous—factual findings. With confidence that the lower courts have the technological capacity to follow its policies, the Federal Circuit would no longer need to straightjacket their decisionmaking. Two levels of specialized courts would, however, likely produce law that is substantially out of the mainstream. As two recent Supreme Court cases suggest, this is already something of a problem.⁸⁴

Another idea would be to abolish the Federal Circuit and reconstitute it as a trial court. This approach would facilitate the use of expertise in fact finding. It would also end the problem of district court forum shopping, which the deferential clearly-erroneous standard of review fosters.⁸⁵ But this strategy would have other consequences. If there were only one trial court, litigants would be forced to travel. In theory, there is nothing wrong

82. See, e.g., Glenn A. Archer, *Conflicts and the Federal Circuit*, 29 J. MARSHALL L. REV. 835, 837 (1996) (citing as an example *In re Ochiai*, 71 F.3d 1565 (Fed. Cir. 1995), where “both parties [thought] there was a conflict when the judges [did] not.”); see also Haldane Robert Mayer, *Reflections on the Twentieth Anniversary of the Court of Appeals for the Federal Circuit*, 52 AM. U. L. REV. 761, 767 (2003) (“Too many opinions in well-trod areas of the law contribute to uncertainty and instability.”).

83. Jay Thomas has a different explanation for what he calls the court’s “formalist turn.” He attributes it to “strong signals” from the Supreme Court’s decision in *Pfaff v. Wells Electronics*, 525 U.S. 55 (1998), which substituted a rule for a standard the Federal Circuit developed for determining when an invention was “on sale” for purposes of 35 U.S.C. § 102(b) (the on sale bar). John R. Thomas, *Formalism at the Federal Circuit*, 52 AM. U. L. REV. 771, 780-81 (2003). The formalist trend may have accelerated with the Supreme Court’s approval of (or, perhaps, reliance on) the same technique for controlling the lower courts, but at least with respect to nonobviousness, the Federal Circuit appears to have begun to use it much earlier. Either way the effect is the same; rigidity/formalism produces what Thomas calls “certainty,” but not “sound innovation policy.” *Id.* at 810.

84. *MedImmune, Inc. v. Genentech, Inc.*, 127 S. Ct. 764, 772-73 (2007) (suggesting that the Federal Circuit’s rule on when a licensee can bring a declaratory judgment action was out of step with the law in nonpatent cases); *eBay, Inc. v. MercExchange, L.L.C.*, 547 U.S. 388, 391 (2006) (“These familiar principles [of equity] apply with equal force to disputes arising under the Patent Act.”). See generally S. Jay Plager, *Foreword: The Price of Popularity: The Court of Appeals for the Federal Circuit 2007*, 56 AM. U. L. REV. 751, 755 (2007).

85. See Moore, *supra* note 8.

with a national personal jurisdiction rule for disputes involving national law. But in practice, Congress has found good reasons to use this approach sparingly.⁸⁶ Furthermore, if appeals were to a single regional circuit, such as the D.C. Circuit, the dual-specialization problem would persist.

Multiple trial courts would solve these problems. Although maintaining a series of dedicated patent trial courts would be prohibitively expensive, then-Professor (now Judge) Kimberly Moore suggested an approach that would minimize the cost. After demonstrating that there is already de facto specialization—that a small number of district courts account for the adjudication of most patent cases—she proposed changing the venue statute to turn current practice into a de jure regime. If patent litigation were concentrated in a limited number of district courts, each court could acquire a degree of expertise in patent matters without sacrificing its generalist perspective.⁸⁷ And if the courts were chosen carefully, no litigant would be required to travel very far. This idea would, however, be complicated to implement. Questions would arise as to whether a particular case had enough of a patent dimension to fall within the new venue rule. Cases that included state law issues would be difficult for district courts outside the relevant state to adjudicate.

Nonetheless, Moore's proposal has focused attention on district court forum shopping issues and has led Congress to consider tighter restrictions on venue choice in patent cases. Under the proposed rule, forum shopping among district courts would be reduced.⁸⁸ Ironically, however, de facto specialization will likely disappear, along with the benefits it produces. More helpful is a proposed experiment in which each of the large districts would appoint specific members of its bench to hear all its patent cases.⁸⁹ These judges would become specialized, yet the parties would enjoy all of the advantages of local adjudication. It remains unclear, however, whether enough judges would agree to have their dockets changed in this way, how reallocating the patent docket would affect other cases, and whether any of the quasi-patent judges would acquire enough expertise to improve the accuracy of factual decisions.

86. *See, e.g.*, FED. R. CIV. P. 4(k) (establishing personal jurisdiction over a defendant only if they were served within 100 miles from where the summons was issued) & advisory committee's note (1993 amendment).

87. Moore, *supra* note 8, at 934-36.

88. *See, e.g.*, Patent Reform Act of 2007, H.R. 1908, 110th Cong. § 11 (2007); H.R. REP. NO. 110-314, at 39-40 (2007).

89. H.R. 34, 110th Cong. (2007); H.R. 5418, 109th Cong. (2006). In the current proposal, this is envisioned as a pilot program that would sunset in ten years unless reenacted.

Because cases within the district court are unlikely to be reallocated or to achieve the desired results, a better approach is to focus harder on the relationship between the Federal Circuit and the district courts, and on the effects that *Dennison* and the clearly-erroneous standard generate. If the Federal Circuit were permitted to review district court determinations with more flexibility, it could drop its rigid analytical rules, revise its determinations about which issues require de novo review and on which the district courts deserve deference, and promote precision by elaborating on the reasons underlying decisions. Whether it would do so is considered below.⁹⁰ With such changes, the balance between precision and accuracy would shift in the preferred direction. While this approach might require an exception to the Federal Rules of Civil Procedure, it should not be surprising that a novel appeals process would demand revision of the rules governing the litigation process.

2. *The Federal Circuit and the Supreme Court*

a) The Problem

The Federal Circuit's problematic relationship with the district courts partially explains the salience of precision; its difficult relationship with the Supreme Court helps explicate the slighting of accuracy.

At first blush, it might seem that if Congress is not able to keep patent law responsive to new circumstances (new technologies, products, players, and organizations), then the Supreme Court would take on that role. Paradoxically, however, the presence of the Federal Circuit makes the Supreme Court's task more difficult. For the Supreme Court to fulfill its responsibility to shape patent law, it must first hear enough cases to develop its own expertise and to impose its views effectively. Second, because of resource constraints, it must choose those cases carefully so that its efforts are directed at the issues that require its consideration.⁹¹

With patent law, neither of these conditions is fulfilled. Because uniformity was created by establishing the Federal Circuit, the Supreme Court is under little pressure to solve intercircuit conflicts for multistate actors. As a result, in the quarter-century of the Federal Circuit's existence, the Supreme Court has granted certiorari in only twenty-odd patent disputes.⁹² Aside from the last two years, when six cases were decided,

90. See *infra* Section III.A.2.

91. See generally Nard & Duffy, *supra* note 40; Dreyfuss, *Continuing Experiment*, *supra* note 5.

92. See sources cited *supra* note 20; see also *Unitherm Food Systems, Inc. v. Swift-Eckrich, Inc.*, 546 U.S. 394 (2006); *Nelson v. Adams USA, Inc.*, 529 U.S. 460 (2000);

that is barely enough attention to exert any real influence on patent jurisprudence.⁹³ To the contrary, the sparseness of review has allowed issues to fester. On matters such as the patentability of software and business methods, the Court's failure to consider Federal Circuit rulings has fostered reliance interests that potentially make revision of Federal Circuit law more difficult to accomplish.⁹⁴

Nor is it easy for the parties. In most areas of law, parties seeking the Supreme Court's attention rely on circuit splits to signal the issues that are ripe for review. That strategy is largely unavailing in patent law because the decision to concentrate disputes in the Federal Circuit means that the likelihood of circuit splits approaches zero.⁹⁵ Instead, the parties must argue that certiorari is justified because a Federal Circuit decision conflicts with Supreme Court precedent or with regional circuit decisions handed down before the Federal Circuit was created. Because the Court takes so few cases, and because regional courts have been out of the patent business for so long, the cases that must be relied upon are largely outdated;

Florida Prepaid Postsecondary Educ. Expense Bd. v. College Savs. Bank, 527 U.S. 627 (1999); Dickinson v. Zurko, 527 U.S. 150 (1999); Pfaff v. Wells Elecs., Inc., 525 U.S. 55 (1998); Warner-Jenkinson Co. v. Hilton Davis Chem. Co., 520 U.S. 17 (1997); Cardinal Chemical Co. v. Morton Int'l, Inc., 508 U.S. 83 (1993); Eli Lilly and Co. v. Medtronic, Inc., 496 U.S. 661 (1990); Christianson v. Colt Indus. Operating Corp., 486 U.S. 800 (1988); Dennison Mfg. Co. v. Pduuit Corp., 475 U.S. 809 (1986).

The number of "patent" cases is somewhat indeterminate. Some of the above, like *Cardinal* and *Unitherm*, did not involve patent issues. Other cases could arguably be included: in one case, *Bonito Boats, Inc. v. Thunder Craft Boats, Inc.*, 489 U.S. 141 (1989), the Court reviewed a patent law issue that the Federal Circuit had decided, but certiorari was granted on a case arising from a different court; in another, *Asgrow Seed Co. v. Winterboer*, 513 U.S. 179 (1995), the Court reviewed a question arising under the Plant Variety Protection Act of 1970, 7 U.S.C. § 2541 (2000), which is closely related to patent protection, and in a third, *United States v. Hohri*, 482 U.S. 64 (1987), the Court reviewed an important issue affecting the Federal Circuit's power in patent cases, but not in a dispute that involved patent law. In addition, in *Laboratory Corp. of America v. Metabolite Laboratories, Inc.*, 548 U.S. 124 (2006), an important patent issue was dismissed but a strong substantive dissent was filed.

93. *But see* John F. Duffy, *The Festo Decision and the Return of the Supreme Court to the Bar of Patents*, 2002 SUP. CT. REV. 273, 314 (suggesting this is enough review).

94. For example, *State Street Bank & Trust Co. v. Signature Financial Group, Inc.*, 149 F.3d 1368 (Fed. Cir. 1998), was decided in 1998; it took the Supreme Court until 2006 to notice there might be a problem with the court's expansive scope of patentable subject matter, and even then, it dismissed a case on the issue because the issue was not raised below. *See* *Lab. Corp. of Am. v. Metabolite Labs., Inc.*, 548 U.S. 124 (2006).

95. *Bonito Boats*, which involved the relationship between patent and trade secrecy law, is the rare exception. *Bonito Boats, Inc. v. Thunder Craft Boats, Inc.*, 489 U.S. 141 (1989).

many articulate rules that no one would want reinstated.⁹⁶ Finally, there is the issue of expertise. Although the Supreme Court takes too few cases in most areas of federal law to become expert, it can normally rely on the experience gained from seeing how the differing rules of the regional circuits play out. But because of the Federal Circuit, there is no occasion for differing rules in patent law.

Given these difficulties, it might be expected that the Supreme Court would defer to the Federal Circuit's expert judgment on issues of law. (Or, to put things another way, one might have thought that the Federal Circuit's unique placement in the judicial hierarchy was intended to reduce the need for Supreme Court attention.) But in fact, the Supreme Court's treatment of the Federal Circuit is somewhat bewildering. On the one hand, it often acts shocked when the court deviates from precedent—even in cases where the Court itself seems to understand that the precedent was dysfunctional.⁹⁷ Certainly, it betrays no indication that the Federal Circuit was established to exercise near-final authority over patent jurisprudence. On the other hand, the Supreme Court occasionally appears impatient with the court for not reading the tea leaves and changing the law to conform to decisions on related issues.⁹⁸

Of course, there are good reasons for the Supreme Court to refuse to defer to the Federal Circuit (or to act irritated by it): even without exploring substance, there is cause to be skeptical about the court's output. Partly, the problem is situational: like the Supreme Court, the Federal Circuit is unable to learn from the way differing doctrines play out on different circuits. Furthermore, because lawyers prefer to avoid annoying the judges by relying on positions the court has already rejected, it is difficult for the court to correct errors once they occur.⁹⁹ In part, however, the

96. A good example is *KSR International Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1740 (2007), where the Federal Circuit's nonobviousness jurisprudence was said to conflict with *Anderson's-Black Rock, Inc. v. Pavement Salvage Co.*, 396 U.S. 57 (1969), and *Sak-raid v. Ag Pro, Inc.*, 425 U.S. 273 (1976). However, those cases announced a "synergy" requirement for combination patents which has long been considered unworkable. *Cf. Sarkisian v. Winn-Proof Corp.*, 688 F.2d 647 (9th Cir. 1982) (en banc) (trying to make sense of the requirements for combination patents).

97. In *KSR*, for example, the Court mentioned the word "synergy" exactly once and then proceeded to recharacterize the precedential decisions while criticizing the Federal Circuit for deviating from them. *KSR Int'l Co.*, 127 S. Ct. at 1740-41.

98. *See, e.g., Illinois Tool Works, Inc. v. Indep. Ink, Inc.*, 547 U.S. 28 (2006). The Court cited the "vast majority of academic literature," *id.* at 43 n.4, "the virtual consensus among economists," *id.* at 45, and the actions of various administrative agencies, *id.*, to show that there is no longer a working assumption that patents confer market power.

99. *See Dreyfuss, supra* note 35, at 1570 (calling this the "repeat-player disadvantage"). Nard and Duffy also point to the problem of annoying the court by petitioning for

problem may relate to the way the court's opinions are crafted: the Federal Circuit tends to favor a kind of formalism that is more characteristic of legal thinking in the nineteenth century than in the twenty-first.¹⁰⁰ Thus, opinions rarely provide insight into the goals the court sees the law as achieving; "policy discussions" take the form of incantations of standard justifications for statutory terms.¹⁰¹ Instead, the court focuses on parsing precedent and on dictionary definitions.¹⁰² As Judge Alan Lourie recently put it, "[N]ot once have we had a discussion as to what direction the law should take. . . . We have just applied precedent as best we could determine it to the cases that have come before us."¹⁰³ The court, in short, fails to instill confidence in its decisions because it rarely tests the accuracy of its positions by trying to explain them.¹⁰⁴

As with the Federal Circuit's district court problem, the appellate structure provides something of an explanation for the situation. Thus, Craig Nard and John Duffy argue that the court is not inspired to write better decisions because it lacks an audience. Without jurisdictional overlap, there are no sister courts that the Federal Circuit needs to persuade, and the Supreme Court intervenes so irregularly that there is also little incentive to write for the consumption of the Justices. In effect, the Court does not defer because the Federal Circuit's opinions are not very persuasive, but the Federal Circuit does not write persuasive opinions because the Supreme Court is so nondeferential.

certiorari. They note that the PTO—the quintessential repeat player at the Federal Circuit—has never sought certiorari to review a Federal Circuit decision on patent law. Nard & Duffy, *supra* note 40, at 1641 n.79.

100. See, e.g., MORTON J. HORWITZ, *THE TRANSFORMATION OF AMERICAN LAW, 1870-1960*, at 131 (1992) (arguing that Oliver Wendell Holmes's article, *Privilege, Malice and Intent*, 8 HARV. L. REV. 1 (1894), marked "the beginning of modernism in American legal thought" and "the demise of the late-nineteenth-century system of legal formalism").

101. For example, on the doctrine of equivalents, the court dutifully acknowledged the notice function of patents. *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 234 F.3d 558, 576 (Fed. Cir. 2000) (en banc). But as Judge Newman suggests in her separate opinion in that case, the court did not consider the economic and practical effect of narrowing the scope of the claims. *Id.* at 630-42 (Newman, J., dissenting in part).

102. See, e.g., *In re Nuijten*, 500 F.3d 1346 (Fed. Cir. 2007); *infra* note 106.

103. Alan D. Lourie, *A View from the Court*, 75 PAT., TRADEMARK & COPYRIGHT J. (BNA) 22 (2007).

104. See DAVID E. KLEIN, *MAKING LAW IN THE UNITED STATES COURTS OF APPEAL*, at 100-02 (2002) (interview studies of circuit judges suggest that they are heavily influenced by how well decisions are reasoned). As academics know well, the real test of a new proposition is whether it can be written up.

That said, it should be noted that to a small extent, both tribunals are learning to cope. Starting with its en banc decision in *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., Ltd.*,¹⁰⁵ the judges on the Federal Circuit have become quite adept at writing dissents signaling the need for Supreme Court attention.¹⁰⁶ And as Nard and Duffy note, the Supreme Court tends to write decisions that leave implementation issues to the expertise of the Federal Circuit.¹⁰⁷ But these efforts are of limited significance. Signaling for Supreme Court review can only work a few times before collegial sentiments within the appellate court fray or the interest of the Court wanes. Leaving implementation to the Federal Circuit runs into the problems the court has supervising the district courts.

b) Solutions

Nard and Duffy suggest that the Federal Circuit/Supreme Court situation could be remedied by giving at least one other sitting circuit court authority to hear patent cases; forum shopping would be avoided by random assignment of district court cases to the relevant appellate courts. This change, the authors say, would not only give the court an incentive to write better opinions, it would also generate better signals of the need for Supreme Court attention.¹⁰⁸ Justice Stevens has expressed a similar view, albeit with respect to a different question, as to the Federal Circuit's appellate jurisdiction: under *Holmes Group, Inc. v. Vornado Air Circulation Systems, Inc.*, the Federal Circuit has jurisdiction only over appeals that raise a patent issue on the face of a well-pleaded complaint. Thus, patent issues that appear in the defense are now diverted to the regional circuits, where they will create the same opportunity for dialogue.¹⁰⁹

105. 234 F.3d 558 (Fed. Cir. 2000) (various dissents).

106. *Id.* at 619-42 (various dissents). *Integra Lifesciences I, Ltd. v. Merck KGaA*, 331 F.3d 860, 872 (Fed. Cir. 2003) (Newman, J., dissenting in part) provides another example. *In re Nuijten*, 500 F.3d 1346 (Fed. Cir. 2007) may become another instance of this phenomenon. In this case on whether a digital watermark is patentable subject matter, the majority decision is an exercise in parsing statutes and looking up words in dictionaries. *Id.* Judge Linn's partial dissent begins with the observation that the case requires the court to apply centuries-old language to a product of the electronics age and moves on to a fascinating discussion of legislative intent and lessons drawn from the history of adapting patent law to new technologies. *Id.* at 1358 (Linn, J., dissenting).

107. Nard & Duffy, *supra* note 40, at 1639 & n.71.

108. *Id.* at 1640.

109. 535 U.S. 826, 839 (2002) (Stevens, J. concurring) ("An occasional conflict in decisions may be useful in identifying questions that merit this Court's attention. Moreover, occasional decisions by courts with broader jurisdiction will provide an antidote to the risk that the specialized court may develop an institutional bias.").

While Nard and Duffy's idea is certainly innovative, it sacrifices the one clear benefit of concentrating patent appeals—national uniformity. The authors suggest that uniformity is overrated, but some of their rhetoric appears to conflate uniformity and precision. They are right that the system is now tilted too far in favor of precision, but practitioners, and presumably their clients, hugely value uniformity.¹¹⁰ Furthermore, Nard and Duffy's solution may produce fewer splits and less dialogue than they expect, for it may be difficult for the non-specialized courts to resist saving resources by simply adopting the Federal Circuit's law based on its presumed expertise, rather than because they are persuaded the Federal Circuit's views are accurate. Indeed, after *Vornado* was decided but before it became evident that it would not add very many patent cases to the regional dockets, commentators suggested that the regional courts take exactly that deferential approach.¹¹¹

Furthermore, even if the other courts acted independently, there may not be enough new voices to make a significant difference. In other areas of the law, major changes are often associated with so-called "entrepreneurial judges" who excel at developing new rules.¹¹² However, these jurists are few and far between. The participation of one or two additional benches in the dialogue over patent law cannot duplicate the other circuits' ability to draw on the entire range of the federal judiciary. Worse, if the Nard and Duffy strategy were successful and the other appellate courts struck a different balance between precision and accuracy, district courts would be required to apply different rules to similar facts, depending on which court was slated to hear the appeal. Trial courts potentially faced an analogous situation regarding the nonpatent issues in the cases allocated to the Federal Circuit for review. Significantly, the Federal Circuit declined to interpret nonpatent issues independently, as the Evarts Act permits, and instead simplified matters for the district courts by deferring to their regional circuit's law.¹¹³

110. See, e.g., Dunner, *supra* note 6.

111. See, e.g., Larry D. Thompson, Jr., *Adrift on a Sea of Uncertainty: Preserving Uniformity in Patent Law Post-Vornado Through Deference to the Federal Circuit*, 92 GEO. L.J. 523 (2004). See also KLEIN, *supra* note 104, at 104, 136-37 (in technical areas, some judges claim to follow the opinions of jurists they regard as having special expertise).

112. See KLEIN, *supra* note 104, at 40-61 (discussing entrepreneurial lawmaking).

113. *Atari, Inc. v. JS & A Group.*, 747 F.2d 1422, 1439 (Fed. Cir. 1984) (en banc). Unfortunately, that approach creates problems of its own. See Dreyfuss, *Case Study*, *supra* note 5, at 38-41 (discussing, among other issues, the indeterminacy of line drawing between "patent" and "nonpatent" issues). Admittedly, cases before the Federal Trade

Finally, it is difficult to see how the absence of dialogue could be the whole story. First, there are few allegations that the D.C. Circuit behaves this way, even in the areas where it has exclusive authority. Second, if the Federal Circuit's entire docket is considered, there is considerably more overlap with other circuits than is generally recognized, as well as greater intervention by the Supreme Court.¹¹⁴ Third, rather than regard academic critique with suspicion,¹¹⁵ the court could be using scholarship as a substitute sounding board. Similarly, the Supreme Court could be using amicus briefs as substitute signals of importance.¹¹⁶ Besides, the court already has a strong incentive to explicate its decisions: as noted earlier, it could reduce the number of appeals that are based on no more than changes in the wording of its opinions.¹¹⁷

Another way to achieve accuracy would be to give rule-making authority to the PTO. Congress often relies on the expertise of administrative agencies to keep the laws they oversee responsive to changing needs; under *Chevron U.S.A. Inc. v. Natural Resources Defense Council*, courts are required to defer to appropriately developed agency interpretations.¹¹⁸ Presently, the Supreme Court requires deference to PTO findings of fact in cases where a patent is denied.¹¹⁹ Furthermore, the PTO has taken on a rule-making role by promulgating guidelines on utility and new continuation rules.¹²⁰

Commission can be appealed to any circuit, 15 U.S.C. § 45(c) (2000), and thus raise something of the same problems, albeit within the Commission.

114. For example, one of the judges noted that in a six-month period, he heard cases involving products liability, contract actions, tax issues, and trademark cases, as well as many cases raising administrative law issues. S. Jay Plager, Introduction, *The United States Courts of Appeals, the Federal Circuit, and the Non-Regional Subject Matter Concept: Reflections on the Search for a Model*, 39 AM. U. L. REV. 853, 860-61 (1990); Arthur J. Gajarsa & Lawrence P. Cogswell, III, *Foreword: The Federal Circuit and the Supreme Court*, 55 AM. U. L. REV. 821, 834-38 (2006) (summarizing the areas of concurrent appellate jurisdiction). There is even some overlap in the patent docket. *See supra* note 95; *see also* Plager, *supra* note 84, at 755 (noting that of the cases on which certiorari was granted, more than two-thirds did not involve patent law).

115. *See generally* Nard, *supra* note 19 (discussing the role of scholarship in Federal Circuit jurisprudence); Dreyfuss, *Continuing Experiment*, *supra* note 5 (analyzing the Federal Circuit's consideration of extra-judicial materials).

116. *See* KLEIN, *supra* note 104, at 121 (suggesting this use of amicus briefs).

117. *See supra* text accompanying note 82.

118. *Chevron U.S.A. Inc. v. Natural Resources Def. Council*, 467 U.S. 837 (1984). *See also* *Skidmore v. Swift & Co.*, 323 U.S. 143 (1940).

119. *Dickinson v. Zurko*, 527 U.S. 150 (1999).

120. *See, e.g.*, Judges Panel of the Malcolm Baldrige National Quality Award, 60 Fed. Reg. 36263 (July 14, 1995) (utility guidelines); Changes to Practice for Continuing Applications, Requests for Continued Examination Practice, and Applications Containing

Commentators who have considered this approach for patent law largely reject it.¹²¹ The PTO was established before the Administrative Procedure Act was enacted; it has never been given rule-making authority; and it is chronically underfunded.¹²² Further, it is not staffed with the economists, scientists, and other experts that would be needed to perform rule-making responsibilities effectively. As Arti Rai notes, deference to patent denials presents a unique situation that should not be generalized to other issues, such as decisions on whether to uphold a patent grant.¹²³ For its part, the Federal Circuit has approved, rather than deferred to, the utility guidelines,¹²⁴ and the fate of the continuation rules remains uncertain.¹²⁵ Furthermore, if the PTO's rule-making authority were made commensurate with its expertise, then some issues in patent law, such as prosecution issues, would be within the PTO's authority, while other issues, such as those that arise in enforcement actions, would be within the jurisdiction of the Federal Circuit. The result is likely to be law that is incoherent. At a minimum, there would be a significant loss in flexibility. For example, economists suggest that optimizing innovation incentives among generations of innovators requires a careful adjustment between the height of the inventive step and the scope of the patent.¹²⁶ If the PTO were to have authority over one of these issues and the Federal Circuit over the other, it would be impossible to develop an ideal regime.

Given the paucity of alternatives, the better approach, again, may be to work with the structure that is already in place. If the Supreme Court were

Patentably Indistinct Claims, 71 Fed. Reg. 48 (Jan. 3, 2006) (to be codified at 37 C.F.R. pt. 1).

121. See, e.g., Nard & Duffy, *supra* note 40; Rai, *supra* note 72.

122. See, e.g., Dale L. Carlson & Robert A. Migliorini, *Past as Prologue for Patent Reform: Experience in Japan With Oppositions Suggests an Alternative Approach for the U.S.*, 88 J. PAT. & TRADEMARK OFF. SOC'Y 101, 115-16 (2006).

123. Arti K. Rai, *Allocating Power over Fact-Finding in the Patent System*, 19 BERKELEY TECH. L.J. 907 (2004).

124. *In re Fisher*, 421 F.3d 1365 (Fed. Cir. 2005). Rai notes that the Federal Circuit has also resisted *Zurko*. Rai, *supra* note 72, at 1055.

125. H.R. 1908, 110th Cong. § 14 (2007) would make clear that the PTO has authority to promulgate rules governing conduct within the Office, but does not grant broader rule-making power. See also H.R. REP. NO. 110-314, at 45 (2007). The issue, however, is whether the effect of continuation rules is confined to conduct within the Office. See *Tafas v. Dudas*, No. 1:07CV846, 2008 WL 859467 (E.D. Va. Apr. 1, 2008) (holding the rules beyond the scope of the PTO's current rule-making authority). See generally Laxman Sahasrabudde, *Is the PTO Authorized to Promulgate the Proposed Rule Change to the Continuation Practice?*, 22 BERKELEY TECH. L.J. 193 (2007).

126. See, e.g., Suzanne Scotchmer, *Standing on the Shoulders of Giants: Cumulative Research and the Patent Law*, 5 J. ECON. PERSP. 29 (1991).

to reconsider *Dennison*, the Federal Circuit's need for rigidity might abate, allowing it to develop substantive rules that are accurate, rather than procedural rules that induce precision without achieving quality. (Whether it would do so is discussed in the next Section.) If decisions were more accurate and better reasoned, the Supreme Court could drop its insistence that the Federal Circuit follow long-outdated precedents and recognize its unique role in shaping patent jurisprudence. And if the Federal Circuit expected the Supreme Court to defer, it could shift its talents from writing attention-seeking dissents to drafting illuminating opinions.

B. The Karma of the Courthouse

The prior Section examined the impact of institutional design and suggested that the skewed balance between precision and accuracy may stem from the Federal Circuit's placement within the judicial hierarchy. But as then-Professor Moore said in another context, fault could also "lie[] with the Federal Circuit itself."¹²⁷ In fact, there are features of the court's history and its judges' experiences that help explain the court's behavior.¹²⁸

127. Moore, *supra* note 16, at 247.

128. The literature on the determinants of judicial behavior is extensive. The study by J. Woodford Howard Jr. is among the best known. J. WOODFORD HOWARD, JR., COURTS OF APPEAL IN THE FEDERAL JUDICIAL SYSTEM 225 (1981). See also KLEIN, *supra* note 104; Frank B. Cross, *Decisionmaking in the U.S. Circuit Courts of Appeal*, 91 CALIF. L. REV. 1457 (2003); Richard L. Revesz, *Environmental Regulation, Ideology, and the D.C. Circuit*, 83 VA. L. REV. 1717 (1997); James L. Gibson, *From Simplicity to Complexity: The Development of Theory in the Study of Judicial Behavior*, 5 POL. BEHAV. 7 (1983) [hereinafter Gibson, *Judicial Behavior*]; see also James L. Gibson, *Judges' Role Orientations, Attitudes and Decisions: An Interactive Model*, 72 AM. POL. SCI. REV. 911 (1978). Several judges have contributed thoughtful pieces as well. See Dennis Jacobs, Chief Judge, United States Court of Appeals for the Second Circuit, *The Secret Life of Judges*, Address at the 2006 John F. Sonnett Memorial Lecture held at Fordham University School of Law, in 75 FORDHAM L. REV. 2855 (2007); Harry T. Edwards, *Collegiality and Decision Making on the D.C. Circuit*, 84 VA. L. REV. 1335, 1365 (1998); Stephen Reinhardt, *Judicial Speech and the Open Judiciary*, 28 LOY. L.A. L. REV. 805 (1995); FRANK M. COFFIN, ON APPEAL: COURTS, LAWYERING, AND JUDGING (1993); Richard A. Posner, *What Do Judges and Justices Maximize (The Same Thing as Everybody Else Does)*, 3 SUP. CT. ECON. REV. 1 (1993). Several Federal Circuit judges have written specifically about the business of the Federal Circuit. See, e.g., Archer, *supra* note 82; Gajarsa, *supra* note 114; Linn, *supra* note 46; Richard Linn, *Effective Appellate Practice Before the Federal Circuit*, 2 J. MARSHALL REV. INTELL. PROP. L. 1 (2002); Mayer, *supra* note 82; Newman, *supra* note 2; Plager, *supra* notes 84 & 114; Rader, *supra* note 37; Howard T. Markey, *The Court of Appeals for the Federal Circuit: Challenge and Opportunity*, 34 AM. U. L. REV. 595 (1985) [hereinafter Markey, *Challenge*]; Howard T. Markey, *The State of the Court*, 38 AM. U. L. REV. 1093 (1989) [hereinafter Markey, *State*]; Howard T. Markey, *The Federal Circuit and Congressional Intent*, 2 FED. CIR. B.J. 303 (1992) [hereinafter Markey, *Intent*].

1. *The Problem*

The history of the Federal Circuit and the concerns surrounding its creation clearly play a crucial role in the court's jurisprudence, especially in its tendency to emphasize precision at the expense of accuracy. As noted at the outset, when the Federal Circuit was created, specialization was regarded with suspicion. It had been tried before with limited success. Some of the earlier tribunals were created to be transitory (an example is the aptly named Temporary Emergency Court of Appeals), but lingered on for many years; others were slated for permanent status, but were abolished rather quickly.¹²⁹ The Commerce Court, for instance, stirred up such strong public opposition that it was disbanded after only three years of operation.¹³⁰

The first judges of the Federal Circuit must have been extremely aware of their court's "experimental" status and anxious to avoid the fate of the Commerce Court. They read the legislative history of the court's founding with care and worked hard to stay faithful to the goals Congress sought to accomplish. These they essentially classified as the production of uniformity and precision.¹³¹ As the court's first Chief Judge, Howard Markey, put it: "[t]he challenge to the court and its bar is to create and maintain a uniform, reliable, predictable, nationally-applicable body of law."¹³² In successive speeches, he repeated that refrain,¹³³ and judges who have joined the court echo it as well. "We are," according to current Chief Judge Paul Michel, "very conscious of our role as a nationwide court, and the need of practitioners in the industry and law firms everywhere for maximum predictive power."¹³⁴

129. On the Commerce Court and other attempts at specialization, see generally Dreyfuss, *Specialized Adjudication*, *supra* note 5.

130. *Id.*

131. See, e.g., Rich, *supra* note 71, at 10 (noting that to achieve the goal of stability, the court's first act was to adopt the law of its predecessor courts, the Court of Customs and Patent Appeals and the Court of Claims, as binding precedent); Newman, *supra* note 2, at 53; see also Meador, *supra* note 4, at 15. The recollections of Professor Meador and Judge Newman are particularly significant because they were key figures in the court's creation.

132. Markey, *Challenge*, *supra* note 128, at 595.

133. Markey, *State*, *supra* note 128, at 1094 ("Every court doubtlessly seeks to issue the best decision it can in each case. Our court, however, was created to establish greater uniformity . . ."); Markey, *Intent*, *supra* note 128 (noting that the Federal Circuit had fulfilled Congress's intent and had not exceeded its mandate).

134. See Paul Michel, *Judicial Constellations: Guiding Principles as Navigational Aids*, 54 CASE W. RES. L. REV. 757, 764 (2004); see also Rader, *supra* note 37, at 3 ("The Federal Circuit . . . has accomplished a great mission in bringing uniformity, predictability, and enforceability to law.").

Emphasizing precision promotes public acceptability in other ways as well. *Dennison* may have led to a skewed relationship between precision and accuracy, but attempts to refute the decision would have required the court to spotlight its unique status and demand special treatment—exactly the kind of attention the early court likely sought to avoid. Besides, as between focusing on accuracy and analytical methods for making the law more precise, precision has an important benefit: it is a bit like apple pie in that it may be fattening, but when it is served, no one criticizes the chef. Precision makes planning and advising easier for everyone. In contrast, refinements made to substantive law are sure to have a negative impact on some constituency.

Of course, the early court could not avoid legal doctrine entirely. But even here, its desire to cement public acceptance explains a great deal about its jurisprudence. Thus, while commentators may be right that the court has decided as many issues in favor of patent holders as in favor of technology users,¹³⁵ the innovative industries may not be the court's primary audience. According to recent scholarship, judges tend to internalize the expectations of the bar far more than they consider the expectations of other members of the public.¹³⁶ On that metric, the court has done very well indeed. As noted above, precision and uniformity are very much appreciated by the bar. On procedure, the court's refusal to grant interlocutory review on *Markman* hearings prolongs cases—and can raise fees.¹³⁷ Its unwillingness to look beyond the individual case to overarching problems, along with its admonitions to stick to the record when writing briefs, to base arguments on precedent, and to avoid footnotes,¹³⁸ makes it easier for counsel to prepare their cases and reduces the competitive advantage

135. See *supra* note 22 and accompanying text.

136. See, e.g., Cross, *supra* note 128, at 1460, 1462; Jacobs, *supra* note 128; see also Benjamin H. Barton, *Do Judges Systematically Favor the Interests of the Legal Profession?* (Univ. of Tenn. Legal Studies Research Paper No. 1, 2007), available at <http://ssrn.com/abstract=976478>; Adam Liptak, *With the Bench Cozied Up to the Bar, the Lawyers Can't Lose*, N.Y. TIMES, Aug. 27, 2007, at A10; cf. Jonathan R. Macey & Geoffrey P. Miller, *Toward an Interest-Group Theory of Delaware Corporate Law*, 65 TEX. L. REV. 469 (1987) (explaining elements of Delaware corporate law as responding to the interests of Delaware lawyers).

137. See H.R. REP. NO. 110-314, at 40-41 (2007) (granting interlocutory claim construction appeals at the discretion of the district court in order to shorten litigation and reduce cost).

138. See, e.g., Linn, *supra* note 128; Michel, *supra* note 134, at 765; see also Lourie, *supra* note 103 (suggesting that footnotes "might not be read").

of the smartest attorneys. Not surprisingly, mediocre lawyering produces mediocre decisionmaking.¹³⁹

The same analysis applies to the substantive positions the court has adopted. The doctrine of equivalents is an example. For the industry, reducing the force of the doctrine is something of a wash. Eliminating it clarifies the metes and bounds of claims and thus lowers the cost of interpretation and planning.¹⁴⁰ But at the same time, inventors must apply for—and be wary of—more patents. The real beneficiaries of the court's work are attorneys—the patent prosecutors who earn fees from applying for the new patents prompted by narrowing the doctrine of equivalents, as well as the lawyers who search for these patents and write freedom-to-operate opinions about them. Lowering the standard of nonobviousness and expanding the scope of patentable subject matter similarly promote the interests of the bar. Now that the creative sector has been thoroughly “patentized,” there is even more work for patent attorneys to do.¹⁴¹

The court's focus on public acceptance may also help to explain its formalism, which is not only ahistoric, but also appears to conflict with the congressional goal of establishing a central source of patent jurisprudence. After all, “just appl[ying] precedent” (as Judge Lourie stated¹⁴²) and “not hav[ing] meetings to discuss whether we are going to rein in the doctrine of equivalents” (as Judge Michel once claimed¹⁴³) are hardly recipes for honing the law or adapting it to new circumstances. The problem here may be that the court is trying too hard not to appear ideological. At first blush, the tension between ideological preferences and neutral decisionmaking, which is an important trope in the literature on judicial behavior,¹⁴⁴ may seem less problematic for the Federal Circuit than for other courts because standard ideological differences, such as Republican/Democrat or conser-

139. This is especially true because there are judges who believe it inappropriate to conduct independent research. *See, e.g., Michel, supra* note 134, at 765 (“We are not supposed to go fishing for extraneous sources unbeknownst to the lawyers who tried the case.”).

140. *See Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 234 F.3d 558, 576 (Fed. Cir. 2000) (en banc).

141. For discussions of patentable subject matter, see, for example, *State Street Bank & Trust Co. v. Signature Financial Group, Inc.*, 149 F.3d 1368 (Fed. Cir. 1998) (holding that software and business methods are patentable).

142. Lourie, *supra* note 103.

143. Michel, *supra* note 134, at 764-65.

144. *See* sources cited *supra* note 128.

vative/liberal, appear to map poorly onto patent law.¹⁴⁵ One could favor strong patents out of a belief in the sanctity of property, because one considered taking another's intellectual labor as slavery, or because one saw patents as important corporate assets or as tools that help individuals finance startups. Significantly, the 1952 Patent Act engendered virtually no debate,¹⁴⁶ the decision to establish the court was nonpartisan,¹⁴⁷ and the Federal Circuit has been as vulnerable to reversal in an opinion penned by a Republican appointee as by a Democrat appointee.¹⁴⁸

In fact, however, recent empirical work by Matthew Sag and coauthors suggests that, at least at the Supreme Court level, this view is incorrect and that ideology and outcomes in intellectual property cases are correlated.¹⁴⁹ If the same holds true for the Federal Circuit, then the judges may be straining to persuade the public that they are not voting their preferences. Thus, they think they can avoid criticism by sticking to precedent parsing and by claiming (again, in Judge Michel's words), that "[w]e really do not have an agenda; actually, it would be very difficult and undesirable to have an agenda."¹⁵⁰ Furthermore, even if the judges are not worried about

145. See generally Kimberly A. Moore, *Are District Judges Equipped to Resolve Patent Cases?*, 15 HARV. J.L. & TECH. 1, 27 (2001) (finding no difference in how Republicans and Democrats construe patent claims).

146. See Giles S. Rich, *Address to the American Inn of Court*, 76 J. PAT. & TRADE-MARK OFF. SOC'Y 320, 329 (1994) ("You think that Congress enacted the Patent Act of 1952. Congress as a whole didn't know a thing about the Patent Act of 1952. Most of them had never heard of it. Why? Because it was put on a consent calendar. It was a codification of the law. It wasn't controversial.").

147. Meador, *supra* note 4, at 17.

148. The line-ups in the recent cases are good examples. See, e.g., *MedImmune, Inc. v. Genentech, Inc.*, 127 S. Ct. 764 (2007) (Scalia opinion; Thomas dissent); *eBay, Inc. v. MercExchange, L.L.C.*, 547 U.S. 388 (2006) (Thomas opinion, Ginsburg and Scalia concurrence, Kennedy, Stevens, Souter, and Breyer concurrence); *Illinois Tool Works, Inc. v. Indep. Ink, Inc.*, 547 U.S. 28 (2006) (Stevens); *Lab. Corp. of Am. v. Metabolite Labs., Inc.*, 548 U.S. 124 (2006) (Breyer dissent from dismissal of cert.); *Merck KGaA v. Integra Lifesciences I, Ltd.*, 545 U.S. 193 (2005) (Scalia); *KSR Int'l Co. v. Teleflex Inc.*, 127 S. Ct. 1727 (2007) (Kennedy); *Microsoft Corp. v. AT&T Corp.*, 127 S. Ct. 1746 (2007) (Ginsburg opinion, Alito concurrence, Stevens dissent).

149. Matthew Sag et al., *The Effect of Judicial Ideology in Intellectual Property Cases* (July 2, 2007), available at <http://ssrn.com/abstract=997963>. Admittedly, there is some inconsistency between Moore's study, see *supra* note 145, and projections based on Sag's. However, the two researchers used different statistical methodologies. Furthermore, Moore looked only at claim construction; Sag counted all of the intellectual property cases considered by the Supreme Court. It could also be the case that by bending over backwards to avoid ideology, the Federal Circuit's decisions are—in fact—nonideological (but nonetheless suffer from a failure to elucidate policy).

150. Michel, *supra* note 134, at 764-65.

the views of the “attitudinal school” of political science,¹⁵¹ they may be concerned about appearing overly patent-friendly. For example, in the speech by Judge Lourie quoted above, he also made a point of saying, “I don’t think we are pro-patent,” and claiming that the court has never had a discussion on “whether we should be pro-patent or not.”¹⁵² Of course, noble as these goals may be, submerging—or ignoring—policy may not be the best way to achieve either neutrality or public acceptability. Even if it is appropriate to avoid ideology (or to avoid, as an ideology, the very idea that patents promote innovation), there are still many neutral questions on how to facilitate their use that the court ought to be deciding. Avoiding an “agenda” does not make adjudication more neutral, it just makes the law less accurate.¹⁵³

In addition to looking to the history of the court to explain its performance, it is also possible that the appointment process has produced judges with experiences different from those of regional jurists, and that these experiences shape the court’s output in an anomalous way.¹⁵⁴ The federal judiciary as a whole attracts judges from a diversity of backgrounds. Thus, the regional appellate benches include people with a rich assortment of talents and interests. Many practiced law. To Judge Posner, their decision to take a pay cut to ascend the bench presents economists with a challenge. He suggests that these judges are substituting another form of gratification for monetary compensation: they enjoy solving puzzles, and their new position allows them to resolve the legal inconsistencies and discontinuities that frustrated them as lawyers.¹⁵⁵ Other jurists spent their professional lives in academia, where they were acculturated to (or, perhaps, self-selected into) a tradition of teaching and scholarship—in other words, their experience lies in exploring and explicating doctrine, policy, and the-

151. *See, e.g.*, JEFFREY A. SEGAL & HAROLD J. SPAETH, *THE SUPREME COURT AND THE ATTITUDINAL MODEL* (1993).

152. Lourie, *supra* note 103.

153. For example, the doctrine of equivalents issue—which Judge Michel claims is never discussed—raises the question whether innovation is best promoted by narrow patents that can be invented around or by fuzzy patents that promote “leapfrogging.” *See, e.g.*, *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 234 F.3d 558, 640-41 (Fed. Cir. 2000) (Newman, J., dissenting in part). Focusing on the issue might help the court strike a better balance between notice and reward, and alleviate the problems it has had with over-reliance on the doctrine. *See supra* note 50 and accompanying text.

154. For a discussion of the impact of prior experience on judicial performance, see Howard, *supra* note 128; KLEIN, *supra* note 104; Cross, *supra* note 128; Gibson, *Judicial Behavior*, *supra* note 128.

155. Posner, *supra* note 128.

ory.¹⁵⁶ Some appointments come from the ranks of the trial courts. Having had the experience of trying to make sense of appellate law in order to apply it accurately, these judges appreciate the importance of high quality decisions.¹⁵⁷

The Federal Circuit's bench is composed quite differently from other Circuits. Because Congress has sought to prevent over-specialization, and because the court has power over several areas other than patent law, less than a third of the judges currently serving have substantial patent law experience.¹⁵⁸ Since the court was initially staffed from the Court of Customs and Patent Appeals (CCPA), some of the early judges did have a background in patents. However, that court's patent jurisdiction was limited to reviewing the PTO. Accordingly, the CCPA judges' most recent experiences were directed only at questions of patentability and not at issues concerning infringement or licensing.¹⁵⁹ As a result, there are few judges who have served on the Federal Circuit who came to the bench aware of problems in patent law and both eager and knowledgeable enough to figure out how to fix them. It should then be no surprise that, beyond early cases on validity issues like nonobviousness,¹⁶⁰ none of the judges has taken an entrepreneurial interest in patent law. Nor should it be startling that the court consigns accuracy to a backburner while concentrating on precision and precedent parsing, which appear to promote stability and at the very least give the judges an opportunity to learn the law.

Judges who do not begin with an interest in working through the problems in patent law can also be expected to prefer doctrines that will lead to easier, quicker, and faster decisions over resolutions that safeguard accuracy.¹⁶¹ And indeed, there are Federal Circuit decisions that appear heavily motivated by these considerations. One example is the court's position, prior to the Supreme Court's *Festo* decision, on the relationship between claim amendments and prosecution history estoppel, which would have

156. See Howard, *supra* note 128, at 131 (demonstrating that appellate judges from academia are among the most likely to rank writing reasoned decisions as a top priority in their judicial role).

157. See *id.* (demonstrating that trial judges form the other group likely to rank reasoned decisions as a high priority).

158. At present, four judges have substantial patent experience (Judges Linn, Lourie, Moore, and Newman). Judge Gajarsa was a patent lawyer for a brief time. See Dunner, *supra* note 6, at 11 n.6.

159. Dreyfuss, *Case Study*, *supra* note 5, at 13.

160. *Id.* at 14-17.

161. KLEIN, *supra* note 104, at 11 (suggesting that judges tend to balance speed against the values of sound decisionmaking and furthering the policies underlying the law).

significantly reduced the number of cases requiring analysis under the doctrine of equivalents.¹⁶² Another is its approach to multinational infringement cases, where it was willing to find that foreign activity infringed U.S. patent rights, but refused to streamline patent disputes by permitting the assertion of foreign claims in U.S. courts.¹⁶³ Applying U.S. law to foreign activity is certainly straightforward, but—as the Supreme Court held in its reversal of the Federal Circuit opinion—it violates the general rule against extraterritorial application of U.S. patent law.¹⁶⁴ In contrast, and despite what the Federal Circuit said in its opinion, consolidating foreign and domestic claims is likely permissible as a matter of international law, but it would clearly lead to some very difficult cases. Judge Michel's opposition to apportionment of damages appears to be similarly animated by concerns over the difficulty of making the required calculations.¹⁶⁵

By the same token, there are very few judges who came to the Federal Circuit from academia; indeed, only one who regularly taught or wrote about patent law, and she joined the court so recently that her presence has yet to be felt.¹⁶⁶ The absence of academics may account not only for the contours of the court's output; it can also help to explain the court's low regard for scholarship and its unwillingness to use scholarship as an alternative sounding board. Finally, the Federal Circuit's only trial court judges came from the CCPA and the Court of Claims.¹⁶⁷ Both courts had narrow jurisdictions, presenting few of the issues with which the regional district courts struggle. Their judges may therefore have come to the court with less of an appreciation for the need to fashion a cohesive jurisprudence.

162. *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 234 F.3d 558, 576 (Fed. Cir. 2000) (en banc) (holding that amendments to claims generally give rise to prosecution history estoppel and block use of the doctrine of equivalents).

163. *Compare* *AT&T Corp. v. Microsoft Corp.*, 414 F.3d 1366 (Fed. Cir. 2005) (applying U.S. law extraterritorially) *with* *Voda v. Cordis Corp.*, 476 F.3d 887 (Fed. Cir. 2007) (holding, in reliance on an implausible interpretation of the Paris Convention, that a trial court that accepted jurisdiction over a foreign patent claim abused its discretion under 28 U.S.C. § 1367).

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

165. Michel Letter, *supra* note 64.

166. Only Plager and Moore were academics; Plager's scholarship was in administrative law; Moore was appointed in 2006. A few judges teach as adjuncts. *See* United States Court of Appeals for the Federal Circuit, Judicial Biographies, <http://www.fedcir.gov/judgbios.html> (last modified Apr. 11, 2007). The experience of the adjunct professors is not, however, likely to lead to a greater interest in writing because publication is not required of adjuncts.

167. Of the current judges, Mayer and Rader were the only former trial court judges; both came from the Court of Claims. *See id.*

What the Federal Circuit does appear to have is an unusually high percentage of judges with a legislative background. Three of the judges on the current court worked for Congress,¹⁶⁸ and Giles Rich, one of the first judges, helped draft the 1952 Patent Act.¹⁶⁹ To these jurists, the idea of using their judicial position to improve the accuracy of the law may appear to inappropriately trench on the power of the legislature. Judge Rich's opinion in *State Street Bank & Trust Co. v. Signature Financial Group, Inc.*¹⁷⁰ is especially illuminating. In order to decide whether software and business methods should be considered patentable subject matter, Judge Rich might have considered whether inventors of software or business methods require patents to spur their ingenuity. He might also have noted how well these fields were faring without patents, pondered the absence of patent rights over business methods and software in economies comparable to that of the United States, and reflected on the problems the trial judge had foreseen in granting patents on business methods.¹⁷¹ Instead, he parsed the traditional common law limitations on patentable subject matter and rejected them, holding it "improper to read limitations into § 101 on the subject matter that may be patented where the legislative history indicates that Congress clearly did not intend such limitations."¹⁷² Much ink has since been spilled on the wisdom of that decision. Congress has already added one new provision to deal with the problems *State Street* has caused and is considering another;¹⁷³ the Supreme Court has signaled interest in the issue.¹⁷⁴ Even the Federal Circuit appears to be having second thoughts.¹⁷⁵

168. Judges Michel, Rader, and Prost worked in Congress. In addition, Judge Plager worked for the OMB. *See id.*

169. *See* Giles S. Rich, *Why and How Section 103 Came to Be*, 14 FED. CIR. B.J. 181 (2005); Rich, *supra* note 146.

170. 149 F.3d 1368 (Fed. Cir. 1998).

171. *See* *State St. Bank & Trust Co. v. Signature Fin. Group, Inc.*, 927 F. Supp. 502, 516 (D. Mass. 1996) (Saris, J.); *see generally* Rochelle Cooper Dreyfuss, *State Street or Easy Street: Is Patenting Business Methods Good for Business*, in *US INTELLECTUAL PROPERTY LAW AND POLICY 1* (Hugh Hansen ed., 2006).

172. *State St. Bank & Trust Co.*, 149 F.3d at 1373.

173. 35 U.S.C. § 273 (2000) protects prior users of patented business methods. Current reform proposals would eliminate patents on tax planning strategies. *See, e.g.*, H.R. 1908, 110th Cong. § 10 (2007).

174. *Lab. Corp. of Am. v. Metabolite Labs., Inc.*, 548 U.S. 124, 124 (2006) (Breyer, J., dissenting from dismissal of certiorari).

175. *See In re Nuijten*, 500 F.3d 1346 (Fed. Cir. 2007); *In re Bilski*, 2008 WL 417680 (Fed. Cir. Feb. 15, 2008) (granting an en banc hearing to consider the question of "[w]hether it is appropriate to reconsider *State Street* . . .")

2. Solutions

If this analysis of the Federal Circuit is apt, then the prescription for improvement may not be very dramatic. In some sense, the trick is patience. After all, the court is very young—in its entire history, it has had only one complete turnover of judges.¹⁷⁶ The first-generation jurists were right to establish the bona fides of the court and avoid attention. But the court is now fully established. There is little support for suggestions to disband it or to recreate it as a trial court. In fact, Congress has expanded its authority over the years.¹⁷⁷ Thus, there is no longer a need for the court to take defensive positions or to maintain a low profile. Now that the court is mature, it is time to press its position as a tribunal with special expertise and to fulfill its role as the near-final authority in patent matters.¹⁷⁸

Unfortunately, however, as the Mets, Red Sox, and Cubs have learned, bad karma can be enduringly bad karma.¹⁷⁹ It may be particularly difficult for subsequent appointees to internalize the change in the court's status. Because their mentors were all imbued with the need to build public support, new judges are inculcated with the same role orientation. Thus, just as it is said to take three generations to assimilate to a new country, it could take a third generation of jurists to assimilate the Federal Circuit to the general norms of the federal judiciary rather than to the unique needs of the Markey court. But it could take even longer. A newcomer who wants to buck the court's emphasis will often wind up in dissent. Thorough opinions (and dissents) take more time to write, and the others on the court may have little tolerance for delay.¹⁸⁰ Peer pressure to conform to existing approaches can be very strong and long-lasting.

But exogenous forces can be brought to bear to help the maturation process along. Patent law is now a popular course and the interest has

176. Mayer, *supra* note 82, at 761-62.

177. *See, e.g.*, Federal Courts Administration Act of 1992, Pub. L. No. 102-572, § 102(b), 106 Stat. 4506, 4506 (1992) (giving the Federal Circuit additional power, including the jurisdiction formerly exercised by the Temporary Emergency Court of Appeals).

178. *Cf.* J.H.H. Weiler, *The Rule of Lawyers and the Ethos of Diplomats*, 35 J. WORLD TRADE 191, 204 (2001) (suggesting that a reasonable time must pass before the "World Trade Court" (the Appellate Body of the WTO) is judged so that it has time to work out the right balance between "external" and "internal" legitimacy).

179. *Cf.* Larry Brooks, *Bad Karma at Shea*, N.Y. POST, Aug. 13, 2007, at 83, available at http://www.nypost.com/seven/08132007/sports/mets/bad_karma_at_shea_mets_larry_brooks.htm (discussing the karma in the Mets' clubhouse).

180. *See supra* text accompanying notes 161-165.

spread to upscale law schools.¹⁸¹ With an increasingly sophisticated bar, briefing should change, with or without the court's approval, and reinforce inclinations of the newer judges to push the court towards more accurate and higher quality decisionmaking. Of course, some practitioners will try to protect the status quo: after all, they have already put in the time to learn the current rules and have found success operating under them. But as newcomers enter the profession and others see the pitfalls in trying to change patent law legislatively, the bar may find the courage to ignore the court's admonitions and write the kind of briefs that lead to well-crafted legal doctrine.

Congress could also foster changes to the court's sensibilities. First and foremost, it must pay careful attention to the appointment process. With increasing demands for a patent professoriate, the population of patent scholars has also grown, leading to a larger cohort of academics from which to choose the next generation of judges. Similarly, there is now a cadre of practitioners whose experience is largely before the Federal Circuit: Congress would do well to consider appointments from this group, for they likely would have an appetite for solving the problems in the Federal Circuit's jurisprudence. Even more important is an elevation from a regional district court. Harold Wegner points out that the special residency requirement for serving on the Federal Circuit may pose an obstacle to such an appointment.¹⁸² Accordingly, he would have Congress repeal the requirement. That approach may, however, be less helpful than Wegner predicts. The goal, after all, is to change the culture of the Federal Circuit. A judge who commutes to the court for hearings is unlikely to exert much of an influence over the judges who see one another in chambers on a daily basis.

Congress could effectuate an even more dramatic change by revising the Federal Rules of Civil Procedure to give the Federal Circuit more power to review facts or power to decide when to review facts. As we saw, if the court were relieved of the need to supervise the district court's fact finding procedurally, it could concentrate harder on substance and develop new ways to execute its role in reviewing factual questions and, espe-

181. For example, U.S. News and World Report now rates UC Berkeley, Stanford, and George Washington as the top three law schools in intellectual property. These schools are rated 8th, 2nd, and 22nd overall. *See* AMERICA'S BEST GRADUATE SCHOOLS 44 (2008 ed.).

182. *See* 28 U.S.C. § 44(c) (2000) (“[E]ach circuit judge of the Federal judicial circuit . . . shall reside within fifty miles of the District of Columbia.”); Posting of Harold Wegner, wegner@foley.com, to undisclosed recipients (Mar. 12, 2007 09:56:51 EST) (on file with author).

cially, mixed questions of fact and law, such as nonobviousness and claim construction.

The Supreme Court could also influence the court's norms. The recent flurry of cases should alert the Federal Circuit to the need to improve accuracy. But it is equally likely that bad karma will prevail. In fact, there are ways in which the Federal Circuit appears somewhat defiant of Supreme Court intervention. For example, the Federal Circuit accepted the Court's reinstatement of the doctrine of equivalents so grudgingly that certiorari was granted on a second doctrine-of-equivalents case;¹⁸³ even now, it is unclear that the Federal Circuit supports its use.¹⁸⁴ The same fate may befall *KSR*, for some of the Federal Circuit judges are suggesting that the effect of the Supreme Court's decision, which was clearly meant to change nonobviousness law, will be "far less than you might think."¹⁸⁵ Accordingly, if the Supreme Court is serious about prodding the court to develop new norms of decisionmaking, it will likely have to decide a few more cases and write sharply worded opinions that clearly state what it sees as the problems and how it thinks the court should go about correcting them.¹⁸⁶

In addition, the Supreme Court might strengthen the Federal Circuit's capacity to do a better job with accuracy by helping it attract more academically oriented, as opposed to practitioner-oriented, law clerks. So far, only one Federal Circuit clerk has later served as a Supreme Court clerk. Because Federal Circuit judges are not regarded within the academy as "feeders," students aspiring to an academic career do not always apply. Were the Supreme Court to take a few Federal Circuit clerks, the status of the position would change and more academically oriented clerks might apply. If the judges on the Federal Circuit hired these clerks,¹⁸⁷ the court

183. See *Warner-Jenkinson Co., v. Hilton Davis Chem. Co.*, 520 U.S. 17 (1997); *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 535 U.S. 722 (2002).

184. Allison & Lemley, *supra* note 9, at 967, 970-71.

185. See Posting of Michael Factor to The IP Factor, Judge Rader Fights Back, Calling for the Federal Circuit to Define Patent Law, <http://blog.ipfactor.co.il/2007/05/31/judge-rader-fights-back-calling-for-the-federal-circuit-to-define-patent-law/> (May 31, 2007 19:12:00 GMT+2); Posting of Dennis Crouch to Patently-O, More Patently-O Tid-Bits, http://www.patentlyo.com/patent/2007/05/more_patentlyo_.html (May 22, 2007); see also *High Court's Patent Rulings on Obviousness Was Not Paradigm Shift, Judges Agree*, 74 PAT., TRADEMARK & COPYRIGHT J. (BNA) 690 (Oct. 12, 2007) (quoting Chief Judge Michel as saying that "not much has changed" after *KSR*).

186. Cf. Barton Beebe, *An Empirical Study of U.S. Copyright Fair Use Opinions, 1978-2005*, 156 U. PA. L. REV. 549 (2007), available at <http://ssrn.com/abstract=998421> (demonstrating the difficulties lower courts have discerning Supreme Court positions).

187. Whether the Federal Circuit is interested in academically oriented clerks is, of course, a different issue.

would be in a better position to understand the culture of scholarship and it might become less suspicious of the academic literature. Recruitment of Federal Circuit judges might also improve, for potential judges may currently see the difference in the clerkship pool as a reason to prefer a regional circuit appointment. The Supreme Court would also benefit from the practice, for the clerks with Federal Circuit experience could help the Court appreciate the unique problems the Federal Circuit encounters.

A Chief Judge sympathetic to the issues could also make a big difference.¹⁸⁸ Chief Judge Michel, for example, has made it a practice to invite district court judges to sit on the Federal Circuit by designation, where they can provide the court with their perspective on the implementability of circuit law.¹⁸⁹ The scope of their influence may be limited, however, for visiting district judges, like newcomers, may be diffident about asserting their views.¹⁹⁰ It is therefore also desirable for members of the Federal Circuit to sit by designation on district courts and regional circuits, where they could see the impact of Federal Circuit decisions first-hand and watch a different judicial culture in operation. Because statutory authority to designate judges for visits turns on whether the “business of that court so requires,”¹⁹¹ it may be difficult to engineer the importation of judges to the court at the same time that the court is exporting its judges to other benches. Nonetheless, Chief Judge Michel has apparently managed that task as well.¹⁹²

Other steps could also be taken. New York University’s Dwight D. Opperman Institute of Judicial Administration runs a program for newly

188. The rumor that the Federal Circuit used quirks in the Chief Judge rule, 28 U.S.C. § 45 (2000) (which disqualifies judges over age 64 from becoming a chief judge, but allows a chief judge to serve until the age of 70), to deny one judge the chief judgeship attests to the role that the Chief Judge can play.

189. See generally Richard B. Saphire & Michael E. Solimine, *Diluting Justice on Appeal? An Examination of the Use of District Court Judges Sitting by Designation on the United States Courts of Appeals*, 28 U. MICH. J.L. REFORM 351 (1995) (discussing pros and cons of using designated judges).

190. For problems with relying on judges sitting by designation, see Dreyfuss, *Continuing Experiment*, *supra* note 5, at 795-96; Saphire & Solimene, *supra* note 189, at 370-83.

191. See, e.g., 28 U.S.C. § 292 (2000).

192. For example, Judge Lourie recently sat on a regional circuit, *United States v. Brito*, 238 Fed. Appx. 857 (3d Cir. 2007), and Judge Denise Cote, from the Southern District of New York, sat on the Federal Circuit, *Digeo, Inc. v. Audible, Inc.*, 505 F.3d 1362 (Fed. Cir. 2007). Judge Rader has sat by designation as a district judge. E.g., *Loral Fairchild Corp. v. Victor Co. of Japan*, 911 F. Supp. 76 (E.D.N.Y. 1996); *Ristvedt-Johnson, Inc. v. Brandt, Inc.*, 805 F. Supp. 549 (N.D. Ill. 1992).

appointed appellate judges.¹⁹³ Among other things, the program helps judges reflect on their new roles and acculturates them to the traditions of the bench.¹⁹⁴ Many circuits use this program, but the Federal Circuit does not appear to have done so. Perhaps the court is using a similar program elsewhere, but if it is not, then it might be worthwhile to send judges for this sort of training to see whether it would foster new norms. In addition, regional circuits have occasionally convened task forces to help the judges consider troublesome issues. For example, Professor Stephen Burbank studied the use of Rule 11 for the Third Circuit,¹⁹⁵ and Professor Judith Resnick examined gender bias for the Ninth Circuit.¹⁹⁶ The Federal Circuit might consider such an appointment to help it ponder its changing institutional identity and transition from the mindset of an experiment to a full-fledged court, charged with primary responsibility over patent law.

IV. CONCLUSION

In its quarter-century of operation, the Federal Circuit has made great strides in improving the adjudication of federal patent disputes. On the whole, however, its contributions lie on the side of making patent law more determinate. It has done less well in using its expertise to keep patent law responsive to changing technological facts and emerging national interests. One explanation for the dichotomy is related to the court's position within the judicial hierarchy; as an appellate court, its power over fact-finding is constrained. As a tribunal with centralized authority over patent law, it lacks incentives to write persuasively.

Although a variety of changes have been proposed to improve the court's performance, time may be the real cure for its perceived ills. The Federal Circuit is only two generations old. Now that its credibility is solidified, it can be more proactive about developing procedural law that makes good use of its expertise. It can also shift its focus from meeting Congress's short-term uniformity and predictability objectives to assuming its role as the near-final authority in patent jurisprudence, responsible for crafting law that is responsive to the needs of the creative community and the users of knowledge products.

193. See NYU School of Law, Institute of Judicial Administration: Programs, <http://www.law.nyu.edu/institutes/judicial/programs/2004/new/> (last visited Mar. 9, 2008).

194. Judge Coffin's book, *ON APPEAL*, exemplifies the kind of work that new judges do in this environment. See COFFIN, *supra* note 128.

195. STEPHEN B. BURBANK, *RULE 11 IN TRANSITION: THE REPORT OF THE THIRD CIRCUIT TASK FORCE ON FEDERAL RULE OF CIVIL PROCEDURE 11* (1989).

196. Judith Resnick, *Gender Bias: From Classes to Courts*, 45 *STAN. L. REV.* 2195 (1993) (describing the Ninth Circuit Gender Bias Task Force).

Several steps can be taken to help the maturation process along. Foremost is appointing judges whose careers demonstrate an interest in writing and “displaying analytical prowess,” who would derive pleasure from playing the “‘game’ of judging.”¹⁹⁷ The next generation of jurists should, in other words, include lawyers who practiced before the Federal Circuit, who come to the bench knowing where the doctrinal and policy problems lie, and who are eager to take a hand in ironing them out. The appointment of district court judges with experience applying Federal Circuit law is also imperative. As the court changes, practitioners could consider more policy-oriented briefing. In addition, the Supreme Court has to decide whether the Federal Circuit is fish or fowl—just one more appellate court or a tribunal with a unique role in shaping patent law. If the former, it ought to make more explicit the direction that patent law should take. If the latter, it needs to reshape procedural law to take that role into account. Ultimately, however, it is up to the Federal Circuit judges themselves to fashion a court that is the premier expositor of patent jurisprudence.

197. Posner, *supra* note 128, at 19, 28.