



University of Richmond
UR Scholarship Repository

Law Faculty Publications

School of Law

2010

Determining Uniformity within the Federal Circuit by Measuring Dissent and En Banc Review

Christopher A. Cotropia

University of Richmond, ccotropi@richmond.edu

Follow this and additional works at: <http://scholarship.richmond.edu/law-faculty-publications>

 Part of the [Intellectual Property Law Commons](#)

Recommended Citation

Christopher A. Cotropia, *Determining Uniformity within the Federal Circuit by Measuring Dissent and En Banc Review*, 43 Loy. L.A. L. Rev. 801 (2010).

This Article is brought to you for free and open access by the School of Law at UR Scholarship Repository. It has been accepted for inclusion in Law Faculty Publications by an authorized administrator of UR Scholarship Repository. For more information, please contact scholarshiprepository@richmond.edu.

DETERMINING UNIFORMITY WITHIN THE FEDERAL CIRCUIT BY MEASURING DISSENT AND EN BANC REVIEW

*Christopher A. Cotropia**

This Article adds to the empirical literature examining how the Federal Circuit treats patent-law issues internally by comparing the decision making of the Federal Circuit with that of other courts of appeals. It does so by measuring two statistics from overall written opinions: the percentage of dissents and the percentage of en banc reviews. The data is taken from the Third, Fifth, Ninth, Tenth, District of Columbia, and Federal Circuits between 1998 and 2009. The data in the study show that the Federal Circuit has the second-highest percentage of dissents among the circuits studied (behind only the Ninth Circuit) and that it has a percentage of en banc review statistically indistinguishable from three of the other circuits studied. Based on these results, the Federal Circuit does not appear to be a court of a single-mind, as some commentators have suggested, at least as compared to other circuits. Rather, there is a good deal of dissent compared to other courts of appeals. This suggests that there are diverse views among Federal Circuit judges and that these judges are willing to play an active and vocal role in the law's development.

* Professor of Law, Intellectual Property Institute, University of Richmond Law School. Thanks to Dawn-Marie Bey, Rochelle Dreyfuss, Arthur Hellman, Jim Gibson, Judge S. Jay Plager, and Jack Preis for their comments on an earlier version of this Article. Special thanks to Lee Petherbridge and the *Loyola of Los Angeles Law Review* staff, particularly Amanda Sherman, for giving me the opportunity to present this paper at the symposium "The Federal Circuit as an Institution." Special thanks also to the participants at the symposium for their comments.

TABLE OF CONTENTS

I. INTRODUCTION	803
II. BACKGROUND	804
A. Creation of the Federal Circuit and the Quest for Uniformity.....	804
B. The Critique of Too Much Uniformity	806
C. Previous Empirical Studies on the Level of Uniformity..	808
III. STUDY.....	809
A. Scope.....	809
1. Dissents	810
2. En Banc Reviews	813
B. Results.....	815
1. Dissents.....	815
2. En Banc Reviews	816
IV. IMPLICATIONS.....	818
A. Comparatively High Percentage of Dissents	818
B. Comparatively Low Percentage of En Banc Reviews	821
V. CONCLUSION.....	824

I. INTRODUCTION

One of the major critiques of the U.S. Court of Appeals for the Federal Circuit is a structural one. Since the Federal Circuit is the sole appellate court for a variety of legal areas (particularly patent law),¹ the court's decision making becomes stagnant and entrenched. As a result, the court has "retarded the pace of common law development in some important ways."² This Article seeks to empirically test this premise.

Scholars such as Lee Petherbridge have previously tested this assumption by examining how the court internally treats specific patent law issues.³ This Article adds to this investigation by taking a different, more macro approach: performing a comparison of the Federal Circuit's decision making with the decision making of other courts of appeals. The Article measures two metrics that provide insight into how entrenched current thinking is in a given circuit: the percentages of dissents⁴ and of en banc reviews⁵ in overall written opinions. This Article analyzes these metrics for the Federal Circuit and for five other circuits—the Third, Fifth, Tenth, Ninth, and District of Columbia (D.C.) Circuits—from 1998 to 2009.⁶

The data reveal two results. First, the Federal Circuit experiences the second highest percentage of dissents among the circuits studied, behind only the Ninth Circuit.⁷ Second, the Federal Circuit's percentage of en banc review is relatively low but

1. See 28 U.S.C. § 1295(a) (2006).

2. 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).

3. See, e.g., Lee Petherbridge, *Patent Law Uniformity?*, 22 HARV. J.L. & TECH. 421 (2009) (studying the uniformity of the Federal Circuit, focusing particularly on the court's doctrine of equivalents jurisprudence); see also R. Polk Wagner & Lee Petherbridge, *Is the Federal Circuit Succeeding? An Empirical Assessment of Judicial Performance*, 152 U. PA. L. REV. 1105 (2004) (looking at the Federal Circuit's claim interpretation case law).

4. See *infra* notes 48–52 and accompanying text.

5. Judge Plager and Lynne Pettigrew mention en banc review as a mechanism by which precedent can change in a court of exclusive appellate jurisdiction. S. Jay Plager & Lynne Pettigrew, *Rethinking Patent Law's Uniformity Principle: A Response to Nard and Duffy*, 101 NW. U. L. REV. 1735, 1753–54 (2007).

6. For a study employing a similar approach with respect to indeterminacy in the Federal Circuit, see Jeffrey A. Lefstin, *The Measure of the Doubt: Dissent, Indeterminacy, and Interpretation at the Federal Circuit*, 58 HASTINGS L.J. 1025 (2007) (comparing dissent rates between the Federal Circuit and other circuits on questions of indeterminacy in legal interpretation).

7. See *infra* Part III.B.1.

statistically indistinguishable from those of three other circuits studied.⁸ Implications of these results are discussed in more detail below, but one thing is fairly clear: the data suggest that the Federal Circuit is no more lacking in jurisprudential diversity than other circuits and, considering dissents, is significantly more internally diverse in viewpoints regarding the outcomes of individual cases.

II. BACKGROUND

A. *Creation of the Federal Circuit and the Quest for Uniformity*⁹

The U.S. Court of Appeals for the Federal Circuit was created in 1982.¹⁰ Congress formed the Federal Circuit in response to a perceived crisis in the federal courts system and, more particularly, in the judicial handling and development of patent law.¹¹ Prior to the creation of the Federal Circuit, patent cases, while within the original jurisdiction of the federal district courts, were appealed to the appropriate regional circuit.¹² Certain patent issues could also be decided by the Court of Customs and Patent Appeals (CCPA),¹³ which had exclusive jurisdiction over appeals from decisions made by the U.S. Patent and Trademark Office (USPTO).¹⁴ The CCPA did

8. See *infra* Part III.B.2.

9. This part is adapted from an earlier article I authored. See Christopher A. Cotropia, "Arising Under" Jurisdiction and Uniformity in Patent Law, 9 MICH. TELECOMM. & TECH. L. REV. 253, 259–61 (2003).

10. Federal Courts Improvement Act of 1982, Pub. L. No. 97-164, 96 Stat. 25 (codified as amended in scattered sections of 28 U.S.C.).

11. See, e.g., H.R. REP. NO. 97-312, at 20–23 (1981); S. REP. NO. 97-275, at 1, 5–6 (1981), reprinted in 1982 U.S.C.C.A.N. 11, 11, 15–16; Commission on Revision of the Federal Court Appellate System, Structure and Internal Procedure: Recommendations for Change, reprinted in 67 F.R.D. 195, 213–16, 361–76 (1975) [hereinafter Hruska Commission]; Thomas H. Case & Scott R. Miller, *An Appraisal of the Court of Appeals for the Federal Circuit*, 57 S. CAL. L. REV. 301, 301 (1984); Rochelle Cooper Dreyfuss, *The Federal Circuit: A Case Study in Specialized Courts*, 64 N.Y.U. L. REV. 1, 6–8 (1989); Emmette F. Hale, III, *The "Arising Under" Jurisdiction of the Federal Circuit: An Opportunity for Uniformity in Patent Law*, 14 FLA. ST. U. L. REV. 229, 238–41 (1986). There are those who contest this history as to why Congress created the Federal Circuit. See, e.g., Cecil D. Quillen, *Innovation and the U.S. Patent System*, 1 VA. L. & BUS. REV. 207, 226–30 (2006).

12. See 28 U.S.C. § 1294 (1976) (indicating that, prior to the creation of the Federal Circuit, patent cases appealed from district courts went to regional circuits); see also H.R. REP. NO. 97-312, at 23–24 (stating that patent appeals from district courts will go to the Federal Circuit instead of to the regional circuit).

13. H.R. REP. NO. 97-312, at 19, 23–24 (noting that patent issues could also be decided by the Court of Claims).

14. See, e.g., Dreyfuss, *supra* note 11, at 6.

not have appellate review jurisdiction over claims of patent infringement filed in district court, leaving the decisions on patent enforcement to be made by regional circuits.¹⁵ With this division of labor between the CCPA and regional circuits, some regional circuits' patent law differed greatly from that of the CCPA and the USPTO.¹⁶

Further division on patent law issues arose among the regional circuits themselves. The handling of patent appeals by multiple circuits led to circuit splits on different patent law issues.¹⁷ Certain regional circuits gained a reputation as being pro-patentee, while other circuits were perceived as being patent unfriendly.¹⁸ The U.S. Supreme Court's docket was overloaded, and the number of patent cases in which the Court granted certiorari was dwindling.¹⁹ The CCPA, while a central location for all appeals from USPTO administrative decisions, had little to no influence on the decisions of the regional circuits on nonadministrative patent issues.²⁰ The handling of patent appeals by regional circuits, coupled with the Supreme Court's inability to resolve conflicts among the circuits due to docket overload, created a lack of uniformity in patent law across the United States.²¹ The fact that certain circuits were both doctrinally and statistically beneficial for the alleged infringer, while others were not, led to forum shopping by patentees and alleged infringers.²² Parties commonly raced each other to the courthouse,

15. See, e.g., Dawn-Marie Bey & Christopher A. Cotropia, *The Unreasonableness of the Patent Office's "Broadest Reasonable Interpretation" Standard*, 37 AIPLA Q.J. 285, 298 n.65 (2009).

16. See, e.g., *Graham v. John Deere Co.*, 383 U.S. 1, 18 (1966) (noting that there was "a notorious difference between the standards [of patentability] applied by the Patent Office and by the courts").

17. See H.R. REP. NO. 97-312, at 20-23; Hruska Commission, *supra* note 11, at 361-76.

18. See H.R. REP. NO. 97-312, at 20-21 (noting that some circuits were considered pro-patent and others anti-patent); Hruska Commission, *supra* note 11, at 370 (noting that "[p]atentees now scramble to get into the 5th, 6th and 7th circuits since the courts there are not inhospitable to patents whereas infringers scramble to get anywhere but in these circuits"); see also Dreyfuss, *supra* note 11, at 6-7 ("Statistics demonstrate that in the period 1945-1957, a patent was twice as likely to be held valid and infringed in the Fifth Circuit than in the Seventh Circuit, and almost four times more likely to be enforced in the Seventh Circuit than in the Second Circuit.").

19. See Hruska Commission, *supra* note 11, at 209-10, 214-15, 220.

20. See Dreyfuss, *supra* note 11, at 6.

21. See H.R. REP. NO. 97-312, at 20-21; S. REP. NO. 97-275, at 3 (1981), *reprinted in* 1982 U.S.C.C.A.N. 13.

22. See H.R. REP. NO. 97-312, at 20-21; Hruska Commission, *supra* note 11, at 220, 370.

each trying to file its case first in the forum most favorable to it, exacerbating the disjointedness in patent doctrine among circuits.²³

In the early 1980s, Congress set out to remedy these perceived problems in the patent system. The Hruska Commission, which studied the caseload crisis in the federal courts, suggested a patent court to sit between the regional circuits and the Supreme Court.²⁴ Congress relied on the results of the commission's study but adopted a different solution: creating a single forum for hearing patent appeals, both from district courts and the USPTO, and sitting at the same level as the other regional courts of appeals.²⁵ The court, named the U.S. Court of Appeals for the Federal Circuit, would assume the jurisdiction of the CCPA and obtain jurisdiction over appeals from patent cases before federal district courts.²⁶

Congress believed that the Federal Circuit, being “[a] single court of appeals for patent cases[,] [would] promote certainty where it [was] lacking to a significant degree and [would] reduce, if not eliminate, the forum-shopping that” existed at the time.²⁷ In other words, the Federal Circuit was created to bring uniformity to the development and application of U.S. patent law.

B. *The Critique of Too Much Uniformity*

One of the critiques related to the Federal Circuit is that Congress was, in a way, too successful—the Federal Circuit creates too much uniformity in patent law.²⁸ For example, Craig Nard and John Duffy recently articulated the concern that “[t]he Federal

23. H.R. REP. NO. 97-312, at 21; Hruska Commission, *supra* note 11, at 220, 370; *see also* Dreyfuss, *supra* note 11, at 6–7 (noting “that forum shopping was rampant” and led to bitter fights over venue transfers).

24. Hruska Commission, *supra* note 11, at 236–47; Case & Miller, *supra* note 11, at 302. Some disagree with the Hruska Commission's proposal. *See, e.g.*, Quillen, *supra* note 11, at 227–29.

25. *See* H.R. REP. NO. 97-312, at 18; S. REP. NO. 97-275, at 2–3.

26. *See* H.R. REP. NO. 97-312, at 18–19; S. REP. NO. 97-275, at 2–3. Note that in addition to exclusive jurisdiction over patent cases, the Federal Circuit has other areas of appellate jurisdiction. *See* H.R. REP. NO. 97-312, at 18.

27. H.R. REP. NO. 97-312, at 22; *see also* S. REP. NO. 97-275, at 5 (“The establishment of the court of appeals for the Federal Circuit also provides a forum that will increase doctrinal stability in the field of patent law.”).

28. There is also a common critique that runs in the other direction—that Federal Circuit law is too disjointed, with conflict between many panel decisions and multiple inconsistencies in patent law doctrine. *See, e.g.*, Kevin Collins, *Enabling After-Arising Technology*, 34 J. CORP. L. 1083, 1087 n.18 (2009) (collecting citations critiquing the internal consistency of the Federal Circuit's enablement case law).

Circuit has been accused of producing an isolated and sterile jurisprudence.”²⁹ There are many reasons for this possible uniformity. First, the judges’ chambers are in a singular location, the same location where the court hears cases.³⁰ Second, the judges must live within fifty miles of the court’s Washington, D.C., location.³¹ As a result, many of the court’s judges resided and worked inside the Beltway before joining the court. Third, the court addresses a singular, finite subject matter, and it is the only appellate court that addresses that subject matter.³² This specialized and exclusive jurisprudence insulates the court.³³ All of these factors place the court in, essentially, a closed universe where there is even “a closed cycle between the court and the attorneys who practice before it.”³⁴ Stare decisis then entrenches this myopic view of patent law, and the court’s other exclusive areas of jurisdiction, forcing future panels to follow the same, close-minded view of a previous panel. As a result, there is “less percolation [and] less chance of experimentation” on the legal issues heard by the Federal Circuit.³⁵

The law that results from such extreme uniformity is single-minded and changes infrequently. Many critics see this result as incredibly unsatisfactory, particularly because, in their view, the embedded legal regime is harmful to society.³⁶ Most critics focus on the court’s patent law jurisprudence, blaming the Federal Circuit’s single-mindedness and lack of innovation on the subject as one of the main reasons the patent system is so damaged.³⁷ These critics

29. Craig Nard & John Duffy, *Rethinking Patent Law’s Uniformity Principle*, 101 NW. U. L. REV. 1619, 1620–21 (2007).

30. See U.S. Court of Appeals for the Fed. Circuit: About the Court, <http://www.cafc.uscourts.gov/about.html> (“The court is located in the Howard T. Markey National Courts Building on historic Lafayette Square in Washington, D.C.”) (last visited Feb. 2, 2010).

31. 28 U.S.C. § 44(c) (2006) (requiring all Federal Circuit judges to “reside within fifty miles of the District of Columbia”).

32. See 28 U.S.C. § 1295(a) (2006) (defining the exclusive jurisdiction of the Federal Circuit). Recent cases have eroded this exclusivity. See *Holmes Group, Inc. v. Vornado Air Circulation Sys., Inc.*, 535 U.S. 826, 834 (2002); Cotropia, *supra* note 9, at 286–302 (explaining how the *Holmes* decision disturbed the Federal Circuit’s exclusive jurisdiction).

33. Nard & Duffy, *supra* note 29, at 1622–24.

34. *Id.* at 1622.

35. Rader, *supra* note 2, at 4.

36. See, e.g., Quillen, *supra* note 11, at 218–25 (noting the effects of increased innovation costs caused by the Federal Circuit’s lowered patentability standards).

37. See, e.g., Nard & Duffy, *supra* note 29, at 1620–22.

contend that the court's groupthink on patent issues has created a patent system that is incredibly one-sided, favoring patentees in particular. The resulting jurisprudence ultimately has a negative effect on innovation in the United States and abroad.³⁸

*C. Previous Empirical Studies on the
Level of Uniformity*

One question this critique presents is whether there is empirical proof that the court's jurisprudence results in uniformity and an accompanying lack of diversity on patent law issues at the Federal Circuit. As Federal Circuit Judge S. Jay Plager and Lynne Pettigrew so aptly put it, there is "no showing" of this fundamental assumption by critics.³⁹

Studies that attempt to prove that the Federal Circuit is pro-patentee mainly aim to show that the Federal Circuit rarely finds patents invalid. One example is Glynn Lunney's study of Federal Circuit's nonobviousness jurisprudence in 2001.⁴⁰ Lunney's study spanned eight different years over a fifty-year period and examined the percentage of patents found invalid by the Federal Circuit, and its predecessor court and regional circuits, due to a finding of obviousness.⁴¹ The study revealed a drop in the percentage of patents found obvious in the later years, and Lunney attributed this drop to the introduction of the Federal Circuit and the doctrinal changes to nonobviousness that the court introduced.⁴²

These types of studies have little use for the uniformity question. While the ultimate result may be uniform—here, a low nonobviousness standard—this does not mean that the actual standard being used by the court did not evolve over time, albeit to lower the nonobviousness requirement. Nor does it mean that the court was actually uniform in its recitation and application (other than producing a similar final result of invalidity). These studies

38. John R. Thomas, *Formalism at the Federal Circuit*, 52 AM. U. L. REV. 771, 773 (2003); see Nard & Duffy, *supra* note 29, at 1622.

39. See S. Jay Plager & Lynne E. Pettigrew, *Rethinking Patent Law's Uniformity Principle: A Response to Nard and Duffy*, 101 NW. U. L. REV. 1735, 1756 (2007).

40. See Glynn S. Lunney Jr., *E-Obviousness*, 7 MICH. TELECOMM. & TECH. L. REV. 363, 370–75 (2001).

41. See *id.* at 371 n.34, 372 n.36 (using previous studies to obtain data for the six pre-Federal Circuit data points and collecting data for the final two Federal Circuit data points).

42. See *id.* at 372–80 (citing both the suggestion test and elevation of secondary considerations as the doctrinal changes responsible for the reduction in obvious findings).

focus on the outcome, as opposed to the particulars of the development of jurisprudence within the court.⁴³

Others have dug deeper into Federal Circuit doctrine. In 2004, Polk Wagner and Lee Petherbridge studied the Federal Circuit's claim interpretation, finding differing methodological approaches by various members of the court.⁴⁴ While not the main goal of the authors, such a result shows a lack of uniformity at least in the application of patent doctrine. In 2009, Petherbridge looked at the Federal Circuit's doctrine of equivalents jurisprudence with the specific goal of testing Nard and Duffy's hypothesis of uniformity in Federal Circuit doctrine.⁴⁵ Petherbridge found a great deal of "jurisprudential diversity" regarding the doctrine.⁴⁶ In fact, as he notes, "the results of this study at least allow for the opposite interpretation [from Nard and Duffy's]: Federal Circuit jurisprudence might be too diverse."⁴⁷

III. STUDY

A. Scope

All of the previous studies are important and provide insight into how insular and homogeneous the Federal Circuit is. This study hopes to add to this understanding by looking at uniformity on a macro level. Thus, this study examines how diverse the Federal Circuit's legal views are, regardless of subject matter or even a particular doctrine within a subject area. Such a study will hopefully, in conjunction with those studies done before, provide an even more complete picture about the jurisprudential diversity, or lack thereof, of the Federal Circuit.

The study takes this macro level look by measuring two occurrences—dissents and en banc review. As explained in more

43. Such a focus is not surprising given that these studies are looking at measuring not uniformity but rather the substantive impact the court's jurisprudence has on patents and society.

44. See R. Polk Wagner & Lee Petherbridge, *Is the Federal Circuit Succeeding? An Empirical Assessment of Judicial Performance*, 152 U. PA. L. REV. 1105, 1125–26, 1129–36, 1171–72 (2004).

45. See Lee Petherbridge, *Patent Law Uniformity?*, 22 HARV. J.L. & TECH. 421, 427–28 (2009).

46. *Id.* at 428.

47. *Id.*

depth below, the presence of these two objective markers is evidence of diversity, at some level, among the judges of an appellate court.

1. Dissents

The first category of data taken is the number of dissents within a circuit. More particularly, the study measures the proportion of dissents to written decisions.

Dissents are relevant to the question of uniformity because they are, at their most basic, disagreements among judges.⁴⁸ Dissents show a division among the judges of a court, specifically those on a particular panel, on a given legal issue.⁴⁹ Dissents at the appellate level are usually the result of disagreement as to what the law is or as to the application of the law to the given facts of a particular case.⁵⁰ Because of the standards of review in play,⁵¹ dissents are rarely disagreements about the facts of a particular case. Dissents show that the “appellate bench is not of one mind” and that “monolithic solidarity” does not exist on a given court.⁵²

Additionally, dissents are said to maintain a court’s “intellectual vibrancy,” communicating differing legal ideas to those within and outside the court.⁵³ Commentators have identified dissents as part of “law[’s] laboratory”⁵⁴ and as “an antidote for judicial lethargy.”⁵⁵ A dissent signals to litigants the narrowness of the majority’s holding and the possibility that small changes in the facts can change the results.⁵⁶ Dissents also can form the basis for a change in the law within the circuit or at the legislative level.⁵⁷

48. See Stanley H. Fuld, *The Voices of Dissent*, 62 COLUM. L. REV. 923, 926 (1962); Arthur D. Hellman, *Precedent, Predictability, and Federal Appellate Structure*, 60 U. PITT. L. REV. 1029, 1038–43 (1999) (using dissents to measure the level of unpredictability in the courts).

49. Fuld, *supra* note 48, at 926–27.

50. See Martha J. Dragich, *Once a Century: Time for a Structural Overhaul of the Federal Courts*, 1996 WIS. L. REV. 11, 59 n.277 (1996) (“The courts of appeals essentially apply a two-tiered standard of review now: *de novo* review (for questions of law) and a more deferential standard, such as abuse of discretion (for review of factual determinations and conduct of the trial.)” (citation omitted)).

51. See *id.*

52. See Robert G. Flanders Jr., *The Utility of Separate Judicial Opinions in Appellate Courts of Last Resort: Why Dissents Are Valuable*, 4 ROGER WILLIAMS U. L. REV. 401, 406 (1999).

53. *Id.* at 407.

54. See *id.*

55. Fuld, *supra* note 48, at 927.

56. *Id.*

57. *Id.*

This study determined the number of dissents and written opinions the Federal Circuit and five other circuit courts issued per year, on a fiscal year basis (October to September), from 1998 to 2009.⁵⁸ The number of dissents and the number of written opinions were obtained by electronic searches on Westlaw.⁵⁹

The study counted dissents as a singular event for every opinion that included a dissent. Thus, even if there were multiple dissents to a single written opinion, these dissents were collectively counted as a single dissent. This does have the potential for undercounting the level of disagreement. But the occurrence of two dissents to a single panel opinion is extremely rare at the intermediate appellate court level given that most panels are composed of three judges and multiple dissents would therefore actually constitute a majority.⁶⁰

One other important point about the data collected is that dissents were counted if they appeared in *any* written opinion available on Westlaw, whether in an opinion selected for publication or in one that was not.⁶¹ Also, the study counted dissents that appeared in written opinions in non-merit-based situations.⁶² The study included the full range of dissents because the study views dissents as external markers of disagreement among the judges in a given circuit. Regardless of whether a decision was published, unpublished, or made by a motions panel, a dissent in that case indicates disagreement within the court.

58. The other circuits are the Third, Fifth, Ninth, Tenth, and D.C. Circuits. While the Fifth, Ninth, and Tenth Circuit were chosen at random, the Ninth and D.C. Circuits were purposely chosen. The Ninth Circuit was chosen because of its notoriety for a high level of discord within the circuit. See Robert A. Katz, *The Jurisprudence of Legitimacy: Applying the Constitution to U.S. Territories*, 59 U. CHI. L. REV. 779, 779 (1992). The D.C. Circuit was chosen because of the characteristics it shares with the Federal Circuit—singular location and somewhat specialized jurisdiction in administrative law. See 47 U.S.C. § 402(b) (2006) (establishing the D.C. Circuit’s jurisdiction over a number of administrative law matters).

59. The existence of a dissent during the fiscal year 2008–2009, for example, was determined by the following search: “dis(judge) & da(aft 9/30/2008 & bef 10/1/2009)”. Essentially, every dissent has an author, a “judge,” associated with it. For the number of written opinions during the 2008–2009 fiscal year, the following search was used: “da(aft 9/30/2008 & bef 10/1/2009) & court.” The additional term “court” is added because Westlaw does not allow date only searches, and the term “court” appears in all opinions because they originate from a court of appeals.

60. 28 U.S.C. § 46(c) (2006) (noting that court of appeals shall determine cases with “not more than three judges”). However, en banc decisions include more than three judges, and there may be any number of dissents. *Id.*

61. See FED. R. APP. P. 32.1(a) (stating that courts of appeals cannot prohibit citation to “unpublished” or “non-precedential” decisions).

62. For example, dissents to orders were counted as “dissents” for this study’s purposes.

To properly compare circuits, a metric was necessary to normalize the number of dissents in a given circuit. Without a determination of the proportion of dissents to the opportunities to dissent, it would be impossible to compare circuits because of the varied workloads among courts of appeals. Thus, this study used the number of written decisions appearing on Westlaw as the base for any given circuit.⁶³ As with the data on dissents, the number of written opinions included all available written opinions. This included published and unpublished decisions, summary affirmances,⁶⁴ and decisions on procedural matters.

There was an alternative source of data for this study. The Administrative Office of the U.S. Courts (AO) produces an annual report entitled *Annual Report of the Director*.⁶⁵ This report includes, among other things, the number of cases terminated by each court of appeals per fiscal year.⁶⁶ The AO report also includes the number of merits terminations per year.⁶⁷

This study uses the Westlaw data instead of the AO data for two reasons. First, the AO report does not count dissents, and once Westlaw is used to collect one set of data, consistency dictates using the same database for related data. Second, the AO report does not clarify the meaning of “termination” of an appealed case or, more importantly, of “merit-based” termination of a case.⁶⁸ The concept of merits decisions seems too narrow for this study, given that discord in non-merit-based situations is still evidence of discord and should be included. Additionally, the total number of terminations seems too broad given that this data could include terminations in situations in which judges never had the opportunity to voice disagreement.⁶⁹

For the Federal Circuit, the data were further coded to identify which of the opinions and dissents were in patent cases. The study

63. See note 59, *supra*, for a description of how the number of written opinions was obtained.

64. See FED. CIR. R. 36 (identifying the Federal Circuit’s procedure to affirm without opinion).

65. See, e.g., ADMIN. OFFICE OF THE U.S. COURTS, 2008 ANNUAL REPORT OF THE DIRECTOR: JUDICIAL BUSINESS OF THE UNITED STATES COURTS (U.S. Gov’t Printing Office 2009), available at <http://www.uscourts.gov/judbus2008/JudicialBusinesspdfversion.pdf>.

66. See, e.g., *id.* at 42 tbl.S-1.

67. See, e.g., *id.* at 43 tbl.S-2.

68. See, e.g., *id.*

69. For example, cases could be terminated because parties settled or because the clerk’s office rejected an appeal for improper filing.

defined “patent case” broadly to include any case involving a patent law issue, no matter how tangential that issue was to the main issues in the case,⁷⁰ rather than focusing solely on determinations of patent infringement or patent invalidity. The aim of this search was to get specific data on the level of uniformity on patent issues, which is of particular interest to those examining uniformity within the Federal Circuit.⁷¹

2. En Banc Reviews

The second category of data taken is the number of en banc reviews within a circuit. More particularly, this study measures the proportion of en banc reviews to written decisions.

Under the Federal Rules of Appellate Procedure, an “en banc hearing or rehearing is not favored and ordinarily will not be ordered unless: (1) en banc consideration is necessary to secure or maintain uniformity of the court’s decisions; or (2) the proceeding involves a question of exceptional importance.”⁷² Tracey George noted multiple theories for such review in her empirical study of the reasons en banc review is granted.⁷³ Of importance to this Article, she noted that both intracircuit conflict—a conflict among panel opinions and judges on a legal issue—and the existence of dissenting judges on a legal issue can be reasons for en banc review.⁷⁴ Indeed, George found that there was a statistically significant relationship between both intracircuit conflict and the existence of a dissenting judge on an earlier panel and the grant of en banc review.⁷⁵

70. The search was done electronically, looking for any use of the term “patent” in the majority opinion or dissenting opinion, using the following search: “op(patent!) dis(patent!) & da(aft 9/30/1998 & bef 10/1/2009).” In addition, to ensure the recording of summary affirmances under Rule 36, an electronic search was done to determine where the underlying opinion was being appealed from. This is based on the assumption that most patent cases come from the U.S. Patent and Trademark Office, the U.S. district courts, and the International Trade Commission. An example of such a search is “(r.36) & (appeal /4 (‘united states district court’ ‘international trade commission’ ‘united states patent and trademark office’) & da(aft 9/30/1998 & bef 10/1/2009))”. This search has the potential to be overinclusive by including, for example, Rule 36 affirmances of trademark appeals. However, the number of unintended results is likely low. Regardless, any error would push the results more toward evidence of uniformity, because it would dilute the percentage of dissents.

71. *See supra* Part II.B.

72. FED. R. APP. P. 35(a).

73. Tracey E. George, *The Dynamics and Determinants of the Decision to Grant En Banc Review*, 74 WASH. L. REV. 213 (1999).

74. *Id.* at 249.

75. *Id.* at 254, 259–60.

This relationship makes en banc review relevant to the question of uniformity. If the Federal Circuit has a high level of uniformity on a legal issue, and thus little intracircuit conflict and few dissenting opinions on that issue, then there should be little en banc review. There would be no need.

This study collected data on the granting of en banc review in a slightly different manner than that regarding dissents. Instead of obtaining the data from electronic Westlaw searches, the study used data from the AO report.⁷⁶ The time period for which data were collected ran from 1998 to 2009.⁷⁷

The analysis of the en banc data used the same base for comparison as did the dissent analysis: the number of written opinions by the given circuit during the defined time period as collected on Westlaw. While using a combination of AO and Westlaw data violates the consistency standard mentioned above with respect to dissents,⁷⁸ the results are more accurate because almost all written decisions are instances in which en banc review is a viable option.⁷⁹ By contrast, using a narrower base provided in the same AO data, such as the number of petitions for rehearing en banc, would fail to take into account the ability for a circuit to go en banc sua sponte.⁸⁰ Alternatively, a broader base, such as the number of total terminations or merit terminations, would include situations in which en banc review was not available. Still, there remains the potential for undercounting opportunities for en banc review because unwritten decisions still present instances where en banc review is possible.

76. The Federal Circuit data were obtained from the court's Web site, since the data are not directly available in the AO report. See U.S. COURT OF APPEALS FOR THE FED. CIRCUIT, PETITIONS FOR REHEARING FILED AND GRANTED, available at <http://www.cafc.uscourts.gov/pdf/PetitionsforRehearingFiledandGranted99-08.pdf>.

77. The latest AO report available is the 2009 report, which is available at <http://www.uscourts.gov/judbususc/judbus.html>.

78. See *supra* Part III.A.1.

79. See FED. R. APP. P. 35(a).

80. See, e.g., *Abbott Labs. v. Sandoz, Inc.*, 566 F.3d 1282, 1291 n.1 (Fed. Cir. 2009) (en banc) (going en banc sua sponte for a portion of the opinion).

B. Results

1. Dissents

Using the data described above, this study first calculated the percentage of total opinions that included a dissent. Table 1 below reports the total number of written opinions, the total number of dissents, and the resulting percentage of dissents over the full period studied, 1998–2009.⁸¹

TABLE 1

	Third Circuit	Fifth Circuit	Ninth Circuit	Tenth Circuit	D.C. Circuit	Federal Circuit
Total Number of Opinions	18,580	38,653	53,177	16,587	7,832	15,319
Total Number of Dissents	432	439	2424	422	234	538
Percentage of Dissents	2.33%	1.14%	4.56%	2.54%	2.99%	3.51%

Only the Ninth Circuit, with a dissent rate of 4.56 percent, had a higher dissent rate than the Federal Circuit, with 3.51 percent. The D.C. Circuit, with 2.99 percent, was just behind the Federal Circuit. The difference in dissent rates between the Federal Circuit and the Ninth Circuit⁸² and the difference between the Federal Circuit and the D.C. Circuit⁸³ are statistically significant.⁸⁴

81. This data can also be viewed as a function of time (and was collected in such a manner); however, for the purposes of this Article such information is not particularly relevant.

82. Using Pearson's chi-squared test yields a P value of less than 0.0001. Pearson's chi-squared test determines whether a difference is statistically significant. *See generally* MICHAEL O. FINKELSTEIN & BRUCE LEVIN, STATISTICS FOR LAWYERS 157–62 (2d ed. 2001) (describing Pearson's chi-squared test). That is, the test measures the likelihood that the observed difference in percentages is too extreme to be caused by chance. *Id.*

83. Pearson's chi-squared test produces a P value of 0.0243.

84. For the distribution to be statistically significant, a P value must be less than 0.05. *See* DAVID FREEDMAN ET AL., STATISTICS 484 (3d ed. 1998). A P value less than 0.01 is considered highly statistically significant. *Id.* Thus, the differences between the Federal Circuit and the Ninth

The patent-specific data, internal to the Federal Circuit, are reported below in table 2, beside the general Federal Circuit data already reported.

TABLE 2

	Federal Circuit (Overall)	Federal Circuit (Patent Only)
Total Number of Opinions	15,319	3,504
Total Number of Dissents	538	325
Percentage of Dissents	3.51%	9.28%

It is initially worth noting that patent opinions appear to represent a small percentage of overall opinions—roughly 23 percent. But given that patent cases make up about a third of the Federal Circuit’s docket, this result makes sense.⁸⁵ Any concern with underreporting written patent opinions is diminished because of the overinclusive method of counting opinions as patent cases.⁸⁶

It is also worth noting that the percentage of dissents in patent opinions is higher than that for Federal Circuit opinions overall. This difference is highly statistically significant.⁸⁷

2. En Banc Reviews

As with dissents, this study calculated the percentage of en banc reviews in relation to total opinions. Table 3 below reports the total number of written opinions, the number of en banc opinions, and the

Circuit (P value of less than 0.0001) and between the Federal Circuit and the D.C. Circuit (P value of 0.0243) are both statistically significant.

85. See, e.g., U.S. COURT OF APPEALS FOR THE FED. CIRCUIT, ADJUDICATIONS BY MERITS PANELS, BY CATEGORY, FY 2008 (2009), available at <http://www.cafc.uscourts.gov/pdf/ChartAdjudications08.pdf> (showing patent cases making up 35 percent of merits panel adjudications).

86. See *supra* note 70.

87. Pearson’s chi-squared test produces a P value of less than 0.0001. See *supra* note 84.

resulting percentage of en banc review over the full period studied, from 1998 through 2009.⁸⁸

TABLE 3

	Third Circuit	Fifth Circuit	Ninth Circuit	Tenth Circuit	D.C. Circuit	Federal Circuit
Total Number of Opinions	18,580	38,653	53,177	16,587	7,832	15,319
Total Number of En Banc Opinions	39	82	202	53	19	28
Percentage of En Banc Opinions	0.21%	0.21%	0.38%	0.32%	0.24%	0.18%

The Federal Circuit had the lowest rate of en banc review, with 0.18 percent of its opinions the subject of en banc review. The Third Circuit and Fifth Circuit are the closest to the Federal Circuit, with 0.21 percent each. The difference between these three circuits is not statistically significant.⁸⁹ Nor is the difference between the Federal Circuit and the D.C. Circuit statistically significant, albeit both are close.⁹⁰ Thus, the rates of en banc review are essentially the same for these four courts of appeals. The difference is not statistically significant except in the comparison of the Federal Circuit with the Tenth Circuit⁹¹ and the Ninth Circuit.⁹²

88. The study did not include a patent-only, internal comparison for the Federal Circuit because the AO data (which were used to obtain en banc grant figures for the court) did not specifically identify patent en banc figures. Although the specific data can be obtained, all of the en banc data would need to be obtained in the same manner for comparison purposes.

89. Pearson's chi-squared test produces a P value of 0.1492.

90. Both comparisons yield a Pearson's chi-squared test P value of 0.0596.

91. Pearson's chi-squared test produces a P value of 0.0015.

92. Pearson's chi-squared test produces a P value of less than 0.0001.

IV. IMPLICATIONS

A. *Comparatively High Percentage of Dissents*

Based on the data, the Federal Circuit exhibits a statistically higher percentage of dissents than four of the other five courts of appeals studied. Only one circuit, the Ninth Circuit, dissents more often.⁹³

Such a result falls in line with other empirical studies—specifically Wagner and Petherbridge's 2004 study and Petherbridge's 2009 study.⁹⁴ Just as the Federal Circuit was diverse in its views on claim interpretation and the doctrine of equivalents,⁹⁵ the court also appears to voice its diversity on individual cases more often than other circuits. This high rate of dissent pushes against the notion of overuniformity within the circuit. Instead of experiencing groupthink, in which everyone follows the particular thinking on a given subject established by the last judge, the Federal Circuit has a fair share of discord.⁹⁶

However, the high rate of dissent observed in the Federal Circuit could be due to other factors. First, the relatively low caseload of the Federal Circuit as compared with other circuits⁹⁷ could be responsible for the discord. The argument is that the less time judges have to decide cases, the less time they have to dissent—a situation that results in fewer dissents. Put another way, other circuits would have a higher rate of dissent if not for their higher workloads. However, the data do not support this thinking. The circuit with a much higher load than the Federal Circuit—the Ninth Circuit—exhibits the highest percentage of dissents.⁹⁸

93. The Ninth Circuit's large size may contribute to this result because a larger circuit may encourage judges to disagree. *See, e.g.*, Gerald B. Tjoflat, *More Judges, Less Justice*, 79 A.B.A. J. 70, 70–71 (1993) (noting that the size of the Ninth Circuit may have a negative effect on collegiality).

94. *See supra* notes 44–45.

95. *See supra* text accompanying notes 44–47.

96. Notably, this study can only report general disagreement within the court. The study does not look to see whether the disagreement is on specific substantive areas of law. While this is definitely a shortcoming of the study, the existence of dissent without regard to particular legal issues still evidences Federal Circuit judges' willingness to disagree.

97. *See* ADMIN. OFFICE OF THE U.S. COURTS, *supra* note 65, at 42 tbl.S-1, 128 tbl.B-8 (showing that the Federal Circuit has fewer terminations of appeals than all other circuits except the First and D.C. Circuits for the fiscal year 2008).

98. *See* Arthur D. Hellman, *Breaking the Banc: The Common Law Process in the Large Appellate Court*, 23 ARIZ. ST. L.J. 915, 981–82 (1991) (studying cases with dissents in the Ninth

Second, an argument can be made that it is not just about caseload but about caseload in the context of the number of judges within a given circuit. The results could be coded on a per-judge basis to take this concern into account. The initial difficulty in doing this coding is determining the number of judges on a given circuit at any given time.⁹⁹ Additionally, the data used for this study suggest that the Federal Circuit's percentage of dissents per opinion and per judge would still be one of the highest. With the results divided by judge for the 2008–2009 period, the Third Circuit had 0.0013%, Fifth Circuit had 0.0007%, the Ninth Circuit had 0.0014%, the Tenth Circuit had 0.0025%, D.C. Circuit had 0.0061%, and the Federal Circuit had 0.0040%.¹⁰⁰ The D.C. Circuit comes out with a higher rate of dissent, but the Federal Circuit is still ahead of other circuits, even the Ninth Circuit. If anything, this analysis makes the Ninth Circuit's high percentage of dissents look less impressive because the high percentage is possibly attributable to its high number of judges in relation to its caseload.¹⁰¹

Third, the results could be due to one or two judges on the Federal Circuit making up a majority of the dissents. If this were the case, there would not be a true disagreement among the judges on the whole court but simply a few outliers who were doing the lion's share of dissenting. Thus, a majority of the court would still be of a single mind.

To test this alternative rationale, the study reexamined the data for 2008–2009 to identify specific dissenters. Judges were identified as dissenting on a given case even if they simply joined a dissent but

Circuit); Marybeth Herald, *Reversed, Vacated, and Split: The Supreme Court, the Ninth Circuit, and the Congress*, 77 OR. L. REV. 405, 417–19 (1998).

99. The number of judges varies at any time based on how many active judges the circuit has and the number of judges both entering and leaving to sit by designation. See, e.g., U.S. Court of Appeals for the Fed. Circuit, <http://www.cafc.uscourts.gov> (last visited Feb. 28, 2010); U.S. Court of Appeals for the Fed. Circuit: About the Court, *supra* note 30.

100. This study used the currently identified number of judges for a given circuit taken directly from the Web site for each court of appeals. Active judges were counted as one judge, and senior judges were counted as 0.15 judge, given that senior judges "typically handle about 15 percent of the federal courts' workload annually." U.S. Courts Frequently Asked Questions, <http://www.uscourts.gov/faq.html> (last visited Feb. 13, 2010). Accordingly, the Third Circuit had 13.35 judges, the Fifth Circuit had 16.9 judges, the Ninth Circuit had 30.15 judges, the Tenth Circuit had 12.35 judges, the D.C. Circuit had 9.75 judges, and the Federal Circuit had 11.75 judges at the time of writing.

101. See *supra* note 93.

did not write it,¹⁰² because those judges still disagreed with the majority's opinion. From this further examination, Judge Newman had the highest number of dissents—eighteen—while most of the other judges had between three and seven dissents.¹⁰³ The judges who dissented most often accounted for forty of the dissents during that year. Judge Newman is definitely an outlier, but then nine other judges fall within the same narrow range. Thus, while Judge Newman is driving the disagreement, others are joining in, and the participation is fairly even and widespread.

This leaves the question of why the Federal Circuit disagrees so frequently. Are the judges on the Federal Circuit just not that friendly a group and more apt to air their differences publicly? A more likely explanation is that the repeated exposure to the same subject matter results in more diverse viewpoints. The deeper judges get into a particular subject, the more likely they are to develop their own opinions, and the further developed and more nuanced these opinions become. Other circuits have a larger breadth of cases than the Federal Circuit at the expense of depth in a particular subject matter, and this perhaps explains why these circuits, with the exception of the Ninth Circuit, have a lower percentage of dissents.¹⁰⁴

The high percentage of dissents in the D.C. Circuit, as compared with other circuits studied, may be evidence of the same thing. The D.C. Circuit is specialized in some subject matter areas, such as administrative law, because of its limited and unique geographic scope.¹⁰⁵ There are, however, other, more obvious reasons for the high rate of disagreement, such as the highly political nature of the court.¹⁰⁶ But the fact that the D.C. Circuit handles certain subject

102. This is a situation that could occur, for example, in an en banc decision.

103. As described in note 59, *supra*, the existence of a dissent during the 2008–2009 fiscal year can be determined by the following search: “dis(judge) & da(aft 9/30/2008 & bef 10/1/2009).” Running this search in the Federal Circuit database in Westlaw yielded fifty-three cases with dissenting opinions in the Federal Circuit during the 2008–2009 fiscal year. The results also contained two denials for a petition to rehear en banc in which multiple judges dissented; these were not included in this test.

104. Of course, this logic would not apply to the Ninth Circuit, which has a higher percentage of dissents. See *supra* Part III.B.1.

105. See John M. Golden, *The Federal Circuit and the D.C. Circuit: Comparative Trials of Semi-Specialized Courts*, 78 GEO. WASH. L. REV. 553, 554–57 (2010) (documenting the similar, semi-specialized nature of the D.C. Circuit and the Federal Circuit); Harold H. Bruff, *Coordinating Judicial Review in Administrative Law*, 39 UCLA L. REV. 1193, 1202–03 (1992).

106. See, e.g., Richard L. Revesz, *Environmental Regulation, Ideology, and the D.C. Circuit*, 83 VA. L. REV. 1717, 1738–43, 1759–60 (1997) (finding, for example, that Democratic judges on

matters more often than other subject matters may foster more diverse viewpoints and result in more dissents for the same reason it does in the Federal Circuit.

Regardless of the explanation, the results of this study push against the conclusion that the Federal Circuit experiences groupthink, in which ideas become entrenched and the court acts as a cohesive unit.¹⁰⁷ In comparison with other circuit court judges, Federal Circuit judges think more independently and are willing to express their distinct viewpoints through dissents.

This independence of thought is particularly evident when it comes to patent law issues, in which the percentage of dissents is even higher than the percentage of dissents overall.¹⁰⁸ The higher rate of dissent is not surprising given the complex,¹⁰⁹ high-stakes nature¹¹⁰ of patent cases. Based on this study's data, it is more common for judges to have a difference of opinion on a patent issue and take the time to articulate such a disagreement than to do so on other issues.

B. Comparatively Low Percentage of En Banc Reviews

By contrast, the data for en banc opinions may tell a different story. While dissents do not immediately result in legal change or have a legal impact,¹¹¹ en banc reviews can have an overt effect: they can change existing law.¹¹² Thus, the rate of en banc reviews may be

the D.C. Circuit were significantly more likely to reverse Environmental Protection Agency decisions than Republican judges).

107. See *supra* notes 28–29, 37–38 and accompanying text.

108. *Supra* Part III.B.1.

109. E.g., Jennifer F. Miller, Comment, *Should Juries Hear Patent Cases?*, 2004 DUKE L. & TECH. L. REV. 4, 29 (2004).

110. See, e.g., AIPLA, REPORT OF ECONOMIC SURVEY 2007, at 25–26 (noting the cost of a high-stakes patent case is \$3 million per side in legal fees pre-trial, and \$5 million if the case goes to trial).

111. See, e.g., *Prometheus Labs., Inc. v. Mayo Collaborative Servs.*, 581 F.3d 1336, 1346 n.3 (Fed. Cir. 2009) (noting that a “dissent is not controlling”). Still, dissents can plant the seeds of change, either inside the court by bringing alternative views to another judge’s attention or outside the court by giving litigants or even policy makers ideas for future legal change. See Flanders, *supra* note 52, at 408–09.

112. See Amy E. Sloan, *The Dog That Didn’t Bark: Stealth Procedures and the Erosion of Stare Decisis in the Federal Courts of Appeals*, 78 FORDHAM L. REV. 713, 718–19, 719 n.28 (2009) (collecting cases from various circuits in support of the proposition that “[t]he law of the circuit rule provides that the decision of one panel is the decision of the court and binds all future

the best metric for determining how willing a court of appeals is to innovate new legal rules, percolate these concepts, and then eventually adopt them in future decisions.

The results indicate that the Federal Circuit does not exhibit much willingness to change its law through en banc review when compared with the Tenth and Ninth Circuits.¹¹³ But there are three other circuits—the Third, Fifth, and D.C. Circuits—that have percentages of en banc review that are indistinguishable when compared with those for the Federal Circuit.¹¹⁴ This indicates that the Federal Circuit is not alone. Accordingly, perhaps nothing much can be inferred from the Federal Circuit’s low rate of en banc review.

Still, it is odd that the court with such a high percentage of dissents is among the courts granting en banc review with the lowest frequency. This implies that there exist many disagreements among judges that never rise to the level of prompting en banc review for resolution.¹¹⁵ Such a situation does not necessarily mean there is uniformity in thought in the Federal Circuit, but it may mean that the law becomes entrenched and infrequently changes.

It could be that the disputes at the Federal Circuit are minor disputes and thus not in need of en banc review for resolution. This study certainly does not provide any information to test this hypothesis. One of the standards for en banc review is that the legal question at issue be one of significant importance.¹¹⁶ For this to explain the low en banc review rate in comparison with the Ninth Circuit, for example, would mean that the Ninth Circuit handles more significant legal issues than the Federal Circuit, which seems unlikely. At best, this explanation could account for some portion of the low percentage of en banc opinions, but not all of it.

Other data, particularly the data Petherbridge observed in his 2009 study, suggest another hypothesis. Petherbridge observed actual doctrinal differences in the area of the doctrine of equivalents from

panels unless and until the panel’s opinion is reversed or overruled, either by the circuit sitting en banc or the Supreme Court”).

113. See *supra* Part III.B.2.

114. *Id.*

115. Notably, the Federal Circuit is not alone in this regard. The D.C. Circuit’s en banc rate is essentially the same as the Federal Circuit’s. See *supra* Part III.B.2. Also, like the Federal Circuit, the D.C. Circuit experiences a relatively high rate of dissent. See *supra* Part III.B.1.

116. FED. R. APP. P. 35.

panel to panel¹¹⁷ and judge to judge.¹¹⁸ Similarly, in their 2004 study, Wagner and Petherbridge observed the same difference in the area of claim interpretation.¹¹⁹ These are substantive areas of patent law in which there appears to be disagreement among the judges.¹²⁰ There is an actual difference as to either what the law is or how it should be applied. And, as Petherbridge points out in his 2009 study, this disharmony continues and remains uncorrected at the Federal Circuit.¹²¹ These observations fall in line with a high rate of dissent accompanied by a low rate of en banc grants. The Federal Circuit articulates much disagreement, but is not resolving it.

The Federal Circuit, however, may be harmonizing, or at least attempting to harmonize the law, but if so, it is doing so in a relatively untransparent fashion. One mechanism the court employs to harmonize the law is its eight-day comment period on all precedential opinions.¹²² Every precedential panel opinion is circulated to all members of the court, who can then comment on the panel's decision and, presumably, point out any potential conflicts the new decision would create.¹²³ Through this process, conflicts or potential disagreements regarding Federal Circuit law can be resolved without en banc review.

Through this full-court review mechanism, or simply unprompted action by the panel itself,¹²⁴ the law can become harmonized in a more sub-rosa fashion. Thus, the low rate of en banc review does not mean that the law has become entrenched; rather, it just means that the law changes via other means, which are either less orderly or less transparent than en banc reviews.

The conjecture that the law changes by means other than en banc review rebuts the critique that the law becomes entrenched in the Federal Circuit and is not easily changed. But change in circuit

117. Petherbridge, *supra* note 3, at 445–49.

118. *Id.* at 455–56.

119. See Wagner & Petherbridge, *supra* note 3, at 1170.

120. See, e.g., Petherbridge, *supra* note 3, at 428.

121. *Id.*

122. See *Overview of the Federal Circuit—After Serving Internship at the Court*, CURRENT DEV. (Ctr. for Advanced Study on Intellectual Prop., Seattle, Wash.), Winter 2003, at 2 (describing the eight-day comment period).

123. *Id.*

124. Panels can change the law under the table by slowly steering the law in another direction to get in line with current thinking.

law outside en banc review can be problematic. Just as in other circuits, and rooted in the concept of stare decisis, a Federal Circuit panel must follow the decisions of previous panels.¹²⁵ The only way such earlier decisions can be ignored is through en banc action.¹²⁶ The data from this study may suggest that this rule of law is not being observed. Later panels are changing the law, or the court is doing so as a whole through the comment process, as opposed to doing so via en banc review. This possibility would not be all that surprising given that some have critiqued the court for failing to resolve disagreements through en banc review.¹²⁷ However, such a conclusion stands on the premise, with which some disagree,¹²⁸ that the state of legal doctrine within the Federal Circuit's jurisprudence is without internal conflict or at least is getting there. Studies such as those by Wagner and Petherbridge in 2004 and by Petherbridge in 2009 suggest otherwise.¹²⁹

V. CONCLUSION

This study provides further insight into the development of jurisprudence at the Federal Circuit and how the individual judges participate in such development. Based on this study, the Federal Circuit does not appear as monolithic in its thought as some commentators suggest. There is a good deal of dissent in comparison with other courts of appeals. Judges on the court are willing to voice their opinions as much as, if not more than, judges on other circuit courts. This suggests that there are diverse views among those on the court and that judges are willing to play an active and vocal role in the law's development.

The en banc data make this picture more complex and are worthy of additional study. While the court seems to grant en banc

125. *Vas-Cath Inc. v. Mahurkar*, 935 F.2d 1555, 1563 (Fed. Cir. 1991) (“[W]e note that decisions of a three-judge panel of this court cannot overturn prior precedential decisions.”). Some have called this concept “horizontal stare decisis.” *See, e.g., Sloan, supra* note 112, at 717.

126. *See UMC Elec. Co. v. United States*, 816 F.2d 647, 652 n.6 (Fed. Cir. 1987) (“A panel of this court is bound by prior precedential decisions unless and until overturned *in banc*.”); *Sloan, supra* note 112, at 718–19.

127. *See, e.g., Robin Feldman, Plain Language Patents*, 17 *TEX. INTELL. PROP. L.J.* 289, 299–300 (2009) (“Most troubling, the Federal Circuit has proven incapable of resolving the disagreements and inconsistencies that arise within the circuit, allowing splits among panels to fester unresolved across decades.”).

128. *See, e.g., supra* note 28.

129. *See supra* notes 44–47 and accompanying text.

review at about the same rate as most of the other circuits studied, when the data are considered in the context of the high rate of individual panel dissents, the results are troubling. In fact, the dissent data suggest that the exact opposite of the current thinking on the court's behavior may be true: rather than suffering from *too much* uniformity, the Federal Circuit actually *lacks* uniformity in its thought on legal issues but fails to use the en banc review process to resolve these disagreements.

