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REVISITING THE FEDERAL CIRCUIT EN BANC

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ABSTRACT

The United States Court of Appeals for the Federal Circuit ("Federal Circuit") holds exclusive jurisdiction over patent appeals and plays a vital role in shaping patent law and policy in the United States. Since its inception in 1982, the Federal Circuit has used en banc review as a crucial method to develop patent law and policy. Until recently, the court had been a model for en banc review by frequently hearing patent cases en banc, addressing important questions for a wide range of stakeholders in the patent system, and freely inviting amici to participate in the en banc process. Through this approach, the Federal Circuit positioned itself as an effective steward of patent law.

However, in 2018, the Federal Circuit suddenly, and without explanation, abandoned en banc review in patent cases. This abrupt departure from the court's prior practices raises important questions about the cause of this en banc retrenchment and demands a critical evaluation of its implications on the evolution of patent law, the Federal Circuit's role as a steward of patent law, and the impact on patent system stakeholders.

This Article documents the court's historical and current en banc practices and examines the potential causes behind the Federal Circuit's retreat from en banc review in patent cases. Notable developments in the law and institutions governing patent law and policy, such as the passage of the America Invents Act and its creation of the Patent Trial and Appeal Board, increased interest in patent law by Congress and the U.S. Supreme Court, and the unprecedented turnover of Federal Circuit judges may have contributed to this significant shift in en banc review. Moreover, this Article evaluates the need for the court to revive its previous en banc practices to ensure an effective and consistent patent law landscape and to effectively guide patent stakeholders.

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I. INTRODUCTION

As the appellate court with exclusive jurisdiction over patent appeals,[1] the Court of Appeals for the Federal Circuit ("Federal Circuit") plays a critical role in the evolution of patent law and policy in the United States.[2] Congress established the Federal Circuit to harmonize patent law across the country, improve its certainty and predictability,

1. 28 U.S.C. § 1295(a)(1) (2018) ("The United States Court of Appeals for the Federal Circuit shall have exclusive jurisdiction . . . of an appeal from a final decision of a district court . . . in any civil action arising under, or in any civil action in which a party has asserted a compulsory counterclaim arising under, any Act of Congress relating to patents . . . ."). The Federal Circuit also has exclusive jurisdiction over patent appeals from other fora, such as final determinations of United States International Trade Commission in so-called § 337 investigations pertaining to the importation into the United States of articles that infringe a U.S. patent, 28 U.S.C. § 1295(a)(6) (2018); 19 U.S.C. § 1337(a)(1)(B)(i), and decisions from the Patent Trial and Appeal Board in post-grant proceedings such as inter partes review, 35 U.S.C. § 141(c) (2018).

2. *See* J. Jonas Anderson, *Congress as a Catalyst of Patent Reform at the Federal Circuit*, 63 AM. U. L. REV. 961, 962 (2014) ("[O]ver the past thirty years supervision of patent policy has largely fallen to a single federal appellate court: the U.S. Court of Appeals for the Federal Circuit."); Paul R. Gugliuzza, *The Federal Circuit as a Federal Court*, 54 WM. & MARY L. REV. 1791, 1795 (2013) ("One court, the U.S. Court of Appeals for the Federal Circuit, has an enormous influence on patent law and innovation policy."); Hon. Arthur J. Gajarsa & Lawrence P. Cogswell III, *Foreword* to *The Federal Circuit and the Supreme Court*, 55 AM. U. L. REV. 821, 842 (2006) ("[T]he Federal Circuit is by far the principal expounder of the patent law.").

and "foster technological growth and industrial innovation."[3] Since its creation in 1982[4] and until a sudden change in course in 2018, one important method the Federal Circuit used to achieve its aims — to develop patent law — has been deciding cases en banc.[5]

For most of the past three decades, the Federal Circuit used en banc review more than any other circuit — hearing patent cases en banc at a rate three times the average en banc rate for the other circuit courts' general caseload.[6] Not only did the Federal Circuit decide cases en banc more frequently than other circuits, but it did so actively and in a manner that invited public input, mimicking administrative agencies' notice-and-comment rulemaking procedures.[7] By using en banc review in such a manner, the Federal Circuit positioned itself to effectively steward patent law and policy.[8]

In 2018, the Federal Circuit suddenly, and without explanation, discontinued its en banc practice.[9] Not until mid-2023 did the Federal Circuit agree to hear a patent case en banc — although it was a design patent issue of only moderate importance rather than a utility patent case.[10]

This Article examines this shift. Several important developments have occurred in the institutions that determine and administer patent law and policy, which could have contributed to the Federal Circuit's en banc retrenchment. First, Congress passed the America Invents Act

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3. *Remarks at the Ninth Annual Judicial Conference of the United States Court of Customs and Patent Appeals*, 94 F.R.D. 350, 358, 395, 538 (1982) (statements by Hon. Robert W. Kastenmeier, Richard W. Velde, and Bruce A. Lehman); *see also* Lee Petherbridge & R. Polk Wagner, *The Federal Circuit and Patentability: An Empirical Assessment of the Law of Obviousness*, 85 TEX. L. REV. 2051, 2056–59 (2007); Christa J. Laser, *Certiorari in Patent Cases*, 48 AIPLA Q.J. 569, 581–82 (2020); Ryan Vacca, *The Federal Circuit as an Institution*, *in* 2 RESEARCH HANDBOOK ON THE ECONOMICS OF INTELLECTUAL PROPERTY LAW 104, 107 (Peter S. Menell & David L. Schwartz eds., 2019).

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

5. *See* Ryan Vacca, *Acting Like an Administrative Agency: The Federal Circuit En Banc*, 76 MO. L. REV. 733, 735–44 (2011); *infra* Section IV.A.

6. *Id.* at 738.

7. *See id.* at 744–49. The similarities between the Federal Circuit's en banc practices and administrative agencies' notice-and-comment rulemaking are that an agency fills in delegated legislative gaps and establishes policy by issuing a notice of proposed rulemaking, receiving and considering comments on the proposed rule, and then issuing the final rule incorporating a statement of its basis and purpose. *Id.* at 745, 747–49. The Federal Circuit's previous en banc practices involved the court issuing an order advising the parties and public that particular issues would soon be addressed, permitting the parties and amici to file briefs and argue before the court about the proposed rule, and then issuing its en banc opinion explaining the newly adopted rule. *See id.* at 747–49.

8. *See id.* at 734.

9. *See infra* Figure 2.

10. LKQ Corp. v. GM Glob. Tech. Operations LLC, 71 F.4th 1383, 1384 (Fed. Cir. 2023) (granting en banc review).

("AIA") in 2011, the most sweeping patent reform since 1952,[11] which has created a slew of patent appeals from the U.S. Patent and Trademark Office ("USPTO").[12] Second, the U.S. Supreme Court's interest in patent law dramatically increased,[13] and this, in conjunction with Congress's introduction of new patent legislation, has opened an active dialogue between the two primary lawmaking and policy-setting institutions in the patent system. And third, over half of the Federal Circuit judges have been replaced, which may have disturbed the court's stewardship model.[14] After exploring the potential causes of this sudden change, this Article evaluates whether the Federal Circuit's retreat from en banc review in patent cases is salutary, or whether the Federal Circuit's en banc practices should be reinvigorated.

This Article juxtaposes the Federal Circuit's prior and current patent en banc practices; analyzes whether, and to what extent, any of the intervening events in the last decade contributed to the Federal Circuit's elimination of en banc review in patent cases; and evaluates whether the court's abandonment of en banc review in patent cases has harmed (or helped) the development of patent law and policy. Part II explains the creation of the Federal Circuit and how it differs from the other U.S. Circuit Courts of Appeal in terms of its jurisdiction and purpose. Part III compares the Federal Circuit's historical en banc patent practices with its modern approach to illustrate the stark change. Part IV then investigates three intervening events that arguably contributed to the Federal Circuit ceasing to hear patent cases en banc and assesses the extent to which these events impacted the court's discontinuance of patent en banc review. Part V questions whether this change makes sense from a normative perspective or whether the Federal Circuit should resume its prior practices to provide patent guidance for the USPTO, patent attorneys, litigators, district court judges, inventors, patent owners, and businesses.

II. THE FEDERAL CIRCUIT: A COURT UNLIKE ANY OTHER

Prior to the Federal Circuit's creation in 1982, all then-existing United States Circuit Courts of Appeal were generalist courts.[15] They heard cases arising from district courts and administrative agencies

11. *See* Janet Freilich, *Patent Shopping*, 10 U.C. IRVINE L. REV. 619, 658 (2020); Brian J. Love & James Yoon, *Predictably Expensive: A Critical Look at Patent Litigation in the Eastern District of Texas*, 20 STAN. TECH. L. REV. 1, 26 (2017).

12. *See infra* Section IV.A.

13. *See infra* Section IV.B.

14. *See infra* Section IV.C.

15. Anderson, *supra* note 2, at 974.

regardless of the underlying subject matter.[16] But in 1982, Congress began a "sustained experiment in specialization."[17] The Federal Courts Improvement Act of 1982 merged the Court of Customs and Patent Appeals with the appellate division of the Court of Claims.[18] This new court, the Federal Circuit, was given "near-exclusive appellate" jurisdiction over particular subject matters, including patent law.[19]

The impetus for the Federal Circuit's specialized jurisdiction arose in connection with the Senate's Commission on Revision of the Federal Court Appellate System in the early 1970s.[20] This commission, also known as the Hruska Commission, was formed to evaluate the systemic strains posed on the federal appellate system and how to efficiently and effectively resolve them.[21] As part of this evaluation, several problems concerning patent litigation were brought to the Hruska Commission's attention, including great disparities among the regional circuits' treatment of patents: some were antagonistic to patents, while others were hospitable.[22] As a result, patent litigators strategically raced to the courthouses to ensure their clients' interests were protected on appeal.[23] This forum shopping, some believed, led to "unfair administration of justice" and "unpredictability of patent jurisprudence,"[24] which led to increasing difficulty in advising technology developers and users.[25]

The Hruska Commission declined to recommend a specialized court of patent appeals to address the problems of a disharmonious national law.[26] Instead, the Hruska Commission ultimately recommended creating a National Court of Appeals which would adjudicate issues of

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16. *See* Paul R. Gugliuzza, *Rethinking Federal Circuit Jurisdiction*, 100 GEO. L.J. 1437, 1446 (2012) ("In the regional circuit courts of appeals, a panel of judges might hear an immigration case, a copyright case, and a securities-fraud case, all before lunch.").

17. Rochelle Cooper Dreyfuss, *The Federal Circuit: A Case Study in Specialized Courts*, 64 N.Y.U. L. REV. 1, 3 (1989).

18. Gugliuzza, *supra* note 2, at 1800–01; Christa J. Laser, *Rethinking Patent Law's Exclusive Appellate Jurisdiction*, 71 CLEV. ST. L. REV. 19, 28–29 (2022).

19. Gugliuzza, *supra* note 16, at 1453; *see also* Hon. Timothy B. Dyk, Foreword, *Federal Circuit Jurisdiction: Looking Back and Thinking Forward*, 67 AM. U. L. REV. 971, 971–72 (2018) (describing the Federal Circuit's varied subject matter jurisdiction).

20. Donald R. Dunner, *The U.S. Court of Appeals for the Federal Circuit: Its Critical Role in the Revitalization of U.S. Patent Jurisprudence, Past, Present, and Future*, 43 LOY. L.A. L. REV. 775, 776 (2010).

21. *See* COMM'N ON REVISION FED. CT. APP., SYSTEM STRUCTURE AND INTERNAL PROCEDURES: RECOMMENDATIONS FOR CHANGE 4 (1975) [hereinafter HRUSKA COMMISSION RECOMMENDATIONS]; Peter S. Menell & Ryan Vacca, *Revisiting and Confronting the Federal Judicial Capacity "Crisis": Charting a Path for Federal Judiciary Reform*, 108 CALIF. L. REV. 789, 815 (2020).

22. Dunner, *supra* note 20, at 777; *see* HRUSKA COMMISSION RECOMMENDATIONS, *supra* note 21, at 15, 23 ("[T]he circuits are divided on whether the element of non-obviousness is a factual question that may be submitted to a jury, or an issue of law to be decided by the judge alone.").

23. Dunner, *supra* note 20, at 777.

24. *Id.*; *see* HRUSKA COMMISSION RECOMMENDATIONS, *supra* note 21, at 15.

25. Dreyfuss, *supra* note 17, at 7.

26. HRUSKA COMMISSION RECOMMENDATIONS, *supra* note 21, at 28.

national law, including patent cases, and provide consistency and uniformity by avoiding and resolving circuit splits.[27] Congress never adopted this recommendation.[28]

Although the National Court of Appeals and a court of patent appeals were rejected by Congress and the Hruska Commission, respectively, the Federal Circuit partially originated from these proposals.[29] Over the next several years, Congress drafted bills[30] and held hearings[31] to solve the problems of lack of uniformity and poor administration of patent law.

Around the same time, President Carter launched a study referred to as the Domestic Policy Review of Industrial Innovation, which aimed to remedy the 1970s recession by spurring technology-based innovation.[32] The Industrial Advisory Subcommittee on Patent and Information Policy was charged with examining the role of the patent system in supporting technological innovation and concluded, in relevant part, that the judiciary was compromising innovation and economic development.[33] These Congressional hearings and the political need for increased innovation led to the Federal Circuit's creation in 1982.[34] Consolidating all patent appeals into one circuit would eliminate the number of decision-makers in the patent system, eradicate the pervasive inconsistency plaguing patent law, and provide predictability to stakeholders through uniformity.[35]

Despite occasional instances of specificity, the patent statute[36] is sparse and leaves several gaps.[37] Thus, rulemaking and policymaking

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27. *Id.* at 208–09; *see also* Laser, *supra* note 18, at 29.

28. *See* Menell & Vacca, *supra* note 21, at 817–19, 821–23 (describing the recommendation for, support of, and eventual demise of the National Court of Appeals).

29. Dreyfuss, *supra* note 17, at 6.

30. *See, e.g.*, S. REP. NO. 97-275, at 2, 7 (1981); H.R. REP. NO. 97-312, at 17, 20 (1981).

31. *See, e.g.*, *Federal Courts Improvement Act of 1979: Hearings on S. 677 and S. 678 Before the Subcomm. on Improvements in Jud. Mach. of the Comm. on the Judiciary*, 96th Cong. 23, 33 (1979) (testimony of Professors A. Leo Levin and Daniel J. Meador).

32. Pauline Newman, *Origins of the Federal Circuit: The Role of Industry*, 11 FED. CIR. BAR J. 541, 541–42 (2002); *see also* Pauline Newman, *The Birth of the Federal Circuit*, 50 AIPLA Q.J. 515, 516–17 (2022).

33. Newman, *Origins of the Federal Circuit*, *supra* note 32, at 542; *see also* Rebecca S. Eisenberg, *Public Research and Private Development: Patents and Technology Transfer in Government-Sponsored Research*, 82 VA. L. REV. 1663, 1689 (1996).

34. Federal Courts Improvement Act of 1982, Pub. L. No. 97-164, 96 Stat. 25 (1982); Dunner, *supra* note 20, at 777–78; Gugliuzza, *supra* note 16, at 1454; Laser, *supra* note 18, at 30.

35. S. REP. NO. 97–275, at 2, 7 (1981); H.R. REP. NO. 97-312, at 17, 20 (1981); *see also* Anderson, *supra* note 2, at 975. It is also interesting to note that large corporations with extensive patent portfolios supported creation of the Federal Circuit because they thought that the court would strengthen and increase the value of their patent rights. Gugliuzza, *supra* note 16, at 1456; *see also* Laser, *supra* note 18, at 34–35.

36. 35 U.S.C. §§ 1–390.

37. Peter S. Menell, *The Mixed Heritage of Federal Intellectual Property Law and Ramifications for Statutory Interpretations*, *in* INTELLECTUAL PROPERTY AND THE COMMON LAW

are regularly implicated in appellate decisions.[38] And because of the Federal Circuit's exclusive appellate jurisdiction over patent cases, it serves as a de facto patent law policymaker.[39] Historically, one important way the Federal Circuit embraced this role was en banc review.[40]

III. EN BANC REVIEW: THEN AND NOW

Until 2018, the Federal Circuit enthusiastically used en banc review to evolve patent law and policy. But this practice abruptly stopped in 2018 when the court took a five-year hiatus from en banc review. To grasp the starkness of this change in full, it is imperative to understand the Federal Circuit's prior and peculiar en banc practices in patent cases and to juxtapose these with the court's current practices. This Part explicates the Federal Circuit's frequency of en banc review in patent cases;[41] explains how the court often initiated en banc review on its own accord;[42] analyzes the broad scope of the questions the en banc court undertook and how this helped it develop patent law and policy;[43] and assesses how the court's liberal use of amicus curiae briefing in en banc patent cases allowed the court to receive substantial input from stakeholders as it advanced patent law.[44]

A. Frequency of En Banc Patent Cases

From 1988 through 2018, the Federal Circuit's rate of en banc patent cases was, on average, similar to the general en banc rates of the combined regional circuits (0.29% versus 0.26%, respectively).[45] But a

64, 78 (Shyam Balganesh ed., 2012); Vacca, *supra* note 5, at 746 (noting the statutory language on patentable subject matter and obviousness as creating policy voids); Anderson, *supra* note 2, at 979 (observing that the patent statute is sparse); *see also* Dan L. Burk & Mark A. Lemley, *Policy Levers in Patent Law*, 89 VA. L. REV. 1575, 1642–54 (2003) (describing how sparse statutory language relating to abstract ideas, utility, the level of skill in the art, obviousness, and written description can be used by the courts as policy levers).

38. *See* Burk & Lemley, *supra* note 37, at 1674 ("The inherent nature of discretion in patent law provides a compelling reason to use that discretion wisely. The Federal Circuit cannot avoid making policy judgments in its decisions.").

39. *See id.*; *see also* Laser, *supra* note 18, at 38 ("The Federal Circuit's first Chief Judge, Howard Markey, expressed a belief held by many on the court that a core mandate of the Federal Circuit was to provide guidance on patent law, even if that guidance extended beyond what was necessary to decide the appeal.").

40. *See* Vacca, *supra* note 5, at 735–49.

41. *See infra* Section III.A.

42. *See infra* Section III.B.

43. *See infra* Section III.C.

44. *See infra* Section III.D.

45. To calculate these rates, I used data from Tables S-1, B-10, and B-8 of the Judicial Business Tables (ending September for each year), *Judicial Business of the United States Courts*, U.S. CTS., https://www.uscourts.gov/statistics-reports/analysis-reports/judicial-busi

closer examination of Figure 1 reveals a more interesting story, demonstrating that the Federal Circuit has been an outlier circuit when it comes to en banc review since around 2003. From 2003 through 2018, the Federal Circuit's average en banc rate for patent cases was 0.31% — more than double the combined regional circuits' average en banc rate for all cases (0.15%). More dramatically, the average rates for the last ten years of this period (2009–2018) were 0.35% and 0.13% for the Federal Circuit and combined regional circuits, respectively.

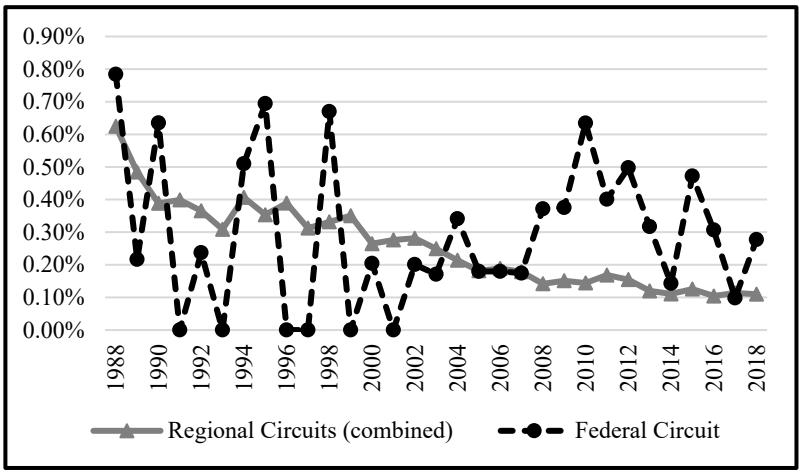

Figure 1: En Banc Rates for Combined Regional Circuits & Federal Circuit (Patent Cases) (1988-2018)

The Federal Circuit's comparatively high frequency of en banc patent cases is consistent with a previous study showing that the Circuit's en banc patent rate was two to three times the average combined regional circuits' en banc rate.[46]

But as illustrated in Figure 2, the Federal Circuit has retreated from en banc patent decisions since the middle of 2018.

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ness-united-states-courts [https://perma.cc/DP67-XUKC]. For the en banc numbers of the regional circuits from 1988 through 1999, I used the data from Appendix 1 published in Tracey E. George & Michael E. Solimine, *Supreme Court Monitoring of the United States Courts of Appeals En Banc*, 9 SUP. CT. ECON. REV. 171, 200 (2001). The denominators for these rates are the total terminations for the regional circuits and the total terminations from the USPTO and district courts for the Federal Circuit. This data is available in Tables B-10 and B-8, respectively, of the Judicial Business Tables (ending September of each year). *Judicial Business of the United States Courts*, *supra*.

46. Vacca, *supra* note 5, at 736–38.

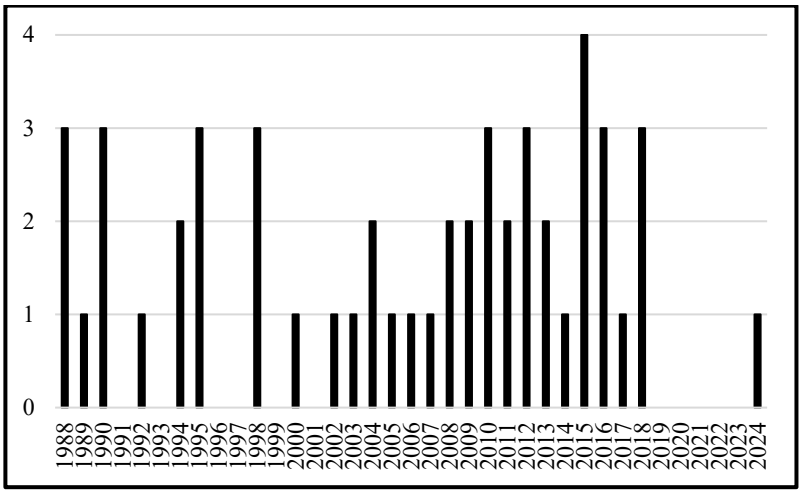

Figure 2: Number of Federal Circuit En Banc Patent Decisions (1988–2024)

B. Sua Sponte En Banc Orders

Another unique aspect of the Federal Circuit's en banc patent cases was the number of times the Federal Circuit ordered en banc review sua sponte.[47] From its creation in 1982 through 2011, the court ordered en banc review sua sponte in approximately half of the en banc cases it decided.[48] Although not dispositive of the court's intent, the high rate of sua sponte orders, in conjunction with the frequency of en banc review and the broad scope of the questions it addressed en banc, paints a clear picture of the Federal Circuit undertaking a conscious stewardship role in defining patent law and policy.[49]

Since 2018, the Federal Circuit has not issued any en banc orders sua sponte. But looking back at the period just before 2018, the rates of sua sponte actions then were similar to the 1982–2011 period. Seventeen patent cases were decided en banc between 2012 and 2018, and at most seven were ordered sua sponte (forty-one percent).[50] The eventual

47. *Id.* at 739.

48. *Id.* (noting that the Federal Circuit ordered en banc review in twenty-two of forty-six sua sponte en banc cases, as of 2011).

49. *Id.* at 739, 751.

50. Based on en banc orders and en banc opinions, four of the seventeen were definitely ordered sua sponte. *See* Zoltek Corp. v. U.S. 672 F.3d 1309, 1317 (Fed. Cir. 2012); Robert Bosch, LLC v. Pylon Mfg. Corp., 480 F. App'x 997, 997 (Fed. Cir. 2012); Lexmark Int'l, Inc. v. Impression Prods., Inc., 785 F.3d 565, 565 (Fed. Cir. 2015); NantKwest, Inc. v. Iancu, 869 F.3d 1327, 1327 (Fed. Cir. 2017). In two cases, it is unclear if en banc review was petitioned for or whether the court granted it sua sponte. *See* Williamson v. Citrix Online, LLC, 792

elimination of sua sponte en banc orders suggests that the Federal Circuit may have shifted in perceiving itself more as an adjudicator and less as a policymaker.

C. Scope of the Questions

Another unique, and probably more important, aspect of the Federal Circuit's en banc patent cases was the scope of the questions the court would address when sitting en banc.[51] For example, in *Phillips v. AWH Corp.*,[52] the court asked seven questions which laid the foundation for a reexamination of how claim construction — a key component of almost every patent case — occurs.[53] These questions considered the tools to be used, how claim construction relates to the requirements for patent protection, and how much deference the Federal Circuit should accord to district courts.[54] Similarly, in *Therasense, Inc. v. Becton, Dickinson & Co.*,[55] the Federal Circuit's en banc order requested briefing on six questions related to the doctrine of inequitable conduct.[56]

In *Ariad Pharmaceuticals, Inc. v. Eli Lilly & Co.*,[57] the court asked two substantial and fundamental questions — (1) whether the written description requirement, a longstanding element of patentability, exists; and (2) if so, "what is the scope and purpose of [it]?"[58]

And with the recent exception of a design patent case in mid-2023,[59] since 2018, the Federal Circuit has not asked any en banc questions — broad or narrow. But what about from 2012 through 2018?

From 2012 to 2018, the scope of the questions remained broad. For example, from 2007 through 2011, Federal Circuit panels in four cases considered whether and when conduct by third parties could be attributable to another for purposes of establishing direct infringement.[60] In the last of these cases, one judge concurred but questioned whether the

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F.3d 1339, 1347 n.3 (Fed. Cir. 2015); Click-to-Call Techs., LP v. Ingenio, Inc., 899 F.3d 1321, 1328 n.3 (Fed. Cir. 2018). Given the absence of pleadings requesting en banc review in these two cases, it is fair to assume the court initiated en banc review on its own accord.

51. Vacca, *supra* note 5, at 740–43 (describing the number of questions and the broad scope of questions presented in the Federal Circuit's en banc orders).

52. 376 F.3d 1382 (Fed. Cir. 2004) (per curiam) (citations omitted) (order granting petition for rehearing en banc).

53. *Id.* at 1383.

54. *Id.*

55. 374 F. App'x 35 (Fed. Cir. 2010) (per curiam) (citations omitted) (granting petition for rehearing en banc).

56. *Id.* at 35–36.

57. 595 F.3d 1329 (Fed. Cir. 2009) (per curiam) (granting petition for rehearing en banc).

58. *Id.* at 1330; *see* Vacca, *supra* note 5, at 743.

59. LKQ Corp. v. GM Global Tech. Operations LLC, 71 F.4th 1383, 1384 (Fed. Cir. 2023) (granting en banc review).

60. BMC Res., Inc. v. Paymentech, L.P., 498 F.3d 1373 (Fed. Cir. 2007); Muniauction, Inc. v. Thomson Corp., 532 F.3d 1318 (Fed. Cir. 2008); Akamai Techs., Inc. v. Limelight Networks, Inc., 629 F.3d 1311 (Fed. Cir. 2010); McKesson Techs. Inc. v. Epic Sys. Corp., No. 2010-1291 (Fed. Cir. Apr. 12, 2011).

standards in these cases were correct.[61] Another judge dissenting concluded that these recent cases contravened earlier panel decisions.[62] As a result, in *McKesson Technologies Inc. v. Epic Systems Corp.*,[63] the court requested briefing on two questions:

(1) "If separate entities each perform separate steps of a method claim, under what circumstances, if any, would either entity or any third party be liable for inducing infringement or for contributory infringement?"[64]

(2) "Does the nature of the relationship between the relevant actors — e.g., service provider/user; doctor/patient — affect the question of direct or indirect infringement liability?"[65]

These two inquiries questioned the specific rules underlying the longstanding doctrine of divided infringement.

The deference owed to district courts on claim construction was hotly disputed for nearly sixteen years[66] and had previously been decided en banc in *Cybor Corp. v. FAS Technologies, Inc.*[67] The Federal Circuit was now ready to address the issue (again). In 2014, in *Lighting Ballast Control v. Philips Electronics*,[68] the Federal Circuit requested briefing on the following three questions:

(1) "Should this court overrule *Cybor Corp. v. FAS Technologies, Inc.*?"[69]

(2) "Should this court afford deference to any aspect of a district court's claim construction?"[70]

(3) "If so, which aspects should be afforded deference?"[71]

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61. McKesson Techs. Inc. v. Epic Sys. Corp., No. 2010-1291, slip op. at 12 (Fed. Cir. Apr. 12, 2011) (Bryson, J., concurring).

62. *Id.* at 13 (Newman, J., dissenting).

63. 463 F. App'x 906 (Fed. Cir. 2011) (per curiam) (citations omitted) (order granting petition for rehearing en banc).

64. *Id.* at 907 (citations omitted). The court also granted en banc review in *Akamai Technologies, Inc. v. Mass. Inst. of Tech.* to address the same question, but with respect to direct infringement rather than indirect infringement. 419 Fed. App'x 989 (Fed. Cir. 2011) (per curiam) (order granting petition for rehearing en banc).

65. *McKesson*, 463 F. App'x at 907.

66. *See* J. Jonas Anderson & Peter S. Menell, *Informal Deference: A Historical, Empirical, and Normative Analysis of Patent Claim Construction*, 108 NW. U. L. REV. 1, 6–7 (2014); Christopher A. Cotropia, *Patent Claim Interpretation Review: Deference or Correction Driven?*, 2014 BYU L. REV. 1095, 1097–98 (2014); J. Jonas Anderson, *Specialized Standards of Review*, 18 STAN. TECH. L. REV. 151, 167–69 (2014).

67. 138 F.3d 1448 (Fed. Cir. 1998) (en banc).

68. 500 F. App'x 951 (Fed. Cir. 2013) (per curiam) (granting petition for rehearing en banc).

69. *Id.* at 951.

70. *Id.* at 952.

71. *Id.*

These were big questions that patent practitioners, judges, and scholars had long debated.[72]

Also, in *Lexmark International, Inc. v. Impression Products, Inc.*,[73] the court asked for briefing on issues relating to overruling precedent involving domestic and international patent exhaustion.[74] These were important questions to consider in light of the Supreme Court's then-recent decision in a copyright case that addressed similar issues.[75]

That the scope of the en banc questions remained consistently broad until mid-2018 continued to suggest an engagement with its previous lawmaking and policy-setting functions, just as the sua sponte nature of the en banc orders did. However, except for a recent design patent case, [76] the Federal Circuit's complete abandonment of patent en banc review suggests either the court's lack of interest in continuing to pursue this role or its inability to do so.

D. Amici Curiae Briefing

The final unique aspect of the Federal Circuit's practices was that it routinely permitted amici curiae to submit briefs in en banc cases without leave or without seeking consent of the parties.[77] The court used standard language in its en banc orders waiving this requirement under the Federal Rules of Appellate Procedure.[78] It also sometimes specifically invited the Department of Justice or USPTO to file an amicus brief.[79]

As noted in a prior study, other circuits did not use similar language in their en banc orders.[80] And while other circuits allowed amici to

72. *See, e.g.*, Craig Allen Nard, *A Theory of Claim Interpretation*, 14 HARV. J.L. & TECH. 1, 11 (2000) (arguing for more deference to district courts' claim interpretations); Timothy J. Malloy & Patrick V. Bradley, *Claim Construction: A Plea for Deference*, 7 SEDONA CONF. J. 191, 198 (2006) (calling for more deference); Retractable Techs., Inc. v. Becton, Dickinson & Co., 659 F.3d 1369, 1373 (Fed. Cir. 2011) (Moore, J., dissenting from denial of rehearing en banc) (urging en banc review of *Cybor*); *id.* (O'Malley, J., dissenting from denial of rehearing en banc) ("It is time to revisit and reverse our decision in *Cybor* . . . ."); Trading Techs. Int'l, Inc. v. eSpeed, Inc., 595 F.3d 1340, 1350–51 (Fed. Cir. 2010) (questioning the appropriateness of de novo review); *id.* at 1363–64 (Clark, J., concurring) (urging the Federal Circuit to revisit de novo review); Medegen MMS, Inc. v. ICU Med., Inc., 317 F. App'x 982, 988–91 (Fed. Cir. 2008) (Walker, J., dissenting) (urging greater deference to district judges' claim construction); Amgen Inc. v. Hoechst Marion Roussel, Inc., 469 F.3d 1039, 1040 (Fed. Cir. 2006) (Michel, C.J., dissenting from denial of rehearing en banc) ("I have come to believe that reconsideration [of *Cybor*] is appropriate and revision may be advisable.").

73. 816 F.3d 721 (Fed. Cir. 2016).

74. *Id.* at 731–32.

75. *See* Kirtsaeng v. John Wiley & Sons, Inc., 568 U.S. 519, 524 (2013).

76. *See* LKQ Corp. v. GM Global Tech. Operations LLC, 71 F.4th 1383, 1384 (Fed. Cir. 2023) (granting en banc review in a design patent case and presenting six questions for review).

77. Vacca, *supra* note 5, at 743.

78. FED. R. APP. P. 29(a); *see id.*

79. Vacca, *supra* note 5, at 743.

80. *Id.* at 743–44.

submit briefs, the Federal Circuit's consistent invitation to amici implied a commitment to inclusivity.[81] The court sought to "benefit from the advice of [stakeholders]" so it could "make informed decisions [about] how to shape and interpret patent law."[82]

From 2012 through 2018, the Federal Circuit mostly continued this practice. The court waived the requirement for leave or consent in at least ten of the seventeen en banc patent cases during this period.[83] In four cases, the court did not specifically waive this requirement.[84] And in at least five of the cases, specific amici were invited to file briefs.[85] Therefore, until 2018, the Federal Circuit continued to seek input from stakeholders as it performed its lawmaking and policy-setting functions. Although there is no indication that the court consciously changed its general practice concerning amici, the court necessarily ceased receiving this type of input when it abruptly stopped taking patent cases en banc in 2018.

IV. INTERVENING EVENTS

Given the Federal Circuit's active and inclusive en banc practices in patent cases — practices which reflected the court's stewardship role in terms of developing patent law and policy — the court's complete

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81. *Id.* at 744.

82. *Id.*

83. *See* Akamai Techs., Inc. v. Limelight Networks, Inc., 419 F. App'x 989, 990 (Fed. Cir. 2011); CLS Bank Int'l v. Alice Corp., 484 F. App'x 559, 560 (Fed. Cir. 2012); Robert Bosch, LLC v. Pylon Mfg. Corp., 480 F. App'x 997, 997 (Fed. Cir. 2012); Lighting Ballast Control LLC v. Philips Elecs. N. Am., 500 F. App'x 951, 952 (Fed. Cir. 2013); SCA Hygiene Prods., Aktiebolag v. First Quality Baby Prods., LLC, 2014 WL 7460970 at *1 (Fed. Cir. Dec. 30, 2014); Lexmark Int'l, Inc. v. Impression Prods., Inc., 785 F.3d 565, 566 (Fed. Cir. 2015); Meds. Co. v. Hospira, Inc., 805 F.3d 1357, 1358 (Fed. Cir. 2015); *In re* Aqua Prods, Inc., 833 F.3d 1335, 1336 (Fed. Cir. 2016); Wi-Fi One, LLC v. Broadcom Corp., 851 F.3d 1241, 1241–42 (Fed. Cir. 2017); NantKwest, Inc. v. Iancu, 869 F.3d 1327, 1328 (Fed. Cir. 2017).

84. *See* Marine Polymer Techs., Inc. v. HemCon, 475 F. App'x 315, 315 (Fed. Cir. 2012); Suprema, Inc. v. Int'l Trade Comm'n, No. 2012–1170, 2014 WL 3036241, at *1 (Fed. Cir. May 13, 2014); Akamai Techs., Inc. v. Limelight Networks, Inc., No. 09-1372 at *2 (Fed. Cir. Aug. 13, 2015) (granting en banc review and noting that the en banc opinion was issued at the same time); Apple Inc. v. Samsung Elecs. Co., Ltd., 839 F.3d 1034, 1063, 1074 (Fed. Cir. 2016) (Prost and Dyk, JJ., noting divergence from the normal practice of permitting amici to participate). There were three cases where the status was unknown. *See, e.g.*, Zoltek Corp. v. United States, 672 F.3d 1309, 1317 (Fed. Cir. 2012) (noting only that the court sua sponte took part of the case en banc to vacate an earlier opinion, but not indicating whether leave was granted to amici); Williamson v. Citrix Online, LLC, 792 F.3d 1339, 1347 n. 3 (Fed. Cir. 2015) (noting that the part II.C.1 of the opinion was considered by the en banc court, but not indicating whether leave was granted to amici); Click-to-Call Techs., LP v. Ingenio, Inc., 899 F.3d 1321, 1328 n.3 (Fed. Cir. 2018) (noting that the court was deciding an issue en banc, but not indicating whether leave was granted to amici).

85. Most often the USPTO and the Department of Justice. *See, e.g.*, *Meds. Co.*, 805 F.3d at 1358 (inviting the Department of Justice to file an amicus brief); *Wi-Fi One*, 851 F.3d at 1241–42 (inviting the USPTO to file an amicus brief).

failure to hear any utility patent cases en banc since 2018 is provocative.

The Federal Rules of Appellate Procedure spell out the criteria for granting en banc review,[86] but courts typically do not explain why they decline to hear cases en banc.[87] Beyond the ability to peer into the black box of judicial decision-making, considering what (if anything) has changed during this time can help determine what drives the Federal Circuit's surprising change in its en banc practices. As detailed later, this change cannot merely be explained by a lack of en banc worthy issues.[88]

Three intervening events arguably contributed to this sudden change of course. First, in late 2011, Congress passed the America Invents Act — the largest patent reform effort since 1952.[89] The AIA created the Patent Trial and Appeal Board ("PTAB"), a new administrative body tasked with adjudicating patent validity disputes.[90] Appeals from the PTAB are appealed to the Federal Circuit.[91] Because litigants frequently use the PTAB, the Federal Circuit's docket has become flooded with PTAB appeals, which may occupy more of the court's resources.[92]

Second, two alternative institutions have begun to play more significant roles in developing patent law and policy. With its enactment of the AIA, additional hearings, and proposed legislation, Congress signaled its attempt to become patent law's policymaking and rulemaking body.[93] Congress is no longer sitting back and permitting the Federal Circuit to take the reins.

Likewise, the Supreme Court became much more involved in interpreting patent law.[94] The increased presence of another institution superior in the judicial hierarchy may have caused the Federal Circuit to step back and assume a less prominent role in developing patent law and policy.[95] In addition, numerous patent cases (including en banc cases) decided by the Federal Circuit were later reversed by the Supreme Court, so the Federal Circuit judges may have concluded that en

86. FED. R. APP. P. 35(a). This standard is quite fluid. As Judge Douglas Ginsburg once stated, the "exceptional importance" standard in Rule 35(a) "is in the eye of the beholder" and therefore "expresses more of an attitude than a standard." Douglas H. Ginsburg & Donald Falk, *The Court En Banc: 1981–1990*, 59 GEO. WASH. L. REV. 1008, 1022 (1991).

87. Tracey E. George, *The Dynamics and Determinants of the Decision to Grant En Banc Review*, 74 WASH. L. REV. 213, 240 (1999) ("Courts of appeals rarely report publicly the judges' votes on en banc requests, and judges need not provide written explanations for their decisions.").

88. *See infra* Part V (describing patent issues in need of en banc review).

89. *See* Freilich, *supra* note 11, at 658; Love & Yoon, *supra* note 11, at 26.

90. *See* Leahy-Smith America Invents Act, Pub. L. No. 112-29, § 7, 125 Stat. 284, 313 (2011) (codified in relevant part at 35 U.S.C. § 6).

91. 35 U.S.C. § 141.

92. *See infra* Section IV.A.

93. *See infra* Section IV.B.1.

94. *See infra* Section IV.B.2.

95. *See infra* Section IV.B.2.

banc review was not worth the candle since the Supreme Court ultimately heard these cases and disagreed with the Federal Circuit.[96]

Third, the makeup of the Federal Circuit's active judges has changed substantially.[97] Over half the active judges have been replaced by new judges; the retreat from en banc review could therefore reflect a change in attitude by the court's newest members.[98]

A. Swamped by PTAB Appeals

After several years of legislative proposals, Congress passed, and President Obama signed into law, the AIA.[99] The AIA was the most comprehensive patent reform since 1952[100] and made significant changes to the patent system.[101] The AIA moved the United States from a first-to-invent to a first-to-file priority system, geographically expanded the scope of prior art references, strengthened the prior user defense, "gave the [USPTO] greater control over its fees,"[102] and "eliminated best mode as a basis for asserting invalidity."[103]

But the most significant changes for these purposes were establishing three new administrative procedures to challenge an issued patent's validity and creating the PTAB to evaluate validity challenges.[104] Because of concerns about bad patents bogging down innovation, Congress adopted these new procedures to more efficiently and cost-effectively remove these incorrectly issued patents from the system.[105] The three procedures included inter partes review ("IPR"),[106] post-

96. *See infra* Section IV.B.2 (noting that the Supreme Court reversed the Federal Circuit's rule or judgment in four en banc cases from 2010 to 2017).

97. *See infra* Section IV.C.

98. *See infra* Section IV.C.

99. *See* Leahy-Smith America Invents Act, Pub. L. No. 112-29, 125 Stat. 284 (2011) (codified in scattered sections of 35 U.S.C.); *President Obama Signs America Invents Act, Overhauling the Patent System to Stimulate Economic Growth, and Announces New Steps to Help Entrepreneurs Create Jobs*, THE WHITE HOUSE (Sept. 16, 2011), https://obamawhitehouse.archives.gov/the-press-office/2011/09/16/president-obama-signs-america-invents-act-overhauling-patent-system-stim [https://perma.cc/M87N-7RZD].

100. Anderson, *supra* note 2, at 981.

101. Megan M. La Belle, Introduction, *The Past, Present, and Future of the U.S. Patent System*, 67 CATH. U. L. REV. 607, 610 (2018) ("The AIA . . . fundamentally altered the way patents are issued and litigated in this country.").

102. *Id.* (describing the AIA's changes to the patent system).

103. Ryan Vacca, *Patent Reform and Best Mode: A Signal to the Patent Office or a Step Toward Elimination?*, 75 ALB. L. REV. 279, 292 (2012).

104. La Belle, *supra* note 101, at 610–11.

105. Rochelle Cooper Dreyfuss, *Giving the Federal Circuit a Run for its Money: Challenging Patents in the PTAB*, 91 NOTRE DAME L. REV. 235, 236 (2015).

106. *See* Leahy-Smith America Invents Act, Pub. L. No. 112-29, § 6, 125 Stat. 284, 299 (2011) (codified in relevant part at 35 U.S.C. § 311).

grant review ("PGR"),[107] and covered business method review ("CBM").[108]

All three procedures involve challenges to an issued patent's validity, but the grounds for challenges, timing, and eligible petitioners differ. For example, in IPR, the only bases for challenging a patent are novelty and obviousness, and the prior art references are limited to patents and printed publications.[109] PGR and CBM permit challenges based on subject matter, novelty, obviousness, enablement, written description, and double patenting.[110] Concerning timing, IPR cannot begin until nine months after the patent is granted or reissued, or after PGR has terminated, whichever is later.[111] In contrast, PGR is only available for the first nine months after the patent has been granted or reissued.[112] And for CBM, a petition could be filed at any time except when PGR was available.[113] For IPR and PGR, anyone may petition for cancellation except for the patentee, someone who has previously filed a civil action challenging the validity of a claim of the patent, or someone sued for infringing the patent more than one year beforehand.[114] For CBM, only those sued for infringing a claim in a covered patent were eligible to petition.[115] Finally, PGR only applies to patents issued under the AIA's first-to-file system, whereas IPR and CBM cover patents issued under the AIA and pre-AIA law.[116]

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107. *See id.* at 305.

108. *See* Leahy-Smith America Invents Act, Pub. L. No. 112-29, § 18, 125 Stat. 284, 329 (2011) (codified in relevant part at 35 U.S.C. § 321 note (Transitional Program for Covered Business Method Patents)). CBM no longer exists as it sunset on September 16, 2020. *Id.* at § 18(a)(3). IPR and PGR continue to exist.

109. 35 U.S.C. § 311(b).

110. *Id.* § 321(b) (for PGR); Leahy-Smith America Invents Act § 18.

111. 35 U.S.C. § 311(c).

112. *Id.* § 321(c).

113. 37 C.F.R. § 42.303.

114. *Id.* § 42.101 (discussing who can petition for IPR); *id.* § 42.201 (discussing who can petition for PGR).

115. *Id.* § 42.302(a).

116. *See* Yasser El-Gamal, Ehab M. Samuel & Peter D. Siddoway, *The New Battlefield: One Year of* Inter Partes *Review Under the America Invents Act*, 42 AIPLA Q.J. 39, 42 (2014); Leahy-Smith America Invents Act, Pub. L. No. 112-29, § 18(a)(2), 125 Stat. 284, 313 (2011) (codified in relevant part at 35 U.S.C. § 321 note (Transitional Program for Covered Business Method Patents)).

Each process begins with a petition to institute, which the Director of USPTO may authorize if it meets the relevant standard. 35 U.S.C. §§ 314, 324. The Director, however, has delegated this responsibility to the PTAB, so the PTAB rules on institution and, if instituted, the merits. 37 C.F.R. § 42.4(a) ("The Board institutes the trial on behalf of the Director."). The patentee is permitted to file a preliminary response opposing institution, but once instituted, the proceedings begin in earnest. 35 U.S.C. §§ 313, 323. The parties then conduct discovery, respond to the petition, reply thereto, move to amend claims, and oppose amendments. Dreyfuss, *supra* note 105, at 242–43 (describing the processes). Thereafter, "the parties [have] opportunities to challenge evidence, file observations, and, request and engage in oral argument." *Id.* at 243.

Patent challengers have enthusiastically embraced PTAB trials.[117] Although CBM expired on September 16, 2020,[118] as illustrated in Figure 3, IPR and PGR carry on at a regular occurrence even after the tapering off of cases that followed the initial excitement.[119]

These procedures, referred to as trials, all occur before the PTAB. *Id.* at 242. The PTAB is staffed with technically trained lawyers serving as administrative patent judges and each PTAB panel is composed of three judges. 35 U.S.C. §§ 6(a), 6(c). The burden of proof for invalidity for PTAB challenges is a preponderance of the evidence standard rather than the clear and convincing standard applied in district court litigation. *Compare* 35 U.S.C. §§ 316(e), 326(e) (establishing the evidentiary standard for invalidity as by a preponderance of the evidence), *with* Microsoft Corp. v. i4i L.P., 564 U.S. 91, 95 (2011) (establishing the evidentiary standard for invalidity as by clear and convincing evidence).

117. Evan J. Wallach & Jonathan J. Darrow, *Federal Circuit Review of USPTO Inter Partes Review Decisions, by the Numbers: How the AIA Has Impacted the Caseload of the Federal Circuit*, 98 J. PAT. & TRADEMARK OFF. SOC'Y 105, 109–10 (2016) ("[P]atent challengers have embraced the IPR procedure . . . ."); *see also* La Belle, *supra* note 101, at 611 ("As of July 2018, a total of 8,874 post-grant petitions had been filed (8,190 IPRs, 557 CBMs, and 127 PGRs), far exceeding expectations about how attractive these proceedings would be to patent challengers."); Dreyfuss, *supra* note 105, at 251 ("[T]hese statistics speak loudly about the public's eagerness and ability to use these procedures to 'weed out' bad patents . . . .").

118. *See* Leahy-Smith America Invents Act § 18(a)(3); *see also id.* § 35 (providing that the AIA would take effect only a year after enactment).

119. Data taken from U.S. PAT. & TRADEMARK OFF., PTAB TRIAL STATISTICS FY23 END OF YEAR OUTCOME ROUNDUP IPR, PGR (2023), https://www.uspto.gov/sites/default/files/documents/ptab_aia_fy2023__roundup.pdf [https://perma.cc/R3QD-P3QW]; U.S. PAT. & TRADEMARK OFF., PTAB TRIAL STATISTICS FY22 END OF YEAR OUTCOME ROUNDUP IPR, PGR (2022), https://www.uspto.gov/sites/default/files/documents/ptab__aia_fy2022_roundup.pdf [https://perma.cc/PQR8-7VND]; U.S. PAT. & TRADEMARK OFF., PTAB TRIAL STATISTICS FY21 END OF YEAR OUTCOME ROUNDUP IPR, PGR, CBM (2021), https://www.uspto.gov/sites/default/files/documents/ptab_aia_fy2021__roundup.pdf [https://perma.cc/C8CW-RVHZ]; U.S. PAT. & TRADEMARK OFF., PTAB TRIAL STATISTICS FY20 END OF YEAR OUTCOME ROUNDUP IPR, PGR, CBM (2020), https://www.uspto.gov/sites/default/files/documents/ptab_aia_fy2020_roundup.pdf [https://perma.cc/4GVD-B6BT]; U.S. PAT. & TRADEMARK OFF., PTAB TRIAL STATISTICS FY19 END OF YEAR OUTCOME ROUNDUP IPR, PGR, CBM (2019), https://www.uspto.gov/sites/default/files/documents/ptab_aia_fy2019_roundup.pdf [https://perma.cc/9YF3-K9F6]; U.S. PAT. & TRADEMARK OFF., TRIAL STATISTICS IPR, PGR, CBM (2018), https://www.uspto.gov/sites/default/files/documents/trial_statistics_20180930a.pdf [https://perma.cc/8EP7-ZGFZ]; U.S. PAT. & TRADEMARK OFF., TRIAL STATISTICS IPR, PGR, CBM (2017), https://www.uspto.gov/sites/default/files/documents/Trial_Stats_2017-09-30.pdf [https://perma.cc/33XS-M3BW]; U.S. PAT. & TRADEMARK OFF., PATENT TRIAL AND APPEAL BOARD STATISTICS (2016), https://www.uspto.gov/sites/default/files/documents/aia_statistics_september2016A.pdf [https://perma.cc/599L-KQLW].

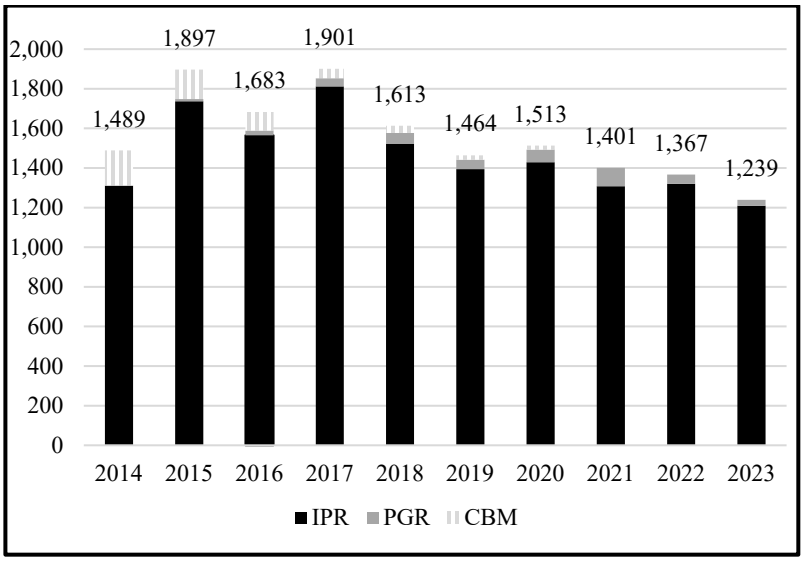

Figure 3: PTAB Trial Petitions Filed (2014–2023)

The speed at which the PTAB decides invalidity challenges makes these procedures highly attractive. By statute, the trials are normally expected to be completed within one year of institution but can be extended by six months for good cause.[120] The PTAB has complied with this statutory mandate. From January 1, 2019 to December 31, 2023, for cases where the PTAB reached a final decision, the time between institution (194 days after filing) and final decision (556 days after filing) was just shy of one year (362 days).[121] And important for patent challengers, the PTAB resolves most cases within eighteen months of filing and ninety-three percent within twenty months of filing.[122] In contrast, district court cases during this same period where a decision on validity was reached had a median time for termination of 729 days from filing — a day shy of two years.[123] And for twenty-five percent

120. 37 C.F.R. § 42.100(c) (2022) ("An IPR proceeding shall be administered such that pendency before the Board after institution is normally no more than one year. The time can be extended by up to six months for good cause . . . or adjusted by the Board in the case of joinder."); *id.* § 42.200(c) ("A PGR proceeding shall be administered such that pendency before the Board after institution is normally no more than one year. The time can be extended by up to six months for good cause . . . or adjusted by the Board in the case of joinder."); *id.* § 42.300(c) ("A CBM patent review proceeding shall be administered such that pendency before the Board after institution is normally no more than one year. The time can be extended by up to six months for good cause . . . or adjusted by the Board in the case of joinder.").

121. LEX MACHINA, PATENT TRIAL AND APPEAL BOARD REPORT 1 (on file with author).

122. *Id.*

123. LEX MACHINA, FEDERAL COURT REPORT 1 (on file with author).

of these district court cases, termination took more than 1,285 days — nearly three and a half years.[124]

In addition, and as anticipated by Congress, PTAB proceedings are less expensive than district court litigation. The American Intellectual Property Law Association's 2021 Report of the Economic Survey found that for IPR and PGR proceedings through appeal, the average cost was $774,000.[125] In contrast, the average cost of defending a claim of patent infringement through appeal by a non-practicing entity for claims worth less than one million dollars was $1,082,000.[126] For defending claims worth between one and ten million dollars, the average cost was $2,200,000.[127] For claims worth between ten and twenty-five million dollars, the average cost through appeal was $3,646,000.[128] And for claims worth more than twenty-five million dollars, the average cost through appeal was $4,558,000.[129]

Since all appeals from the PTAB are heard by the Federal Circuit,[130] the importance of the immense popularity of the AIA's new procedures is that appeals from the PTAB (and IPR in particular) have become a significant part of the Federal Circuit's docket.[131] As shown in Figure 4, the number of appeals from the USPTO dramatically increased soon after the PTAB opened for business and eventually leveled off around 2017.[132]

124. *Id.*

125. AIPLA, 2021 REPORT OF THE ECONOMIC SURVEY I–183 (2021) (table Q46Aiv).

126. *Id.* at I–162 (table Q45Cc).

127. *Id.* at I–164 (table Q45Cg).

128. *Id.* at I–165 (table Q45Ck).

129. *Id.* at I–166 (table Q45Co).

130. Leahy-Smith America Invents Act, Pub. L. No. 112-29, § 7, 125 Stat. 284, 313 (2011) (codified in relevant part at 35 U.S.C. § 141(c)).

131. Laser, *supra* note 18, at 37.

132. The data for Figure 4 comes from Table B-8 of the Statistical Tables for the Federal Judiciary (ending December of each year). *Statistical Tables for the Federal Judiciary*, U.S. CTS. (Feb. 10, 2024), https://www.uscourts.gov/statistics-reports/analysis-reports/statistical-tables-federal-judiciary [https://perma.cc/ZE8T-Y7NH].

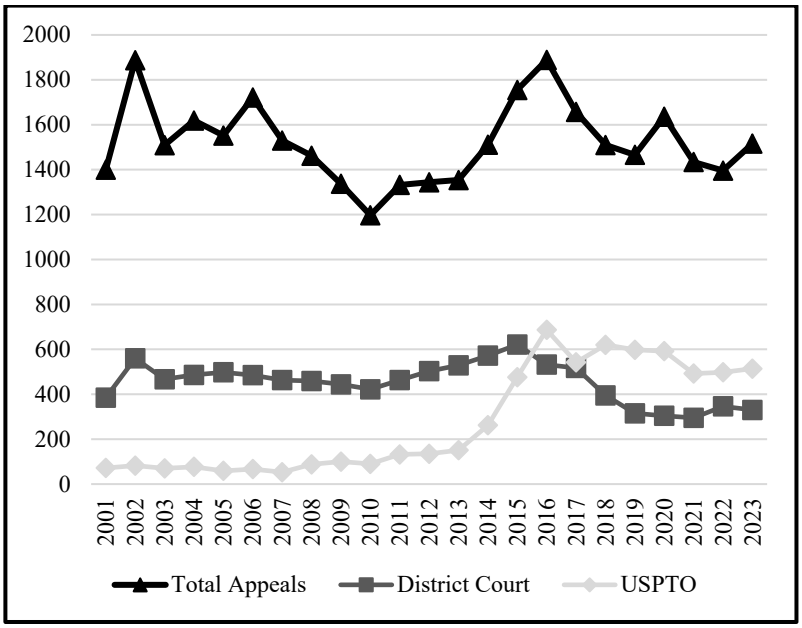

Figure 4: Federal Circuit Filings (2001–2023)

One theory for the Federal Circuit retreating from en banc review in patent cases is that because of the increase in PTAB appeals, dispensing with en banc review is an effective way to conserve resources.[133] The reluctance to hear cases en banc is rampant in the other circuits.[134] D.C. Circuit Judge Douglas Ginsburg described en banc review as increasing the amount of required judicial resources by a factor of four, noting that the author of the opinion must circulate it to a larger group of colleagues for their feedback, address any dissenting opinions, and secure a concurrence from each member of the majority after each revised opinion.[135] Similarly, then-D.C. Circuit Chief Judge Patricia

133. Peter Michael Madden, *In Banc Procedures in the United States Courts of Appeals*, 43 FORDHAM L. REV. 401, 417, 418 (1974) (noting "[t]he major problem with an in banc proceeding is the resulting loss of efficiency" and that the "in banc procedure is inherently and unavoidably time-consuming"); Michael Ashley Stein, *Uniformity in the Federal Courts: A Proposal for Increasing the Use of En Banc Appellate Review*, 54 U. PITT. L. REV. 805, 829 (1993) ("Most of the criticisms of en banc rehearings have focused on its alleged inefficiency."); Stephen L. Wasby, *The Supreme Court and Courts of Appeals En Bancs*, 33 MCGEORGE L. REV. 17, 24 (2001) ("Judges might believe that it is not worth the court's time and energy to rehear the case, because of the required additional in-chambers work necessary to decide the case and the possible disruption of calendars caused by having to bring together judges who live scattered throughout the circuit . . . .").

134. Peter S. Menell & Ryan Vacca, *Breaking the Vicious Cycle Fragmenting National Law*, 2024 U. ILL. L. REV. 353, 374–77 (2024) (describing judges' objections to en banc review).

135. *See* Ginsburg & Falk, *supra* note 86, at 1018–19.

Wald commented that en banc review "normally take[s] an inordinate time to schedule, let alone decide" and that, "[a]s a result, [it is] not undertaken lightly."[136] Second Circuit Judge Irving Kaufman echoed these concerns:

> And where rehearings en banc are granted, the inefficiencies become glaring. En banc opinions must be written and circulated among the members of the en banc court; invariably they spark a blizzard of memoranda in an effort to forge a consensus. It is axiomatic that three judges, in an intimate conference, will find the heart of a case more quickly than will eleven.[137]

These same objections could be echoed by the Federal Circuit in light of its current caseload.

As shown in Figure 4, the total number of appeals significantly declined since 2016. If this were the entire story, there is no reason to believe that the Federal Circuit has become so swamped with PTAB appeals that it cannot hear cases en banc. The Federal Circuit reached its modern apex of four en banc cases in 2015[138] when its total number of appeals (1,755 cases) was close to its peak.[139] With fewer appeals over the last several years, it seems like the Federal Circuit would have the capacity to hear some patent cases en banc.

But taking a closer look at the Federal Circuit's caseload shows a significant shift in the type of cases comprising the Federal Circuit's docket. As shown in Figure 5, patent-related filings have grown enormously over the past decade.[140] Although the number of appeals from district courts has declined, the number of appeals from the USPTO has dramatically offset that decrease, leading to patent-related cases making up sixty-seven percent of the Federal Circuit's docket in 2018.[141] Pre-AIA, this number hovered around forty percent.[142]

If appeals were fungible, then this growth in patent appeals would not matter because the total number of appeals is only slightly higher than pre-AIA levels.[143] But all appeals are not created equal. Federal

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136. Patricia M. Wald, *Changing Course: The Use of Precedent in the District of Columbia Circuit*, 34 CLEV. ST. L. REV. 477, 482–83 (1985).

137. Irving R. Kaufman, *Do the Costs of the En Banc Proceeding Outweigh its Advantages?*, 69 JUDICATURE 7, 7 (1985).

138. *See supra* Figure 2.

139. *See supra* Figure 4.

140. The data for Figure 5 comes from Table B-8 of the Statistical Tables for the Federal Judiciary (ending December of each year). *Statistical Tables for the Federal Judiciary*, U.S. CTS. (Feb. 10, 2024), https://www.uscourts.gov/statistics-reports/analysis-reports/statistical-tables-federal-judiciary [https://perma.cc/ZE8T-Y7NH].

141. *See* Laser, *supra* note 18, at 37.

142. *See infra* Figure 5.

143. *See supra* Figure 4.

Circuit Judge Dyk has explained that "patent cases are typically more difficult and time consuming than many other cases."[144] Judge Dyk estimated that when the Federal Circuit's docket was sixty-three percent patent cases, the court devoted more than eighty percent of its total time to the patent docket.[145]

Thus, the increase in patent appeals could have had a significant impact on the court's resources, constrained its capacity, and caused it to eliminate en banc review as a coping mechanism for handling this additional workload. But it is interesting to note that the court's patent docket over the last few years has been lower than it was from 2015 through 2018, when the Federal Circuit still maintained an active en banc practice.[146]

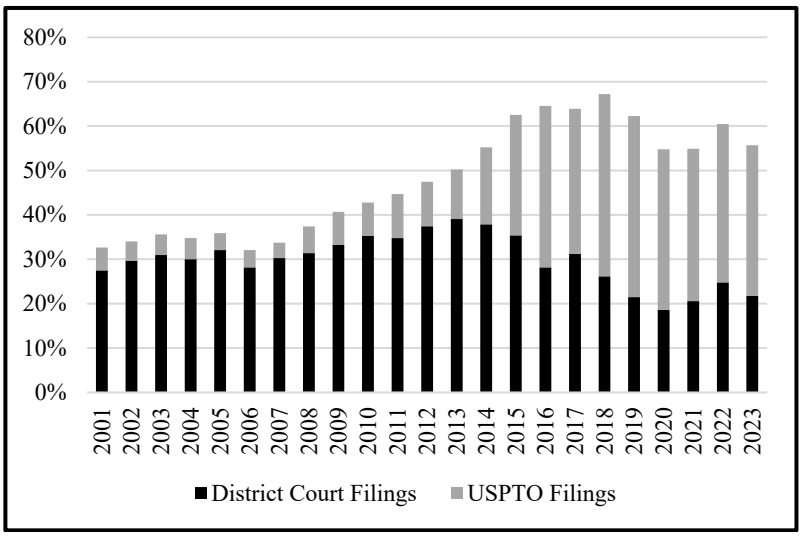

Figure 5: Federal Circuit Patent-Related Filings (2001–2023)

One possibility that could effectively reduce the Federal Circuit's caseload is the court's use of Rule 36 affirmances. When the Federal Circuit decides an appeal, it has two options for disposing of the case: writing an opinion explaining its decision or affirming without an opinion under Federal Circuit Rule 36.[147] Rather than writing a full opinion

144. Dyk, *supra* note 19, at 973; *see also* Hon. Timothy B. Dyk, *Thoughts on the Relationship Between the Supreme Court and the Federal Circuit*, 16 CHI.-KENT J. INTELL. PROP. 67, 78 (2016).

145. Dyk, *supra* note 19, at 973; *see also* Dyk, *supra* note 144, at 77, 78.

146. *See infra* Figure 5.

147. Paul R. Gugliuzza & Mark A. Lemley, *Can a Court Change the Law by Saying Nothing?*, 71 VAND. L. REV. 765, 778 (2018). More specifically, if the Federal Circuit writes an opinion explaining its reasoning, it has two options: a precedential opinion or a nonprecedential opinion. *Id.*

explaining the court's reasoning, a Rule 36 affirmance is one word and one citation, simply stating "AFFIRMED. *See* Fed. Cir. R. 36."[148]

As shown in Figure 6,[149] from 2015 to 2019, the Federal Circuit used Rule 36 affirmances in more than forty percent of its patent cases.[150] This increase has been attributed to the increasing patent appeals stemming from the AIA.[151] But since 2020, the Federal Circuit has been issuing fewer Rule 36 affirmances — in only about one-third of its patent cases.[152] The court's diminishing use of Rule 36 affirmances over the last few years has added to its workload. As a result, the Federal Circuit may have determined that it lacks the capacity to hear en banc cases.

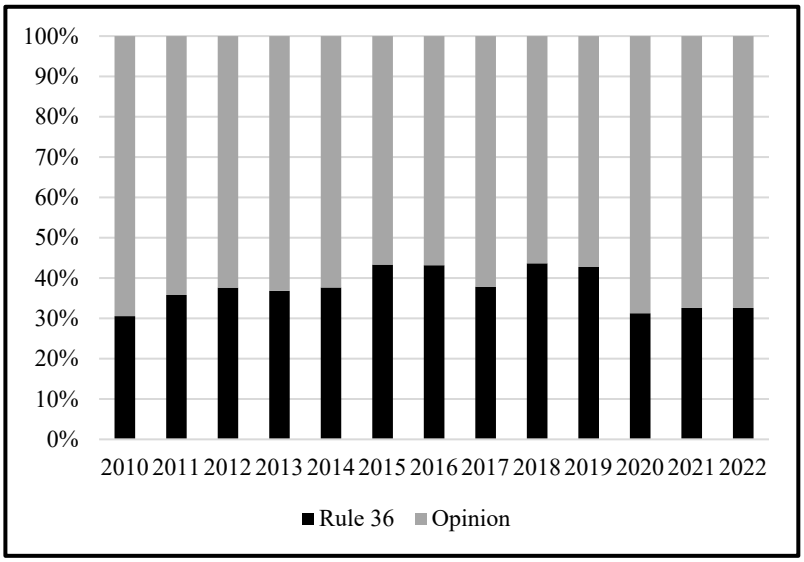

Figure 6: Federal Circuit Patent Decisions:
Rule 36 or Opinion (2010–2022)

This lack of capacity to engage in en banc review is confirmed by reviewing the total pending cases at the end of the year. As illustrated in Figure 7, the total pending cases at year-end dipped down

148. *Id.* at 779.

149. The data for Figure 6 comes from Jason Rantanen, *Federal Circuit Dataset & Stats: January 2023 Update*, PATENTLY-O (Jan. 31, 2023), https://patentlyo.com/patent/2023/01/federal-circuit-dataset.html [https://perma.cc/39L2-ZU7Q].

150. *Id.*; *see also* Gugliuzza & Lemley, *supra* note 147, at 780 ("By 2016 . . . the [Federal Circuit] decided over 40% of its district court and PTO appeals via Rule 36 . . . .").

151. *Id.*

152. *See infra* Figure 6.

significantly from 2008 through 2014.[153] This lull in pending cases at year-end fits nicely with the Federal Circuit's active en banc practices during this same period. And as shown in Figure 7, the pending cases at year-end quickly peaked in 2017 and then tapered off for the last several years until 2023. Even this tapered-off level is still quite a bit greater than it had been over the last twenty years, which would be mostly consistent with the Federal Circuit's renouncement of en banc review in patent cases.

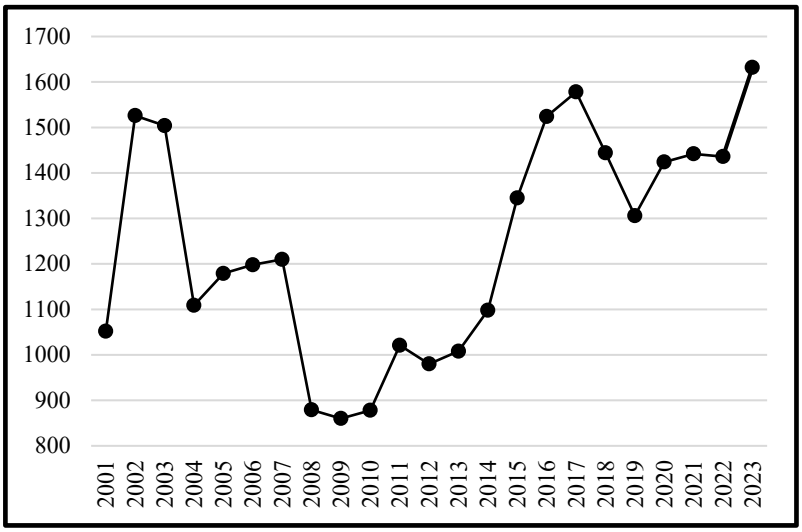

Figure 7: Federal Circuit Total Pending Cases at Year End (2001–2023)

Despite the plausibility that the inflow of patent appeals may have overwhelmed the Federal Circuit and left no time for en banc review over the past five years, it is curious that the court has not completely jettisoned en banc review. From 2019 through 2023, the Federal Circuit

153. The data for Figure 7 comes from Table B-8 of the Statistical Tables for the Federal Judiciary (ending December of each year). *See Statistical Tables for the Federal Judiciary*, U.S. CTS. (Feb. 10, 2024), https://www.uscourts.gov/statistics-reports/analysis-reports/statistical-tables-federal-judiciary [https://perma.cc/ZE8T-Y7NH].

has decided nine non-patent cases en banc.[154] Of the nine en banc cases, most involve veterans' affairs[155] and five were ordered sua sponte.[156]

One would expect a court so inundated with time-consuming appeals that it can no longer steward patent law and policy via en banc review would be loath to extend its limited resources to en banc review in other subject matters.[157] Although increased workload may be a contributing factor toward the Federal Circuit's abandonment of en banc review in patent cases, there may be more to the story.

B. Alternative Institutions

Another intervening event, which could have contributed to the Federal Circuit's desertion of en banc review in patent cases, is the emergence of two alternative institutions in the patent lawmaking and policy-setting space: Congress and the Supreme Court. Over the last several years, Congress has proposed legislation on a bevy of patent issues,[158] and the Supreme Court has decided the greatest number of patent cases in modern history.[159] Could the increased presence of these two institutions have pushed the Federal Circuit to the sidelines and caused it to retreat from patent en banc review?

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154. *See, e.g.*, Procopio v. Wilkie, 913 F.3d 1371 (Fed. Cir. 2019); Francway v. Wilkie, 940 F.3d 1304 (Fed. Cir. 2019); Sunpreme Inc. v. United States, 946 F.3d 1300 (Fed. Cir. 2020); Nat'l Org. of Veterans' Advocs., Inc. v. Sec'y of Veterans Affs., 981 F.3d 1360 (Fed. Cir. 2020); Arellano v. McDonough, 1 F.4th 1059 (Fed. Cir. 2021); Lynch v. McDonough, 21 F.4th 776 (Fed. Cir. 2021); Rudisill v. McDonough, 55 F.4th 879 (Fed. Cir. 2022); Adams v. United States, 59 F.4th 1349 (Fed. Cir. 2023); Taylor v. McDonough, 71 F.4th 909 (Fed. Cir. 2023). This list excludes administrative en banc orders such as Order, *In re Petition for Removal*, No. 18-153 (Fed. Cir. Aug. 23, 2018) (dismissing petition of removal of a judge as frivolous).

155. *See Procopio*, 913 F.3d 1371; *Francway*, 940 F.3d 1304; *Nat'l Org. of Veterans' Advocs., Inc.*, 981 F.3d 1360; *Arellano*, 1 F.4th 1059; *Lynch*, 21 F.4th 776; *Rudisill*, 55 F.4th 879; *Taylor*, 71 F.4th 909.

156. *See Procopio*, 913 F.3d 1371; *Francway*, 940 F.3d 1304; *Arellano*, 1 F.4th 1059; *Adams*, 59 F.4th 1349; *Taylor*, 71 F.4th 909.

157. An alternative hypothesis is that the Federal Circuit allocates resources only for a set number of en banc cases each year, and the drought in patent cases can be explained by these limited slots simply being occupied by non-patent cases. This is doubtful. To test this hypothesis, I examined all Federal Circuit en banc decisions from 2012 through 2023. From 2018 to 2023, the court averaged two en banc cases per year with a range from one to three. From 2012 to 2017, the court averaged 3.5 en banc cases per year with a range from two to six.

Furthermore, when comparing the total number of non-patent en banc cases from 2012 to 2017 (seven cases) and 2018 to 2023 (nine cases), the two-case difference over a six-year period is unlikely to have impacted the court's capacity to hear patent cases en banc.

158. *See infra* Section IV.B.1.

159. *See infra* Section IV.B.2.

1. Congress

Congress is the primary policymaker and lawmaker in the federal system.[160] Separation of powers, per the Constitution, gives Congress the power to create federal laws[161] and gives the judiciary the power to adjudicate cases and controversies.[162] This fundamental principle suggests that the Federal Circuit should not play a policy-setting or lawmaking role.

Despite these separate assignments of power, Congress and the courts regularly "engage in a dialogue" about the development and interpretation of the law.[163] This is also true with patent law.[164] For many years, Congress showed little interest in improving patent law.[165] Given the Federal Circuit's mandate to harmonize and supervise patent law, it made sense for the court to engage in some policymaking[166] despite its repeated claims that it does not.[167]

But as previously discussed, Congress's absence from patent law changed in 2011 when it passed the AIA;[168] Congress was back in the patent policy game. And over the last several years, Congress has introduced legislation and held hearings on several patent law issues.[169] The subject matter of these bills has run the gamut, covering topics such as patentable subject matter,[170] venue,[171] loser-pays fee-shifting,[172] the

160. Marin K. Levy, *Judging the Flood of Litigation*, 80 U. CHI. L. REV. 1007, 1059 (2013) ("[E]ach branch has its 'proper place[],' with Congress as the primary lawmaker . . . .") (alteration in original).

161. U.S. CONST. art. I, § 1.

162. *Id.* art. III, § 2.

163. Anderson, *supra* note 2, at 969–70.

164. *Id.* at 1014 (quoting Dan L. Burk, *Patent Reform in the United States: Lessons Learned*, REGULATION, Winter 2012–2013, at 20. 21).

165. *Id.* at 965.

166. *Id.* at 968 ("Congress certainly envisioned that the Federal Circuit would engage in some policymaking functions when it established the court in 1982 with a mandate to unify and supervise patent law."); Gugliuzza, *supra* note 2, at 1827 ("[P]olicy power in the field of patent law may remain mostly with the Federal Circuit.").

167. Gugliuzza, *supra* note 16, at 1440 n.7 (criticizing Federal Circuit judges' publications disclaiming that they engage in any policymaking).

168. *See supra* notes 99–105 and accompanying text.

169. *See, e.g.*, Innovation Act, H.R. 3309, 113th Cong. (2013); Targeting Rogue and Opaque Letters Act of 2015, H.R. 2045, 114th Cong. (2015); Protecting American Talent and Entrepreneurship Act of 2015, S. 1137, 114th Cong. (2015); Venue Equity and Non-Uniformity Elimination Act of 2016, S. 2733, 114th Cong. (2016); Support Technology and Research for Our Nation's Growth and Economic Resilience Patents Act of 2018, H.R. 5340, 115th Cong. (2018); Promoting and Respecting Economically Vital American Innovation Leadership Act, S. 2220, 118th Cong. (2023).

170. *E.g.*, Patent Eligibility Restoration Act of 2022, S. 4734, 117th Cong. (2022).

171. *E.g.*, Innovation Act, H.R. 9, 114th Cong. (2015); S. 2733.

172. *E.g.*, Saving High-Tech Innovators from Egregious Legal Disputes Act of 2013, H.R. 845, 113th Cong. (2013); H.R. 9; S. 1137.

burden of proof for petitioners before the PTAB,[173] demand letters,[174] pleading standards,[175] and stays of discovery.[176] Because Congress is the primary policy-setting and lawmaking body, perhaps the Federal Circuit is backing off of en banc review in patent cases to avoid separation of powers concerns.

While this could be the case, the Federal Circuit's en banc practices in the shadow of legislative reform belie this narrative. As Professor Jonas Anderson has explained, when Congress begins proposing bills to reform patent law, the Federal Circuit can still effectively engage in a dialogue with Congress: Congress signals the need for reform to the court, and the court adapts the law in response.[177]

This dialogue between Congress and the Federal Circuit occurred in the lead-up to passage of the AIA.[178] In 2005 and 2006, Congress identified certain areas of patent law in need of reform, including patent venue, damages, claim construction, and inequitable conduct.[179] Hearings were held on bills in both chambers, but neither was marked up or reported.[180]

Then, in 2007 and 2008, new legislation was introduced that primarily focused on damages, claim construction, and venue.[181] Although inequitable conduct was removed from this legislation, Senator Hatch, one of the key sponsors of the legislation, continued to push for curtailing this defense.[182] The Federal Circuit began modifying its practices in response to these bills.[183] For example, it began to use its discretionary mandamus power to overturn transfer of venue decisions.[184] But most relevant here, Chief Judge Michel urged patent litigators to petition the Federal Circuit for en banc review so the court could revisit particular doctrines.[185] Congress had spurred the Federal Circuit into action.[186]

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173. *E.g.*, Support Technology and Research for Our Nation's Growth and Economic Resilience Patents Act of 2019, S. 2082, 116th Cong. (2019); S. 2220.

174. *E.g.*, H.R. 2045; S. 1137.

175. *E.g.*, Innovation Act, H.R. 3309, 113th Cong. (2013); H.R. 9.

176. *E.g.*, H.R. 9; S. 1137.

177. Anderson, *supra* note 2, at 966–67.

178. *Id.* at 967.

179. *Id.* at 982–90 (describing bills from the 109th Congress focused on patent damages, venue, and claim construction); Joe Matal, *A Guide to the Legislative History of the America Invents Act: Part II of II*, 21 FED. CIR. BAR J. 539, 545–46 (2012) (describing S. 3818 as "includ[ing] a provision that would have sharply limited courts' authority to hold a patent unenforceable on the basis of inequitable conduct . . .").

180. Anderson, *supra* note 2, at 990.

181. *See id.* at 990–93.

182. Matal, *supra* note 179, at 546.

183. *See* Anderson, *supra* note 2, at 995–96.

184. *Id.* at 995–96.

185. *Id.* at 995 ("Before an audience largely comprised of patent litigators, the Chief Judge urged practitioners to use the en banc petition process to raise legal challenges to calcified precedent.").

186. *Id.* at 996.

Finally, in 2009 and 2010, Congress introduced new bills that modified the claim construction and venue provisions to reflect the court's new approaches.[187] And at Senator Hatch's insistence, Senator Leahy and Representative Conyers consented to reforming inequitable conduct in this legislation.[188] However, in April 2010, before inequitable conduct reforms could once again be included in the legislation, the Federal Circuit granted en banc review in *Therasense, Inc. v. Becton, Dickinson & Co.*,[189] in which the court would reconsider the standards for evaluating inequitable conduct. Decided a few months before the AIA was enacted, *Therasense* heightened the standard for proving inequitable conduct.[190] The draft AIA provision on inequitable conduct was dropped,[191] and the only meaningful reform on this front involved restrictions following supplemental examination.[192]

Current legislative proposals lack the same level of dialogue between Congress and the en banc Federal Circuit. For example, although there have been several bills introduced and congressional hearings held on patentable subject matter, the court refuses to go en banc on this issue.[193] As explained below, the court may be acting quite rationally in refusing to hear patentable subject matter cases en banc, given the Supreme Court's refusal to acknowledge the signals the court is sending.[194]

The court is not taking other areas of patent reform up en banc either. In short, the Federal Circuit is not engaging in dialogue with Congress. And except for its recent decision on design patents,[195] it is not using en banc review to address areas of patent law that need development but are not getting congressional attention.

Although the Federal Circuit could be backing away from en banc review because of separation of powers concerns, this is a big attitudinal shift from a court that previously embraced such dialogue. Perhaps another institution has impacted the Federal Circuit's en banc practices.

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187. *See id.* at 996–99.

188. Matal, *supra* note 179, at 546.

189. 374 F. App'x 35 (Fed. Cir. 2010) (per curiam) (granting petition for rehearing en banc).

190. Therasense, Inc. v. Becton, Dickinson & Co., 649 F.3d 1276, 1290, 1291 (Fed. Cir. 2011) (en banc) (requiring specific intent instead of recklessness and requiring but-for materiality).

191. Anderson, *supra* note 2, at 1012.

192. *See* Matal, *supra* note 179, at 547–51.

193. *See, e.g.*, Ariosa Diagnostics, Inc. v. Sequenom, Inc., 809 F.3d 1282, 1284 (Fed. Cir. 2015) (denying en banc review); Athena Diagnostics, Inc. v. Mayo Collaborative Servs., LLC, 927 F.3d 1333, 1335 (Fed. Cir. 2019) (denying en banc review); Am. Axle & Mfg., Inc. v. Neapco Holdings LLC, 966 F.3d 1347, 1348 (Fed. Cir. 2020) (denying en banc review).

194. *See infra* notes 206–20 and accompanying text.

195. *See* LKQ Corp. v. GM Glob. Tech. Operations LLC, 102 F.4th 1280 (Fed. Cir. 2024).

2. The Supreme Court

Immediately after the Federal Circuit was established, the Supreme Court's involvement in patent law was minimal.[196] As Professor Timothy Holbrook explains, the Supreme Court's hands-off approach persisted for "approximately twenty years" and the Court "seemed to abdicate responsibility for developing patent law to the specialized Federal Circuit."[197]

But in the early 2000s, the Supreme Court renewed its interest in patent law.[198] It no longer limited its interest to issues tangential to substantive patent law.[199] But that was only the beginning. Since 2010, the Supreme Court's interest in patent law has exploded.

As Professor Christa Laser recently documented, from 2010 to 2019, the Supreme Court decided a total of thirty-four patent law cases,[200] amounting to "more patent law cases than in the prior three decades combined and nearly twice that of any prior decade since the 1952 Patent Act."[201] This interest in patent law is even more impressive given the Court's shrinking caseload during that same period.[202] As a result, patent cases comprise a more significant portion of the Court's docket.[203] But it is also worth noting that the Supreme Court's interest

196. Timothy R. Holbrook, *Explaining the Supreme Court's Interest in Patent Law*, 3 IP THEORY 62, 62 (2013); Laser, *supra* note 18, at 38–39.

197. Holbrook, *supra* note 196, at 62–63.

198. *See id.* at 63; John F. Duffy, *The* Festo *Decision and the Return of the Supreme Court to the Bar of Patents*, 2002 SUP. CT. REV. 273, 283; Gajarsa & Cogswell, *supra* note 2, at 843–44; Laser, *supra* note 18, at 39.

199. Holbrook, *supra* note 196, at 64; *see also* Dyk, *supra* note 144, at 67 ("A large proportion of [the Supreme Court's review of the Federal Circuit has] involved substantive patent law or related procedural issues.").

200. *See* Laser, *supra* note 3, at 571 fig.1.

201. *Id.* at 571. In the preceding decades, the Supreme Court decided eighteen cases between 1960 and 1969, ten between 1970 and 1979, seven between 1980 and 1989, eight between 1990 and 1999, and twelve between 2000 and 2009. *Id.* at 571 fig.1. The reasons for the uptick in patent cases are unclear. Some commentators have pointed to the rise of a specialized Supreme Court patent bar. *See* Paul R. Gugliuzza, *The Supreme Court Bar at the Bar of Patents*, 95 NOTRE DAME L. REV. 1233, 1259 (2020). Others have noted the important role of the Solicitor General. *See* John F. Duffy, *The Federal Circuit in the Shadow of the Solicitor General*, 78 GEO. WASH. L. REV. 518, 519–20 (2010). Others have hypothesized that the Supreme Court is attempting to avoid jurisprudential isolationism or exceptionalism. *See* Holbrook, *supra* note 196, at 71–72; Tejas N. Narechania, *Certiorari, Universality, and a Patent Puzzle*, 116 MICH. L. REV. 1345, 1349–50 (2018). And others have suggested the Court's rejection of the Federal Circuit's bright-line rules as the source. *Cf.* Peter Lee, *Patent Law and the Two Cultures*, 120 YALE L.J. 2, 45–46 (2010) (noting that the Supreme Court has been narrowing patent rights and "systematically favoring holistic standards over formalistic, bright-line rules").

202. Laser, *supra* note 3, at 587 ("The Supreme Court heard roughly half the number of cases in recent years as it did in the 1970s or 80s.").

203. *Id.*

in patent cases has begun to wane over the last few years. From 2020 to 2023, the Court decided only four patent cases.[204]

What does the Supreme Court's increased appetite for patent law tell us about why the Federal Circuit has abandoned en banc review in patent cases? For some issues, such as patentable subject matter, in which the Supreme Court has had a particular interest — deciding four cases between 2010 and 2014[205] — the Federal Circuit may believe that its efforts are futile.[206] If en banc review were used to clarify the law regarding eligibility, the Federal Circuit may reason that it has insufficient room to maneuver given Supreme Court precedent.[207] But if the Federal Circuit hoped to use en banc review to signal to the Supreme Court that its intervention was necessary to resolve this issue, then the Federal Circuit likely sees this as a hopeless task. After the Supreme Court's puzzling[208] decisions in *Bilski v. Kappos*,[209] *Mayo Collaborative Services v. Prometheus Laboratories, Inc.*,[210] *Association for Molecular Pathology v. Myriad Genetics, Inc.*,[211] and *Alice Corp. v. CLS Bank International*,[212] the Federal Circuit sought clarity on patentable subject matter by declining to sit en banc but simultaneously issuing fractured dissenting and concurring opinions and specifically requesting the Supreme Court to weigh in.[213] But the Court refused the

204. Thryv, Inc. v. Click-to-Call Techs. LP, 140 S. Ct. 1367 (2020); United States v. Arthrex, Inc., 594 U.S. 1 (2021); Minerva Surgical, Inc. v. Hologic, Inc., 141 S. Ct. 2298 (2021); Amgen Inc. v. Sanofi, 598 U.S. 594 (2023).

205. *See* Bilski v. Kappos, 561 U.S. 593 (2010); Mayo Collaborative Servs. v. Prometheus Labs., Inc. 566 U.S. 66 (2012); Ass'n for Molecular Pathology v. Myriad Genetics, Inc., 569 U.S. 576 (2013); Alice Corp. v. CLS Bank Int'l, 573 U.S. 208 (2014).

206. *See* Jeremy W. Bock, *Forcing Supreme Court Review by the Federal Circuit*, 71 BUFF. L. REV. 83, 86 (2023).

207. *See id.* at 88–89.

208. *See* John M. Golden, Flook *Says One Thing*, Diehr *Says Another: A Need for Housecleaning in the Law of Patentable Subject Matter*, 82 GEO. WASH. L. REV. 1765, 1765–66 (2014) ("Commentators have bemoaned the problems this uncertainty and lack of clarity create for potential innovators and patent-system administrators."); Richard Gruner, *Lost in Patent Wonderland with* Alice*: Finding the Way Out*, 72 SYRACUSE L. REV. 1053, 1055 (2022) ("Parties throughout the patent world have described *Alice* as a disaster for the patent system, rendering the incentives and legal constraints of patent law — indeed the scope of the patent system itself — without meaningful boundaries for almost a decade.").

209. 561 U.S. 593 (2010). The Federal Circuit's decision in *Bilski* was en banc. *Id.* at 600.

210. 566 U.S. 66 (2012).

211. 569 U.S. 576 (2013).

212. 573 U.S. 208 (2014). The Federal Circuit's decision in *Alice* was en banc. *Id.* at 214.

213. *See, e.g.*, Ariosa Diagnostics, Inc. v. Sequenom, Inc., 809 F.3d 1282, 1284, 1293 (Fed. Cir. 2015) (denying en banc review); Berkheimer v. HP Inc., 890 F.3d 1369, 1369 (Fed. Cir. 2018) (denying en banc review); Athena Diagnostics, Inc. v. Mayo Collaborative Servs., LLC, 927 F.3d 1333, 1333–34, 1337 (Fed. Cir. 2019) (denying en banc review). *But see* Nikola L. Datzov & Jason Rantanen, *Predictable Unpredictability*, 53–59 (Univ. Iowa Legal Stud. Rsch. Paper, Paper No. 2024-04, 2023), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4380434 [https://perma.cc/2LCV-ZG3R] (analyzing low dissent rates for patentable subject matter cases and opining that this is a better indicator of predictability than the fractured opinions in orders denying en banc review).

invitation in each case.[214] The Supreme Court's failure to grant certiorari in these eligibility cases, among others,[215] sent a clear sign to the Federal Circuit that its signals were being ignored.[216] Using en banc procedures to clarify the law or to signal to the Supreme Court has left the Federal Circuit despondent with respect to patentable subject matter. Further en banc review or discussion would be a waste of the Federal Circuit's limited resources and it has understandably given up these efforts.[217]

Alternatively, given the Supreme Court's latest, but confusing, decisions on patentable subject matter[218] and Congress's recent hearings on the topic,[219] the Federal Circuit may see its role as more limited than before. Rather than serving as the sole voice on patent eligibility, the Federal Circuit is now joined by ongoing dialogue from Congress and the Supreme Court. As then-Judge Ruth Bader Ginsburg once explained, the Supreme Court sometimes initiates a discussion with the executive and legislative branches when deciding cases.[220] Because of

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214. *See, e.g.*, *Ariosa Diagnostics*, 809 F.3d at 1282, *cert. denied*, 579 U.S. 928 (2016); *Berkheimer*, 890 F.3d at 1369, *cert. denied*, 140 S. Ct. 911 (2020); *Athena Diagnostics*, 927 F.3d at 1333, *cert. denied*, 140 S. Ct. 855 (2020).

215. *See, e.g.*, Interactive Wearables, LLC v. Polar Electro Oy, No. 2021-1491, 2021 WL 4783803, at *1 (Fed. Cir. Oct. 14, 2021), *cert. denied*, 143 S. Ct. 2482 (2023); Travel Sentry, Inc. v. Tropp, 877 F.3d 1370 (Fed. Cir. 2017), *cert. denied sub nom.* Tropp v. Travel Sentry, Inc., 143 S. Ct. 2483 (2023).

216. *See* Dani Kass, *From* Alice *to* Fintiv*: Judge O'Malley Dishes on Patent Law*, LAW360 (Mar. 23, 2022), https://www.law360.com/ip/articles/1476073/from-alice-to-fintiv-judge-o-malley-dishes-on-patent-law [https://perma.cc/76WZ-Z49M] (quoting Judge Kathleen O'Malley as saying, "I believe we were handed stuff from the Supreme Court and that the circuit has done the best it can to try to ferret it out and to beg the Supreme Court for more guidance, and [the Supreme Court] hasn't received it.").

217. That is not to say that there is no room left for the Federal Circuit to develop patentable subject matter — via panels or en banc review. *See* Datzov & Rantanen, *supra* note 213, at 68–70 (advocating for the Federal Circuit to go en banc to resolve the confusion between Step 1 and Step 2 of the *Mayo*/*Alice* framework).

218. *See, e.g.*, Ariosa Diagnostics, Inc. v. Sequenom, Inc., 788 F.3d 1371 (Fed. Cir. 2015), *reh'g denied*, 809 F.3d 1282 (Fed. Cir. 2015), *cert. denied sub nom.* Sequenom, Inc. v. Arisoa Diagnostics, Inc., 579 U.S. 928 (2016).

219. *See The State of Patent Eligibility in America: Part I: Hearing Before the Subcomm. on Intell. Prop. of the S. Comm. on the Judiciary*, 116th Cong. (2019), https://www.judiciary.senate.gov/committee-activity/hearings/the-state-of-patent-eligibility-in-america-part-i [https://perma.cc/69BQ-CZ9T]; *The State of Patent Eligibility in America: Part II: Hearing Before the Subcomm. on Intell. Prop. of the S. Comm. on the Judiciary*, 116th Cong. (2019), https://www.judiciary.senate.gov/committee-activity/hearings/the-state-of-patent-eligibility-in-america-part-ii [https://perma.cc/VH8M-LLRH]; *The State of Patent Eligibility in America: Part III: Hearing Before the Subcomm. on Intell. Prop. of the S. Comm. on the Judiciary*, 116th Cong. (2019), https://www.judiciary.senate.gov/committee-activity/hearings/the-state-of-patent-eligibility-in-america-part-iii [https://perma.cc/8KGM-YVNJ].

220. Ruth Bader Ginsburg, *Speaking in a Judicial Voice*, 67 N.Y.U. L. REV. 1185, 1204 (1992); *see also* Ryan Vacca & Ann Bartow, *Ruth Bader Ginsburg's Copyright Jurisprudence*, 22 NEV. L.J. 431, 480–85 (2022) (describing Justice Ginsburg's dialogic theory in copyright cases); Richard L. Hasen, *End of the Dialogue? Political Polarization, The Supreme Court, and Congress*, 86 S. CAL. L. REV. 205, 208 (2013) ("The governing model of

this ongoing dialogue between institutions tasked with policymaking and lawmaking and a superior institution within the judicial hierarchy, perhaps the Federal Circuit is acknowledging that it has been pushed to the sidelines.

Although patentable subject matter is an important and confusing issue and best exemplifies en banc review as futile, it is generally an outlier. Other patent issues in need of clarification do not suffer the same restraint because the Supreme Court has not been as active.[221] Perhaps the Federal Circuit could play a more active role in these areas. Has the Supreme Court's entry into patent law somehow squelched the Federal Circuit's instinct for en banc review?

One theory in support of this view is that the Federal Circuit is tired of being reversed by the Supreme Court when it decides cases en banc and does not want to expend the effort to sit en banc when there is a high likelihood of being reversed. There is some support for such a theory. From 2010 through 2017, the Supreme Court rejected the Federal Circuit's rule or judgment in a handful of en banc cases.

In 2017, in *Impression Products, Inc. v. Lexmark International, Inc.*,[222] the Supreme Court rejected the en banc Federal Circuit's holdings on the exhaustion doctrine that (1) "a patentee may sell an item and retain the right to enforce [the patent]" and (2) international exhaustion did not apply.[223] Also in 2017, in *SCA Hygiene Products Aktiebolag v. First Quality Baby Prods.*,[224] the Supreme Court rejected the en banc Federal Circuit's "holding that laches can be asserted to defeat a claim for damages incurred within the 6-year period set out in the Patent Act."[225]

Three years earlier, in 2014, in *Limelight Networks, Inc. v. Akamai Technologies, Inc.*,[226] the Supreme Court rejected the en banc Federal Circuit's holding on divided infringement that a single party need not commit direct infringement before another party can be liable for inducement.[227] And finally in 2010, the Supreme Court in *Bilski v. Kappos* rejected the en banc Federal Circuit's machine or transformation test as the exclusive test for determining whether a process was patent

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congressional-Supreme Court relations is that the branches are in dialogue on statutory interpretation."); J. Jonas Anderson, *Patent Dialogue*, 92 N.C. L. REV. 1049, 1059–60 (2014) (describing the dialogue between Congress and the Supreme Court on constitutional and statutory interpretations).

221. *See infra* Part V (describing patent issues in need of en banc review).

222. 581 U.S. 360 (2017).

223. *Id.* at 368–70.

224. 580 U.S. 328 (2017).

225. *Id.* at 333, 346.

226. 572 U.S. 915 (2014).

227. *Id.* at 920, 923.

eligible.[228] Following four rejections of its en banc opinions,[229] perhaps the Federal Circuit had enough?

Although it is a possibility, this seems unlikely for three reasons. First, after 2010 and 2014, the subsequent couple of years were marked by an increase in en banc patent decisions.[230] This includes the Federal Circuit's en banc decision in *Alice*,[231] which followed two Supreme Court rejections of the Federal Circuit's tests for patentable subject matter[232] and a third on the way a month later.[233]

Second, even though the Federal Circuit stopped hearing patent cases en banc following the two 2017 rejections of its en banc decisions, the Supreme Court affirmed another en banc decision shortly thereafter. In *Peter v. NantKwest, Inc.*,[234] the Supreme Court affirmed the en banc Federal Circuit's decision that § 145 of the Patent Act, which permits the USPTO to recover "[a]ll the expenses of the proceedings," does not extend to attorneys' fees.[235] If the Federal Circuit had lost hope in the en banc process after its four rejections from 2010 through 2017, the Federal Circuit's en banc success in *NantKwest* should have mitigated any lost hope.

Third, the Federal Circuit experienced an earlier period of en banc reversals, but its reaction then was much different. From 1997 through 2002, the Supreme Court reversed the en banc Federal Circuit in two cases involving the doctrine of equivalents[236] and one case concerning the standard of review for factual findings by the USPTO.[237] Similar to the recent trend in en banc reversals, there was a decline of en banc review during the 1997–2002 time period, even if not as extreme.[238] But a closer inspection of this period reveals that hopelessness from Supreme Court reversal is not what occurred at this time. Instead, the

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228. 561 U.S. 593, 600, 604 (2010). Note that while the Court rejected the Federal Circuit's ruling that the machine or transformation test was the exclusive test, it affirmed the judgment.

229. In addition to these four cases, the Supreme Court also reversed and vacated the limited en banc decision in *Thryv, Inc. v. Click-to-Call Technologies*. 140 S. Ct. 1367 (2020). The en banc Federal Circuit held that § 315(b)'s time bar, which prohibits institution of inter partes review when a petitioner files its petition more than one year after being served with a complaint, applies even when the complaint was subsequently voluntarily dismissed without prejudice. *Id.* at 1372. The Supreme Court did not specifically address that issue but held that such an issue was unreviewable by the Federal Circuit. *Id.* at 1373–74. But because *Thryv* was not issued until 2020, its potential impact on the Federal Circuit's decision to cease hearing patent cases en banc in 2018 is less probative of this theory.

230. *See supra* Figure 2.

231. CLS Bank Int'l v. Alice Corp., 717 F.3d 1269 (Fed. Cir. 2013) (en banc).

232. Bilski v. Kappos, 561 U.S. 593 (2010); Mayo Collaborative Servs. v. Prometheus Lab'ys, Inc., 566 U.S. 66 (2012).

233. *See* Ass'n for Molecular Pathology v. Myriad Genetics, Inc., 569 U.S. 576 (2013).

234. 140 S. Ct. 365 (2019).

235. *See id.* at 370 (quoting 35 U.S.C. § 145).

236. *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).

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

238. *See supra* Figure 2.

two doctrine of equivalents cases — *Hilton Davis Chem. Co. v. Warner-Jenkinson Co.*[239] and *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*[240] — demonstrate the Federal Circuit embracing en banc review after reversal by the Supreme Court.

In 1995, the Federal Circuit sat en banc in *Warner-Jenkinson* and held by a seven-to-five majority (1) that "a finding of infringement under the doctrine of equivalents requires proof of insubstantial differences between the claimed and accused products or processes,"[241] (2) that equivalence "is an issue of fact to be submitted to the jury in a jury trial,"[242] and (3) that "[t]he trial judge does not have discretion to choose whether to apply the doctrine of equivalents when the record shows no literal infringement."[243] As applied to the facts, which involved amending a claim to add "a pH [range] from approximately 6.0 to 9.0," the en banc Federal Circuit determined that because there was no explanation for why the inventors added the lower limit, the patentee was not prevented under the doctrine of prosecution history estoppel from "asserting equivalency to processes . . . operating sometimes at a pH below 6."[244]

The Supreme Court granted certiorari and reversed.[245] The Court noted that significant disagreement within the Federal Circuit suggested that the doctrine of equivalents was not free from confusion and that it was endeavoring "to clarify the proper scope of the doctrine."[246] In its opinion, the Court (1) confirmed that the doctrine of equivalents survived in Congress's adoption of the 1952 Patent Act,[247] (2) required that the doctrine be applied to individual elements of the claim rather than to the invention as a whole,[248] and (3) broadened the scope of prosecution history estoppel.[249]

This third contribution was where the en banc Federal Circuit had erred.[250] According to the Supreme Court, courts are to presume that there was a "substantial reason related to patentability for including the limiting element" and that prosecution history estoppel "bar[s] the

239. 62 F.3d 1512 (Fed. Cir. 1995) (en banc).
240. 234 F.3d 558 (Fed. Cir. 2000) (en banc).
241. *Hilton Davis*, 62 F.3d at 1521–22.
242. *Id.* at 1522.
243. *Id*.
244. *Id.* at 1525.
245. Warner-Jenkinson Co. v. Hilton Davis Chem. Co., 520 U.S. 17, 24 (1997).
246. *Id.* at 21.
247. *Id.* at 26–27; *see also* John M. Golden, *The Supreme Court as "Prime Percolator": A Prescription for Appellate Review of Questions in Patent Law*, 56 UCLA L. REV. 657, 691 (2009).
248. *Warner-Jenkinson*, 520 U.S. at 29.
249. *See id.* at 33–34; *see also* Golden, *supra* note 247, at 691–92.
250. *See* Golden, *supra* note 247, at 692–93 (noting that the Court did not justify the extent to which the absolute bar applied, resulting in several years of conflicting opinions between the Federal Circuit and the Supreme Court).

application of the doctrine of equivalents as to that element."[251] The Federal Circuit concluded that prosecution history estoppel did not apply to the lower 6.0 pH level because there was no apparent reason for its inclusion.[252] Instead, the court should have presumed that there was a reason for it and applied prosecution history estoppel (or at least allowed the patentee to explain the reasons for the amendment).[253]

After the Supreme Court decision in *Warner-Jenkinson*, there was some confusion as to whether an unexplained narrowing amendment completely barred application of the doctrine of equivalents.[254] In 2000, the Federal Circuit again sat en banc "to resolve certain issues relating to the doctrine of equivalents that remained in the wake of the Supreme Court's decision in *Warner-Jenkinson* . . . ."[255] In *Festo*, the en banc court sought to answer five questions regarding prosecution history estoppel and the doctrine of equivalents.[256] As part of its decision, the Federal Circuit completely barred the doctrine of equivalents for an amended limitation when the amendment triggered prosecution history estoppel.[257] That is, if a narrowing amendment were made, the patentee surrenders *all* equivalents to the amended claim element, not just the equivalents specifically related to the amendment.[258] Echoing congressional statements about the Federal Circuit's purpose, the court reasoned that such an interpretation would result in consistent and predictable results, which would help patentees and other businesses conduct their affairs.[259]

The Supreme Court granted certiorari and, like in *Warner-Jenkinson*, rejected the Federal Circuit's approach.[260] The Court held that a complete bar to the doctrine of equivalents was inappropriate and that the patentee "bear[s] the burden of showing that the amendment does not surrender the particular equivalent in question."[261] Instead of a complete bar, a rebuttable presumption is raised.[262] The Court also

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251. *Warner-Jenkinson*, 520 U.S. at 33; *see also* Golden, *supra* note 247, at 692.

252. Hilton Davis Chem. Co. v. Warner-Jenkinson Co., 62 F.3d 1512, 1525 (Fed. Cir. 1995) (en banc).

253. *See Warner-Jenkinson*, 520 U.S. at 33–34; *see also* Golden, *supra* note 247, at 692.

254. Golden, *supra* note 247, at 692.

255. Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., 234 F.3d 558, 563 (Fed. Cir. 2000) (en banc).

256. *See id.*

257. *Id.* at 576; *see also* Golden, *supra* note 247, at 693.

258. *See Festo*, 234 F.3d at 572–74 (explaining that precedent underlying the flexible bar approach led to uncertainty, thereby rejecting the approach).

259. *See id.* at 575 ("A problem with the flexible bar approach is that it is virtually impossible to predict before the decision on appeal where the line of surrender is drawn.").

260. Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., 535 U.S. 722, 728, 741–42 (2002).

261. *Id.* at 740.

262. *See id.* at 740–41 (holding that in circumstances where the patentee could not have reasonably foreseen the equivalent in question, "the patentee can overcome the presumption that prosecution history estoppel bars a finding of equivalence").

rebuked the Federal Circuit for "ignor[ing] the guidance of *Warner-Jenkinson*, which instructed that courts must be cautious before adopting changes that disrupt the settled expectations of the inventing community" and reminded the court that "[t]he responsibility for changing" the rules concerning the doctrine of equivalents and prosecution history estoppel "rests with Congress."[263]

After twice being reversed by the Supreme Court on the doctrine of equivalents (and also being reversed in another en banc decision regarding the applicability of the Administrative Procedure Act to findings of fact by the USPTO),[264] the Federal Circuit might have called it quits with further en banc review. Yet it persisted. In 2003, on remand from the Supreme Court, the Federal Circuit again sat en banc in *Festo* to provide additional guidance on the doctrine of equivalents, which included four questions about how to implement the Supreme Court's new flexible standard under the facts of this case and more generally.[265]

The current period of Supreme Court reversals and the seemingly concurrent scaling back of en banc review looks like a retreat from stewarding patent law's evolution through en banc review. At first blush, the Federal Circuit's current five-year drought of en banc patent decisions might be understood as history repeating itself. But a closer examination of the Federal Circuit's history from 1997 to 2002 illustrates that, even in the face of repeated en banc reversal, the court continued to use en banc review to develop patent law. The current quiescence of en banc review in patent cases is quite different.

The Supreme Court's emerging role in shaping patent law does not adequately explain the Federal Circuit's retreat. As discussed, although the court's reluctance to sit en banc in patentable subject matter cases might be explained by fears that its hands are tied or that its efforts are futile,[266] patentable subject matter is an outlier in this regard.[267] As detailed later, several other aspects of patent law can benefit from en banc review.[268] Likewise, if the Supreme Court's interest was a major cause of the abandonment of en banc review, the Supreme Court's waning interest in patent law over the last several years should have resulted in more en banc review. Further, theories about the Federal Court's fears of inevitable reversal are unpersuasive for several reasons.

As John Golden suggested over a decade ago, the Supreme Court occasionally steps in to become the "prime percolator" of patent law — to "combat undesirable ossification of legal doctrine" by issuing

263. *Id.* at 739.

264. Dickinson v. Zurko, 527 U.S. 150, 165 (1999).

265. Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., 344 F.3d 1359, 1365–66 (Fed. Cir. 2003) (en banc) (listing four questions it asked the parties to brief on remand regarding the flexible bar approach and rebutting the presumption).

266. *See supra* text accompanying notes 206–20.

267. *See supra* Section IV.B.2.

268. *See infra* Part V.

modest and development-spurring decisions.[269] But Supreme Court intervention should not — and does not — preclude the Federal Circuit from continuing to serve in its stewardship role. In these circumstances, the Federal Circuit can hear — and has heard — cases en banc to continue the development and optimization of patent law and policy.[270]

C. The Federal Circuit's Changing Bench

All institutions are composed of individuals who make decisions on behalf of the institution. A significant change in the individual decision-makers can impact institutions' decisions. The Federal Circuit is no different. Replacing judges can impact how the institution operates,[271] including disrupting the court's previously active en banc practices. As then-Chief Judge Michel explained, "the most dramatic development in the evolution of the Federal Circuit" was the "sudden change in membership."[272] As part of the court's then-expected turnover in judges starting in 2010, Judge Michel warned of the possibility of a "marked shift in the balance among its members" and "[a] significant shift in direction."[273]

The Federal Circuit has twelve active judgeships.[274] Since 2010, nine new active judges were appointed to replace existing judges.[275] Perhaps this dramatic change to the court's bench is a contributing cause of the Federal Circuit's en banc retrenchment.

Federal Rule of Appellate Procedure 35 provides that "[a] majority of the circuit judges who are in regular active service and who are not disqualified may order that an appeal or other proceeding be heard or reheard by the court of appeals en banc."[276] Thus, the active judges (as opposed to senior or visiting judges) themselves decide whether to hear a case en banc.

The process for en banc review is fairly straightforward. The parties may petition for en banc review,[277] or judges on the Federal Circuit may request it sua sponte before or after the panel has issued its

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269. Golden, *supra* note 247, at 662.

270. *See id.* at 717.

271. *See* Hon. Paul R. Michel, *Past, Present, and Future in the Life of the U.S. Court of Appeals for the Federal Circuit*, 59 AM. U. L. REV. 1199, 1203–05 (2010).

272. *Id.* at 1203.

273. *Id.* at 1204.

274. 28 U.S.C. § 44(a) (2008).

275. The nine judges and their years of appointments are: O'Malley (2010), Wallach (2011), Reyna (2011), Taranto (2013), Chen (2013), Hughes (2013), Stoll (2015), Cunningham (2021), and Stark (2022). Judge Wallach took senior status in 2021. Judge O'Malley retired in 2022. *Judge Biographies*, U.S. CT. OF APPEALS FOR THE FED. CIR., https://cafc.uscourts.gov/home/the-court/judges/judge-biographies/ [https://perma.cc/7GDT-4CLT].

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

277. *Id.* at 35(b).

decision.[278] Parties and judges request en banc review to resolve intracircuit splits,[279] to resolve intercircuit splits when the en banc court is the outlier,[280] and to change circuit law when the panel decision does not reflect the view of the entire court.[281] If petitioned for, the clerk promptly sends the petition to the active judges and "allow[s] ten working days for any judge to request a response."[282] Then, "[i]f no judge requests a response, the clerk will enter an order . . . denying the petition . . . ."[283] But, "[i]f a response is requested, the clerk . . . send[s] the response . . . to the [active] judges [and] allow[s] ten working days for any judge to initiate a poll . . . ."[284]

An active judge or panel of judges can initiate a poll by requesting the chief judge to poll the active judges.[285] The chief judge distributes a ballot that gives three choices: (1) deny en banc review, (2) hear the case en banc, or (3) defer voting pending a conference of the judges.[286] If a majority votes to follow one of these three choices, then such action is taken.[287] "If less than a majority vote to [grant en banc review] or to defer voting pending a conference, but together those votes constitute a majority, then the chief judge . . . schedule[s] a conference."[288] If a conference is held, a ballot is taken during the conference or promptly thereafter with the option of denying or granting en banc review.[289]

If no poll is initiated, the clerk enters an order denying the petition.[290] If a poll is initiated and a majority of active judges votes to grant en banc review, then a committee of judges is appointed by the chief judge and this committee circulates a draft order setting forth the questions proposed to be addressed by the en banc court.[291] If a poll is initiated, but en banc review is denied, then the clerk enters an order denying the petition but notes if there are dissenting votes or opinions

278. UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT RULES OF PRACTICE 167 (2023) ("Practice Notes to Rule 35"); UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT INTERNAL OPERATING PROCEDURE nos. 14.3, 14.4.

279. *See* George, *supra* note 87, at 234.

280. *Id.* at 236.

281. *Id.* at 242–43, 245–46. Litigants also frequently seek en banc review as a last-ditch attempt to prevail in cases they have lost. *See* Ryan Davis, *Fed. Circ. Judges Say Cool It With the Rehearing Petitions*, LAW360 (Mar. 17, 2022), https://www.law360.com/articles/1475014/fed-circ-judges-say-cool-it-with-the-rehearing-petitions [https://perma.cc/43D4-SYT4]. As Judge Linn of the Federal Circuit explained, "the chances of success [on such a petition] are slim to none." *Id.*

282. UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT INTERNAL OPERATING PROCEDURE no. 14.1(a).

283. *Id.* at no. 14.1(b).

284. *Id.* at no. 14.1(c).

285. *Id.* at no. 14.5(a).

286. *Id.*

287. *Id.* at no. 14.5(c).

288. *Id.*

289. *Id.* at no. 14.5(d).

290. *Id.* at no. 14.1(d).

291. *Id.* at no. 14.1(e).

from the denial of en banc review.[292] The process for sua sponte polls is similar except that for polls initiated before the panel opinion is issued, if en banc review is denied, no order issues, and the panel opinion issues.[293] And for sua sponte polls initiated after the panel opinion issues, the process is the same except that a denied order notes that a poll was taken but failed to get a majority of votes.[294] Like with petitions, dissents and dissenting opinions are noted in the order denying en banc review.[295]

Analyzing dissents from denials of en banc review can give us a glimpse into the active judges' views on en banc review. Dissenting or drafting opinions about why en banc review should have been granted is an indicator of how much or little the judges value en banc review. Figure 8 shows the percentage of cases in which each then-active Federal Circuit judge dissented from denial of en banc review. The percentage is calculated as a function of the total opportunities each judge had to vote on the denied en banc request.[296]

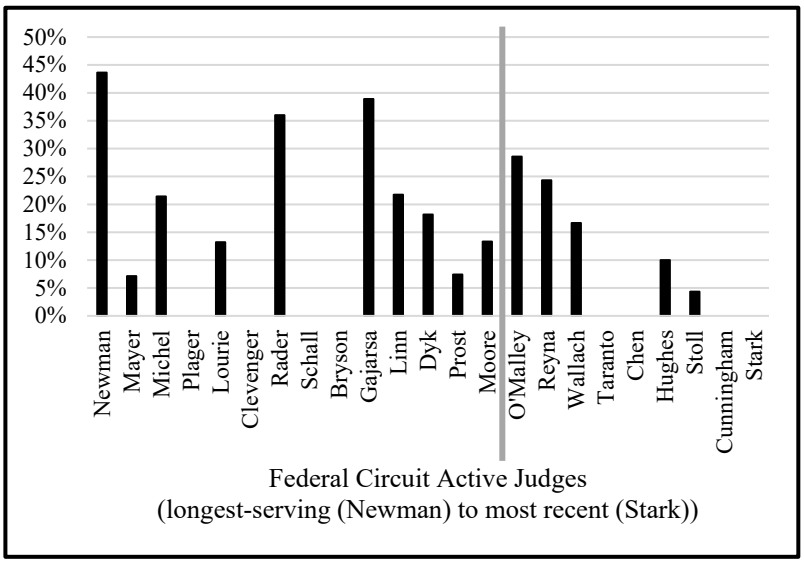

Figure 8: Dissents from Participating En Banc Denials (2005–2023)

292. *Id.* at no. 14.1(f).
293. *Id.* at no. 14.3(c).
294. *Id.* at no. 14.4(c).
295. *Id.*
296. By "total opportunities to vote on the denied en banc request," I mean the total number of cases in the dataset where the judge was an active judge and not otherwise disqualified from deciding the case en banc (e.g., disqualified because of a conflict of interest). Data for

Figure 9 shows the same data but limits it to the current active judges.[297] Figure 9 more clearly shows the stark difference between the six longest-serving and six newly-appointed active judges.

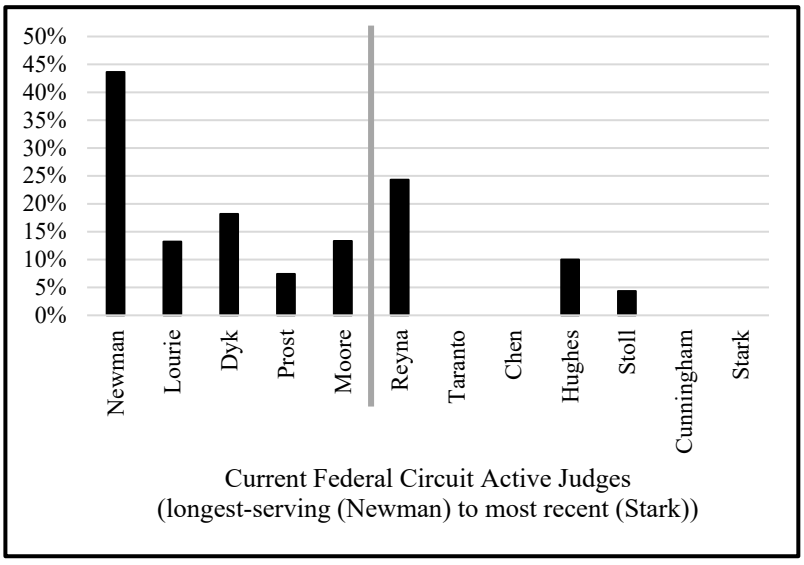

Figure 9: Dissents from Participating En Banc Denials (Active Judges) (2005–2023)

As these figures illustrate, six of the newest active judges (Taranto, Chen, Hughes, Stoll, Cunningham, and Stark) dissent from denials of en banc review at a much lower rate than the active judges who have

these calculations was obtained from THE FEDERAL CIRCUIT DATABASE PROJECT, https://federalcircuitdatasetproject.streamlit.app [https://perma.cc/PBQ9-JUCS]. This has been supplemented by the author's own review of data taken from the Federal Circuit's website, which publishes the court's orders and opinions. *See* U.S. CT. OF APPEALS FOR THE FED. CIR., https://cafc.uscourts.gov [https://perma.cc/YE9L-WM35]. It should be noted that the Federal Circuit does not consistently post all en banc orders to its website. After cross-referencing the orders available on the website with a comprehensive manual review of one year of docket review, it appears that the Federal Circuit posts all orders granting en banc review and all orders denying en banc review in which a dissenting opinion is filed. The only en banc orders excluded from the website are those in which en banc review is denied, but no judges dissent from the denial. Because these orders are not readily available, the denominators used for the rates in the charts are likely lower. The numerators are unaffected. Because this same limitation applies to all of the judges and the analysis is focused on the relative rates between judges, the impact of the missing orders on the analysis is of no significance.

297. Judge Newman was recently suspended from receiving any new case assignments and her request to the Judicial Conference of the United States was denied. *See In re* Complaint No. 23-90015 at *6 (Fed. Cir. Jun. 5, 2023). Because she has been disqualified from participating in en banc cases during her suspension, she is not considered an "active" or "regular active" judge, at least for purpose of the Federal Circuit's internal operating procedures. *See* UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT INTERNAL OPERATING PROCEDURE no. 14.

served longer.[298] Judge Reyna, the longest-serving of the new judges, is the outlier with a higher rate of dissents from denials of en banc review (similar to those of the longer-serving judges). Judge Hughes is in the same ballpark as some of the longer-serving judges (Lourie, Moore, and Prost).

As Figure 8 shows, during this same time, the court lost several en banc dissenting judges, including Judges Gajarsa, Rader, and O'Malley. Judge Gajarsa (a frequent dissenter) was replaced by Judge Wallach (a moderate dissenter) and then by Judge Cunningham (no dissents). Judge Rader (a frequent dissenter) was replaced by Judge Stoll (an infrequent dissenter). Judge O'Malley (a frequent dissenter) was replaced by Judge Stark (no dissents), but Judge Stark has not had any opportunities to dissent because of his recent appointment. Judge Linn (a moderate dissenter) was replaced by Judge Chen (no dissents). The only increases in en banc dissents are in connection with Judges Bryson and Mayer (zero or few dissents) who were replaced by Judge Hughes (an infrequent dissenter) and Judge Reyna (a frequent dissenter).

The data suggests that turnover on the Federal Circuit is strongly associated with the near elimination of en banc review in patent cases. Was Judge Michel's prediction of turnover causing a significant shift in direction prescient? In that same article, Judge Michel described the adjustment period for new judges on the Federal Circuit.[299] He stated:

> When I arrived in March 1988, Chief Judge Markey told me that it usually takes five years for a new appellate judge to hit full stride. There are, of course, exceptions, and we have some on the court now who reached full capacity in a shorter time. But most of us required a long period of learning by doing, by studying, and by consulting more experienced judges. Therefore, the very newness of so many new appointees could present serious challenges quite aside from any doctrinal ambitions they might harbor.[300]

If Judge Michel was correct about the five-year acclimation period, then this would have the new judges "hit[ting] full stride" around 2018,

298. For Judges Cunningham and Stark, the lack of dissents is less meaningful because of their very recent appoints to the bench (2021 and 2022, respectively). Judge Cunningham has only had two opportunities to dissent, and Judge Stark has had zero. Judge Stark's vote to grant en banc review in *LKQ Corp. v. GM Global Tech. Operations LLC* may indicate his willingness to return the Federal Circuit to its more active en banc practices. 71 F.4th 1383, 1383 n.* (Fed. Cir. 2023) (granting en banc review). But it is too soon to tell. Judge Cunningham did not participate in the en banc vote in *LKQ*. *See id.*

299. Michel, *supra* note 271, at 1204.

300. *Id.*

the same time when en banc review in patent cases started to wither. Maybe the new judges decided they did not want to tinker too much with the patent system. But even if this were the case, it is not clear why they would reach this conclusion in light of the Federal Circuit's charge of harmonizing patent law and improving its certainty and predictability,[301] and its enthusiastic embrace of patent en banc review over the previous couple of decades.[302]

One of the Federal Circuit's newer judges has shared insight into the court's concerns regarding the use of en banc review in patent cases. At a conference in early 2023, Judge Chen followed up on a co-panelist's concerns that the Federal Circuit sometimes forgets that it is a court and that it sometimes acts more like a legislative body.[303] Judge Chen responded:

> [M]aybe before I was on the Federal Circuit, I shared that concern. You would see en banc orders on patent

301. *See supra* note 35 and accompanying text. Upon the suggestion of a colleague, I examined the judges' backgrounds before they joined the Federal Circuit to see if this provided a clue. A similar number of the earlier-appointed judges and later-appointed judges came from private practice or the Department of Justice. The most striking change in background from the judges appointed earlier to those appointed later is that several of the earlier-appointed judges served as attorneys in Congress (e.g., Judges Michel, Rader, Prost) or played a role in the court's establishment (e.g., Judge Newman), whereas some of the later-appointed judges served for many years as district court judges (e.g., Judges Wallach, O'Malley, and Stark). *See Judge Biographies*, U.S. CT. OF APPEALS FOR THE FED. CIR., https://cafc.uscourts.gov/home/the-court/judges/judge-biographies/ [https://perma.cc/7GDT-4CLT]; Newman, *Origins of the Federal Circuit*, *supra* note 32, 541–43 (2002); *Randall Rader*, THE RADER GRP., https://www.theradergroupplc.com/randall-rader [https://perma.cc/U8HU-BM6B]; Gene Quinn, *In His Own Words: the Career of Chief Judge Paul Michel*, 10 J. MARSHALL REV. INTELL. PROP. L. 301, 302–06 (2011). One hypothesis that could explain the different appreciation of the mandate to harmonize patent law and improve its predictability and certainty is that the judges with backgrounds as congressional attorneys and those who helped with the court's creation were more closely aligned with these congressional goals. The court's shift towards a bench with more former trial court judges is a move away from this congressional nexus. But the data does not fully support this hypothesis. Although Judges Newman, Rader, and Michel dissented from en banc denials quite a bit, which fits with the congressional-nexus theory, Judge Prost is on the lower end of dissents from en banc denials. More importantly, Judges Wallach and O'Malley (former district court judges) dissented from en banc denials quite frequently, which runs counter to the hypothesis. Because of Judge Stark's recent appointment to the Federal Circuit, it is too soon to draw any conclusions about him. For the view that the Federal Circuit's focus on its congressional charges has caused the court to get certain aspects of patent law wrong, see Paul R. Gugliuzza, *Saving the Federal Circuit*, 13 CHI.-KENT J. INTELL. PROP. 350, 364–74 (2014).

302. *See* Vacca, *supra* note 5, at 735–44. One former Federal Circuit judge noted that when they were on the court, some judges believed that en banc review was helpful in sending a signal to the Supreme Court that would be the equivalent of a circuit split in the regional circuits and would encourage the Supreme Court to grant certiorari. *See* Note from Judge to Author (July 28, 2023) (on file with author).

303. EC Live!, *DreyFEST: Courts and Jurisdiction Panel*, ENGLEBERG CTR. ON INNOVATION L. & POL'Y, at 43:10 (Mar. 24, 2023), https://eclive.engelberg.center/episodes/dreyfest-courts-and-jurisdiction-panel-34mK185R [https://perma.cc/6TPX-9J7Z] (comments by John M. Desmarais).

> law issues, consequential patent law issues . . . and you would see the order have seven different questions laid out. How should we decide this? How should we rule on this? How should we handle this? And then it does start to look a little bit too much like a quasi-legislature. But at the same time, . . . the Federal Circuit is betwixt and between because the Federal Circuit hears plenty of times from academics, "Why isn't the Federal Circuit using all the available policy levers to course correct and drive the law in the right direction and essentially be a policymaker?" . . . I'm sitting here, I'm a judge, I'm telling you right now: we do law, we do not do policy. I repeat, we do law, we do not do policy. But at the same time, I would say that at this point, our court has been on a journey and part of that journey is avoiding those kinds of en banc orders where the court comes across appearing like a legislature.[304]

This comment by Judge Chen suggests that the judges on the Federal Circuit are cognizant of separation of powers concerns when the court hears patent cases en banc. He shared this concern before he joined the court, which falls in line with the court's recent practices. But as discussed earlier, this is a departure from the Federal Circuit's historical approach. Maybe the new judges are simply more cautious about separation of powers principles than their predecessors.

But if so, it is interesting to note that three months after making this statement, the Federal Circuit, including Judge Chen, voted to grant en banc review in *LKQ Corp. v. GM Global Technology Operations LLC*.[305] Although *LKQ* is a design patent case, the en banc order does exactly what Judge Chen said the court avoids doing. It lists six broad questions, including questions such as "[i]f the court were to eliminate or modify the *Rosen-Durling* test, what should the test be for evaluating design patent obviousness challenges?" and "what differences, if any, between design patents and utility patents are relevant to the obviousness inquiry, and what role should these differences play in the test for obviousness of design patents?"[306]

Collegiality concerns could be another possible driver contributing to the Federal Circuit's avoidance of patent en banc review.[307] For

304. *Id.* at 45:32 (comments by Judge Chen).

305. 71 F.4th 1383, 1384 (Fed. Cir. 2023) (granting en banc review).

306. *Id.* (discussing the elimination of the *Rosen-Durling* test in questions C and F).

307. Perry Cooper, *Top Patent Court Urged to Tackle More Full Bench Do-Overs*, BLOOMBERG L. (Mar. 3, 2020), https://news.bloomberglaw.com/ip-law/top-patent-court-

decades, judges in other circuits have expressed concern that en banc review eroded collegiality between judges[308] and that this discouraged them from hearing cases en banc.[309] D.C. Circuit Judge Wald commented that "en bancs heighten tensions on the court," that "[n]o judge likes to have her opinions en banced, and although she may expect it from those with whom she frequently disagrees, she may resent it from usual allies," and that "[s]ome judges do indeed regard a vote in favor of en bancing their cases as tantamount to betrayal."[310] Second Circuit Judge Newman remarked that he believed one reason Second Circuit opinions were "relatively free of the vitriolic language unfortunately found in the writings of some other appellate courts" was because the Second Circuit rarely sat en banc.[311]

This view, however, is not universally held. Ninth Circuit Judge Browning believed that en banc review enhanced collegiality, noting that his colleagues "'thoroughly enjoy[ed] participating in en banc proceedings' and . . . view[ed] en banc gatherings as an 'opportunity for interchange that leads to improved personal communication and to the development of the attitude of trust and respect that is essential to judicial deliberation.'"[312] And as Judge Wald explained, sometimes these concerns are resisted and "judges' regard for their colleagues survive . . . en banc votes."[313] Perhaps more reflective of a bygone era, Third Circuit Judge Maris described en banc review as "very helpful in maintaining the very high esprit de corps" enjoyed in that circuit.[314]

Although collegiality concerns may explain the reluctance of some circuits to use en banc review, this same rationale for the Federal Circuit judges is harder to justify. The culture of the Federal Circuit has been to embrace en banc review in patent cases.[315] Other than Judges Cunningham and Stark, the other new judges joined the court amid a period of frequent en banc activity in patent cases. These judges would immediately have realized that the culture of the Federal Circuit was to put clarity and predictability of the law ahead of internal, personal concerns about stepping on each other's toes. Moreover, if collegiality

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urged-to-tackle-more-full-bench-do-overs [https://perma.cc/3KLZ-WDY2] ("There are also collegiality concerns. Some judges think full court reviews create friction and strain interpersonal relationships, [former Federal Circuit Chief Judge Paul] Michel said.").

308. *See* Harry T. Edwards, *The Effects of Collegiality on Judicial Decision Making*, 151 U. PA. L. REV. 1639, 1644–45 (2003).

309. *See* Menell & Vacca, *supra* note 134, at 375–76 (describing judges' collegiality concerns).

310. Wald, *supra* note 136, at 488 (emphasis omitted).

311. Jon O. Newman, *In Banc Practice in the Second Circuit, 1984–1988*, 55 BROOK. L. REV. 355, 369 (1989).

312. Stein, *supra* note 133, at 844.

313. Wald, *supra* note 136, at 488.

314. Hon. Albert Branson Maris, *Hearing and Rehearing Cases in Banc*, 14 F.R.D. 91, 96 (1954).

315. *See supra* Part III.

concerns were a driving force in the judges' decisions to avoid en banc review, we would expect these same collegiality concerns to pervade the non-patent cases too. But as explained earlier, the Federal Circuit has ordered en banc review in many non-patent cases from 2019 to 2023.[316]

Although there has been a significant shift in the court's patent en banc practices that coincides with the turnover of its active judges, the exact rationale for this shift is elusive.[317] Separation of powers and collegiality concerns fall short of explaining the shift.[318]

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316. *See supra* notes 154–56 and accompanying text.

317. The Federal Circuit has a practice of circulating all precedential opinions to the full court and allowing for ten days of review before the opinion is sent to the clerk for issuance. UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT INTERNAL OPERATING PROCEDURES no. 10.5 (2022). During this ten-day period, the non-panel judges are permitted to send comments to the authoring judge, panel, or all judges, and the panel can make necessary changes. *Id.* This practice permits the full court (or even a subset of the judges) to police problematic panel decisions without the need for a full en banc decision. This practice undoubtedly decreases the need for en banc review, but it is important to note that circulating opinions before issuance long predates the Federal Circuit's recent decline in en banc review and therefore is not an intervening event that caused the sudden shift. *See* Hon. Helen Wilson Nies, *The Federal Circuit: A Court for the Future*, 41 AM. U. L. REV. 571 (1992) ("To maintain uniformity, precedential decisions of the court are circulated to all members of the court prior to issuance for their comment so that statements which may appear to conflict with a prior decision or might cause confusion may be called to the attention of the panel.").

318. Another, but less observable, possibility is that psychological factors and personal relationships have changed the decision to hear cases en banc.

As to a psychological factor, in a 2021 interview, Judge Hughes criticized the use of en banc review. *See* Perry Cooper, *Full Court Patent Review Bids Often 'Waste of Time,' Judge Says*, BLOOMBERG L. (Feb. 23, 2021), https://news.bloomberglaw.com/ip-law/full-court-patent-review-bids-often-waste-of-time-judge-says [https://perma.cc/A9KQ-Z4K6]. He explained that en banc review generally does not clarify the law and referred to the court's en banc decision in *Aqua Products, Inc. v. Matal*, 872 F.3d 1290 (Fed. Cir. 2017) as an example. Cooper, *supra*. He noted that the case spawned five opinions, but none had enough votes to be controlling. *Id.* Judge Hughes reported, "That case almost broke me. . . . It didn't really decide anything, and I don't want to do that anymore." *Id.*

This is only one judge's opinion, but even if it were shared by the other judges, this risk is present in every en banc case, not just patent cases. In fact, in a Veterans Affairs case, *Arellano v. McDonough*, 1 F.4th 1059 (Fed. Cir. 2021) (en banc) (per curiam), decided just a few months after Judge Hughes made his comments about en banc review, the Federal Circuit unanimously held that equitable tolling was not available to the petitioner but was equally divided regarding the reasons for its decision. *Id.* at 1060. Ultimately, the Supreme Court granted certiorari and resolved the intracircuit split. *See Arellano v. McDonough*, 598 U.S. 1, 4–6 (2023). Similarly, in *Taylor v. McDonough*, 71 F.4th 909 (Fed. Cir. 2023) (en banc), the court issued a fractured en banc opinion. *Id.* at 916.

Judge Hughes's aversion to en banc review due to the hardship of *Aqua Products* is also undermined by his own actions encouraging en banc review. Just as *Aqua Products* was decided, Judge Hughes joined colleagues' dissents from denial of en banc review in two cases. *See* Secure Axcess, LLC v. PNC Bank Nat'l Assoc., 859 F.3d 998, 1004 (Fed. Cir. 2017) (denying en banc review) (Lourie, J., dissenting); Mentor Graphics Corp. v. EVE-USA, Inc., 870 F.3d 1298, 1306 (Fed. Cir. 2017) (denying en banc review) (Dyk, J., dissenting). Perhaps the psychological hardship of *Aqua Products* was not as severe as it was reported.

Finally, it is important to note that the COVID-19 pandemic also occurred during this five-year period. But this too cannot fully explain the en banc patent drought. First, the Federal

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If the three intervening events over the past decade — PTAB appeals swamping the Federal Circuit, increased patent activity by Congress and the Supreme Court, and turnover on the bench — do not, in and of themselves, fully explain the Federal Circuit's abandonment of en banc review in patent cases, what does? Although each intervening event is insufficient on its own, the impact of the combination of these events could best explain the phenomenon. Regardless of our ability to pinpoint the precise cause of the elimination of patent en banc review, an important question remains: how should we evaluate this absence of en banc review at the Federal Circuit?

V. A NORMATIVE EVALUATION

En banc review is an important and powerful tool for all circuit courts.[319] En banc cases typically involve complex and important legal questions and en banc review "ensur[es] consistency and conformity in decision-making."[320] The primary reason for sitting en banc is to

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Circuit's last en banc decision was August 16, 2018, seventeen months before COVID-19 arrived in the United States. *See* Click-to-Call Techs., LP v. Ingenio, Inc., 899 F.3d 1321 (Fed. Cir. 2018); CTR. FOR DISEASE CONTROL, CDC MUSEUM COVID-19 TIMELINE, https://www.cdc.gov/museum/timeline/covid19.html [https://perma.cc/USY6-M7RQ] (reporting January 20, 2020 as the first laboratory-confirmed case in the United States). Second, although the court restricted access to the courthouse from March 2020 to September 2022, the judges, court staff, and litigants were permitted to be physically present to argue their cases for much of this time. *See* U.S. CT. OF APPEALS FOR THE FED. CIR., ORDER RESTRICTING PUBLIC ACCESS TO THE NATIONAL COURTS BUILDING (Mar. 16, 2020), https://cafc.uscourts.gov/wp-content/uploads/covid-procedures-resources/AdministrativeOrder-BuildingRestriction-03162020.pdf [https://perma.cc/38UP-GCVS] (limiting public access to press, attorneys, and parties with in-person hearings); U.S. CT. OF APPEALS FOR THE FED. CIR., ORDER CONDUCTING ORAL ARGUMENTS (May 18, 2020), https://cafc.uscourts.gov/wp-content/uploads/Announcements/COVID-19Info/AdministrativeOrder-2020-02-05182020.pdf [https://perma.cc/TWD7-RE5Y] (suspending all in-person arguments); U.S. CT. OF APPEALS FOR THE FED. CIR., ORDER MODIFYING COURT OPERATIONS (June 22, 2021), https://cafc.uscourts.gov/wp-content/uploads/Announcements/COVID-19Info/AdministrativeOrder-2021-10-06222021.pdf [https://perma.cc/QZQ3-556W] (resuming in-person arguments in September 2021); U.S. CT. OF APPEALS FOR THE FED. CIR., ORDER REOPENING THE NATIONAL COURTS BUILDING (Sept. 9, 2022), https://cafc.uscourts.gov/wp-content/uploads/Announcements/AdministrativeOrders/AdministrativeOrderReopeningNCB-09092022.pdf [https://perma.cc/XU5Z-GQPZ] (fully reopening the National Courts Building for public access). Third, from March 2020 through September 2022, the court decided three non-patent cases en banc. *See* Nat'l Org. of Veterans' Advocates, Inc. v. Sec'y Veterans Affairs, 981 F.3d 1360 (Fed. Cir. 2020); *Arellano*, 1 F.4th; Lynch v. McDonough, 21 F.4th 776 (Fed. Cir. 2021) (en banc). It seems odd that COVID-19 would impede patent cases from en banc review, but not impact veterans' cases. Fourth, the COVID-19 restrictions ended in September 2022 and the court has failed to resume its en banc practices in patent cases.

319. George, *supra* note 87, at 217.

320. *Id*. at 217–18.

resolve intracircuit conflicts.[321] Writing for a unanimous Supreme Court, in the first case to address whether en banc review was permitted, Justice Douglas not only confirmed the legal basis of en banc review, but also praised its logic and desirability:

> Certainly the result reached makes for more effective judicial administration. Conflicts within a circuit will be avoided. Finality of decision in the circuit courts of appeal will be promoted. Those considerations are especially important in view of the fact that in our federal judicial system these courts are the courts of last resort in the run of ordinary cases.[322]

In addition to clarifying intracircuit confusion over the law,[323] en banc also benefits the legal system by signaling to the Supreme Court that its intervention is needed.[324] It also produces a more thorough consideration of the issue under the theory that "more heads are better than one."[325] Furthermore, if the Supreme Court grants certiorari in an en banc case, the Court is presented with a wider range of options to harmonize the law and produce a better outcome.[326] Finally, en banc decisions provide more authoritativeness than panel decisions.[327] As discussed below, these rationales for en banc review align well with the current state of patent law and policy and suggest the Federal Circuit should resuscitate its prior en banc practices.[328]

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321. *Id.* at 234–35.

322. Textile Mills Sec. Corp. v. Comm'r, 314 U.S. 326, 334–35 (1941) (citing H.R. Rep. No. 77-1246, which described a then-pending bill expressly permitting en banc review and touted the benefits of en banc review as avoiding intracircuit splits and freeing the majority of circuit judges from being bound by two colleagues).

323. En banc review can also be used to resolve intercircuit splits. *See* George, *supra* note 87, at 235–36. Because of the Federal Circuit's exclusive jurisdiction over all cases "arising under" U.S. patent law, 28 U.S.C. § 1295(a)(1), the opportunity for intercircuit splits is minimal. *But see infra* notes 371–74 and accompanying text (discussing Xitronix Corp. v. KLA-Tencor Corp., 882 F.3d 1075 (Fed. Cir. 2018)).

324. *See* George & Solimine, *supra* note 45, at 197; Wasby, *supra* note 133, at 31.

325. Wasby, *supra* note 133, at 31.

326. *Id.*; *see also* Eisen v. Carlisle & Jacquelin, 479 F.2d 1005, 1026 (2d Cir. 1973) (Oakes, J., dissenting from denial of rehearing en banc) ("There is no reason why the Supreme Court should not have before it some view, even if it is not a majority one, from this court, different from the panel's if, as I think is undoubtedly the case, an en banc vote would result in such.").

327. *See* Neal Devins & Allison Orr Larsen, *Weaponizing En Banc*, 96 N.Y.U. L. REV. 1373, 1375 (2021) ("The judges hear argument in a big room, often write separately, air disagreements publicly, and authoritatively decide the law that will govern a large jurisdiction for the foreseeable future."); Wasby, *supra* note 133, at 31 ("An en banc decision would also provide assurance that the doctrinal rule announced by the courts of appeals was held by a majority of that court's judges.").

328. *But see* Laser, *supra* note 18, at 63 (arguing that the Federal Circuit does not have sufficient "opportunities to gather information on policy making and consider the impact of alternative decisions").

There remains a need for clarity in patent law. Patent practitioners want to accurately advise their clients about how their patent disputes will be resolved.[329] They seek clarification on issues such as patentable subject matter, claim construction, the doctrine of equivalents, and a host of other issues.[330]

Former Chief Judge Michel echoed the current concern about claim construction, explaining that there are "two fundamentally divergent sets of claim-construction principles."[331] The first approach "accords a 'heavy presumption' that a claim term carries its ordinary meaning, as understood by a person of ordinary skill in the art."[332] Under this approach, the patent's specifications affect the ordinary meaning "'only' if it meets an 'exacting' standard and demonstrates either (i) clear lexicography . . . ; or (ii) a clear disavowal of claim scope."[333] The second is "a more 'holistic' approach . . . and allows the patent specification to limit a claim term's scope even when it does not evince clear lexicography or a disclaimer."[334] This inconsistency developed over three decades and still persists.[335] This is a key issue central to almost every patent case that needs en banc review to help litigants accurately advise their clients.[336]

The need for clarity is not limited to litigants. Clarity in patent law also impacts "business operations, product development plans, commercialization strategies, and licensing activities" of stakeholders

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329. Cooper, *supra* note 307 (quoting an attorney expressing the need for greater clarity in patent law).

330. *Id.* That said, there is an indication that attorneys litigating before the Federal Circuit file unwarranted en banc petitions. *See* Davis, *supra* note 281 (quoting Federal Circuit Judges Linn, Stoll, and Chen saying they are overwhelmed by the number of en banc and panel rehearing petitions and urging attorneys to be more circumspect before filing such petitions).

To confirm that lawyers are actually filing en banc petitions and that the cause of the en banc drought is not a lack of petitions, I conducted a manual review of the dockets for each patent case filed in 2015 and 2020 as coded in The Federal Circuit Database Project. For each case, I coded whether a petition for en banc review was filed. In 2015, parties sought en banc review in nineteen percent of patent cases (eighty-four petitions). In 2020, parties petitioned for en banc review in sixteen percent of patent cases (fifty-eight petitions). Although there was a slight dip, the raw numbers still indicate a strong desire by litigants for en banc review. As discussed below, the substance of the petitions also justifies en banc review.

331. Paul Michel & John Battaglia, *On Claim Construction, Predictability, and Patent Law Consistency: The Federal Circuit Needs to Vote En Banc*, IPWATCHDOG (Feb. 3, 2020), https://ipwatchdog.com/2020/02/03/claim-construction-predictability-patent-law-consistency-federal-circuit-needs-vote-en-banc/id=118481 [https://perma.cc/FN5K-BSU6].

332. *Id.* (emphasis omitted).

333. *Id.* (emphasis omitted); *see also* Erik I. Perez, Note, *A Proposed Analytical Framework for Resolving an Intra-Court Split on Claim Construction Ambiguity*, 39 SANTA CLARA HIGH TECH. L.J. 91, 99–102 (2022). *But see* Anderson & Menell, *supra* note 66, at 48–50 (finding that since the Federal Circuit's en banc decision in *Phillips*, claim construction decisions have been less panel dependent than before *Phillips*).

334. Michel & Battaglia, *supra* note 331 (emphasis omitted); *see also* Perez, *supra* note 333, at 102–06.

335. Michel & Battaglia, *supra* note 331.

336. *Id.*

across the patent system.[337] Christa Laser, in her article on the Supreme Court's patent cases, explained:

> Tens of thousands of businesses in the United States and around the world rely upon United States patent law to structure their new products and investments. It also is the driving force for research and development for a technological society. A change in the law from the Supreme Court can impact whether patents are valid, whether products are infringed, whether patents are enforceable, or the amount of recoverable damages. These changes can destabilize and revalue millions of investments in technology and pharmaceuticals. In some cases, the patent law decisions of the United States Supreme Court can change the viability of industries or the standing of the United States as a leader in innovation.[338]

Substituting the Federal Circuit for the Supreme Court yields the same concerns. The need for clarity in patent law extends well beyond litigants to a wide array of stakeholders that rely on patent law in conducting their affairs. And in some instances, important questions about the proper functioning of the institutions within the patent system are raised. Both sets of issues need en banc attention.

Litigants and scholars have raised several doctrinally important questions leading up to and during the Federal Circuit's five-year hiatus from en banc review in patent cases that impact not only patent litigators, but other stakeholders in the patent system. A few examples illustrate the important questions being raised but ignored.

In *Berkheimer v. HP Inc.*[339] and *Aatrix Software, Inc. v. Green Shades Software, Inc.*,[340] en banc review was requested on the question of whether patentable subject matter under § 101 is a question of fact or question of law.[341] This is an important question for litigants and potential litigants because it impacts how quickly district courts can

337. Bock, *supra* note 206, at 87–88.

338. *See* Laser, *supra* note 3, at 573.

339. 881 F.3d 1360 (Fed. Cir. 2018).

340. 882 F.3d 1121 (Fed. Cir. 2018).

341. *See* Appellee HP Inc.'s Petition for Rehearing En Banc at 1, Berkheimer v. HP Inc., 881 F.3d 1360 (Fed. Cir. 2018) (No. 17-1437); Appellee Green Shades Software, Inc.'s Petition for Rehearing En Banc at 1, Aatrix Software, Inc. v. Green Shades Software, Inc., 882 F.3d 1121 (Fed. Cir. 2018) (No. 17-1452); *see also* Dennis Crouch, *Berkheimer En Banc: HP Asks Whole Court to Consider Whether Eligibility is Predominately Factual*, PATENTLYO (March 13, 2018), https://patentlyo.com/patent/2018/03/berkheimer-eligibility-predominately.html [https://perma.cc/FWU6-6TSE] ("The case has good shot [sic] at being heard by the whole court.").

dispose of cases raising eligibility grounds.[342] Likewise, in *Amgen Inc. v. Sanofi*,[343] en banc review was requested on a couple questions relating to the enablement standard and whether enablement is a question of fact or a question of law.[344] Although the Supreme Court ultimately granted certiorari on the first question, it did not consider the second.[345]

In *Mondis Technology Ltd. v. LG Electronics. Inc.*,[346] en banc review was sought on when a decision "is final except for an accounting" for purposes of permitting an interlocutory appeal and tolling the deadline for filing such an appeal.[347] In *GlaxoSmithKline LLC v. Teva Pharmaceuticals USA, Inc.*,[348] clarification was sought on whether a generic pharmaceutical company's compliance with the FDA's skinny label requirement could result in inducement liability.[349] And finally, in *Biogen International GmbH v. Mylan Pharmaceuticals Inc.*,[350] en banc clarification about the written description requirement was requested, which could have dramatically impacted the pharmaceutical industry.[351]

Another confused doctrinal issue in need of en banc review is that of licensee standing.[352] For a non-exclusive licensee to have prudential standing, the Federal Circuit requires the licensee to have acquired "all substantial rights" to the patent.[353] But as Professor Nguyen successfully describes, the Federal Circuit's decisions on this issue are "unclear and unpredictable."[354] She cites inconsistent treatment of the importance of the licensee's ability to sublicense as evidence of this unpredictability.[355]

Another muddled issue is when preambles are treated as claim limitations.[356] As Professor Lemley explained, the Federal Circuit's tests

342. Paul R. Gugliuzza, *The Procedure of Patent Eligibility*, 97 TEX. L. REV. 571, 575–76 (2019).

343. 987 F.3d 1080 (Fed. Cir. 2021).

344. *See* Appellants' Petition for Rehearing En Banc at v–vi, Amgen Inc. v. Sanofi, 987 F.3d 1080 (Fed. Cir. 2021) (No. 20-1074).

345. *See* Amgen Inc. v. Sanofi, 598 U.S. 594 (2023).

346. 6 F.4th 1379 (Fed. Cir. 2021).

347. LG Electronics Inc. and LG Electronics U.S.A., Inc.'s Combined Petition for Panel Rehearing and Rehearing En Banc at 1, Mondis Tech. Ltd. v. LG Elecs. Inc., 6 F.4th 1379 (Fed. Cir. 2021) (No. 20-1812).

348. 976 F.3d 1347 (Fed. Cir. 2020).

349. Petition for Rehearing En Banc at viii–ix, GlaxoSmithKline LLC v. Teva Pharms. USA, Inc., 976 F.3d 1347 (Fed. Cir. 2020) (Nos. 18-1976 & 18-2023).

350. 18 F.4th 1333 (Fed. Cir. 2021).

351. Plaintiffs-Appellants Biogen International GmbH and Biogen MA Inc.'s Combined Petition for Panel Rehearing and Rehearing En Banc at 1, Biogen Int'l GmbH v. Mylan Pharms. Inc., 18 F.4th 1333 (Fed. Cir. 2021) (No. 20-1933).

352. Xuan-Thao Nguyen, *Patent Prudential Standing*, 21 GEO. MASON L. REV. 17, 37–38 (2013) ("[D]etermining what will satisfy [the 'all substantial rights'] requirement is difficult based on the Federal Circuit's wavering and incongruous precedent.").

353. *Id.* at 38.

354. *Id.* at 39.

355. *Id.* at 39–41.

356. Mark A. Lemley, *Without Preamble*, 100 B.U. L. REV. 357, 359 (2020) ("It's virtually impossible to tell when the court is going to [ignore words in the preamble].").

for including preamble language are circular.[357] The Federal Circuit has, at times, opined that preamble language limits claims if it is "necessary to give meaning to the claim[s] and properly define the invention," "breathes life and meaning into the claims," or "is essential to particularly point out the invention defined by the claims."[358] Although the Federal Circuit has noted that the facts of each case are different, this only exacerbates the problem that "no one, least of all the courts, knows when preambles limit claims."[359] Furthermore, nearly identical cases regularly result in inconsistent conclusions regarding their preambles.[360] As Professor Lemley observed: "The doctrine is so confused that Federal Circuit judges can't even agree on whether it exists at all."[361] This view is shared by several Federal Circuit judges, one of whom announced: "As a result of the lack of clarity as to whether a preamble should be construed as limiting, our caselaw has become rife with inconsistency, both in result and in the articulation of the test."[362] In fact, Judge Dyk encouraged the Federal Circuit to sit en banc to address this issue.[363]

The treatment of secondary considerations in obviousness is yet another issue with a deep intracircuit split that would benefit from en banc review.[364] As Professor Karshtedt explained: "It is no secret that the treatment of secondary considerations at the Federal Circuit is highly panel-dependent, and that the court's members can be assigned to two distinct factions based on their views of this evidence."[365] One group of Federal Circuit judges believes the secondary considerations are part of the prima facie obviousness analysis, while another group uses a two-step framework whereby the secondary considerations are used to rebut the prima facie case of obviousness.[366] These "mixed

357. *Id.* at 365–66.

358. *Id.* (quoting *In re* Gold, 29 F.3d 644 (Fed. Cir. 1994), Loctite Corp. v. Ultraseal Ltd., 781 F.2d 861, 866 (Fed. Cir. 1985), and Diversitech Corp. v. Century Steps, Inc., 850 F.2d 675, 678 (Fed. Cir. 1988)).

359. *Id.* at 366.

360. *Id.* at 369.

361. *Id.* at 371.

362. Am. Med. Sys., Inc. v. Biolitec, Inc., 618 F.3d 1354, 1363 (Fed. Cir. 2010) (Dyk, J., dissenting).

363. *Id.* at 1364 ("Neither the Supreme Court nor our court sitting en banc has ever addressed the preamble limitation issue. I think the time may have come for us to eliminate this vague and confusing rule.").

364. Dmitry Karshtedt, *Nonobviousness: Before and After*, 106 IOWA L. REV. 1609, 1639–44 (2021).

365. *Id.* at 1639.

366. *Id.*

messages" from the Federal Circuit[367] cause confusion with practitioners,[368] district court judges, PTAB judges, and patent examiners.[369]

With respect to en banc petitions raising issues addressing the proper functioning of institutions within the patent system, a few examples demonstrate the importance of the questions. In *Xitronix Corp. v. KLA-Tencor Corp.*,[370] en banc review was requested on the Federal Circuit's jurisdiction over *Walker Process* antitrust causes of action — those based on fraudulently obtaining a patent.[371] The unsettled law results in a wasteful "judicial ping-ponging" between circuit courts.[372] It also leaves parties in a quandary about where to file their appeal.[373] Moreover, *Xitronix* is illustrative of a deeper internal conflict within the Federal Circuit about jurisdiction "arising under" patent law,[374] thus warranting en banc review. And in both *Biodelivery Sciences International, Inc. v. Aquestive Therapeutics, Inc.*[375] and *Atlanta Gas Light v. Bennett Regulator Guards*,[376] en banc review was sought to determine the authority of the PTAB to not comply with a Federal Circuit remand order and whether such non-compliance is reviewable, thus testing the outer bounds of the Supreme Court's decision in *SAS Institute, Inc. v. Iancu*.[377]

As these examples illustrate, there are still important questions that remain unanswered, stagnating precedent that warrants revisiting and

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367. Intercontinental Great Brands LLC v. Kellogg N. Am. Co., 869 F.3d 1336, 1356 (Fed. Cir. 2017) (Reyna, J., dissenting in part).

368. Charles Liu, *Fixing Secondary Considerations in Patent Obviousness Analysis*, 60 IDEA 352, 365 (2020) ("Such inconsistency causes difficulty to patent practitioners because they cannot predict how the Federal Circuit would react to certain cases.").

369. *See* Karshtedt, *supra* note 364, at 1643–44.

370. 882 F.3d 1075 (Fed. Cir. 2018).

371. Appellee's Petition for Panel Rehearing and Rehearing En Banc at 1–4, *Xitronix Corp. v. KLA-Tencor Corp.*, 882 F.3d 1075 (Fed. Cir. 2018) (No. 16-2746).

372. Samantha Handler, *Judicial 'Ping-Ponging' Over Patent-Antitrust Disputes Heats Up*, BLOOMBERG IP L. (Sept. 13, 2022), https://news.bloomberglaw.com/ip-law/judicial-ping-ponging-over-patent-antitrust-disputes-heats-up [https://perma.cc/6SG9-ZY2T] (describing the confusion about which appellate court has jurisdiction); *see also* Paul R. Gugliuzza, *Rising Confusion About "Arising Under" Jurisdiction in Patent Cases*, 69 EMORY L.J. 459, 487–97 (2019) (detailing the back-and-forth opinions between the Federal Circuit and Fifth Circuit about "arising under" jurisdiction).

373. Handler, *supra* note 372.

374. Gugliuzza, *supra* note 372, at 487 ("Separate and apart from the potential inconsistency of Federal Circuit law with regional circuit law, Federal Circuit law on arising under jurisdiction is now internally inconsistent.").

375. 898 F.3d 1205 (Fed. Cir. 2018).

376. 825 Fed. Appx. 773 (Fed. Cir. 2020).

377. 138 S. Ct. 1348 (2018); *see* Petition for Rehearing En Banc of Order Dismissing Consolidated Appeals by Biodelivery Sciences International, Inc. at 1–2, Biodelivery Scis. Int'l, Inc v. Aquestive Therapeutics, Inc., 898 F.3d 1205 (Fed. Cir. 2018) (Nos. 19-1643, 19-1644, and 19-1645); Appellant Atlanta Gas Light Company's Petition for Rehearing or Rehearing En Banc at 1, Atlanta Gas Light Co. v. Bennett Regul. Guards, Inc., 825 Fed. Appx. 773 (Fed. Cir. 2020) (No. 21-1759).

stakeholders who need guidance. A Federal Circuit that embraces en banc review can address these lingering questions.

Although Congress and the Supreme Court have been more active than in the past, this does not obviate the need for the Federal Circuit to take patent cases en banc for three key reasons. First, as just noted, there are plenty of issues in need of further review and neither Congress nor the Supreme Court has shown any interest in resolving them. Second, even though the Supreme Court was active in taking patent cases from 2010 to 2019, the Court has decided fewer cases over the last several years — only four from 2020 to 2023.[378] Even if it were appropriate for the Federal Circuit to retreat from its traditional stewardship role because of the Supreme Court's presence, the Supreme Court's gradually fading role should reinvigorate the Federal Circuit to (re)assume the mantle.[379] And third, echoing John Golden's observations from over a decade ago, the Supreme Court's role in evolving patent law has largely been that of the "prime percolator" — issuing modest decisions that move the law, but also spurring further development by the Federal Circuit.[380] The Supreme Court's recent activity in the realm of patent law should not preclude the Federal Circuit from continuing to steward patent law and using en banc review as an important tool in this role.

A final concern about the Federal Circuit hearing more patent cases en banc is that more en banc review may not clarify the law.[381] This is always a risk with en banc review, but this concern overlooks the signal that these conflicts send to the Supreme Court and Congress regarding confusion in the law.[382] And when en banc review works to clarify the law, stakeholders benefit from having more certain law and predictable outcomes, a task the Federal Circuit was formed to achieve.[383]

Ultimately, the evolution of patent law is a multi-institutional task. Given the Federal Circuit's history and charge to steward patent law and policy, it should play an active part in this evolution. This is so even when other institutions enter the fray. This is indicative of a healthy

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378. *See supra* note 204 and accompanying text.

379. *See* Cooper, *supra* note 307 (quoting former Chief Judge Michel as saying, "If the Federal Circuit defaults on its responsibility to provide predictability and clarity, it's really serious because nobody else can provide it").

380. *See* Golden, *supra* note 247, at 662.

381. *See* Cooper, *supra* note 307 (noting that a former Federal Circuit clerk does not agree that "more full court reviews will lead to clearer law" because it "assumes the judges will be able to reach some kind of compromise").

382. *See* Menell & Vacca, *supra* note 134, at 378; *see also* Cooper, *supra* note 307 (quoting the Author as saying "[e]ven if a full court decision isn't entirely successful at clarifying the law, the process can be an important signal to the Supreme Court . . . . It is more likely to review a case that 12 smart people can't agree on . . . .").

383. *See supra* note 35 and accompanying text; *see also* Cooper, *supra* note 307 (paraphrasing Judge Michel as saying, "The court was created in 1982 as the sole patent appeals court precisely to provide certainty").

system. With more people keeping tabs on this dynamic system, it is likely to produce more coherent and robust patent law.

VI. CONCLUSION

Science and technology, which are regulated in part by patent law, are about experimentation and improvement. And because patent law must respond to changing technological and scientific landscapes,[384] we should expect the law to evolve. Evolution often occurs incrementally as courts experiment with applying the law to different technologies, and hopefully improve how patent law performs.[385]

But the experimentation and evolution of patent law are not limited to existing doctrines being applied to new technologies. There is also experimentation within the system itself. One of the biggest experiments in patent law has been the Federal Circuit.[386] And over the last four decades, the Federal Circuit has evolved and experimented as an institution.[387]

Part of this experimentation and evolution includes the frequent use and subsequent abandonment of en banc review in patent cases. The intervening events over the last decade have likely contributed to the court's en banc retrenchment, but it need not continue. Quite the opposite; the Federal Circuit re-embracing en banc review would enhance patent law and the percolation process, provide stakeholders with the certainty and predictability they desire, and fulfill Congress's charge to the court.

The time has arrived for concluding the Federal Circuit's five-year desertion of patent en banc review. Could the court's recent en banc decision in a design patent case[388] exemplify a shift in the court's approach and signal a period of renewed interest in en banc review in patent cases? For the sake of all who rely on the proper functioning of the patent system, we can only hope.

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384. Sean B. Seymore, *Atypical Inventions*, 86 NOTRE DAME L. REV. 2057, 2058 (2011).

385. *Id*. at 2059.

386. Rochelle Cooper Dreyfuss, *The Federal Circuit: A Continuing Experiment in Specialization*, 54 CASE W. RES. L. REV. 769, 772 (2004) ("[T]he establishment of [the Federal Circuit] was something of an experiment . . . ."); Craig Allen Nard & John F. Duffy, *Rethinking Patent Law's Uniformity Principle*, 101 NW. U. L. REV. 1619, 1642 (2007) ("From the time of its creation in 1982, the Federal Circuit has been viewed as an experiment in judicial specialization.").

387. *See*, *e.g.*, Rebecca S. Eisenberg, *A Functional Approach to Judicial Review of PTAB Rulings on Mixed Questions of Law and Fact*, 104 IOWA L. REV. 2387, 2415 (2019) (describing changes since the Federal Circuit's creation and how the Federal Circuit can and has adapted).

388. LKQ Corp. v. GM Global Tech. Operations LLC, 71 F.4th 1383 (Fed. Cir. 2024).