The Federal Circuit and the Patent Trial and Appeal Board

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Abstract

The U.S. Court of Appeals for the Federal Circuit holds a unique and powerful position in the patent system. It exercises exclusive jurisdiction over appeals in patent cases, which, short of Supreme Court intervention, empowers the court to set national patent law. But since passage of the America Invents Act, at least with respect to resolving often multimillion dollar disputes over patent validity, there is another, more powerful government institution: the Patent Trial and Appeal Board. Given its significant new power over disputes regarding patent validity, the Patent Trial and Appeal Board has been the subject of numerous disputes resolved by the Federal Circuit and Supreme Court, and there also is a developing body of scholarship related to its judges, procedures, and decision making. In this article, however, I explore an underdeveloped area of study of both the Federal Circuit and the Patent Trial and Appeal Board. I study the relationship of the Federal Circuit and the Patent Trial and Appeal Board as a matter of institutional choice. I analyze ten years’ worth of caselaw that provides insights into the different ways the two institutions decide cases. I also analyze ten years’ worth of data regarding the Federal Circuit’s review of decisions of the Patent Trial and Appeal Board. This analysis reveals the impact of the Patent Trial and Appeal Board on the patent system and the Federal Circuit itself.

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INTRODUCTION

The U.S. Court of Appeals for the Federal Circuit holds a unique and powerful position in the patent system. Congress and President Reagan granted it near-exclusive jurisdiction over appeals in patent cases beginning October 1, 1982.¹ Short of Supreme Court intervention, this jurisdiction empowers the court to set national patent law.² Despite criticisms,³ the court maintains this exclusive jurisdiction today.⁴ Moreover, even with increased intervention by the Supreme Court in recent years,⁵ Federal Circuit patent law decisions largely go unreviewed.⁶ As a result, the court holds significant power to shape U.S. patent law. And, no doubt given this power, there is a substantial body of robust scholarship related to the court’s jurisdiction,⁷ judges,⁸ and decision making.⁹

But today, at least with respect to resolving often multimillion dollar—and even billion dollar—disputes over patent validity, there is another, more powerful government institution: the Patent Trial and Appeal Board.¹⁰ Congress and Pres-

¹ Federal Courts Improvement Act of 1982, Pub. L. No. 97-164, 96 Stat. 25. Congress also granted the Federal Circuit exclusive jurisdiction over appeals from the Court of Federal Claims, the Merit Systems Protection Board, the Court of Appeals for Veterans Claims, and various other tribunals. Id.
² See 42 USC § 2021(j) (‘The United States Court of Appeals for the Federal Circuit shall have exclusive jurisdiction over appeals 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, or in any civil action in which a party has asserted a compulsory counterclaim arising under, any Act of Congress relating to patents’); 129 F.3d (A) (“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’); 129 F.3d (A) (“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’).
³ See, e.g., Hon. Diane P. Wood, Is it Time to Abolish the Federal Circuit’s Exclusive Jurisdiction in Patent Cases?, 13 CHICAGO-KENT J. INT’L. PROP. 1 (2013) (arguing “there are better ways to solve the problems that this branch of the Federal Circuit’s exclusive jurisdiction was designed to address”).
⁴ 28 U.S.C. §§ 1291, 1295(a)(1) (“The United States Court of Appeals for the Federal Circuit shall have exclusive jurisdiction over appeals from the Court of Federal Claims, the Merit Systems Protection Board, the Court of Appeals for Veterans Claims, and various other tribunals. Id.
⁶ See Daniel R. Cahoy & Lynda J. Oswald, A Serendipitous Experiment in Percolation of Intellectual Property Doctrine, 95 Ind. L.J. 39 (2020) (highlighting that the Supreme Court’s intervention on patent issues “is necessarily rare”).
⁸ See, e.g., Ted L. Field, Hyperactive Judges: An Empirical Study of Judge-Dependent “Judicial Hyperactivity” in the Federal Circuit, 38 VT. L. REV. 625, 627 (2014) noting that “[m]any patent practitioners believe that decision-making by the U.S. Court of Appeals for the Federal Circuit is highly judge-dependent” and studying, among other things, the “reversal rates for each judge of the Federal Circuit”.
¹⁰ See Statement of Justice Kavanaugh, Oral Argument Transcript, United States v. Arthrex, Inc., No. 19-1434 (S. Ct. Mar. 1, 2021) (noting that in inter partes review proceedings, “as the Chief Justice said and Justice Gorsuch was just saying, these are multimillion, sometimes billion-dollar decisions being made not by someone who’s accountable in the usual way that the Appointments Clause demands... and the director, on rehearing, does not have the unilateral power to reverse”); United States v. Arthrex, Inc., No. 19-1434, slip op. at 1 (“Billions of dollars can turn on a Board decision.”).
ident Obama created this institution when they enacted the America Invents Act in 2011.11 Replacing the former Board of Patent Appeals and Interferences,12 they granted it existing authority to review the rejection of patent applications13 coupled with new authority to invalidate issued patents in revised and new proceedings.14 Notably, the Federal Circuit must affirm invalidation decisions by the Patent Trial and Appeal Board if those decisions are supported by substantial evidence, an extremely deferential standard of review.15 Moreover, decisions by the Patent Trial and Appeal Board to invalidate issued patents trump contrary decisions by federal district courts, even when decisions by federal district courts are affirmed by the Federal Circuit.16 Thus, it is not an overstatement to say that, compared to the Federal Circuit and district courts, the Patent Trial and Appeal Board has more power over the validity of patents.

Given its significant new power over disputes regarding patent validity, the Patent Trial and Appeal Board has been the subject of numerous disputes resolved by the Federal Circuit and Supreme Court. These disputes have included constitutional challenges to its existence17 and judges’ appointments,18 as well as its jurisdiction,19 how it has interpreted relevant statutes,20 and the rules and procedures it has adopted.21 Given the Patent Trial and Appeal Board’s power to decide validity challenges, there also is a developing body of scholarship related to its judges,22 procedures,23 and decision making.24

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12 Id. § 7.
13 Id. § 7(a)(1) (amending 35 U.S.C. § 6 to state that “[a]ny reference in any Federal law, Executive order, rule, regulation, or delegation of authority, or any document of or pertaining to the Board of Patent Appeals and Interferences is deemed to refer to the Patent Trial and Appeal Board.”).
14 Id. § 6.
16 XY, LLC v. Trans Ova Genetics, L.C., 890 F.3d 1282, 1294 (Fed. Cir. 2018) (holding that affirmation of a judgment of invalidity by the Patent Trial and Appeal Board “has an immediate issue-preclusive effect on any pending or co-pending actions involving the patent”); Fresenius USA, Inc. v. Baxter Int’l, Inc., 721 F.3d 1330, 1342 (Fed. Cir. 2013) (holding that “the existence of an interim appellate decision on invalidity” does not “change the basic rule” that “where the scope of relief remains to be determined, there is no final judgment binding the parties (or the court)” so that “a final PTO decision affirmed by this court [must] be given effect in pending infringement cases that are not yet final”).
19 Return Mail, Inc. v. United States Postal Serv., 139 S. Ct. 1853, 1867 (2019) (holding “that a federal agency is not a ‘person’ who may petition for post-issuance review” of patents).
21 Cuozzo Speed Techs., LLC v. Lee, 136 S. Ct. 2131, 2136 (2016) (concluding that the governing statute “authorizes the Patent Office to issue the regulation before us” governing claim construction during inter partes review proceedings).
22 See, e.g., Michael Goodman, What’s So Special About Patent Law?, 26 FORESHORE INT’L PROP. MEDIA & ENT. L.J. 797, 801 (2016) (concluding that, “in creating the PTAB, Congress has produced a specialized body of administrators who understand the science and technological issues that are often so difficult for judges to grasp, and has focused that expertise where it is most needed: issues of patent validity.”).
23 See, e.g., Rochelle Cooper Dreyfuss, Giving the Federal Circuit A Run for Its Money: Challenging Patents in the PTAB, 91 NOTRE DAME L. REV. 235, 241 (2015) (analyzing the Patent Trial and Appeal Board’s decision to study “how the procedures operate and the opportunities they create to streamline—but also to game—the system”).
In this article, however, I explore an underdeveloped area of study of both the Federal Circuit and the Patent Trial and Appeal Board. I study the relationship of the Federal Circuit and the Patent Trial and Appeal Board as a matter of institutional choice. This relationship is an area ripe for study. The Patent Trial and Appeal Board recently turned ten years old, and so there is almost a decade worth of caselaw and data to analyze from this perspective. Indeed, in this article I analyze ten years’ worth of caselaw that provides insights into the different ways the two institutions decide cases. I also analyze almost ten years’ worth of data regarding the Federal Circuit’s review of decisions of the Patent Trial and Appeal Board, along with prior data regarding the court’s review of the Board of Patent Appeals and Interferences. In short, based on all this information, I provide a comprehensive analysis of the impact of the Patent Trial and Appeal Board on the patent system and the Federal Circuit itself.

Beyond this introduction, this Article proceeds in just two parts. Part I briefly explains the history of the creation of the Federal Circuit and the Patent Trial and Appeal Board. Part II then analyzes a collection of caselaw and data related to the two institutions to reveal the impact of the Patent Trial and Appeal Board on the patent system and the Federal Circuit. After these parts, I finally conclude with some comments on the importance of my findings.

I. CREATION STORIES

Two Congresses and two Presidents created the Federal Circuit and the Patent Trial and Appeal Board at different times and for different reasons. This history informs the perceived purposes of these two institutions, their roles in the patent system, and indeed their conduct as reflected in the opinions and data I analyze in the next section.

A. The Federal Circuit

Congress and President Reagan created the Federal Circuit in 1981, setting October 1, 1982 as the date the Federal Circuit would begin exercising near-exclusive jurisdiction over appeals in patent cases. From all accounts, they did so for two primary reasons.

1. To Create Uniformity in Patent Law

First, Congress and President Reagan created the Federal Circuit to create uniformity in patent law. At the time, and indeed for a long time, the Supreme Court
had failed to eliminate circuit splits regarding important matters of patent law. This, in turn, along with constrained views of issue preclusion, which allowed each federal judicial circuit to consider anew the matter of a patent’s validity, created incentives for forum shopping. Removing almost all jurisdiction over patent cases from all other federal appellate courts and placing that jurisdiction in one new federal appellate court inherently created uniformity in patent law: there would be no circuit splits regarding patent law.

2. To Strengthen the Patent System

Second, Congress and President Reagan created the Federal Circuit to strengthen the patent system. In 1949, Justice Jackson famously remarked that “the only patent that is valid is one which [the Supreme Court] has not been able to get its hands on.” Even after the Patent Act of 1952, which sought to eliminate the Supreme Court’s so-called “invention requirement,” there was still complaints that the Supreme Court held a negative view of patents as monopolies, which infected its reasoning in deciding patent cases.

Everything came to a head in the late 1970s and early 1980s. In the late 1970s, the United States was experiencing so-called stagflation—a stagnant economy combined with high inflation. One idea to stimulate the economy was to strengthen the patent system. This idea reflects the economic theory that patents not only reward inventors for inventing and disclosing their inventions to the

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29 Sapna Kumar, Expert Court, Expert Agency, 44 U.C. DAVIS L. REV. 1547, 1594 (2011) ("When Congress created the Federal Circuit in 1982, it concentrated expertise in patents at the appellate level. The primary reason for doing so was to alleviate the uncertainty in patent law caused by frequent circuit splits.").

30 The Supreme Court eliminated the ability of federal appellate courts to determine a patent’s validity without deference to other federal appellate court determinations of the same patent’s validity when it adopted defensive nonmutual collateral estoppel in this context. See Blonder-Tongue Labs., Inc. v. University of Ill. Foundation, 402 U.S. 313 (1971).

31 See Commission on Revision of the Federal Court Appellate System, Structure, and Internal Procedures: Recommendations for Change, 67 F.R.D. 195, 220 (1975) (known as the Hruska Commission) ("The problem has been particularly acute in the field of patent law. The Commission’s consultants, Professor James B. Gambrell of New York University and Donald R. Dunner, Esq., confirmed what has long been asserted: the perceived disparity in results in different circuits leads to widespread forum shopping.").

32 Samuel F. Ernst, A Patent Reformist Supreme Court and Its Unearthed Precedent, 29 FORDHAM INTELL. PROP. MEDIA & ENT. L.J. 1, 2 (2018) (discussing how the Federal Circuit “was originally conceived and viewed by some of its members as a court intended to bring uniformity to patent law in a way that would reinvigorate patent rights”).


35 See Paul M. Janicke, To Be or Not to Be: The Long Gestation of the U.S. Court of Appeals for the Federal Circuit, 69 ANTITRUST L.J. 645, 664 (2002) ("While the word monopoly certainly can be used in more than one way, the high court had a curious habit of referring to any patent as a monopoly, sometimes adding the adjective ‘legal,’ or words to that effect. Whether with or without adjectives, the impact of the ‘M’ word is distinctly pejorative, suggesting something dangerous, or at least something that needs to be carefully scrutinized.").

36 See Oxford English Dictionary (2nd ed. 1989) (Oxford University Press), (defining “stagflation” as “[a] state of the economy in which stagnant demand is accompanied by severe inflation”).

37 See Paul R. Gugliuzza, Rethinking Federal Circuit Jurisdiction, 100 GeLo. L.J. 1437, 1454 (2012) ("In response, President Jimmy Carter initiated a ‘Domestic Policy Review,’ which concluded, among other things, that technology-based products were one area ‘in which American companies continued to dominate world markets.’ The Review, as well as other contemporary studies, identified a disuniform patent law as a potential impediment to continued American dominance of the technology industry.").
public,38 but also create property rights that allow for investors to coalesce around people and legal entities that own those rights to facilitate the accumulation of capital in support of innovative efforts.39 In short, Congress and President Reagan sought to eliminate stagflation in part by strengthening patents through creation of the Federal Circuit.

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Notably, in both respects—the creation of uniformity and the strengthening of the patent system—Congress and President Reagan sought to remedy problems with the patent system ostensibly caused by the Supreme Court. The solution was to create a new Article III court, the Federal Circuit, by combining the jurisdiction of two Article I courts, the Court of Customs and Patent Appeals and the appellate division of the Court of Claims, and then giving this court jurisdiction over appeals not only from the Patent and Trademark Office but also from patent infringement cases filed in the federal district courts.40 The later solution to a different set of problems would also involve refashioning existing jurisdiction with respect to another set of judges.

B. The Patent Trial and Appeal Board

The creation of the Federal Circuit did not end attempts by Congress to deal with perceived problems in the patent system by tinkering with the system's institutional structure. Congress and President Obama created the Patent Trial and Appeal Board in 2011, giving it the authority previously granted to the Board of Patent Appeals and Interferences (including to review appeals of rejected patent applications) but also new authority to reconsider the validity of issued patents.41

In particular, Congress created three new proceedings: post grant review, inter partes review, and covered business method review.42 As explained in the America Invents Act, post-grant review may be requested in the first nine months after a patent is granted, and the request may seek to invalidate the patent “on any ground that could be raised . . . relating to the invalidity of the patent or any claim.”43 Inter partes review, by contrast, may be requested after the nine-month period reserved for post-grant review, but a request may not be filed by a party if that party first files a declaratory judgment action challenging validity or more than one year after that party has been sued for patent infringement.44 Furthermore, inter partes review is limited to questions relating to the patentability requirements of novelty and non-obviousness, and moreover only with respect to a limited subset of prior art: patents and printed publications.45 Finally, the America

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38Ted Sichelman, Commercializing Patents, 62 STAN. L. REV. 341, 357 (2010) (“The reward theory . . . justifies patents as necessary to induce the invention and disclosure of new and non-obvious knowledge, which inventors would otherwise be reluctant to do in the fear that others may free ride off their efforts.”).
39Id. at 373-76 (describing the “commercialization theory” of patent rights).
Invents Act created covered business method review, a procedure that, for a limited time period, allowed challenges to any business method patent claim based on any patentability requirement.\textsuperscript{46}

President Obama and Congress refashioned the Board of Patent Appeals and Interferences into the Patent Trial and Appeal Board and created these new proceedings for two primary reasons.

1. To Reduce Cost in Patent Invalidity Proceedings

First, Congress and President Obama sought to reduce cost associated with challenging the validity of issued patents in federal court. Patent litigation is notoriously expensive.\textsuperscript{47} As an example, patent practitioners in 2011 indicated that patent litigation involving potential liability of $1 million to $25 million incurred median costs of $2.5 million.\textsuperscript{48}

In district court litigation, patent challengers had difficulty obtaining early resolution of patent invalidity challenges. Some courts, for example, developed a norm of granting summary judgment rarely, which increased the costs for patent challengers.\textsuperscript{49} While summary judgment ends a case, the denial of summary judgment results in continued expenses, particularly discovery and trial expenses. Discovery, in particular, is the most expensive part of patent litigation.\textsuperscript{50} Proceedings in front of the Patent Trial and Appeal Board, by contrast, would be subject to deadlines that would, in effect, reduce the time necessary to reach a conclusion regarding the validity of the patents-in-suit.\textsuperscript{51} Moreover, discovery in Patent Trial and Appeal Board proceedings would be limited.\textsuperscript{52}

Litigation in federal court also requires compliance with liberal fact and expert discovery.\textsuperscript{53} Modern digital technologies storing vast amounts of information ex-


\textsuperscript{47} Alan Devlin, Systemic Bias in Patent Law, 61 DEPAUL L. REV. 57, 106 (2011) (noting that “patent litigation is notoriously expensive”).


\textsuperscript{49} See J. Jonas Anderson, Court Competition for Patent Cases, 163 U. PA. L. REV. 631, 655 (2015) (noting the District of Delaware developed “a norm ... to grant summary judgment motions rarely” which “increase[d] costs for defendants”); Daniel Klerman & Greg Reilly, Forum Selling, 89 S. CAL. L. REV. 241, 251 (2016) (noting that “judges in the Eastern District of Texas grant summary judgment at less than one-quarter the rate of judges in other districts” with “[o]nly Delaware even approach[ing] the Eastern District of Texas, and its summary judgment rate is twice that of the Eastern District of Texas”); Daniel Klerman & Greg Reilly, Forum Selling, 89 S. CAL. L. REV. 241, 303 (2016) (“Summary judgment generally speeds case resolution and is more predictable because it involves judges rather than juries. Nevertheless, the Eastern District of Texas and District of Delaware both make it difficult for parties to get summary judgment, which primarily advantages defendants.”).

\textsuperscript{50}J. Jonas Anderson & Paul R. Gugliuzza, Federal Judge Seeks Patent Cases, 71 DUKE L.J. 419, 457 (2021) (“Discovery is the most expensive part of patent litigation and often the most time-consuming.”).

\textsuperscript{51} See, e.g., Leahy-Smith America Invents Act, Pub. L. No. 112-29, 125 Stat. 284 (2011) § 6 (codified at 35 U.S.C. § 316(a)(1)(A) (subject to certain exceptions, “requiring that the final determination in an inter partes review be issued not later than 1 year after the date on which the Director notifies the institution of a review under this chapter”)).

\textsuperscript{52} See, e.g., Leahy-Smith America Invents Act, Pub. L. No. 112-29, 125 Stat. 284 (2011) § 6 (codified at 35 U.S.C. § 316(a)(5)) (requiring “standards and procedures for discovery of relevant evidence, including that such discovery shall be limited to—(A) the deposition of witnesses submitting affidavits or declarations; and (B) what is otherwise necessary in the interest of justice”).

\textsuperscript{53} See Diego A. Zambrano, Discovery As Regulation, 119 MICH. L. REV. 71, 80 (2020) (discussing how the Federal Rules of Civil Procedure “allow parties to obtain broad information,” how discovery under them is “extremely broad,” and how the main drafter of the discovery rules argued that they authorize parties to employ “almost unlimited discovery”).
acerbated the high cost of discovery, which falls particularly hard on defendants accused of infringement rather than patent owners. Around the same time as President Obama signed the America Invents Act into law, steps were being taken in an attempt to rein in the scope of digital discovery. But these efforts would not eliminate the difficulty of patent challengers obtaining low cost determinations of patent invalidity. As discussed, the Patent Trial and Appeal Board’s new proceedings would have limited discovery. Not only would the proceeding be limited to invalidity and not deal with infringement, damages, or other peripheral matters, but the Patent Trial and Appeal Board would be expected to limit the scope of discovery related to invalidity to ensure that the proceedings would be able to meet their statutory deadlines.

2. To Improve Patent Quality

Second, Congress and President Obama created the Patent Trial and Appeal Board to improve patent quality. The new proceedings run by the Patent Trial and Appeal Board would be conducted by administrative patent judges. Notably, the America Invents Act specified that administrative patent judges would “be persons of competent legal knowledge and scientific ability.”

Previous proceedings available at the Patent and Trademark Office to review the patentability of issued patent claims—ex parte reexamination and inter partes reexamination—allowed issued patents to be reviewed within the Patent and Trademark Office. These proceedings, however, were not used extensively. As for why, challengers were unable to participate in ex parte reexamination, and federal district judges were not required to stay patent infringement litigation pending resolution of reexamination proceedings. With respect to inter partes reexamination...
tion, a stringent statutory estoppel provision provided a basis to avoid this type of proceeding.\textsuperscript{64} In short, for various reasons, invalidity challenges were typically reserved as defenses in patent infringement litigation.

But the resolution of these defenses in litigation necessarily required the use of juries and federal district judges. Absent a bench trial, juries decide questions of fact, and most invalidity defenses involve factual determinations.\textsuperscript{65} Juries, of course, include jurors randomly drawn from jury pools, and typically jurors have little education or experience relevant to technologies involved in patent infringement litigation.\textsuperscript{66} And federal district judges only rarely have engineering or science degrees or experience in practice related to patents.\textsuperscript{67} While some Federal Circuit judges have technical degrees, not all do.\textsuperscript{68} And, anyway, appellate courts are not supposed to be engaging in factfinding.\textsuperscript{69}

Compared to juries and generalist federal district judges, administrative patent judges would have more technical expertise as well as more knowledge and experience with respect to the patentability requirements they would be called to enforce. In short, the America Invents Act created a mechanism for expertise to be used in the resolution of disputes regarding validity, which if all else were equal ought to increase the accuracy of invalidity decisionmaking. And if a patent survived this process, one ought to be more confident that that patent was indeed valid.

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In both respects—the effort to reduce cost in patent invalidity proceedings and to improve patent quality—Congress and President Obama created the Patent Trial and Appeal Board primarily due to problems associated with the other available avenues to address the validity of issued patents: district court litigation related to invalidity, as well the prior forms of reexamination available within the Patent and Trademark Office.\textsuperscript{70}

\textsuperscript{64} See Mark D. Janis, \textit{Inter Partes Patent Reexamination}, \textit{10 Fordham Intell. Prop. Media \\& Ent. L.J.} \textit{481}, 493 (2000) ("The estoppel provisions make clear that Congress has exacted a very high price for participation in an inter partes reexamination. Even without the other disincentives to reexamination (limitations on substantive scope, appeal restrictions), the estoppel provisions alone may convince many patent owners to avoid inter partes reexamination.”).

\textsuperscript{65} As two examples of fact-bound invalidity defenses, novelty is a question of fact, \textit{Brown v. 3M}, 265 F.3d 1349, 1351 (Fed. Cir. 2001) ("Anticipation under 35 U.S.C. § 102 means lack of novelty, and is a question of fact.”), and non-obviousness, while ultimately a question of law, is based on subsidiary factual findings, \textit{CRFD Rsch., Inc. v. Matal}, 876 F.3d 1330, 1340 (Fed. Cir. 2017) ("Obviousness is a question of law based on subsidiary findings of fact.”).

\textsuperscript{66} See Sarah Beisheim et. al., \textit{Think Before You Arbitrate: Considerations for Patent Disputes}, \textit{ACC Docket, September 2018}, at 36, 38 (noting “the risks and concerns that jurors lack experience and education to address the patent dispute issues”).


\textsuperscript{69} See F.R. LePage Bakery, Inc. v. Roush Bakery Prod. Co., 863 F.2d 43, 44 (Fed. Cir. 1988) ("This appellate court, however, is not a fact-finding body, does not receive evidence, and the determination of presently existing facts . . . is initially for the [lower tribunal], as is the legal effect of the facts . . . .”).

\textsuperscript{70} Another reason to create the Patent Trial and Appeal Board was the limited effectiveness of the original examination of patent applications. Indeed, the America Invents Act initiated other reforms that sought to improve the original examination of patent applications, such as the ability of third parties to submit prior art to examiners during original examination of patent applications. Leahy-Smith America Invents Act, Pub. L. No. 112-29, 125 Stat. 284 (2011) § 8.
II. THE NEW PATENT SYSTEM

While the Federal Circuit and the Patent Trial and Appeal Board were created at different times to address different and seemingly opposite problems—the Federal Circuit to strengthen patents and the Patent Trial and Appeal Board to make it easier to invalidate patents—the reality is that since the enactment of the America Invents Act the two institutions have worked together in what is effectively a new patent system. Notably, given that the Federal Circuit reviews the work of the Patent Trial and Appeal Board, moreover, the institutional structure creates the opportunity for the two institutions to communicate with one another and take advantage of relative strengths. But, as always, the proof is in the reality of day-to-day practice. As a result, beyond considering mere prediction and theory, here I review ten years’ worth of opinions and data highlighting the importance of the Patent Trial and Appeal Board and its impact on both the patent system generally and the Federal Circuit in particular.

A. Opinions

In the ten years since the creation of the Patent Trial and Appeal Board, the Supreme Court and the Federal Circuit have considered a number of important cases related to the Patent Trial and Appeal Board. The Federal Circuit has also decided other cases reviewing decisions of the Patent Trial and Appeal Board, cases that the Supreme Court has not reviewed. And, finally, the Patent and Trademark Office has taken important actions outside of Patent Trial and Appeal Board proceedings, particularly through rulemaking, that the Federal Circuit has also reviewed. Here, I review all these cases with an eye toward understanding the evolving roles of the Federal Circuit and the Patent Trial and Appeal Board in the nation’s patent system.

1. Supreme Court Review of Federal Circuit Decisions Regarding the Patent Trial and Appeal Board

The Supreme Court has reviewed a significant number of decisions of the Federal Circuit related to the Patent Trial and Appeal Board, including constitutional challenges to the Patent Trial and Appeal Board’s existence and judges’ appointments, as well as other challenges to its jurisdiction, how the Federal Circuit has interpreted relevant statutes governing the Patent Trial and Appeal Board, and the rules and procedures the Patent Trial and Appeal Board has adopted. The relatively large number and breadth of these disputes highlight both the importance of the Patent Trial and Appeal Board and its novelty in the patent system. Here, besides summarizing the Supreme Court’s central holdings in these cases and the impact of these holdings on the patent system, I will consider how the Federal Circuit first decided the relevant challenge. The Federal Circuit’s holdings in these cases reflects its view of various matters relevant to the Patent Trial and Appeal Board.
a. Article III and Seventh Amendment Challenges to Inter Partes Review Proceedings

In *Oil States Energy Services, LLC v. Greene’s Energy Group, LLC*, the Supreme Court addressed arguments that inter partes review proceedings violate Article III or the Seventh Amendment of the Constitution. The Court rejected both arguments.

With respect to Article III, the Court explained that its precedents “have distinguished between ‘public rights’ and ‘private rights’” and “given Congress significant latitude to assign adjudication of public rights to entities other than Article III courts.” According to the Court, inter partes review concerns a public right. In the words of the Court, it is a matter “arising between the government and others, which from [its] nature do[es] not require judicial determination” even if is susceptible of it. This is so, in particular, because inter partes review is “reconsideration of the Government’s decision to grant a public franchise.” As a result, Congress did not violate the Constitution by assigning invalidation proceedings to the Patent Trial and Appeal Board, despite the fact that it is a non-Article III adjudicating body given that its judges are not appointed by the President, confirmed by the Senate, and given life tenure.

With respect to the Seventh Amendment challenge, which focused on the absence of a jury to determine invalidity in inter partes review, the Court noted that, “when Congress properly assigns a matter to adjudication in a non-Article III tribunal, the Seventh Amendment poses no independent bar to the adjudication of that action by a nonjury factfinder.” As a result, the Court held that, “[b]ecause inter partes review is a matter that Congress can properly assign to the PTO, a jury is not necessary in these proceedings.”

Notably, the Federal Circuit had granted a summary affirmance in this case.

In another, earlier case, however, the Federal Circuit reached the same conclusions as the Supreme Court using the same reasoning. The Federal Circuit found that “Supreme Court precedent demonstrates that [the relevant] statutes, and particularly the inter partes review provisions, do not violate Article III.” And it similarly concluded that, “when Congress created the new statutory right to inter partes review, it did not violate the Seventh Amendment by assigning its adjudication to an administrative agency.” Thus, the Federal Circuit did not act as a roadblock to the Patent Trial and Appeal Board taking its place as an administrative body with authority review the validity of issued patents.

b. Appointments Clause Challenge

In *United States v. Arthrex*, the Supreme Court considered another constitutional challenge to the Patent Trial and Appeal Board, in particular the manner

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72Id. at 1373.
73Id.
74Id. (internal quotation marks omitted).
75Id. Oil States Servs., LLC v. Greene’s Energy Grp., LLC, 639 F. App’x 639 (Fed. Cir. 2016).
76Id. at 1289.
77Id. at 1292.
of appointment of administrative patent judges that make up the Board. Arthrex argued that as a result of their authority to decide inter partes review proceedings, administrative patent judges are principal officers of the United States, and as a result they must be nominated by the President with the advice and consent of the Senate.\(^8\)

The Supreme Court reached the same conclusion as the Federal Circuit that the statutory authority of administrative patent judges and their manner of appointment created an Appointments Clause violation.\(^8^2\) The Court identified the problem as the authority of administrative patent judges to issue final decisions on behalf of the Executive Branch.\(^8^3\) Stated otherwise, the problem was the lack of authority under the statute for the Director of the Patent and Trademark Office (who is a principal officer of the United States nominated by the President and confirmed by the Senate) to review final decisions of the Patent Trial and Appeal Board, given that administrative patent judges are not nominated by the President and confirmed by the Senate.\(^8^4\)

With respect to the appropriate remedy, however, the Court disagreed with the Federal Circuit. The Supreme Court concluded that it would make the Director of the U.S. Patent and Trademark Office ultimately responsible for decisions of the Patent Trial and Appeal Board by allowing the Director to decide requests for rehearing.\(^8^5\) In this regard, the Court did not follow the Federal Circuit's remedy, which removed job protections provided by statute to administrative patent judges.\(^8^6\) As explained by Chief Justice Roberts, "[w]e ... conclude that the appropriate remedy is a remand to the Acting Director for him to decide whether to rehear the petition filed by Smith & Nephew."\(^8^7\) This approach effectively matched the constitutional violation with the remedy.

Both the Supreme Court and the Federal Circuit, in effect, recognized the significance of the authority Congress granted to the Patent Trial and Appeal Board. In the words of the Supreme Court, the Patent Trial and Appeal Board's decisions represented the "final decision binding the Executive Branch."\(^8^8\) And, as the Court recognized, "[b]illions of dollars can turn on a Board decision."\(^8^9\) But the remedy the Federal Circuit adopted would have maintained the status quo in the sense that the Board would have retained the ability to bind the Executive Branch in cases with billions of dollars at stake. It was the Supreme Court, not the Federal Circuit, that eliminated this power by shifting it from the Patent Trial and Appeal Board to the Director of the Patent and Trademark Office. As in *Oil States*, there-

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\(^8^1\) Id. at 1978 (relying upon U.S. Const. art. 2, § 2, cl. 2).
\(^8^2\) Id. at 1985 ("We hold that the unreviewable authority wielded by APJs during inter partes review is incompatible with their appointment by the Secretary to an inferior office.").
\(^8^3\) Id.
\(^8^4\) Id. at 1988 (noting that "the source of the constitutional violation is the restraint on the review authority of the Director").
\(^8^5\) Id. at 1986 ("Decisions by APJs must be subject to review by the Director.").
\(^8^6\) Id. at 1987 ("The Government defends the different approach adopted by the Federal Circuit. ... But regardless whether the Government is correct that at-will removal by the Secretary would cure the constitutional problem, review by the Director better reflects the structure of supervision within the PTO and the nature of APJs' duties, for the reasons we have explained.").
fore, in Arthrex the Federal Circuit did not act as a roadblock to the significant authority conferred on the Patent Trial and Appeal Board and its administrative patent judges.

c. **Challenges to Statutory Interpretations**

Besides constitutional challenges, in four cases the Supreme Court has confronted challenges to the way the Federal Circuit has interpreted statutes governing the Patent Trial and Appeal Board.

In *Cuezzo Speed Technologies, LLC v. Lee,*\(^9\)\(^1\) for example, the Supreme Court held that the patent statute bars judicial review "of the kind of mine-run claim at issue here, involving the Patent Office's decision to institute inter partes review,\(^9\)\(^1\) The Federal Circuit had reached the same result.\(^9\)\(^2\) But the significance of the Federal Circuit's conclusion should not be overlooked: the Federal Circuit decided that it did not have the authority to review certain decisions of the Patent Trial and Appeal Board, which in effect insulated and therefore increased the power of the lower tribunal.

Later, in *SAS Institute, Inc. v. Iancu,* the Court addressed another problem of statutory interpretation.\(^9\)\(^3\) The Court considered a statutory provision providing that, when the Patent Office initiates an inter partes review, it must "issue a final written decision with respect to the patentability of *any* patent claim challenged by the petitioner."\(^9\)\(^4\) The Court held that this language requires the agency to decide the patentability of all claims challenged by the petition.\(^9\)\(^5\) In other words, in this context, "'any' means 'every.'" The agency, the Court said, "cannot curate the claims at issue," in other words pick and choose which claims to review.\(^9\)\(^6\) The Federal Circuit, notably, had held the opposite, agreeing with the Patent Trial and Appeal Board that it did not need to address claims on which it did not institute review.\(^9\)\(^7\) The Federal Circuit had effectively deferred to the Patent Trial and Appeal Board’s practice, which in turn gave the lower tribunal significant discretion.

In the third case, *Return Mail, Inc. v. United States Postal Service,* the Supreme Court was called to decide under the governing statute "whether a federal agency is a 'person' able to seek" a post-issuance review of a patent.\(^9\)\(^8\) The Court concluded that a federal agency is not such a "person."\(^9\)\(^9\) Again, the Court’s conclusion ran contrary to the Federal Circuit, which had agreed with the Patent Trial and Appeal Board that the term "person" in the statute does not exclude the govern-

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\(^9\)\(^0\) *Cuozzo Speed Techs., LLC v. Lee,* 136 S. Ct. 2131, 2136 (2016).
\(^9\)\(^1\) *Id.*
\(^9\)\(^2\) *In re Cuozzo Speed Techs., LLC,* 793 F.3d 1268, 1271 (Fed. Cir. 2015) ("[W]e hold that we lack jurisdiction to review the PTO's decision to institute IPR.").
\(^9\)\(^4\) *Id.* (quoting 35 U.S.C. § 318(a)).
\(^9\)\(^5\) *Id.* at 1353 ("In this context, as in so many others, 'any' means 'every.' The agency cannot curate the claims at issue but must decide them all.").
\(^9\)\(^6\) *Id.*
\(^9\)\(^7\) *Id.*
\(^9\)\(^8\) *SAS Inst., Inc. v. ComplementSoft, LLC,* 825 F.3d 1341, 1343 (Fed. Cir. 2016) ("[W]e ... determine that the Board did not need to address in its final written decision claims it did not institute").
\(^9\)\(^9\) *Return Mail, Inc. v. United States Postal Serv.,* 139 S. Ct. 1853, 1859 (2019).
\(^10\) *Id.*
While a matter of statutory interpretation, it bears noting, first, that the Federal Circuit had agreed with the Patent Trial and Appeal Board and, second, that the Federal Circuit had interpreted the statute in a way that in effect expanded the scope of the lower tribunal’s jurisdiction.

The fourth and last Supreme Court case from the last ten years interpreting a statutory provision governing the Patent Trial and Appeal Board is *Thryv, Inc v. Click-To-Call Technologies, LP*. In this case, the Supreme Court confronted the relationship between two statutory provisions, a first indicating inter partes review may not be instituted if a request for review comes more than a year after a lawsuit for patent infringement is filed against the requesting party, and a second barring judicial review of the agency’s decision whether to institute inter partes review. The Court held that the second provision controls, such that judicial review of the Patent Trial and Appeal Board’s application of the time limit was barred. Yet again, the Court reversed the Federal Circuit, which in its underlying opinion had cited its earlier holding in another case that time-bar determinations are appealable. In this dispute, therefore, the Federal Circuit had interpreted the relevant statutes to permit its review of decisions by the Patent Trial and Appeal Board, which unlike the other three instances of statutory interpretation expanded the Federal Circuit’s jurisdiction and oversight of the lower tribunal.

In sum, in all but one of these important cases relating to statutory interpretation, the Federal Circuit had interpreted the relevant statutes in a manner that gave authority and discretion to the Patent Trial and Appeal Board. In this way, the Federal Circuit seemingly indicated it had no motive to limit the authority of the Patent Trial and Appeal Board.

d. Challenges to Rules and Procedures

In one of these Supreme Court cases, the Court addressed a challenge directed less to statutory interpretation and more to the rules and procedures adopted by the Patent Trial and Appeal. In particular, in *Cuozzo Speed Technologies, LLC v. Lee*, the Supreme Court held that the patent statute “authorizes the Patent Office to issue [a] regulation” stating that in inter partes review proceedings the agency “shall [construe a patent claim according to] its broadest reasonable construction in light of the specification of the patent in which it appears.” Notably, the Federal Circuit had reached the same result. Yet again, the Federal Circuit had acted in a way to recognize the authority of the Patent Trial and Appeal Board.

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102 *Id.* at 1370.
103 *Id.*
104 *Id.*
105 *Id.*
106 *Id.*
107 *Cuozzo Speed Techs., LLC v. Lee, 136 S. Ct. 2131, 2136 (2016).*
108 *In re Cuozzo Speed Techs., LLC, 793 F.3d 1268, 1271 (Fed. Cir. 2015).*
2. Other Federal Circuit Decisions Reviewing the Patent Trial and Appeal Board

Of course, beyond cases later reviewed by the Supreme Court, there have been a large number of Federal Circuit opinions reviewing Patent Trial and Appeal Board decisions. Few of these opinions, however, rank as important. Most of the Federal Circuit’s opinions reviewing decisions of the Patent Trial and Appeal Board are, one might say, run of the mill. That is, they review anticipation and obviousness findings, analyze the disclosure of prior art references, and consider disputes over claim construction. These opinions, in other words, by and large are fact bound—their importance is limited to the facts of the particular case. Relatively few consider and resolve weighty matters of law. There is, however, one particular case worthy of consideration.

In 2020, the Federal Circuit reviewed an appeal of an inter partes review proceeding decided by the Patent Trial and Appeal Board. The case presented the Federal Circuit with the opportunity not only to consider the propriety of a joinder decision by the Patent Trial and Appeal Board in the case on appeal, but also to consider whether the Federal Circuit must or should defer to a decision of the Patent Trial and Appeal Board’s Precedential Opinion Panel concerning joinder. In short, the Federal Circuit did not defer to the Precedential Opinion Panel and, indeed, came to the opposite conclusion on the relevant issue.

The Federal Circuit issued a unanimous opinion in the case disposing of the parties’ arguments concerning the propriety of joinder. The court explained that “the clear and unambiguous language of [the relevant statutory provision] does not authorize same-party joinder, and also does not authorize joinder of new issues, including issues that would otherwise be time-barred.” The court then “turn[ed] to the question of what, if any, deference is owed to the PTO’s interpretation” of the relevant statutory provision. Because the court concluded “that the clear and unambiguous language of [the relevant statutory provision] does not authorize same-party joinder or joinder of new issues,” the court determined that it “need not defer to the PTO’s interpretation.” As a result, the court found that the Patent Trial and Appeal Board’s decisions to allow a party to add otherwise time-barred issues to an inter partes review proceeding were improper.

The case, however, elicited a rather unprecedented separate opinion joined by all of the Federal Circuit judges assigned to the panel. All three judges issued a separate opinion designated as including “additional views.” In this opinion, which by definition represented dicta, they explained that, had the statutory pro-
vision in question been ambiguous, the judges would have decided the case by concluding that the Precedential Opinion Panel did not merit any type of deference. The judges explained that, “in light of the extensive attention the parties gave to the issue of deference,” they would “address what our alternative holding would be if [the relevant statutory provision] were deemed ambiguous.” They highlighted how the government argued for so-called “Chevron, or at least Skidmore, deference for the Board’s interpretation.”

The judge explained their conclusion that, “were the statute ambiguous,” they would “alternatively resolve this matter in the same way.” In particular, they would have found that “no deference is due to the POP opinion” and “the most reasonable reading of [the relevant statutory provision] is the one we adopt in our majority opinion.”

As for why they would not defer to the Precedential Opinion Panel, they explained that “[t]here is no indication in the statute that Congress either intended to delegate broad substantive rulemaking authority to the Director to interpret statutory provisions through POP opinions or intended him to engage in any rulemaking other than through the mechanism of prescribing regulations.” Moreover, the judges explained, “there is nothing in the AIA that displaces our obligation under the Administrative Procedure Act to review the Board’s legal conclusions without deference to the trial forum.” The judges also distinguished the Precedential Opinion Panel’s procedure from traditional notice-and-comment rulemaking, indicating that “[i]ssuing an order that a POP panel has been convened in a particular case and soliciting amicus briefs is not equivalent in form or substance to traditional notice-and-comment rulemaking.”

Even were the procedures equivalent, they also highlighted how “[t]he law has long been clear that the Director has no substantive rule making authority with respect to interpretations of the Patent Act.” And, they continued, “the Board’s authority to adjudicate IPRs does not confer rulemaking authority upon the Director that extends to all legal questions the Board adjudicates.” Finally, they explained that “[t]he considerations listed in Skidmore weigh against affording deference” in this circumstance because, as an example, the Precedential Opinion Panel’s interpretation of the relevant statutory provision was “inconsistent with the plain language of the statute and therefore unpersuasive.”

In short, the Federal Circuit and its judges found reason not to give either Chevron or Skidmore deference to the Precedential Opinion Panel with respect to questions of law and, in particular, interpretations of the patent statute.

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119 Id. at 1347–48.
120 Id. at 1347.
121 Id.
122 Id.
123 Id. at 1347–48.
124 Id. at 1350.
125 Id.
126 Id. at 1353.
127 Id.
128 Id.
129 Id. at 1354.
130 Id.
3. Other Important USPTO Actions Taken Outside of Patent Trial and Appeal Board Proceedings

Rather than have the Patent Trial and Appeal Board decide important matters exclusively through adjudication—including traditional appeals or using the Precedential Opinion Panel—the last ten years have seen some important actions of the U.S. Patent and Trademark Office taken outside of Patent Trial and Appeal Board proceedings. Indeed, during this time period the U.S. Patent and Trademark Office has conducted numerous rulemaking proceedings regarding the interpretation of the patent statute.

As a first example, after engaging in a rulemaking proceeding the U.S. Patent and Trademark Office concluded that the America Invents Act changed the meaning of the patentability requirement that an invention not be “on sale” more than one year prior to the filing of a patent application covering that invention.1 It bears repeating that this determination was made during rulemaking; the Patent Trial and Appeal Board did not create this interpretation during one of its proceedings. Moreover, later, when the interpretation was challenged, the challenge occurred in an appeal from a district court proceeding. Ultimately, the Supreme Court agreed with the Federal Circuit that the U.S. Patent and Trademark Office had reached the wrong conclusion regarding the correct interpretation of the patent statute.131

As a second example, again following a rulemaking proceeding, the U.S. Patent and Trademark Office adopted guidance explaining how examiners should determine whether a claim is eligible for patenting pursuant to the relevant statutory provision. Again, the Patent Trial and Appeal Board did not create this position during one of its proceedings. Eventually, however, after sidestepping the question of whether to give at least some deference to the guidance1, the Federal Circuit made it clear in a precedential opinion that it was not bound by the guidance.133

In both of these cases, the Federal Circuit did not give deference to the U.S. Patent and Trademark Office, and the same lack of deference presumably would have applied had the Patent Trial and Appeal Board adopted and applied the on-sale bar interpretation and eligibility guidance during a post-grant review, inter partes review, or covered business method review proceeding.

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1 See, e.g., MANUAL OF PATENT EXAMINING PROCEDURE § 2152.02(d) (9th ed., March 2014) (“The phrase ‘on sale’ in AIA 35 U.S.C. 102(a)(1) is treated as having the same meaning as ‘on sale’ in pre-AIA 35 U.S.C. 102(b), except that the sale must make the invention available to the public.”).

131 Helsinn Healthcare S.A. v. Teva Pharms. USA, Inc., 139 S. Ct. 628, 630 (2019) (holding that “the reenactment of the phrase ‘on sale’ in the AIA did not alter [the statute’s] meaning” and that “a commercial sale to a third party who is required to keep the invention confidential may place the invention ‘on sale’ under the AIA”).

133 Nat. Alternatives Int’l Inc. v. Creative Compounds, LLC, 918 F.3d 1338, 1346 (Fed. Cir. 2019) (“The U.S. Patent and Trademark Office has adopted guidance on how examiners should determine whether a claim is eligible under § 101 and provided examples of eligible and ineligible claims. Under these guidelines, a claim to a practical application of a natural product to treat a particular disease is patent eligible. The parties dispute the persuasiveness of this document and the weight we should accord it under Skidmore v. Swift & Co., 323 U.S. 134 (1944). The issue before us is not a case in which Skidmore deference would affect the outcome.”).

132 In re Rudy, 956 F.3d 1379, 1383 (Fed. Cir. 2020) (“We are not, however, bound by the Office Guidance, which cannot modify or supplant the Supreme Court’s law regarding patent eligibility, or our interpretation and application thereof. Accordingly, we apply our law and the relevant Supreme Court precedent, not the Office Guidance, when analyzing subject matter eligibility. To the extent the Office Guidance contradicts or does not fully accord with our caselaw, it is our caselaw, and the Supreme Court precedent it is based upon, that must control.”).
The Federal Circuit has shown remarkable acceptance of the authority of the Patent Trial and Appeal Board with respect to its role in adjudicating the validity of patents. With a few notable exceptions, in case after case the Federal Circuit has deferred to the Patent Trial and Appeal Board, effectively welcoming it with open arms as an important actor in the modern patent system. By contrast, the Federal Circuit has not shown the same acceptance when reviewing interpretations of the patent statute given by the Patent Trial and Appeal Board—and, more broadly, Patent and Trademark Office—after enactment of the America Invents Act, whether those interpretations through the Precedential Opinion Panel, through notice-and-comment rulemaking, or through guidance documents.

B. Data

While a review of the content of published opinions exposes various aspects of the relationship between the Federal Circuit and the Patent Trial and Appeal Board, so too does aggregated data related to the Federal Circuit’s caseload. Indeed, this data exposes a significant impact of the creation of the Patent Trial and Appeal Board on the Federal Circuit.134

1. Total and Administrative Dispositions

As an initial point, the creation of the Patent Trial and Appeal Board marginally increased the overall number of cases decided by the Federal Circuit. Between 2005 and 2012, for example, the Federal Circuit decided between 571 and 730 total cases each year by summary affirmance, nonprecedential opinion, or precedential opinion.135 Between 2013 (the first year the Federal Circuit decided any administrative appeals originating at the Patent Trial and Appeal Board) and 2020, the Federal Circuit decided between 638 and 801 total cases each year (again, by summary affirmance, nonprecedential opinion, or precedential opinion).136 Beginning in 2013, the annual number of total dispositions began to rise until it peaked in 2016.137 While in 2013 the Federal Circuit decided 638 cases, in 2016 it decided 801.138 Comparing 2012 to 2020, in terms of yearly dispositions the Federal Circuit’s workload increased 10%.139 Since 2015, moreover, the Federal Circuit has decided more cases each year than every year from 2005 to 2014 other than 2008.140

This marginal increase in overall dispositions, however, somewhat hides the fact that dispositions of administrative patent appeals have increased more

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134 I derived all of the data presented in this Part II from information provided by the Compendium of Federal Circuit Decisions, which is available online at https://fedcircuit.shinyapps.io/federalcompendium. This resource draws from opinions and order released by the Federal Circuit on its website. For more information, see The Federal Circuit Data Project – The Compendium of Federal Circuit Decisions, University of Iowa, https://empirical.law.uiowa.edu/compendium-federal-circuit-decisions (last accessed Oct. 8, 2023).
135 Id.
136 Id.
137 Id.
138 Id.
139 In 2012, the court decided 635 cases, while in 2020 the court decided 698. Id.
140 Id.
substantially. Yearly dispositions of all other cases actually decreased from 560 in 2012 to 500 in 2020, while yearly dispositions in cases appealed from the Board of Patent Appeals and Interferences and the Patent Trial and Appeal Board rose from 75 to 198 over the same time period. Comparing 2012 to 2020 in terms of yearly dispositions of administrative patent cases, the Federal Circuit’s dispositions of administrative patent cases increased 164%. Moreover, in the five most recent years, from 2016 to 2020, each year the Federal Circuit released between 190 and 238 summary affirmances, nonprecedential opinions, or precedential opinions in administrative patent appeals. In the eight years from 2005 to 2012, by contrast, the Federal Circuit released a combined 243 of these dispositions.

The increased workload at the Federal Circuit, in other words, is a result of the creation of the Patent Trial and Appeal Board. That is, since the creation of the Patent Trial and Appeal Board, the Federal Circuit is not only busier overall, but also the proportion of its work devoted to administrative patent appeals is much greater. In 2012, the year before the Federal Circuit decided its first administrative case appealed from the Patent Trial and Appeal Board, in terms of dispositions, administrative patent appeals accounted for 12% of the court’s overall workload. In 2020, just to take the most recent year, again in terms of dispositions, administrative patent appeals accounted for 28% of the court’s overall workload.

These numbers, as striking as they are, may not even tell the whole story of how much busier the Federal Circuit is as a result of the creation of the Patent Trial and Appeal Board. In particular, Federal Circuit judges have indicated that patent appeals are more complex than other types of appeals. If this complexity applies to administrative patent appeals (and not just appeals of patent cases from district courts) and the decrease in all other cases is not the result of a decrease in patent cases appealed from district courts, the overall accounting of the court’s workload based on dispositions may actually understate the increased workload.

2. Summary Affirmances

One way the Federal Circuit has seemingly dealt with the increased workload is to grant more summary affirmances, which is permitted under both the Federal Rules of Appellate Procedure and the Federal Circuit Rules. Indeed, one thing that has captured the attention of commentators in the last few years is the substantial increase in the number of summary affirmances granted by the Federal

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141 For a graphical representation of this data, see Appendix, Figure 2.
142 Id.
143 Id.
144 In 2012, there were 75 dispositions in administrative patent appeals and 560 dispositions in other appeals. Id.
145 In 2020, there were 198 dispositions in administrative patent appeals and 500 dispositions in other appeals. Id.
Several parties even petitioned the Supreme Court (unsuccessfully) to try and put an end to the practice.\textsuperscript{149}

As a preliminary matter, the data shows that the Federal Circuit more often grants summary affirmances in administrative patent appeals as compared to all other types of appeals. Notably, this has been true since 2007, when the Federal Circuit reviewed administrative patent appeals decided by the Board of Patent Appeals and Interferences. In particular, every year from 2007 to 2020, summary affirmances have represented between 20\% and 62\% of the total dispositions in administrative patent appeals.\textsuperscript{150} By contrast, during this same time period, summary affirmances have represented between 10\% and 32\% of the total dispositions in all other appeals.\textsuperscript{151} In each of these years, moreover, the Federal Circuit has more often granted summary affirmance in administrative patent appeals than in all other cases.\textsuperscript{152}

The data, moreover, supports the idea that the Federal Circuit has granted substantially more summary affirmances after the creation of the Patent Trial and Appeal Board. In 2012, the year before the Federal Circuit issued its first disposition in a case appealed from the Patent Trial and Appeal Board, the Federal Circuit issued a total of 177 summary affirmances: 37 in administrative patent cases appealed from the Board of Patent Appeals and Interferences and 140 in any other type of case.\textsuperscript{153} In 2018, to pick the year with the greatest number of overall summary affirmances, the court issued a total of 252 summary affirmances: 103 in administrative patent appeals and 149 in all other appeals.\textsuperscript{154} Comparing 2012 to 2018, that represented a 42\% increase overall in the number of summary affirmances. Notably, almost all of this increase was a result of increased summary affirmances in administrative patent appeals. Summary affirmances in administrative patent cases increased 178\%, while summary affirmances in all other types of cases increased just 6\%.\textsuperscript{155} As striking as this may seem at first, remember that the overall number of dispositions of administrative patent cases increased dramatically over the same time period, in particular from 75 in 2012 to 222 in 2018, an increase of 196\%.\textsuperscript{156} In other words, the number of summary affirmances in administrative patent appeals increased substantially because the number of administrative patent appeals increased substantially.

With this last point in mind, the data still tells an interesting story about the Federal Circuit’s practice of granting summary affirmances in administrative patent cases. As a proportion of the total number of administrative patent appeals


\textsuperscript{150} For a graphical representation of this data, see Appendix, Figure 3.

\textsuperscript{151} For a graphical representation of this data, see Appendix, Figure 4.

\textsuperscript{152} For a graphical representation of this data, see Appendix, Figures 3 and 4.

\textsuperscript{153} Id.

\textsuperscript{154} Id.

\textsuperscript{155} Id.

\textsuperscript{156} For a graphical representation of this data, see Appendix, Figure 2.
each year, the Federal Circuit’s practice of granting summary affirmances changed with the introduction of the Patent Trial and Appeal Board. Prior to the Federal Circuit deciding administrative patent cases appealed from the Patent Trial and Appeal Board, the court made use of summary affirmances in administrative patent cases appealed from the Board of Patent Appeals and Interferences. And, since 2008, each year the court has always granted a significant number of summary affirmances as a proportion of the total number of administrative patent appeals. That said, in every year from 2005 to 2015, the Federal Circuit always issued more opinions than summary affirmances in cases appealed from the Board of Patent Appeals and Interferences. By contrast, from 2013 to 2016, the Federal Circuit each year issued more summary affirmances than opinions in cases appealed from the Patent Trial and Appeal Board. In other words, the introduction of the Patent Trial and Appeal Board increased not just the number of summary affirmances, but also the relative use of summary affirmances in administrative patent appeals.

The trend interestingly changed, however, starting in 2017. That year, the Federal Circuit again issued more opinions than summary affirmances in administrative patent appeals. And, finally, in 2020, the court substantially reduced use of summary affirmances compared to opinions to dispose of administrative patent appeals. Perhaps the reduced use of summary affirmances in administrative patent appeals relative to opinions in these cases starting in 2017 represented a response to complaints early that year about improper use and overuse of summary affirmances. And perhaps the further and substantial decrease in use of summary affirmances in 2020 represented a response to the Supreme Court petitions in late 2019 and early 2020 seeking to overturn the practice. But, whatever the cause of the recent reduction in use of summary affirmances, the reality is that the Federal Circuit still grants a significant number of summary affirmances in administrative patent appeals, as an absolute number and relative to the total number of dispositions in these cases.

3. Nonprecedential v. Precedential Opinions

While the Federal Circuit has recently (since 2017 and particularly in 2020) reduced its relative use of summary affirmances to dispose of administrative patent appeal

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157 For a graphical representation of this data, see Appendix, Figure 3.
158 Id.
159 Id.
160 Id.
161 Id. The recent decreased use of summary affirmances and increased use of opinions also shows up in the data related to all other types of appeals, but not until 2019 and 2020. See Figure 4.
164 See Appendix Figure 3.
appeals, that begs a follow-up question: in what type of opinion, nonprecedential or precedential, is the court more often disposing those cases? The data shows the answer. Since 2016, the Federal Circuit has substantially increased the number and relative use of nonprecedential opinions to dispose of administrative patent appeals. In 2016, the Federal Circuit released 50 nonprecedential opinions to dispose of administrative patent appeals, and in 2020 that number increased to 89. Notably, by contrast, in 2016 the Federal Circuit released 43 precedential opinions to dispose of administrative patent appeals, and in 2020 that number decreased to 37. In short, relative to one another, the Federal Circuit is making more use of nonprecedential opinions and less use of precedential opinions to dispose of administrative patent appeals. And most recently the Federal Circuit has more often used nonprecedential opinions compared to precedential opinions to resolve administrative patent appeals.

Interestingly, the Federal Circuit’s recent practice in administrative patent appeals of more often using nonprecedential opinions compared to precedential opinions actually brings the court’s practice in administrative patent appeals in line with its historical practice in all other types of cases. Indeed, in all other types of cases, in every year since 2005 the Federal Circuit has issued more nonprecedential opinions than precedential opinions.

4. Affirmance in Nonprecedential Opinions

Of course the increased use of nonprecedential opinions relative to precedential opinions to resolve administrative patent cases does not necessarily indicate anything regarding how the cases have been decided—whether the court has affirmed the Patent Trial and Appeal Board. Notably, however, the court’s recent increased use of nonprecedential opinions (and increased use of nonprecedential opinions relative to precedential opinions) to decide administrative patent cases has come during a time the court has reduced (relatively speaking) its use of summary affirmances to resolve administrative patent appeals. My suspicion, therefore, was that the Federal Circuit was shifting from using summary affirmances to affirm in administrative patent cases to using nonprecedential opinions to reach the same result in these cases. As a result, I decided to collect data to analyze what I call the Federal Circuit’s simple affirmance rate in its nonprecedential opinions. By simple affirmance rate, I refer to the rate at which the Federal Circuit simply affirmed a judgment rather than take any other action, such as affirm only in part, dismiss, vacate, or reverse.

Interestingly, the data shows that immediately after the introduction of the Patent Trial and Appeal Board, the Federal Circuit’s simple affirmance rate in nonprecedential opinions in administrative patent cases actually decreased. In partic-

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165 For a graphical representation of this data, see Appendix, Figure 5.
166 Id.
167 Id.
168 Id.
169 For a graphical representation of this data, see Appendix, Figure 6.
170 For a graphical representation of this data, see Appendix, Figure 5.
171 For a graphical representation of this data, see Appendix, Figure 3.
ular, in 2014, the Federal Circuit simply affirmed in these nonprecedential opinions in administrative patent appeals less often than it took some other action. In that year, there were 8 nonprecedential opinions that simply affirmed the Patent Trial and Appeal Board compared to 10 nonprecedential opinions that did not simply affirm, a simple affirmance rate of 47%.

That one year, however, appears anomalous. Beginning in 2015, the simple affirmance rate in nonprecedential opinions in administrative patent appeals returned to pre-America Invents Act levels, varying between 61% and 79% each year. This compares to simple affirmance rates in nonprecedential opinions in administrative patent appeals varying between 60% and 100% between 2005 and 2012. And these numbers all compare favorably with the simple affirmance rate in all other nonprecedential opinions during this time frame, which varied between 45% and 78% from 2005 to 2020.

Thus, while I suspected that the Federal Circuit was shifting from using summary affirmances to affirm in administrative patent cases to using nonprecedential opinions to reach the same result in administrative patent cases, the data does not necessarily support that suspicion. That is unless the shift from precedential opinions to nonprecedential opinions to decide administrative patent appeals over the same time period has inflated the portion of dispositions in nonprecedential opinion in administrative patent cases that is not simply affirming. One way to explore that possibility is to analyze the data regarding simple affirmances in precedential opinions deciding administrative patent cases.

5. Affirmance in Precedential Opinions

Predictably, the simple affirmance rate is generally lower in precedential opinions as compared to nonprecedential opinions both in the context of administrative patent appeals and in the context of all other cases. But, interestingly, the simple affirmance rate in precedential opinions in administrative patent appeals did not vary much with the introduction of the Patent Trial and Appeal Board. Prior to the Patent Trial and Appeal Board, each year the Federal Circuit released so few precedential opinions in administrative patent cases that the yearly simple affirmance rate is not a reliable metric. From 2005 to 2013 (the year before the first precedential opinion reviewing the work of the Patent Trial and Appeal Board), however, the overall simple affirmance rate was 58%. And from 2014 to 2020 (once the Federal Circuit began to issue precedential opinions reviewing the

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172 For a graphical representation of this data, see Appendix, Figure 7.
173 Id.
174 Id.
175 For a graphical representation of this data, see Appendix, Figure 8.
176 For a graphical representation of this data, see Appendix, Figure 5.
177 There has been a recent trend at the Federal Circuit, particularly in 2020, away from using both summary affirmances and precedential opinions to decide administrative patent cases. In other words, the recent trend has been to use nonprecedential opinions to resolve administrative patent cases. See Figures 3 and 5. Compare Figure 7 with Figure 9; Compare Figure 8 with Figure 10. This is predictable because a precedential opinion would be appropriate both to explain how the lower tribunal made a mistake and, at the same time, to provide precedential guidance to help other lower tribunals avoid the same mistake.
178 For a graphical representation of this data, see Appendix, Figure 9.
179 Id.
work of the Patent Trial and Appeal Board), the overall simple affirmance rate in administrative patent appeals was 55%.\(^{181}\) For comparison purposes, the simple affirmance rate in all other precedential opinions during the same time frame was 51% from 2005 to 2020.\(^{182}\) Thus, the simple affirmance rate in administrative patent appeals has only been slightly higher than the simple affirmance rate in all other appeals.

6. Dissents to Precedential Opinions

Of course, whatever the holding of the Federal Circuit in a particular appeal, there may be dissent. Because it is more likely to find dissenting opinions to precedential opinions than nonprecedential opinions,\(^{183}\) I studied collected data related to dissents to precedential opinions in administrative patent appeals and all other appeals.

With respect to cases appealed from the Board of Patent Appeals and Interferences and decided by the Federal Circuit in precedential opinions from 2005 to 2014, each year the Federal Circuit released so few opinions that the yearly rate of dissent is not a reliable metric.\(^ {184}\) Collectively, however, Federal Circuit judges dissented in 19% of all of these Board of Patent Appeals and Interferences cases.\(^ {185}\) With respect to cases appealed from the Patent Trial and Appeal Board and decided by the Federal Circuit in precedential opinions from 2014 to 2020, each year the percentage of cases with dissents varied between 11 and 35%.\(^ {186}\) Collectively, moreover, Federal Circuit judges dissented in 20% of all of these Patent Trial and Appeal Board cases.\(^ {187}\) As a whole, these numbers do not reflect a significant change in the pattern of dissent in administrative patent appeals at the Federal Circuit over this time period.

Notably, moreover, the rate of dissent to Federal Circuit precedential opinions resolving appeals in administrative patent cases compares similarly to the rate of dissent to all other Federal Circuit precedential opinions during the same time period.\(^ {188}\) From 2005 to 2020, the rate of dissent to all other Federal Circuit precedential opinions (excluding administrative patent appeals) varied each year from 11% to 31%.\(^ {189}\) And, collectively, Federal Circuit judges dissented in 18% of all of these cases.\(^ {190}\) These numbers are only slightly lower compared to the numbers related to administrative patent cases discussed in the previous paragraph.

\(^{181}\) Id.

\(^{182}\) For a graphical representation of this data, see Appendix, Figure 10.

\(^{183}\) Judges are more likely to write dissenting opinions when the majority opinion is a precedential one because the majority opinion has decided an important question that may not be controlled by the court’s existing precedent. Indeed, that is one of the bases for the court making a majority opinion a precedential one. See Federal Circuit Internal Operating Procedure #10.4(b) (noting that one of the criteria for making a disposition precedential is when “[a]n issue of first impression is treated.” Moreover, the Internal Operating Procedures explain that “[t]he purpose of a precedential disposition is to inform the bar and interested persons other than the parties.” Id. at #10.2.

\(^{184}\) Id.

\(^{185}\) Id.

\(^{186}\) Id.

\(^{187}\) Id.

\(^{188}\) For a graphical representation of this data, see Appendix, Figure 11.

\(^{189}\) Id.

\(^{190}\) Id.
other words, the rate of dissent in administrative patent cases proved to be rather similar to the rate of dissent in all other cases during the studied time period.

7. Simple Affirmance Rate

The last data I compiled relates to the Federal Circuit’s overall simple affirmance rate. Again, a simple affirmance is a case in which the court only affirmed the entire judgment, rather than take any other action even in part. The overall simple affirmance reflects the relative number of affirmances found in summary affirmances, nonprecedential opinions, and precedential opinions. In particular, I collected data to determine from 2005 to 2020 the overall simple affirmance rate of administrative patent appeals and the overall simple affirmance rate of all other appeals.

From 2005 to 2012, the Federal Circuit’s overall simple affirmance rate in cases appealed from the Board of Patent Appeals and Interferences varied from 67% to 88%. Collectively, from 2005 to 2012 the Federal Circuit’s overall simple affirmance rate in cases appealed from the Board of Patent Appeals and Interferences was 82%. Starting in 2013, which was the first year the Federal Circuit decided any cases appealed from the Patent Trial and Appeal Board, through 2020, the overall simple affirmance rate in cases appealed from the Board of Patent Appeals and Interferences and the Patent Trial and Appeal Board varied from 77% to 91%. Collectively, during this later time period, from 2013 to 2020, the Federal Circuit’s overall simple affirmance rate in cases appealed from the Board of Patent Appeals and Interferences and the Patent Trial and Appeal Board was 81%. Thus, the Federal Circuit’s overall simple affirmance rate did not change greatly between the time period when the court reviewed the Board of Patent Appeals and Interferences and the time period when the court reviewed the Patent Trial and Appeal Board.

Another interesting point is to compare the overall simple affirmance rate for administrative patent appeals versus the overall simple affirmance rate for all other appeals. From 2005 to 2020, the overall simple affirmance rate each year for all other appeals varied between 48% and 85%, with a total overall simple affirmance rate of 74%. By contrast, the overall simple affirmance rate for administrative patent appeals over the same time period was 81%.

While the overall simple affirmance rate for administrative patent appeals was seven percentage points higher during the same time period, this data should be taken with a grain of salt. The Federal Circuit reviewed factual determinations by the Board of Patent Appeals and Interferences and the Patent Trial and Appeal Board under a more deferential substantial evidence standard, while the court reviewed factual determinations by lower courts under a less deferential clear error standard.

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191 For a graphical representation of this data, see Appendix, Figure 13.
190 Id.
199 Id.
198 Id.
197 Id.
196 Id.
195 Id.
194 Id.
193 Id.
192 Id.
191 Id.
190 Id.
189 Id.
188 Since the Supreme Court’s decision in Dickinson v. Zurko, (1999), the Federal Circuit may set aside the findings of fact made by the Board of Patent Appeals and the Patent Trial and Appeal Board only when those findings are arbitrary, capricious, an abuse of discretion, or unsupported by substantial evidence.
The data I have collected tells an interesting story about the impact of the Patent Trial and Appeal Board on the Federal Circuit. After the creation of the Patent Trial and Appeal Board, the Federal Circuit is busier overall and increasingly tasked with deciding administrative patent appeals as a proportion of its docket. The court has dealt with the increased workload by granting more summary affirmances and issuing more nonprecedential opinions in these administrative patent appeals.

On the merits, however, the Federal Circuit appears to be affirming the Patent Trial and Appeal Board at a similar rate compared to the rate at which it affirmed the Board of Patent Appeals and Interferences. Moreover, the rate of dissenting opinions is likewise similar when comparing the Patent Trial and Appeal Board to the Board of Patent Appeals and interferences. Thus, in short, since the introduction of the Patent Trial and Appeal Board, the Federal Circuit is busier but (at least without considering potential selection effects) reaching similar decisions on the merits.

**CONCLUSION**

My comprehensive analysis of the relationship of the Patent Trial and Appeal Board and the Federal Circuit reveals the impact of the America Invents Act on the patent system and the Federal Circuit. In this regard, I am proud to follow in the footsteps of my late colleague, Sarah Tran, who provided, in her words, the “first comprehensive analysis of how the America Invents Act fundamentally alter[ed] both the USPTO’s authority and its relationship with the courts.”109 Now, a little more than ten years later, I am able to consider the cases and data that demonstrate exactly how the Patent Trial and Appeal Board and Federal Circuit interact. While the Federal Circuit remains the nation’s primary expositor of patent law, the Patent Trial and Appeal Board has evolved into the most powerful institution in the nation’s patent system with respect to the question of patent validity. The caselaw and data related to the Patent Trial and Appeal Board and its relationship with the Federal Circuit demonstrate the importance of the Patent Trial and Appeal Board and its impact on the patent system and the Federal Circuit in particular.

While the Federal Circuit defers to the Patent Trial and Appeal Board with respect to the application of the patentability requirements to particular patent applications and patents, the Federal Circuit does not defer to the Patent Trial and Appeal Board or the Patent and Trademark Office with respect to interpretations of the patent statute. This might seem unsurprising given the roles of the two institutions and the relevant standards of review applied by the Federal Circuit. But the Federal Circuit has been criticized over its history for not showing deference and instead usurping the factfinding role of, for example, district courts and juries. Perhaps the Federal Circuit’s deference demonstrates its trust in the specialized judges that fill the Patent Trial and Appeal Board, and the prior criticism highlights the court’s comparative lack of trust in the generalists that fill the federal

district court benches and the juries that those judges empanel to decide most patent disputes. This shift of decision making from district court judges and juries to the Patent Trial and Appeal Board is one of the most striking ways the America Invents Act has changed the U.S. patent system. But my analysis shows that that shift has also shifted power from the Federal Circuit to the Patent Trial and Appeal Board.

The creation of the Patent Trial and Appeal Board has also significantly impacted the Federal Circuit’s workload. The data I analyzed highlights how much busier the Federal Circuit is dealing with administrative patent appeals. This causes me concern. Since its creation—indeed even prior to its creation—the Federal Circuit has been criticized as specialized court. These critics have cited problems associated with specialized courts, including capture, insularity, inability to attract high quality judges, law diverging from general principles of law, and lack of deference to other institutional actors. If the Federal Circuit is even more specialized as a result of the creation of the Patent Trial and Appeal Board, these problems may infect the Federal Circuit.

To my mind, the increased potential for these specialization problems to emerge at the Federal Circuit—or to be exacerbated to the extent they already exist—by the creation of the Patent Trial and Appeal Board should generate two responses. The first is obvious. All who care about the Federal Circuit as an institution and its work should exercise vigilance to detect the problems associated with specialized courts. The second is likewise straightforward. To the extent these problems materialize, we should consider reasonable changes to the institutional structure of the patent system and the Federal Circuit to address them. In this regard, if the problem is too much specialization at the Federal Circuit, logically the solution likely revolves around reducing (or even eliminating) that specialization. In closing, though, I must note the irony: the Patent Trial and Appeal Board is a much more specialized institutional actor when compared to the Federal Circuit. Specialization, however, is likely less of a concern with respect to fact finding and the application of law to facts, tasks given to the Patent Trial and Appeal Board. Specialization is likely more of a concern with respect to an appellate court like the Federal Circuit and decisions regarding questions of law and policy. As I have written elsewhere, there are significant benefits to an institutional structure that tasks a generalist court with reviewing the work of a specialist tribunal.
APPENDIX

Federal Circuit Total Dispositions
By Opinions and Rule 36s

Figure 1

Federal Circuit BPAI and PTAB Dispositions
v. All Other Dispositions

Figure 2
Federal Circuit BPAI and PTAB Nonprecedential and Precedential Opinions

Figure 5

All Other Federal Circuit Nonprecedential and Precedential Opinions

Figure 6
Fed. Cir. BPAI and PTAB Nonprec. Opinions
Simply Affirming v. Not Simply Affirming

- ••••• BPAI Nonprecedential Opinions Simply Affirming
- - BPAI Nonprecedential Opinions Not Simply Affirming
- •• PTAB Nonprecedential Opinions Simply Affirming
- - PTAB Nonprecedential Opinions Not Simply Affirming

Figure 7

All Other Fed. Cir. Nonprecdential Opinions
Simply Affirming v. Not Simply Affirming

- ••••• All Other Nonprecedential Opinions Simply Affirming
- - All Other Nonprecedential Opinions Not Simply Affirming

Figure 8
Federal Circuit BPAI and PTAB Prec. Opinions
Simply Affirming v. Not Simply Affirming

Figure 9

All Other Federal Circuit Precedential Opinions
Simply Affirming v. Not Simply Affirming

Figure 10
BPAI and PTAB Precedential Opinions
With and Without Dissents

Figure 11

All Other Federal Circuit Precedential Opinions
With and Without Dissents

Figure 12
Federal Circuit Overall Simple Affirmance Rate in Admin. Patent Appeals Vs. All Other Appeals

![Graph showing the comparison between the overall simple affirmance rate in administrative patent appeals and all other appeals from 2005 to 2020]

- Dotted line: Overall Simple Affirmance Rate in Administrative Patent Appeals
- Solid line: Overall Simple Affirmance Rate in All Other Appeals

Figure 13