

CAPRICIOUS PATENT BOUNDARIES: THE “RE-LIBERALIZATION” OF POST-ISSUANCE PATENT CLAIM AMENDMENTS

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I. INTRODUCTION

The Patent Trial and Appeal Board’s (PTAB) recent “Preliminary Guidance”¹ in *Mylan Pharmaceuticals v. Sanofi-Aventis* on Sanofi’s motion to amend (MTA) is an important reminder that, unlike physical objects, intellectual property deals with abstract objects that have no clear boundaries. French global pharmaceutical company Sanofi sued German pharmaceutical company Mylan in October 2017 for infringement of its insulin pen patents.² Mylan subsequently petitioned the PTAB for *inter partes* review (IPR),³ a trial-like⁴ proceeding created in 2011 by the America Invents Act (AIA)⁵ for

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1. Mylan Pharm. Inc. v. Sanofi-Aventis Deutschland GmbH, No. IPR2018-01680, Paper No. 65 (P.T.A.B. Oct. 16, 2019). This was the first “Preliminary Guidance” ever issued. *PTAB Gives Sanofi First-Ever Early Feedback on Amendments*, LAW360 (Oct. 18, 2019), <https://www.law360.com/articles/1210934/ptab-gives-sanofi-first-ever-early-feedback-on-amendments>.

2. Complaint for Patent Infringement, *SanofiAventis U.S. LLC v. Mylan GmbH*, No. 2:17-cv-09105-SRC-CLW (D.N.J. Oct. 24, 2017), <https://storage.courtlistener.com/recap/gov.uscourts.njd.357534.1.0.pdf>.

3. *Mylan Pharm. Inc. v. Sanofi-Aventis Deutschland GmbH*, No. IPR2018-01682, Paper No. 2 (P.T.A.B. Sept. 10, 2018).

4. “Trial-like” because it adopts characteristics from district court litigation (such as limited discovery, expert evidence, cross-examination, oral argument, and rules of evidence and procedure) and characteristics from examinational proceedings (such as technical judges and the possibility of claim amendments). This “hybrid” nature, however, is controversial. *See Oil States Energy Servs., LLC v. Greene’s Energy Grp., LLC*, 138 S. Ct. 1365 (2018) (holding that IPRs are constitutional); *Saint Regis Mohawk Tribe v. Mylan Pharm.*, 896 F.3d 1322 (Fed. Cir. 2018) (holding that tribal sovereign immunity does not apply to IPR proceedings); *Regents of the Univ. of Minn. v. LSI Corp.*, 2019 WL 2479596 (Fed. Cir. June 14, 2019) (holding that state sovereign immunity is similar to Native American tribal sovereign immunity and does not apply to IPRs challenging state-owned patents).

5. The AIA was the first comprehensive patent bill to be enacted since the Patent Act of 1952 (“Patent Act”) and was intended to “establish a more efficient and streamlined patent system that w[ould] improve patent quality and limit unnecessary and counterproductive

revisiting the validity of a patent's claims. Sanofi then moved to amend some of its patent claims and requested preliminary guidance on its motion.⁶

This dance presents one of the oddest aspects of patent law. Claims that are meant to act as a patent's boundaries—to inform “the public during the life of the patent of the limits of the monopoly asserted”⁷—are shape-shifting entities. Seeking to amend patent claims both pre- and post-issuance is commonplace.⁸ And policy makers are only making it easier. In seeking preliminary guidance on its motion, Sanofi took advantage of a new strategy for patent owners offered by the PTO's Motion to Amend Pilot Program (“Pilot”). As of March 2019, patent owners may request preliminary guidance from the PTAB on their motions to amend and, based on this guidance and any opposition by the petitioner, revise their motions.⁹ The Pilot is not, however, alone in easing patent owners' abilities to amend their claims. It is part of a larger movement within the patent system that is adjusting the lever of claim amendments in defining the balance between patent owners and the public.

Claim amendments during examination¹⁰ and post-issuance have been an important part of the patent system since at least 1836¹¹—and for good reason. Patents have two primary parts: (1) a written description, or specification, that discloses the invention, and (2) claims that define the precise scope of the invention.¹² After a patent is filed—giving a patent its priority date—the

litigation costs.” 157 Cong. Rec. S1361 (daily ed. Mar. 8, 2011) (statement of Sen. Leahy), https://www.uspto.gov/sites/default/files/aia_implementation/20110308-debate_s23_part-b_s1360-s1394.pdf.

6. Mylan Pharm. Inc. v. Sanofi-Aventis Deutschland GmbH, IPR2018-01682, Paper No. 32 (P.T.A.B. June 25, 2019).

7. *Permutit Co. v. Graver Corp.*, 284 U.S. 52, 60 (1931).

8. Amendments “are a common practice in prosecution of patent applications.” *Hughes Aircraft Co. v. U.S.*, 717 F.2d 1351, 1363 (Fed. Cir. 1983). As described below, the PTO has also historically liberally granted post-issuance claim amendments. Greg Reilly, *Amending Patent Claims*, 32 HARV. J.L. & TECH. 1, 16 (2018) (“On first glance, the AIA extends the traditional liberal approach to claim amendments into these new post-issuance invalidity proceedings.”).

9. Notice Regarding a New Pilot Program Concerning Motion to Amend Practice and Procedures in Trial Proceedings Under the America Invents Act Before the Patent Trial and Appeal Board, 84 Fed. Reg. 9497 (Mar. 15, 2019) [hereinafter Notice Regarding a New Pilot Program] (providing (1) the opportunity to receive preliminary guidance on their motions to amend, and (2) the option to revise amended claims in light of a petitioner's opposition and the preliminary guidance).

10. Examination, or patent prosecution, is the process by which the PTO determines whether an inventor's application satisfies the various statutory requirements for the issuance of a patent.

11. Reilly, *supra* note 8, at 2 (“Patent claim amendments have been a largely uncontroversial part of the patent system since 1836.”).

12. JANICE M. MUELLER, PATENT LAW 11 (5th ed. 2016).

written description may not be amended to add any new matter.¹³ This requirement reflects an important policy decision that prevents inventors from filing before they have completed their inventions. However, claims are often extensively modified during examination.¹⁴ Justifications for this permissiveness include that claims do not add matter beyond what is described in the written description, and that inventors should be able to obtain patent protection even if the initial claims are rejected. Yet, even during examination, too liberal of a claim amendment policy can be problematic for the patent system. It creates perverse incentives for inventors, for example, to draft overbroad or vague claims and fails to incentivize them to avoid drafting mistakes.¹⁵

Post-issuance amendments are even harder to justify. While they may similarly protect a patent owner's investment while enabling claim correction, post-issuance amendments burden the PTO with more examination and increase uncertainty for competitors, follow-on innovators, and courts in parallel proceedings.¹⁶ In designing post-issuance amendment avenues, actors within the patent system have struggled to balance exclusive rights that incentivize invention against public enjoyment and use of those inventions. Too rigid of a claim amendment practice limits the universe of patents, incentivizing overly narrow claims. Too liberal of a practice fails to give the public notice regarding what is claimed.¹⁷ The Pilot is only the most recent

13. *Id.* at 190–92.

14. Those modifications generally taking the form of (1) narrowing amendments that distinguish claims from prior art or make the claims commensurate with the disclosure in the specification; (2) broadening amendments, provided they are supported by the specification's disclosure; or (3) clarifying amendments that neither narrow nor broaden claim language but more clearly specify the invention, distinguish it from prior art, or better track the disclosure in the specification. Reilly, *supra* note 8, at 10–11.

15. See Tun-Jen Chiang, *Fixing Patent Boundaries*, 108 MICH. L. REV. 523 (2010) (arguing that examination amendments create undesirable incentives for patent owners to draft overly broad and vague terms).

16. See *id.* (arguing that post-issuance amendments permit ever changing patent boundaries, resulting in uncertainty for both patent owners and competitors). As will be discussed below, limitations on post-issuance claim amendments vary with the method used (e.g., “intervening rights” are more strenuously applied to reissuance and reexamination than continuation applications).

17. The doctrine of intervening rights applies when post-issuance proceedings change the scope of a patent. “This doctrine recognizes that third parties may rely on the claims of an issued patent and thus provides a safe harbor to parties practicing subject matter covered by the amended claims.” PETER S. MENELL, LYNN H. PASAHOW, JAMES POOLEY, MATTHEW D. POWERS, STEVEN C. CARLSON, JEFFREY G. HOMRIG, GEORGE F. PAPPAS, CAROLYN CHANG, COLETTE REINER MAYER & MARC DAVID PETERS, PATENT CASE MANAGEMENT JUDICIAL GUIDE 14–22 (3rd ed. 2016), <https://www.law.berkeley.edu/wp-content/uploads/2016/05/Chapter-8-Final.pdf>. There are two types of intervening rights: (1) absolute intervening rights

design choice—promulgated by an increasingly assertive PTO¹⁸—and is a reaction to the most recent avenues for amending claims post-issuance: AIA trials.¹⁹

AIA trials, and IPRs in particular, were intended to serve as “relatively low-cost and prompt alternative[s]” —or even “complete substitute[s]” —to the validity portion of district court litigation.²⁰ In furtherance of this goal, the PTO restricted patent owners’ ability to amend claims during AIA trials.²¹ It did so by tinkering with the burden of persuasion for claim amendment proceedings. With other post-issuance procedures, the PTO or petitioner bear the burden of persuasion to prove the unpatentability of claim amendments.²² However, with AIA trials, the PTO reversed course and placed the burden on patent owners to prove the validity of their proposed amended claims.²³ Patent owners had to show patentability over all prior art known to the patent owner, and not just over the references applied by the petitioner against the original

that protect the right of an accused infringer to continue using, selling, or offering to sell infringing products made before the date of the amended claim in reissue or IPR, and (2) equitable intervening rights, which are forward-looking, and may permit the infringer to continue using products made after the amended date. *Id.*

18. See Clarisa Long, *The PTO and the Market for Influence in Patent Law*, 157 U. PA. L. REV. 1965, 1965–66 (2009) (discussing the PTO’s growing role as a player in the market for legal influence over patent law).

19. Figure 1 illustrates the relationship between the six avenues for amending claims post-issuance.

20. See Joel Sayres & Julie Wahlstrand, *To Stay or Not to Stay Pending IPR? That Should be a Simpler Question*, 17 CHI.-KENT J. INTELL. PROP. 52, 63 (2018) (citing the statutory framework and associated legislative history, including 157 Cong. Rec. S1376 (daily ed. Mar. 8, 2011) (statement of Sen. Kyl) (“Ideally, extending could-have-raised estoppel to privies will help ensure that if an inter partes review is instituted while litigation is pending, that review will completely substitute for at least the patents-and-printed publications portion of the civil litigation.”); 157 Cong. Rec. S5409 (daily ed. Sept. 8, 2011) (statement of Sen. Schumer) (stating that the AIA “streamlines review of patents to ensure that the poor-quality patents can be weeded out through administrative review rather than costly litigation.”); H.R. REP. NO. 112-98, pt. 1, at 48 (2011) (stating the purpose of IPRs is to “provid[e] quick and cost effective alternatives to litigation.”)).

21. See Supplemental Brief on Rehearing En Banc for Intervenor: Director of the USPTO at 28, *In re Aqua Prods., Inc.*, 833 F.3d 1335 (Fed. Cir. 2016) [hereinafter Supplemental Brief on Rehearing] (arguing that Congress did not want to “simply carry forward” the process for addressing amendments in inter partes reexamination to the “new proceedings”).

22. See, e.g., inter partes reexamination, the proceeding that the AIA trials replaced.

23. See Supplemental Brief on Rehearing, *supra* note 21, at 28 (arguing that Congress did not want to “simply carry forward” the process for addressing amendments in inter partes reexamination to the “new proceedings”); Reilly, *supra* note 8, at 3 (“[A]fter the America Invents Act of 2011 (AIA) created new post-issuance proceedings to review and cancel issued patents that fail the requisite statutory criteria, the Patent Office made it virtually impossible to amend claims in these proceedings.”).

patent claims. The resulting ninety-two-percent denial rate for claim amendments—a marked shift from the liberal grant rate in inter partes reexamination, the proceeding the AIA trials replaced²⁴—drew protest from the patent bar.²⁵ And beginning in 2017, three developments have worked to “re-liberalize” post-issuance claim amendment practice at the PTAB.

First, the Federal Circuit ruled in *Aqua Products v. Matal* that the patent owner does not bear the burden of persuasion with respect to demonstrating the patentability of requested amended claims.²⁶ This change effectively reversed what had been the PTO’s practice since 2012. Second, in October 2018, the PTO changed the standard by which claims are construed in post-issuance proceedings, including for both “unexpired patent claims and substitute claims proposed in a motion to amend,” from the “broadest reasonable interpretation”—the standard used by PTO examiners to determine the validity of a patent claim—to the more narrow *Phillips* standard, or “plain and ordinary meaning” standard, used in federal courts.²⁷ Because of this change, issued patents now retain a presumption of validity both in court and at the PTAB. And third, in March 2019, the PTO launched the above-mentioned Pilot, which gives patent owners new flexibility when amending claims, including both the opportunity to receive preliminary guidance on motions to amend, as well as the opportunity to revise amended claims in light of a petitioner’s opposition and the preliminary guidance.²⁸

This Note argues that the “re-liberalization” of post-issuance claim amendments during AIA trials hurts the patent system, particularly for patents involved in concurrent district court litigation. It undermines the AIA’s goal of mitigating burdensome litigation, creates perverse drafting and strategic incentives for patent owners, and is redundant with other post-issuance claim

24. See Reilly, *supra* note 8, at 15 (“In fact, claims are amended in approximately two-thirds of reexaminations, a significantly more common outcome than either complete confirmation or cancellation of claims.”).

25. See e.g., Neal Solomon, *The Problem of Inter-Partes Review (IPR)*, IPWATCHDOG (Aug. 8, 2017), <https://www.ipwatchdog.com/2017/08/08/problem-inter-partes-review-ipr/id=86287/> (“The combination of these features suggest that due process rights are not available to patent holders in the PTO compared to the district courts.”).

26. *Aqua Prods., Inc. v. Matal*, 872 F.3d 1290 (Fed. Cir. 2017).

27. Changes to the Claim Construction Standard for Interpreting Claims in Trial Proceedings Before the Patent Trial and Appeal Board, 83 Fed. Reg. 51,340, 51,340–41 (Oct. 11, 2018) (“This final rule revises the rules for IPR, PGR, and CBM proceedings that implemented provisions of the Leahy-Smith America Invents Act (“AIA”) providing for trials before the Office, by replacing the BRI standard for interpreting unexpired patent claims and substitute claims proposed in a motion to amend with the same claim construction standard that would be used to construe the claim in a civil action under 35 U.S.C. 282(b).”).

28. Notice Regarding a New Pilot Program, *supra* note 9.

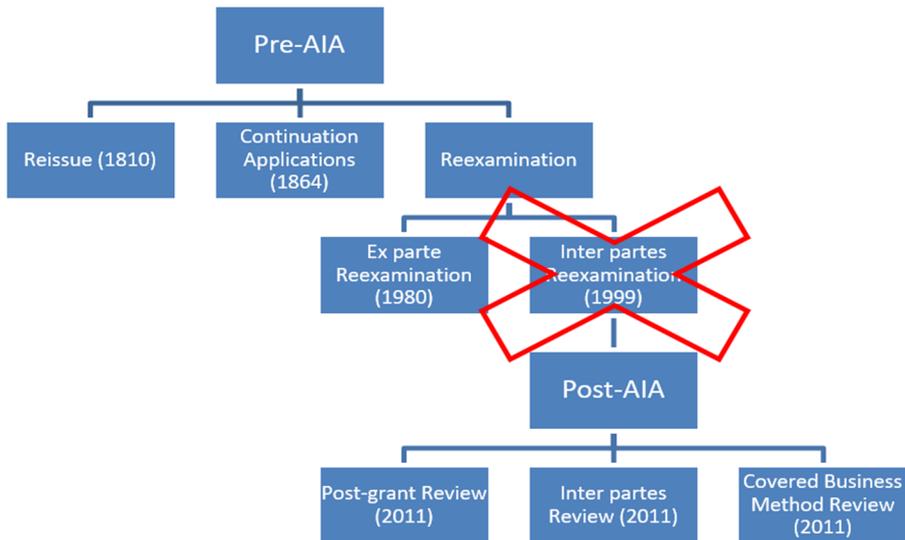
amendment avenues including reissue. This Note further illustrates these ill effects empirically. Not only have rates of claim amendment motions filed and granted in AIA trials increased since October 2017, but there has also been a decrease in the rate of petitions for IPR and an increase in district court stays pending IPR, demonstrating that IPRs are losing their ability to mitigate burdensome litigation.

Part II begins with a history of claim amendments at the PTO, including the AIA's restriction on claim amendments during AIA trials. Part III documents recent moves toward re-liberalizing post-issuance claim amendments in AIA trials, focusing on the Federal Circuit's *Aqua Products* decision, the PTO's embrace of the *Phillips* standard, and the PTO's Motion to Amend Pilot Program. Part IV analyzes the costs and benefits of a liberal approach to post-issuance claim amendments in AIA trials, concluding that the costs outweigh the benefits. And Part V moves beyond theory by examining the rate of claim amendments filed and granted during AIA trials since 2013, the rate of petitions for IPR since 2015, and the rate of district court stays granted pending IPR since 2013, empirically supporting the theoretical analysis in Part IV. This Note concludes by offering solutions to counteract the ill effects of re-liberalizing post-issuance claim amendments in AIA trials.

II. HISTORY OF POST-ISSUANCE CLAIM AMENDMENTS

This Part discusses the history of post-issuance claim amendments, detailing the six approaches for amending claims post-issuance displayed in Figure 1. It begins by discussing the origins of the PTO and the three pre-AIA methods—reissuance, continuation applications, and reexamination. It concludes by discussing post-AIA methods. In discussing each method's development, it explores the tension at the heart of post-issuance claim amendments: balancing incentives for inventors and costs for society.

Figure 1: Historical Development of Post-Issuance Proceedings



A. PRE-AIA

1. *Origins of the PTO*

The purpose of the patent system is “[t]o promote the progress of science and useful arts.”²⁹ After a brief start judging patent validity in 1790, the patent system became a pure registration system.³⁰ Patent validity became the prerogative of district courts, and only when patent owners tried to enforce their patents.³¹ As will be discussed below with reexamination and AIA trials, the close relationship between the PTO and district courts remains to this day.

29. U.S. CONST. art. I, § 8, cl. 8.

30. OREN BRACHA, *OWNING IDEAS: THE INTELLECTUAL ORIGINS OF AMERICAN INTELLECTUAL PROPERTY 1790-1909*, at 201 (Cambridge Univ. Press 2016) (“The 1790 regime was short lived. There were some complaints from patentees, but, as Jefferson observed years later, the main reason for its demise was that the board members were overwhelmed by the work load.”).

31. The Patent Office, created in 1802, was the first independent agency in the United States. Due to limited availability of federal institutions, the initial 1790 Patent Act—which invested the newly created Patent Board with discretionary power to weigh social costs and benefits underlying each patent grant—quickly gave way to the 1793 Patent Act’s registration system. *See* BRACHA, *id.* at 202 (“In the absence of meaningful prior review, the task of deciding the validity of patents now fell to the courts and was postponed entirely to the stage after the patent was issued.”). That district courts can determine validity is a distinctive U.S. practice, still in play today. In most countries, validity, even post-patent issuance, continues to be the province of the national patent office, with courts typically limited to patent enforcement issues (infringement, remedies). Robert P. Merges, *The Hamiltonian Origins of the U.S. Patent*

As could be expected under a pure registration system, patent quality was a serious issue with the 1793 Patent Act. The 1836 Patent Act shifted the issuance framework to an examination system.³² It was a step towards setting standards for universality and uniformity. Patent owners now had a right to receive a patent upon meeting patentability requirements. Along with this right came the ability to appeal decisions by the patent office and to amend one's patent claims both pre- and post-issuance.³³

As discussed above, patents have two primary parts: (1) a written description, or specification, that discloses the invention, and (2) claims that define the precise scope of the invention for which protection is sought. After a patent is filed, the written description may not be amended to add any new matter. Claims, however, are often extensively modified during examination. The patent system has struggled with designing avenues for post-issuance claim amendments that balance flexible claim adjustments for patent owner protection with public protection from unfair adjustments. The three pre-AIA avenues for amending claim amendments post-issuance are reissue, continuation applications, and reexamination.

2. *Reissue*

Reissue is only available to correct errors in a patent arising without “deceptive intention” where, as a result of the error, the patent is deemed

System, and Why They Matter Today, 104 IOWA L. REV. 2559, 2566 (2019) (“The resulting system, whereby federal judges determine patent validity in the context of a defense to patent infringement, was and is a distinctive aspect of U.S. patent practice.”).

32. BRACHA, *supra* note 30, at 209 (“The 1836 Patent Act was legislated after a long period of dissatisfaction with the existing framework. Complaints about the registration system varied, but most of them revolved around the insecurity of registered patents and the vagueness surrounding them. Issuing patents on demand with no prior examination resulted in their validity being highly questionable. Patentees often discovered their patents were invalid or that other patents overlapping with theirs had been issued. Purchasers of patented goods were harassed with dubious patents or paid licensing fees only to discover later that the goods they bought were covered by other conflicting patents.”). Unlike the semi-political board created by the 1790 Patent Act, here, the bureaucratic examiners had a clear prerogative: certifying the satisfaction of standard patentability criteria. *Id.* (“The act specifically established the Patent Office as a subdivision of the State Department, defined its structure, and established a corps of examiners. . . . [T]he newly organized Patent Office was meant to be nothing like the old Patent Board. It was set up not as a semipolitical forum with discretionary powers to grant privileges, but rather as a bureaucracy whose role was to certify the satisfaction of standard patentability criteria.”).

33. *Id.*

“wholly or partly inoperative or invalid.”³⁴ It proceeds much the same way as initial examination.

Without express statutory authority, the PTO has been granting reissued patents since 1810.³⁵ The Supreme Court endorsed this practice a few years before the statutory grant in *Grant v. Raymond*.³⁶ In *Grant*, the defendants raised an issue central to the balance between patent owners and the public: intervening rights.³⁷ What should courts do when a third party who was lawfully making, using, or selling a given article before a reissue now finds himself to be infringing under a modified patent? The Court in *Grant* declined to take on the topic and it wasn’t until *Sontag Chain Stores v. National Nut Co. of California* in 1940 that the Supreme Court endorsed the idea that a defendant could enjoy a personal “intervening right” to continue otherwise infringing activity after a valid reissue.³⁸

In response to concerns that reissue proceedings were used to expand claim scope to capture competitor’s products, the Supreme Court introduced limits on “broadening reissues” throughout the nineteenth century, including a requirement of diligence.³⁹ However, despite limiting broadening reissues to a two-year window after the grant of the original patent with the 1952 Patent Act,⁴⁰ actors within the patent system have heavily favored patent owners’ ability to amend their claims post issuance through reissue. For example, unlike the Acts of 1836 and 1870, which understood reissued patents as “new

34. 35 U.S.C. § 251. The error requirement is satisfied by a patent owner’s failure to previously present narrower claims. *See, e.g., In re Tanaka*, 640 F.3d 1246, 1251 (Fed. Cir. 2011).

35. While codified in the Patent Act of July 3, 1832, Pub. L. No. 22-162, § 3, without express statutory authority, the PTO began granting replacement amended patents, or reissued patents, in 1810, and the Supreme Court endorsed this practice in *Grant v. Raymond*, 31 U.S. 218, 243 (1832). MUELLER, *supra* note 12, at 569; Reilly, *supra* note 8, at 12.

36. *Grant v. Raymond*, 31 U.S. at 243.

37. *Id.* (“An objection much relied on is, that after the invention has been brought into general use, those skilled in the art or science with which it is connected, perceiving the variance between the specification and the machine, and availing themselves of it, may have constructed, sold and used the machine without infringing the legal rights of the patentee, or incurring the penalties of the law. The new patent would retro-act on them, and expose them to penalties to which they were not liable when the act was committed.”).

38. *Sontag Chain Stores Co. v. Nat’l Nut Co. of Cal.*, 310 U.S. 281 (1940). There currently are two types of intervening rights stemming from 35 U.S.C. § 252: (1) absolute intervening rights, whereby a party is shielded from liability if the products were made or used before the patent reissues, and (2) equitable intervening rights, which are a matter of judicial discretion and can shield a party from liability even for accused products made or used after the patent reissues.

39. 4A DONALD S. CHISUM, CHISUM ON PATENTS: A TREATISE ON THE LAW OF PATENTABILITY, VALIDITY AND INFRINGEMENT § 15.02[5] (LEXIS 2019).

40. 35 U.S.C. § 314(a) (2011).

patents” that were only effective as to “causes thereafter arising,”⁴¹ the 1928 Patent Act allowed patentees to recover “in so far as the claims of the original and reissued patents are identical.”⁴² In addition, courts have continued to interpret reissue based on the fundamental notions of equity and fairness to inventors recognized in the Supreme Court’s 1892 *Topliff* decision⁴³ and have construed the reissue statute liberally when they find no deceptive intent on the part of the inventor.⁴⁴ The Federal Circuit took this track recently in *In re Staats*, when it allowed a continuing reissue application to broaden claims after § 251’s two-year limit, finding that the two-year time limit only applied to the initial broadening reissue application.⁴⁵

3. Continuation Applications

The second method by which patent owners can alter their claims was developed in the mid-nineteenth century: continuation applications. Continuation applications are very popular and today constitute about one-

41. Therefore, the patentee could not recover for acts of infringement occurring before reissue.

42. 4A CHISUM, *supra* note 39, at § 15.02[5].

43. In finding that the patent owner could retain the broadened reissued patent, the Supreme Court in *Topliff v. Topliff*, 145 U.S. 156, 171 (1892), discussed the importance of post-issuance claim amendments:

The specification and claims of a patent, particularly if the invention be at all complicated, constitute one of the most difficult legal instruments to draw with accuracy, and in view of the fact that valuable inventions are often placed in the hands of inexperienced persons to prepare such specifications and claims, it is no matter of surprise that the latter frequently fail to describe with requisite certainty the exact invention of the patentee, and err either in claiming that which the patentee had not in fact invented, or in omitting some element which was a valuable or essential part of his actual invention. Under such circumstances, it would be manifestly unjust to deny him the benefit of a reissue to secure to him his actual invention, provided it is evident that there has been a mistake and he has been guilty of no want of reasonable diligence in discovering it, and no third persons have in the meantime acquired the right to manufacture or sell what he had failed to claim. The object of the patent law is to secure to inventors a monopoly of what they have actually invented or discovered, and it ought not to be defeated by a too strict and technical adherence to the letter of the statute, or by the application of artificial rules of interpretation.

44. *See, e.g., In re Weiler*, 790 F.2d 1576, 1579 (Fed. Cir. 1986) (noting that the reissue statute “should be construed liberally”).

45. *In re Staats*, No. 2010-1443 (Fed. Cir. Mar. 5, 2012).

quarter of all issued patents.⁴⁶ Continuation applications allow an inventor to rely, in a subsequent application, on the filing date of a prior co-pending application disclosing the same invention.⁴⁷ Although they didn't gain express statutory recognition until 1952, continuation applications were first recognized by the Supreme Court in *Godfrey v. Eames* in 1864, which found that an inventor's second application was entitled to the filing date of a first application because the second was analogous to an amendment and together they could be constituted as "one continuous application."⁴⁸

Throughout the nineteenth century and into the twentieth century, case law clarified the meaning of a "continuous application." In *Crown Cork & Seal v. Ferdinand Gutmann*, the Supreme Court emphasized the importance of continuity of disclosure rather than continuity of claims.⁴⁹ The lower courts further explained that the standard of continuity of disclosure was, in effect, equated with the enablement requirement.^{50, 51}

Many of these decisions, however, were not unanimous and the varying opinions demonstrate the unease some had (and continue to have)⁵² with continuation applications. The dissent in *Harder v. Haywood*, for example,

46. Mark A. Lemley & Kimberly A. Moore, *Ending Abuse of Patent Continuations*, 84 B.U.L. REV. 63, 66 (2004).

47. Menell, *supra* note 17, at 14–16 ("A continuation application is a second application for an invention claimed in a prior application. To qualify as a continuation application and claim the benefits of the earlier "parent" application's priority date, the application must be filed while the parent is still pending (i.e., not issued or abandoned), expressly refer to the parent application, identify at least one common inventor, and encompass the same disclosure of the parent application without adding any new matter. The same invention must be claimed, but the scope of the claims can vary." (internal citations omitted)).

48. *Godfrey v. Eames*, 68 U.S. (1 Wall.) 317, 325–26 (1864).

49. *Crown Cork & Seal Co. v. Ferdinand Gutmann Co.*, 304 U.S. 159, 165 (1938) ("[A]s Warth's disclosure was continuously before the Patent Office, clearly without any adverse significance to the petitioner is the fact that Warth formally canceled one disclosure from his first application and with it claims thought by the Circuit Court of Appeals broad enough to cover the disclosure. The continuity so maintained shows that Warth intended to retain, not to abandon, the disclosed invention.").

50. 4A CHISUM, *supra* 39, at § 13.02 (citing *Victor Talking Mach. Co. v. Am. Graphophone*, 145 F. 350, 351 (2d Cir. 1906) (holding that claims in a continuation application were entitled to the benefit of the filing date of the first (parent) application if the disclosures of the parent "were full enough to warrant the making of the claims"); *In re Febrey*, 135 F.2d 751 (C.C.P.A. 1943) (holding that the right to file a continuation application was created by *Godfrey v. Eames* and is dependent only upon copendency and continuity of disclosure)).

51. The enablement requirement requires that the specification "describe the invention in such terms that one skilled in the art can make and use the claimed invention." 2164 *The Enablement Requirement* [R-11.2013], USPTO, <https://www.uspto.gov/web/offices/pac/mpep/s2164.html> (last revised June 2020).

52. Lemley & Moore, *supra* note 46.

disapproved of an applicant keeping “his application alive indefinitely.”⁵³ The dissent also flagged the inappropriate incentives continuation applications create, in particular regarding continuation-in-part applications after allowance.^{54, 55} The dissent asserted that whatever purpose continuations-in-part have would be better solved by “proper attention” during the drafting of the patent.⁵⁶

The Patent Act of 1952 later codified the *Godfrey* doctrine entitling continuation applications to the filing date of prior applications.⁵⁷ Under § 120, an applicant can file a continuation application at any time before the PTO actually issues the patent or before the applicant abandons the application.

Here, again, courts interpret continuing applications in a manner favorable to patent owners. In *Kingsdown Medical Consultants v. Hollister*, for example, the Federal Circuit explicitly endorsed the practice of keeping an application pending in the PTO just to monitor developments in the marketplace and subsequently add claims during the continuation process to cover ideas learned from a competitor.⁵⁸ This practice appears particularly appealing in the pharmaceutical and biotechnology industries.⁵⁹ While Congress and courts

53. *Harder v. Haywood*, 150 F.2d 256, 265 (C.C.P.A. 1945) (Jackson, J., dissenting) (“The formal allowance of an application by the Patent Office is a holding by it that the patent which is granted on it is valid. Consequently, a continuation-in-part is as much of a device for delaying the issuance of a patent as is a continuation, and in my opinion both are subject to the same rule. Proper attention given to the drafting of specifications and claims in an application by reasonably diligent and skillful counsel would certainly reveal to him before allowance the scope of the necessary protection.”).

54. *Id.*

55. Unlike continuation applications, continuation-in-part applications also add additional matter. MUELLER, *supra* note 12, at 75.

56. *Haywood*, 150 F.2d at 265 (“The formal allowance of an application by the Patent Office is a holding by it that the patent which is granted on it is valid. Consequently, a continuation-in-part is as much of a device for delaying the issuance of a patent as is a continuation, and in my opinion both are subject to the same rule. Proper attention given to the drafting of specifications and claims in an application by reasonably diligent and skillful counsel would certainly reveal to him before allowance the scope of the necessary protection.”).

57. 35 U.S.C. § 120.

58. *Kingsdown Med. Consultants v. Hollister*, 863 F.2d 867, 874 (Fed. Cir. 1988) (“It should be made clear at the outset of the present discussion that there is nothing improper, illegal or inequitable in filing a patent application for the purpose of obtaining a right to exclude a known competitor's product from the market; nor is it in any manner improper to amend or insert claims intended to cover a competitor's product the applicant's attorney has learned about during the prosecution of a patent application. Any such amendment or insertion must comply with all statutes and regulations, of course, but, if it does, its genesis in the marketplace is simply irrelevant and cannot of itself evidence deceitful intent.”).

59. Lemley & Moore, *supra* note 46, at 71.

have created a number of patent doctrines designed to combat the misuse of continuation applications—including changing the term of patents, ending the secrecy of most patent applications, reviving the doctrine of written description, and creating a defense of prosecution laches—some commentators have raised concerns with this practice and propose further solutions to stem abuse, including banning the practice altogether.⁶⁰

4. *Reexamination*

Congress created the third approach for amending patent claims post-issuance in 1980: reexamination.⁶¹ Established to “strengthen[] investor confidence in the certainty of patent rights by establishing a system of administrative reexamination of doubtful patents,” reexamination was envisioned as a substitute for patent litigation.⁶² As the legislative history explains, “[r]eexamination will permit efficient resolution of questions about validity of issued patents without recourse to expensive and lengthy infringement litigation.”⁶³

In reexamination proceedings, the PTO assesses the patentability of the claims of an issued patent in view of prior art patents and publications.⁶⁴ Prior to the AIA’s enactment, there were two types of reexamination procedures: *ex parte* reexamination (still used today) and *inter partes* reexamination (replaced under the AIA with post-grant review, inter partes review, and covered business method proceedings). Both types of reexamination require a threshold showing that a substantial new question of patentability exists for one or more claims.⁶⁵

Ex parte reexamination may be brought by the patent owner, a third party, or the Director of the PTO.⁶⁶ If initiated by a third party, the third party has

60. *Id.* at 66 (offering solutions to stem abuse of continuation applications, including requiring publication of all applications, putting a time limit on the addition of new claims that broaden the scope of the patent, and creating a defense for infringers who independently developed the patented inventions before it was added to the patent claims).

61. Act of Dec. 12, 1980, Pub. L. No. 96-517, 94 Stat. 3015 (codified as amended in scattered sections of 35 U.S.C.).

62. H.R. REP. NO. 96-1307, pt. 1, at 4 (1980). Much scholarship has dissected the concerns that led patent policy makers to reallocate decision making authority away from the courts and into the PTO, including capitalizing on the institutional competence of the expert agency over the relative inexpertise of courts. *See, e.g.,* Saurabh Vishnubhakat, *The Youngest Patent Validity Proceeding: Evaluating Post-Grant Review*, 24 TEX. INTELL. PROP. L.J. 333, 345 (2016).

63. H.R. REP. NO. 96-1307, pt. 1, at 4.

64. 35 U.S.C. § 304.

65. 35 U.S.C. §§ 302–03.

66. 35 U.S.C. § 301.

limited involvement and the proceedings are conducted in a manner similar to examination.⁶⁷

Ex parte reexamination, however, was criticized as biased in favor of patent owners because of the extremely limited opportunities for third-party participation, which led to the creation of inter partes reexamination in 1999. However, inter partes reexamination was ineffective because the proceedings were often hampered by lengthy delays, severe estoppel provisions, a lack of decisive results, and a permissiveness for claim amendments.⁶⁸ In addition, involvement by third parties was limited to responding to the patent owner's responses to the PTO as part of the reexamination.

As noted above, the PTO took and continues to take a liberal stance on claim amendments during reexamination. In fact, claims are amended in approximately two-thirds of reexaminations.⁶⁹ However, unlike reissue, reexamination cannot be used to broaden the claims of an issued patent.⁷⁰

B. THE AIA

As the first comprehensive patent bill to be enacted since the Patent Act of 1952 (hereinafter the "Patent Act"), the AIA intends to "establish a more efficient and streamlined patent system that w[ould] improve patent quality and limit unnecessary and counterproductive litigation costs."⁷¹ Responding to mounting pressures regarding global patent harmonization, patent over-granting, and aggressive nonpracticing entities (i.e., patent trolls⁷²), the AIA enacted two major administrative changes to the patent system: shifting to a

67. 35 U.S.C. § 305.

68. See Brian J. Love & Shawn Ambwani, *Inter Partes Review: An Early Look at the Numbers*, 81 U. CHI. L. REV. DIALOGUE 93 (2014); Teresa Stanek Rea, *Building a Better Post Grant*, USPTO (May 15, 2012), https://www.uspto.gov/blog/director/entry/building_a_better_post_grant.

69. Reilly, *supra* note 8, at 15.

70. 35 U.S.C. § 305 ("no proposed amended or new claim enlarging the scope of a claim of the patent will be permitted in a reexamination proceeding under this chapter.")

71. See 157 CONG. REC. S1380 (daily ed. Mar. 8, 2011) at S1361 (statement of Sen. Leahy).

72. See Ted Sichelman, *Commercializing Patents*, 62 STAN. L. REV. 341, 368 (2010) (noting that non-practicing entities are pejoratively referred to as "trolls" because they "tend to exploit litigation and licensing market defects to extract unwarranted rents from commercializers, usually on patents that the commercializer was completely unaware of before the NPE's demand for payment"). But see FED. TRADE COMM'N, PATENT ASSERTION ENTITY ACTIVITY: AN FTC STUDY (2016), https://www.ftc.gov/system/files/documents/reports/patent-assertion-entity-activity-ftc-study/p131203_patent_assertion_entity_activity_an_ftc_study_0.pdf (arguing that a label like "patent troll" is "unhelpful because it invites pre-judgment about the societal impact of patent assertion activity without an understanding of the underlying business model that fuels such activity").

modified first-to-file system⁷³ and expanding post-issuance review proceedings.⁷⁴

Building on its goal of creating an inexpensive alternative to court challenges, Congress replaced inter partes reexamination with a three-tiered framework: broad post-grant review (PGR) in a patent's infancy, followed by narrower inter partes review (IPR) thereafter, with a limited exception for broad review of older covered business method patents (CBM). Unlike inter partes reexamination, these new proceedings take place as adjudicatory proceedings before three-member panels of administrative judges (ALJs)⁷⁵ from the PTAB.⁷⁶ They are thus "hybrid,"⁷⁷ adopting characteristics from district court litigation (such as limited discovery, expert evidence, cross-examination, oral argument, and rules of evidence and procedure) and characteristics from examinational proceedings (such as technical judges and the possibility of claim amendments). However, under Title 35, the PTO does not have the authority to decide infringement or to grant relief for violation of a patentee's rights.⁷⁸ Such disputes are decided in civil actions filed in federal district court.

73. "Modified" because the AIA regime still permits an inventor a one-year grace period under certain conditions. Because of this, the U.S. regime still diverges from other first-to-file systems.

74. See Changes to Implement Inter Partes Review Proceedings, Post-Grant Review Proceedings, and Transitional Program for Covered Business Method Patents, 77 Fed. Reg. 48,680 (Aug. 14, 2012) (codified at 37 C.F.R. §§ 42.100 *et seq.*). See also Jeffrey P. Kushan, *The Fruits of the Convoluted Road to Patent Reform: The New Invalidity Proceedings for the Patent and Trademark Office*, 30 YALE L. & POL'Y REV. 385 (2012) (arguing that, given the excessive cost of litigation, administrative proceedings before the PTO play a crucial role in providing a way to contest patents).

75. 35 U.S.C. § 6. The ALJs also hear appeals from adverse examiner decisions in patent applications and reexamination proceedings, and render decisions in interferences. *Id.* Appointment of APJs is a controversial topic: the Federal Circuit recently held that appointment of APJs by the Secretary of Commerce violates the Appointments Clause. See *Federal Circuit Says PTAB Judges Are Not Constitutionally Appointed*, IPWATCHDOG (Oct. 31, 2019), <https://www.ipwatchdog.com/2019/10/31/federal-circuit-says-ptab-judges-not-constitutionally-appointed/id=115556/>; Gene Quinn, *USPTO Admits to Stacking PTAB Panels to Achieve Desired Outcomes*, IPWATCHDOG (Aug. 23, 2017), <https://www.ipwatchdog.com/2017/08/23/uspto-admits-stacking-ptab-panels-achieve-desired-outcomes/id=87206/>.

76. Steve Brachmann, *Supreme Court Petition Challenges PTAB's Constitutionality Under the Takings Clause*, IPWATCHDOG (Aug. 20, 2018), <https://www.ipwatchdog.com/2018/08/20/supreme-court-petition-challenges-ptabs-constitutionality-takings-clause/id=100401/>.

77. See *supra* note 4.

78. While Title 35 does not give the PTO the authority to decide infringement, in *Oil States Energy Services, LLC v. Greene's Energy Group, LLC*, the Court determined that patents are a government franchise rather than a vested property right. See 138 S. Ct. 1365, 1375. Invoking the "public rights doctrine," the Court found that patent validity trials need not take place in Article III courts, nor do they violate the Seventh Amendment right to a jury trial. *Id.* at 1379.

This Section addresses (1) the three new post-issuance proceedings, (2) their purpose, and (3) the PTO's approach to claim amendments before the "re-liberalization" of post-issuance claim amendments.

1. *AIA trials*

As discussed above, with these new procedures, the AIA created a three-tiered framework with broad PGR in a patent's infancy, followed by narrower IPR thereafter, with a limited exception for broad review of older CBM patents. In contrast with pre-AIA inter partes reexamination, PGR, IPR, and CBM review take place as adjudicatory proceedings before three-member panels of ALJs from the PTAB.⁷⁹ The parties can conduct limited discovery, respond to each other's arguments, and have the right to an oral hearing.⁸⁰

a) Post-Grant Review

Considered "the first window" for challenging patent validity, PGR may be sought within the first nine months after a patent is issued by any person who is not the patent owner.⁸¹ By statute, PGR should be completed by the PTO within twelve months from the date of institution, although this can be extended an additional six months for good cause, or as needed in the case of joinder.⁸² According to a Judiciary Committee Report, "[t]he intent of the post-grant review process is to enable early challenges to patents, while still protecting the rights of inventors and patent owners against new patent challenges unbounded in time and scope."⁸³ Thus, the third party standing requirements are broad, as is the scope of challenges—encompassing all

The Court's holding was narrow but left open the possibility of future constitutional challenges, including regarding the interplay between infringement and validity, and whether the public rights doctrine applies to patent infringement.

79. 35 U.S.C. § 6(c).

80. 35 U.S.C. § 316(a)(5), (8), (10), (13).

81. 35 U.S.C. § 321(a)–(c). Because of this timing restraint, PGR applies only to patents subject to the AIA's modified first-to-file priority rule, enacted eighteen months from the AIA's enactment (i.e., only to patents from applications filed after March 16, 2013). Pub. L. No. 112-29, § 3(n)(1), 125 Stat. 284, 293 (2011). In large part because of this structural constraint, during the first four years in which the procedure became available, the PTO received only twenty-one petitions for PGR, in contrast with over four thousand for IPR and four hundred for CBM. See Vishnubhakat, *supra* note 62, at 354. As of September 30, 2018, the filing statistics are as follows: 8,476 IPRs, 560 CBMs, and 134 PGRs. USPTO, TRIAL STATISTICS: IPR, PGR, CBM (2018), https://www.uspto.gov/sites/default/files/documents/trial_statistics_20180930a.pdf. For a further analysis as to why IPRs are more popular than PGRs, see Jonathan Stroud, *Patent Post-Grant Review After Alice*, 69 BAYLOR L. REV. 56 (2017).

82. See 35 U.S.C. § 326(a)(11).

83. H.R. REP. NO. 112-98, at 58 (2011).

grounds that could be asserted to render a patent invalid or unenforceable⁸⁴— and the permitted evidence, which includes expert opinion.⁸⁵

b) Inter Partes Review

To avoid overlap with PGR, IPR can only be requested by a third party after the nine-month window following the issue date of the patent or after termination of PGR.⁸⁶ As with PGR, only third parties can petition for IPR and they “must demonstrate that there is a reasonable likelihood that the petitioner would prevail with respect to at least one of the claims challenged in the petition.”⁸⁷ In *SAS Institute, Inc. v. Iancu*, the Supreme Court ended the PTAB’s practice of “partial institution,” holding that if the PTAB institutes review, it must issue a final written decision addressing every patent claim challenged in an IPR petition.⁸⁸ Unlike PGR, the grounds for IPR are limited to lack of novelty⁸⁹ and nonobviousness,⁹⁰ and the grounds for challenges are limited to patents and printed publications.⁹¹ If the PTAB grants review, a final determination must be issued “not later than one year” after the petition is granted.⁹² The one-year period may be extended for good cause for up to six months, although “[e]xtensions of the one-year period are anticipated to be rare.”⁹³

c) Covered Business Method Patents

While PGR and IPR are the primary new forms for challenging issued patents before the PTAB, CBM was added as a transitional program set to expire on September 16, 2020,⁹⁴ to address the “flood of poor quality business

84. Whereas IPR limits the grounds by which claims can be challenged to just novelty and obviousness over patents and printed publications, PGR permits challenges by those too, as well as by written description (except for best mode), enablement, indefiniteness, claim broadening on any prior art statutorily available, and subject matter eligibility. 35 U.S.C. § 321(b).

85. 35 U.S.C. §§ 321(a), 322(a)(3).

86. 35 U.S.C. § 311(c).

87. 35 U.S.C. § 314(a).

88. *SAS Inst., Inc. v. Iancu*, 138 S. Ct. 1348 (2018).

89. 35 U.S.C. § 102.

90. 35 U.S.C. § 103.

91. 35 U.S.C. § 311 (2013).

92. 35 U.S.C. § 316(a)(11) (2014).

93. 77 Fed. Reg. 48,680, 48,695 (Aug. 14, 2012). Extensions of the one-year period have, in fact, been rare, but may become more frequently invoked in light of *SAS Institute, Inc. v. Iancu*’s holding that the PTAB must issue a final written decision addressing every patent claim challenged in an IPR petition, ending the PTAB’s practice of “partial institution.”

94. On March 20, 2018, Congress held a hearing to determine the future of CBM and whether it should be extended beyond its current September 16, 2020, sunset date (Congress has considered whether to extend CBM several times, including in June 2015). *See* Gene Quinn

method patents” unleashed by the Federal Circuit’s decision in *State St. Bank & Trust Co. v. Signature Financial Group* in 1998.⁹⁵ State Street categorically did away with the business method exception to patentability, allowing patents over business methods for the first time.⁹⁶ Because of the lack of prior art references and scholarship around methods of conducting business, patent examiners had little guidance for weeding out undeserving applications.⁹⁷ Following State Street, courts quickly recognized the growing problem of vague and suspect business method patents and began to articulate new standards for obviousness,⁹⁸ but a body of “problematic” CBM patents were already issued. To help “reduce the burden placed on courts and the economy by this back-and-forth shift in judicial precedent,” Congress created a “temporary administrative alternative for reviewing business method patents,”⁹⁹ within the AIA. As with PGR and IPR, the transition program “is designed to provide a cheaper, faster alternative to district court litigation,”¹⁰⁰ but with an even greater emphasis on not burdening courts.¹⁰¹

& Steve Brachmann, *The House IP Subcommittee: A Bunch of Fiddling Neros Watching the U.S. Patent System Burn* (Mar. 29, 2018), IP Watchdog, <https://www.ipwatchdog.com/2018/03/29/house-ip-subcommittee-fiddling-neros-watching-patent-system-burn/id=95263/>. The March 2018 hearing took place a week after the U.S. Government Accountability Office issued an assessment of CBM that highlighted the general decline of CBM filings since 2015. *Id.* This decline makes sense given that the program was created, as chair of the House Intellectual Property Subcommittee Representative Durrell Issa stated in his introduction, to address “a series of patents that got out that the court today clearly has said that the PTO should not grant.” *Id.* CBM remains slated to sunset after September 16, 2020. *Id.*

95. See *State St. Bank & Trust Co. v. Signature Fin. Grp.*, 149 F.3d 1368 (1998); H.R. REP. NO. S23, pt. S1363 (2011).

96. H.R. REP. NO. S23, pt. S1363.

97. *Id.*

98. See, e.g., *Bilski v. Kappos* 561 U.S. 593 (2010) (acknowledging the need for a limiting principle on business method patents and signaling that abstract business methods are not patentable); *eBay Inc. v. MercExchange, L.L.C.* 547 U.S. 388, 397 (2006) (Kennedy, J., concurring) (citing the “potential vagueness and suspect validity” of business method patents).

99. H.R. REP. NO. S23, pt. S1363.

100. *Id.*

101. Some commentators and courts have argued that because the “underlying impetus and rationale of CBMs largely mirror those of IPRs, there is little reason to apply a different standard for the two proceedings with respect to stays pending litigation.” Sayres & Wahlstrand, *supra* note 20, at 64–65 (citing *Murata Mach. USA v. Daifuku Co.*, 830 F.3d 1357, 1362 (Fed. Cir. 2016) (concluding that district courts may properly consider the fourth CBM factor in considering motions to stay pending IPR because the “legislative history confirms that Congress’s desire to enhance the role of the PTO and limit the burden of litigation on courts and parties was not limited to the CBM review context”) (internal quotation marks omitted); *NFC Tech. LLC v. HTC Am., Inc.*, No. 2:13-CV-1058-WCB, 2015 WL 1069111, at *5 (“The legislative history indicates that Congress recognized that the same underlying policy

2. *Goal of AIA Trials*

The AIA trials' overlap with civil litigation goes to the heart of the AIA: mitigating burdensome litigation. Although patent litigation takes place in federal district courts, it is common for parties to initiate parallel proceedings in the PTO to challenge the validity of an asserted patent or to confirm that a patent is valid in light of potential challenges.^{102, 103} Based on recent scholarship, an estimated seventy percent of instituted IPRs are brought by parties involved in district court litigation.¹⁰⁴ Congress believed that IPR, in particular, could serve as a "complete substitute" for district court litigation with respect to validity based on patents and printed publications under 35 U.S.C. § 102 (novelty) and § 103 (nonobviousness).^{105, 106}

considerations that apply to CBM review apply to inter partes review as well."); Vishnubhakat, *supra* note 62, at 64 ("In general, the AIA's legislative history indicates Congress wanted both IPRs and CBM reviews to serve as a substitute for Article III litigation over patent validity.").

102. Although historically, the PTO's job has focused on examining patent applications, Congress established and expanded the PTO's authority to reexamine previously issued patents over the past forty years. The AIA's post-issuance administrative procedures were instantly popular with patent challengers for at least three reasons: (1) they are generally much less expensive than district court patent infringement litigation; (2) they can be invoked by anyone wishing to challenge a patent, not just those who have a litigation-worthy "case or controversy" under federal court procedure; and (3) issued patents in these proceedings do not enjoy the "presumption of validity" that district courts must afford during the adjudication of challenges to patent validity. *See* ROBERT PATRICK MERGES & JOHN FITZGERALD DUFFY, *PATENT LAW AND POLICY: CASES AND MATERIALS* 18 (7th ed. 2017).

103. Five main venues are available to resolve disputes involving U.S. patents, beginning with U.S. District Courts, the U.S. International Trade Commission, and the PTO. Regardless of the first venue selected, all cases can then be appealed to the U.S. Court of Appeals for the Federal Circuit, and subsequently to the U.S. Supreme Court. It is worth noting that the "substantial evidence" standard on appeal from the PTO is more deferential than the "clearly erroneous" standard for appeals from district courts. *See Dickinson v. Zurko*, 527 U.S. 150 (1999).

104. Saurabh Vishnubhakat, Arti K. Rai & Jay P. Kesan, *Strategic Decision Making in Dual PTAB and District Court Proceedings*, 31 *BERKELEY TECH. L.J.* 45, 49 (2016).

105. *See* Sayres & Wahlstrand, *supra* note 20, at 52, and accompanying parenthetical.

106. The PTO took an additional step in this direction by replacing its previous broadest reasonable interpretation standard on October 11, 2018, with the same *Phillips* standard for claim construction as district courts. *See* Changes to the Claim Construction Standard for Interpreting Claims in Trial Proceedings Before the Patent Trial and Appeal Board, 83 Fed. Reg. 51,340 (Oct. 11, 2018). Its stated ambition was that "the change will lead, among other things, to greater consistency and harmonization with the federal courts and the ITC and lead to greater certainty and predictability in the patent system." *PTAB Issues Claim Construction Final Rule*, USPTO (Oct. 10, 2018), <https://www.uspto.gov/patents-application-process/patent-trial-and-appeal-board/procedures/ptab-issues-claim-construction>.

However, while AIA trials, and IPRs in particular, have proven to be popular, they are also controversial.¹⁰⁷ Commentators have criticized IPR's anti-inventor bias,¹⁰⁸ and legislation was introduced that would abolish not only IPR, but also the PTAB.¹⁰⁹ Further, courts have considered IPR's constitutionality¹¹⁰ and overlap with civil litigation.¹¹¹ A less reported but equally important development has been the AIA's unanticipated effect on claim amendments.¹¹²

3. *Tightening Post-Issuance Motions to Amend*

Many assumed that claim amendment procedures wouldn't change with the AIA.¹¹³ As noted above, AIA trials were intended to replace inter partes reexamination, which liberally allowed claim amendments. In addition, the AIA states that "the patent owner may file one motion to amend the patent."¹¹⁴

107. See, e.g., Andre Iancu, Director, USPTO, Keynote Address at the U.S. Chamber of Commerce Patent Policy Conference: Role of U.S. Patent Policy in Domestic Innovation and Potential Impacts on Investment (Apr. 11, 2018), <https://www.uspto.gov/about-us/news-updates/remarks-director-andrei-iancu-us-chamber-commerce-patent-policy-conference> ("Pointing to the high invalidation rates in IPR proceedings, some hate the new system with vigor, arguing that it's an unfair process that tilts too much in favor of the petitioner. Others love the system, and think it's the best tool we have to correct errors, eliminate 'bad patents,' and improve patent quality.").

108. See, e.g., Russell Slifer, *Five Years After the AIA Created the PTAB*, IPWATCHDOG (Sept. 16, 2017), <http://www.ipwatchdog.com/2017/09/16/five-years-after-the-aia-created-the-ptab/id=87994/> (arguing that post-issuance proceedings have substituted defendant abuse in district court litigation with patent owner abuse in the PTAB).

109. H.R. 6264, 115th Cong. (2018) (proposing to abolish the PTAB and eliminate both IPRs and PGRs because they "have harmed the progress of science and the useful arts by subjecting inventors to serial challenges to patents").

110. See *Oil States Energy Servs., LLC v. Greene's Energy Grp., LLC*, 138 S. Ct. 1365 (2018) (holding that IPRs are constitutional); see, e.g., *Regents of the Univ. of Minn. IPR2017-01186*, Paper No. 14 (P.T.A.B. Dec. 19, 2017) (considering whether state sovereign immunity applies to IPR proceedings). See Shashank Upadhye & Adam Sussman, *A Real Separation of Powers or Separation of Law: Can an Article I Administrative Agency Nullify an Article III Federal Court Judgment?*, 25 FORDHAM INTELL. PROP., MEDIA, & ENT L.J. 1 (2014).

111. See, e.g., *Wi-Fi One, LLC v. Broadcom Corp.*, 887 F.3d 1329 (Fed. Cir. 2018) (holding that decisions by the PTAB to institute IPR validity challenges may be appealed when such decisions relate to the timing of the petitions, rather than on the substantive merits).

112. Barbara Clarke McCurdy, Thomas L. Irving & Stacy D. Lewis, *How the PTAB and Federal Circuit Have Responded to Aqua Products*, FINNEGAN (Mar. 28, 2018), <https://www.finnegan.com/en/insights/how-the-ptab-and-federal-circuit-have-responded-to-aqua-products.html> ("The patent bar watched the en banc rehearing decision in *Aqua Products Inc. v. Matal*, with great interest. This was because the lack of availability to amend claims in an inter partes review has frustrated patent owners and was a somewhat unanticipated consequence of the America Invents Act." (internal citations omitted)).

113. *Id.*

114. 35 U.S.C.A. § 316(d)(1).

However, the PTO set new regulations that restricted post-issuance claim amendments in AIA trials, namely by putting the burden of patentability on the patent owner.¹¹⁵ As the PTO stated, it understood Congress as not wanting to “carry forward to the new proceedings” the amendment process of inter partes reexamination.¹¹⁶ But why did it think that?

Before the AIA, Congress explicitly directed the PTO to follow the initial examination approach for reexamination.¹¹⁷ With the AIA, however, Congress removed that explicit instruction. Further, the PTO understood Congress to have “created a new practice in patent law—the motion to amend a patent apart from any sort of reexamination or reissue proceeding before the USPTO.”¹¹⁸ Thus, the PTO took Congress as not wanting to “carry forward” the amendment process from reexamination.

Instead, the PTO placed the burden of proving patentability of amended claims on the patent owner—the person in the best position to be familiar with the prior art.¹¹⁹ In doing so, however, the PTAB severely restricted motions to amend during post-issuance proceedings.¹²⁰ In fact, between 2012 and 2017, the PTAB denied an MTA in ninety-two percent of AIA trials.¹²¹ Beginning in 2017, however, several developments “re-liberalized” post-issuance claim amendments at the PTAB.

III. RELIBERALIZING CLAIM AMENDMENTS

Since 2017, three recent events have “re-liberalized” post-issuance claim amendments: (1) the Federal Circuit’s decision in *Aqua Products*, which clarifies where the burden of proving patentability lies; (2) the PTO’s embrace of the Phillips standard; and (3) the PTO’s Motion to Amend Pilot. They are discussed below in chronological order.

115. See 37 C.F.R. § 42.121.

116. Supplemental Brief on Rehearing, *supra* note 21, at 28. However, in the House Report for the AIA, several representatives noted with approval the high rate of “modification or nullification” of patent claims in inter partes reexamination and their desire to retain this feature in IPRs. H.R. REP. NO. 112-98, pt. 1, at 164 (2011).

117. 35 U.S.C. § 314 (pre-AIA) (providing that the initial examination procedures where amendments are treated like original claims and must be proven unpatentable by the Patent Office of § 132 and § 133 would apply during inter partes reexamination).

118. Supplemental Brief on Rehearing, *supra* note 21, at 14–17.

119. *Id.* at 28.

120. USPTO, PATENT TRIAL AND APPEAL BOARD MOTION TO AMEND STUDY (2018), https://www.uspto.gov/sites/default/files/documents/ptab_%20mta_study_%28installment_5_-_%20update_through_fy2018%29.pdf (showing that PTAB has denied a motion to amend in ninety percent of AIA trials).

121. *Id.*

A. AQUA PRODUCTS AND ITS PROGENY

The decision in *Aqua Products* was widely anticipated by the patent bar.¹²² Given the ninety-two-percent denial rate of claim amendments, many felt that the PTO had overstepped its role.¹²³

The product at issue in *Aqua Products v. Matal* was a jet-propelled pool cleaner. During litigation, Zodiac Pool Systems, Inc., (“Zodiac”) petitioned the PTO for IPR of Aqua Products’ (“Aqua”) patent.¹²⁴ The PTAB held all instituted claims unpatentable and denied Aqua’s MTA, concluding that Aqua had failed to prove the patentability of the substitute claims.¹²⁵ The PTAB highlighted its standard that the burden is on the patent owner to show that the proposed amendments are patentable over the known prior art.¹²⁶

Aqua appealed the decision to the Federal Circuit and argued that it did not bear the burden of proving the patentability of its proposed substitute claims.¹²⁷ The Federal Circuit in *In re Aqua Products* rejected Aqua’s argument, finding that the court “has upheld the Board’s approach of allocating the patentee the burden of showing that its proposed amendments would overcome the art of record.”¹²⁸ Aqua sought rehearing *en banc* of that panel decision.¹²⁹

In a fractured decision comprising five separate opinions, the Federal Circuit sided with Aqua. The Federal Circuit held that, under the PTO’s current rules and rule-making history, the PTO may not place the burden of persuasion regarding the patentability of proposed amended claims during an IPR on the patent owner.¹³⁰ A plurality of the court ruled that the burden of

122. McCurdy, *supra* note 112, and accompanying parenthetical. *See also* BOB STEINBERG, JONATHAN M. STRANG & MICHAEL J. GERARDI, *AQUA PRODUCTS LEVELS THE PLAYING FIELD AT THE PTAB*, LATHAM & WATKINS (2017), <https://www.lw.com/thoughtLeadership/LW-Aqua-Products-Levels-the-Playing-Field-at-the-PTAB> (“The Federal Circuit’s long-awaited *en banc* opinion . . .”).

123. *See, e.g.*, Gene Quinn, *Industry Reaction to the Federal Circuit’s Decision in Aqua Products v. Matal*, IPWATCHDOG (Oct. 4, 2017), <https://www.ipwatchdog.com/2017/10/04/industry-reaction-federal-circuits-decision-aqua-products-v-matal/id=88866/> (gathering reactions to the *Aqua Products* decision).

124. *Aqua Prods., Inc. v. Matal*, 872 F.3d 1290 (Fed. Cir. 2017).

125. *Id.* at 1297 (citing *Zodiac Pool Sys. Inc. v. Aqua Prods. Inc.*, No. IPR2013-159, 2014 WL 4244016 (P.T.A.B. Aug. 22, 2014)).

126. *Id.*

127. *Id.*

128. *Aqua Prods.*, 872 F.3d at 1297.

129. *Id.*

130. *Id.* at 1327 (“The only legal conclusions that support and define the judgment of the court are: the PTO has not adopted a rule placing the burden of persuasion with respect to the patentability of amended claims on the patent owner that is entitled to deference; and in

proof during IPR regarding the patentability of amended claims is on the petitioner.¹³¹ The court was divided, however, on how to interpret the AIA, particularly on the relationship between 35 U.S.C. § 316(e) and 35 U.S.C. § 316(d), and whether they “unambiguously” place the burden of proof on petitioners for both original and amended claims.¹³²

A majority of the court found the statute “ambiguous,” but in the absence of an interpretation of the statute by the PTO to which the court must defer under *Chevron*, it held that “the most reasonable reading of the AIA is one that places the burden of persuasion with respect to the patentability of amended claims on the petitioner.”¹³³ The PTO’s amendment practice—placing the burden of patentability on the patent owner—therefore violated the AIA.¹³⁴

The *Aqua Products* decision, however, left open the possibility that the PTO could promulgate a rule placing the burden on the patent owner or petitioner. Thus far, the PTO hasn’t done so. In guidance offered after *Aqua Products*, however, the PTO was hesitant to accept that the petitioner had the burden of persuasion.¹³⁵ In fact, the PTO’s understanding of the *Aqua* decision seemed markedly different from industry’s.¹³⁶ The PTO stated that while it would not place the burden of persuasion on the patent owner, “the Board will proceed to determine whether the substitute claims are unpatentable by a preponderance of the evidence based on the entirety of the record, including any opposition made by the petitioner.”¹³⁷ It concluded by noting that the only impact this change would make is if “the entirety of the evidence of record before the Board is in equipoise as to the unpatentability of one or more substitute claims.”¹³⁸ If that were the case, the Board would grant the MTA.

the absence of anything that might be entitled deference, the PTO may not place that burden on the patentee.”).

131. *Id.* at 1296.

132. *Id.*

133. *Id.*

134. *Id.*

135. Memorandum from David P. Ruschke on MTAs in View of *Aqua Products*, USPTO (Nov. 21, 2017), https://www.uspto.gov/sites/default/files/documents/guidance_on_motions_to_amend_11_2017.pdf (noting that the only impact this change would make is if “the entirety of the evidence of record before the Board is in equipoise as to the unpatentability of one or more substitute claims”).

136. See STEINBERG, *supra* note 123, at 1 (“Once the patent owner meets its burden of showing they are responding to the petitioners’ arguments and not broadening their claims, the burden will shift to the petitioner to introduce prior art (including new prior art) and to make arguments concerning the patentability of the amended claims. Aqua’s holding should enable patent owners to more easily amend claims during an IPR. The impact of this change on all stakeholders in the patent system will be significant.”).

137. Memorandum from David P. Ruschke, *supra* note 135, at 2.

138. *Id.*

The PTO later went a step further by designating its *Western Digital Corporation, v. Spex Technologies Inc.* order precedential and de-designating earlier orders on motions to amend in *MasterImage 3D Inc. v. RealD Inc.* and *Idle Free Systems Inc. v. Bergstrom Inc.*¹³⁹ In *Western Digital*, the PTAB declared that “the burden of persuasion will ordinarily lie with the petitioner to show that any proposed substitute claims are unpatentable by a preponderance of the evidence,” although “[t]he Board itself also may justify any finding of unpatentability by reference to evidence of record in the proceeding.”¹⁴⁰

B. PHILLIPS STANDARD

Until October 2018, the PTAB and district courts used different standards for claim construction in validity proceedings. The PTAB used the Broadest Reasonable Interpretation (BRI), which required consideration of the “broadest reasonable meaning of [a claim’s] words in their ordinary usage as they would be understood by one of ordinary skill in the art, taking into account whatever enlightenment by way of definitions or otherwise that may be afforded by the written description contained in the applicant’s specification.”¹⁴¹ This is the standard PTO examiners use to determine whether a patent claim should be issued in the first instance. By contrast, district courts use the *Phillips* approach, wherein claim terms must be given “the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention.”¹⁴²

BRI was controversial from the outset. It treated issued patent claims the same as unexamined patent claims, essentially ridding the system of the presumption of validity. In addition, different standards for interpreting claims for the purpose of invalidity can lead to gaming of the system.¹⁴³ However, the Supreme Court in *Cuozzo Speed Technologies v. Lee* authorized the PTO to adopt a rule promulgating use of BRI under the logic that patent owners may move

139. Rules of Practice to Allocate the Burden of Persuasion on Motions to Amend in Trial Proceedings Before the Patent Trial and Appeal Board, 84 Fed. Reg. 56,401 (Oct. 22, 2019).

140. The board has since replaced its *Western* decision with *Lectrosonics, Inc. v. Zaxcom, Inc.*, IPR2018-01129, -01130, Paper No. 15, slip op. at 3–4 (P.T.A.B. Feb. 25, 2019) (precedential). See also USPTO, TRIAL PRACTICE GUIDE UPDATE (2019), <https://www.uspto.gov/sites/default/files/documents/trial-practice-guide-update3.pdf>.

141. *In re Morris*, 127 F.3d 1048, 1054 (Fed. Cir. 1997).

142. *Phillips v. AWH*, 415 F.3d 1303, 1313 (Fed. Cir. 2005).

143. See, e.g., *PPC Broadband, Inc. v. Corning Optical Commc’ns RF, LLC*, 815 F.3d 734, 741 (Fed. Cir. 2016) (“This case hinges on the claim construction standard applied—a scenario likely to arise with frequency. And in this case, the claim construction standard is outcome determinative.”).

to amend during an AIA trial.¹⁴⁴ However, courts and the PTAB have used these different standards as an excuse to perform de novo claim construction.¹⁴⁵

Under the PTO's recent move adopting the *Phillips* standard for both "unexpired patent claims and substitute claims," however, the PTAB now takes into consideration any prior claim construction determination that is made in a civil action or a proceeding before the ITC. In seeking to harmonize standards, the PTO hopes that "the change will lead, among other things, to greater consistency and harmonization with the federal courts and the ITC and lead to greater certainty and predictability in the patent system."¹⁴⁶ Former Commissioner for Patents at the PTO, Robert Stroll, commended Director Iancu "for being responsive to the wide majority of parent practitioners who have raised concerns that the PTAB procedures were unfairly tilted against patent owners."¹⁴⁷

However, in eliminating the BRI, the PTO loses its rationale for allowing claim amendments. New and substitute claims that have never passed in front of an examiner under the BRI now never will—and ALJs are not well positioned to act as first review of new or amended claims.¹⁴⁸ In addition, while the PTO's stated purpose is improving consistency between the courts and PTAB, it is unlikely to do so given the complexities of *Phillips*. Further, other

144. *Cuozzo Speed Techs., LLC v. Lee*, 136 S. Ct. 2131, 2145 (2016) (explaining that the patent owner's opportunity to amend its patent in IPRs is what justifies the Board's use of the broadest reasonable interpretation standard in IPRs). *See also In re Rambus, Inc.*, 753 F.3d 1253, 1256 (Fed. Cir. 2014) (finding that, in inter partes reexamination, "the sole basis for the 'broadest reasonable interpretation' rubric is the ability to amend claims"); *In re Prater*, 415 F.2d 1393, 1404–05 (C.C.P.A. 1969) (holding that claims are given their broadest reasonable interpretation during examination "since the applicant may then amend his claims").

145. KEVIN GREENLEAF, SHAUN ZHANG, ERIC COHEN, JOAN ELLIS, DAVID RANDALL, JONATHAN KWOK, JAMES HIETALA, TED NISSLY & LISSA MOJICA, INTELL. PROP. OWNERS ASS'N, HOW DIFFERENT ARE THE BROADEST REASONABLE INTERPRETATION AND *PHILLIPS* CLAIM CONSTRUCTION STANDARDS?, <https://ipo.org/wp-content/uploads/2018/10/BRI-v-Phillips-Final-1.pdf>.

146. USPTO, *supra* note 106.

147. Gene Quinn, *USPTO Publishes Final Rule Adopting Phillips Standard at PTAB*, IPWATCHDOG (Oct. 10, 2018), <https://www.ipwatchdog.com/2018/10/10/uspto-publishes-final-rule-phillips-standard-ptab/id=102210/>.

148. Not only do many ALJs not have the same training as examiners, but AIA trials have statutorily mandated short timelines. *See Stacy Lewis & Tom Irvin, Amending Rather than Cancelling Claims in Inter Partes Review*, 11 BUFF. INTELL. PROP. L.J. 178 (2015). *See also* Gene Quinn, *PTAB Judges Shockingly Inexperienced Compared to District Court Judges*, IPWATCHDOG (Mar. 6, 2018), <https://www.ipwatchdog.com/2018/03/06/ptab-judges-shockingly-inexperienced/id=94438/> (questioning whether PTAB judges can competently fulfill their roles).

proceedings at the PTO such as *ex parte* reexamination will continue to use the BRI standard, leading to inconsistency within the PTO itself.

C. MOTION TO AMEND PILOT PROGRAM

The PTO's Motion to Amend Pilot Program launched in March 2019.¹⁴⁹ It provides a patent owner with two options not previously available during AIA trials. The first option is that a patent owner may choose to receive preliminary guidance from the PTAB on its MTA.¹⁵⁰ The second option is that a patent owner may choose to file a revised MTA after receiving petitioner's opposition to the original MTA and after receiving the PTAB's preliminary guidance (if requested).¹⁵¹ The Pilot also extends time between due dates (e.g., "rather than 1 month, a patent owner will have 6 weeks to file a reply after receiving an opposition to its original MTA, and a petitioner will have 6 weeks to file a sur-reply in response to that reply").¹⁵²

The Pilot's roots began in 2014, eighteen months after implementing the AIA. The PTO requested comments on all aspects of the new administrative trial provisions of the AIA and many comments focused on which party should bear the burden of proving the patentability or unpatentability of substitute claims proposed in an MTA.¹⁵³ In 2015, the PTAB specifically requested feedback on "[w]hat modifications, if any, should be made to the PTAB's practice regarding motions to amend," and again most comments focused on the burden of proof.¹⁵⁴ The PTAB undertook a Motion to Amend Study in 2016, analyzing (1) the number of MTAs that had been filed in AIA trials, both as a cumulative total and by fiscal year; (2) subsequent developments in each MTA (i.e., whether the motion was decided, rendered moot, withdrawn, or otherwise dismissed); (3) the number of MTAs requesting to substitute claims that were granted, granted-in-part, denied-in-part, and denied; and (4) the reasons the PTAB provided for denying entry of substitute claims.¹⁵⁵ In finding that ninety-two percent of motions to amend are denied, the PTO formulated the Pilot.¹⁵⁶

149. Notice Regarding a New Pilot Program, *supra* note 9.

150. *Id.*

151. *Id.*

152. *Id.*

153. *Id.*

154. *Id.*

155. *Id.*

156. USPTO, *supra* note 120.

D. CURRENT LAW ON MOTIONS TO AMEND & PARALLEL PROCEEDINGS

Together, these three events have rapidly liberalized post-issuance claim amendments in AIA trials. Aqua Products changed the burden from the patent owner to the petitioner. Shifting from BRI to the Phillips standard rid the PTO of its justification for permitting post-issuance claim amendments during AIA trials. And the Pilot has increased the chances of patent owners having their amendments granted. This section will address (1) the current law on motions to amend during post-issuance validity proceedings, and (2) will identify how parallel procedures may also be used.

a) Current Law on Motions to Amend

The AIA provides that a patent holder in an IPR “may file one motion to amend the patent,” either by cancelling any challenged patent claim or by “propos[ing] a reasonable number of substitute claims.”¹⁵⁷ The AIA delegates authority to the Director to “prescribe regulations . . . establishing and governing inter partes review” and to “set[] forth standards and procedures for allowing the patent owner to move to amend the patent” under § 316(d).¹⁵⁸ Invoking this authority, the Director promulgated 37 C.F.R. § 42.121, which permits a patent owner to file one motion to amend after conferring with the Board.¹⁵⁹ Under this regulation, the Board may deny a motion to amend if the amendment does not satisfy the requirements of § 316(d)(3) (i.e., if it expands the claim scope, introduces new matter,¹⁶⁰ or if it “does not respond to a ground of unpatentability involved in the trial”¹⁶¹). As the PTAB demonstrated recently in *Amazon.com, Inc. v. Uniloc*, while IPR is statutorily limited to prior art challenges based on patents and printed publications under § 102 and § 103, a substitute claim, however, must be reviewed for compliance with all of the statutory requirements for patentability.¹⁶²

The Director also set forth 37 C.F.R. § 42.20 to govern all motion practice before the PTAB. This section was at the heart of the *Aqua Products* case

157. 35 U.S.C. § 316(d)(1)(B). There is a presumption that a reasonable number of substitute claims is one substitute claim per challenged claim, 37 C.F.R. § 42.121(a)(3), but a patent owner may rebut this presumption.

158. 35 U.S.C. §§ 316(a)(4), (9).

159. 37 C.F.R. § 42.121(a)(1).

160. 35 U.S.C. § 316(d)(3); 37 C.F.R. § 42.121(a)(2)(ii).

161. 37 C.F.R. § 42.121(a)(2)(i).

162. *Amazon.com, Inc. v. Uniloc Luxembourg S.A.*, IPR2017-00948, Paper No. 34, at 5 (P.T.A.B. Jan. 18, 2019) (“By its terms, § 311(b) limits a petitioner to requesting cancellation of existing claims of a patent only under § 102 and § 103. It does not, however, limit the grounds of unpatentability that can be raised in response to proposed substitute amended claims presented in a motion to amend.” (internal citations omitted)).

discussed above.¹⁶³ In relevant part, Rule 42.20(a) requires that any “[r]elief, other than a petition requesting the institution of a trial, must be requested in the form of a motion.”¹⁶⁴ Rule 42.20(c) states additionally that “[t]he moving party has the burden of proof to establish that it is entitled to the requested relief.”¹⁶⁵ In *Aqua Products*, the PTO claimed that the Board “interpreted Rules 42.20 and 42.121 to place the burden of persuasion on a patent owner to demonstrate, by a preponderance of the evidence, that any proposed amended claims are patentable, that it must do so in light of prior art not already part of the IPR, and that the Director has endorsed that interpretation.”¹⁶⁶ This rule, however, directly conflicts with the penultimate section under § 316 titled “Evidentiary Standards,” which states “in an inter partes review instituted under this chapter, the petitioner shall have the burden of proving a proposition of unpatentability by a preponderance of the evidence.”¹⁶⁷ As discussed, in *Aqua Products* the Federal Circuit held that the PTO may not place the burden of persuasion, regarding the patentability of proposed amended claims during an IPR, on the patent owner.¹⁶⁸ Instead, the burden should generally be placed on the petitioner. The PTAB recently designated *Lectrosonics v. Zaxcom* as precedential and it clarifies this point, stating that:

as a result of the current state of the law and USPTO rules and guidance, the burden of persuasion ordinarily will lie with the petitioner to show that any proposed substitute claims are unpatentable by a preponderance of the evidence. The Board itself also may justify any finding of unpatentability by reference to evidence of record in the proceeding, for example, when a petitioner ceases to participate. . . . Thus, the Board determines whether substitute claims are unpatentable by a preponderance of the evidence based on the entirety of the record, including any opposition made by the petitioner.¹⁶⁹

After the PTAB decides whether to grant any amended claim, the PTAB “shall issue a final written decision with respect to the patentability of any patent claim challenged by the petitioner and any new claim added under section 316(d).”¹⁷⁰ The statute provides that, following the final written

163. See generally *Aqua Prods., Inc. v. Matal*, 872 F.3d 1290 (Fed. Cir. 2017).

164. 37 C.F.R. § 42.20.

165. *Id.*

166. *Aqua Prods.*, 872 F.3d at 1301.

167. 35 U.S.C. § 316(e).

168. *Aqua Prods.*, 872 F.3d at 1296.

169. *Lectrosonics, Inc. v. Zaxcom, Inc.*, No. IPR2018-01129, Paper No. 15 (P.T.A.B. Feb. 25, 2019).

170. 37 C.F.R. § 318(a).

decision and any subsequent appeal, the Director shall incorporate “in the patent . . . any new or amended claim determined to be patentable.”¹⁷¹

Unlike in the examination context, the PTAB proceedings must be completed within a year, and until the PTO’s 2019 Motion to Amend Pilot, there was no time for the back-and-forth between the applicant and the PTO that happens during prosecution. Under the Motion to Amend Pilot, patent owners now have two new opportunities: obtaining preliminary guidance from the Board and filing a revised motion to amend. A disappointed patent owner who believes the PTAB erred in refusing to allow a claim amendment may, of course, seek review from the Federal Circuit.

b) Parallel Proceedings at the PTO

In addition to amending claims during AIA trials, there are parallel proceedings for amending claims, including continuing applications, reissue, and ex parte reexamination. Given the low grant rate of claim amendments during AIA trials, the PTO provided notice to remind patent owners of these parallel proceedings and to describe the factors the PTO considers when determining whether to stay or suspend a parallel proceeding during the pendency of an AIA proceeding.¹⁷²

According to the PTO, eighty-nine percent of patents challenged in AIA proceedings have not had any associated reexams or reissues.¹⁷³ Indeed, less than one percent of the U.S. patents granted annually are reissue patents.¹⁷⁴ Continuation patents, on the other hand, constitute about one-quarter of all issued patents.¹⁷⁵

As others have summarized, those who seek reissues are often successful.¹⁷⁶ For example, over seventy percent of utility reissue patent applications and ninety percent of design reissue patent applications were granted for all applications issued or abandoned since 2014.¹⁷⁷ Further, for reissue patent applications pending in parallel to a post-issuance proceeding challenging claims of the original patent, the data indicates a grant rate of over

171. 37 C.F.R. § 318(b).

172. Notice Regarding Options for Amendments by Patent Owner Through Reissue or Reexamination During a Pending AIA Trial Proceeding, 84 Fed. Reg. 16,654 (Apr. 22, 2019).

173. *Id.*

174. *Reissue Presents A Solid Option For Amending Patent Claims*, LAW360 (Oct. 21, 2019), <https://www.law360.com/articles/1210276/reissue-presents-a-solid-option-for-amending-patent-claims>.

175. *Id.*

176. *See, e.g., id.*

177. *Id.*

fifty percent.¹⁷⁸ One explanation for these increased chances may be that a third party generally cannot actively participate in reissue proceedings. Further, reissues are examined by examiners, not ALJs.

IV. ANALYSIS ON WHETHER THE RELIBERALIZATION OF POST-ISSUANCE CLAIM AMENDMENTS DURING VALIDITY PROCEEDINGS IS BENEFICIAL FOR THE PATENT SYSTEM

As noted above, the U.S. patent system is justified through a utilitarian rationale of maximizing net social welfare—balancing exclusive rights that incentivize invention against public enjoyment and use of those inventions.¹⁷⁹ Claim amendments are an important lever in that balance. They provide inventors with the flexibility to narrow, broaden, clarify, and correct claims.¹⁸⁰ But post-issuance claim amendments also burden the patent system and create uncertainty for competitors, follow-on inventors, and courts in parallel proceedings. This Part weighs the pros and cons of post-issuance amendment procedures during validity proceedings.

A. PROS OF POST-ISSUANCE CLAIM AMENDMENTS

Post-issuance claim amendments during AIA trials serve a potentially cost saving corrective function. Congress noted with the AIA that “[a]llowing narrowing amendments during an IPR helps strengthen and clarify patents. [. . .] [P]roviding a patent owner with a meaningful opportunity to amend subject to minimal statutory and regulatory criteria helps preserve the merited benefits of patent claims better than the win-all or lose-all validity contests in district court.”¹⁸¹ The Supreme Court has also noted that claim drafting is difficult.¹⁸² A more permissive system encourages innovation because it ensures that patentees receive protection even if the original claim is struck down. Further, district court litigation may be stayed to allow the validity portion of trial to

178. *Id.*

179. William Fisher, *Theories of Intellectual Property*, in *NEW ESSAYS IN THE LEGAL AND POLITICAL THEORY OF PROPERTY* 168, 173–74 (Stephen Munzer ed., 2001).

180. Reilly, *supra* note 8, at 20 (“When an original claim covers both matter to which the inventor is entitled and matter to which they are not, narrowing claim amendments offer a middle ground that allows the inventor to receive only the protection that is warranted, rather than being denied any protection whatsoever.”).

181. 152 CONG. REC. 16,834 (2006) (statement of Sen. Leahy on S. 3818) (emphasis added).

182. *Topliff v. Topliff*, 145 U.S. 156, 171 (1892).

take place at the less expensive PTAB.¹⁸³ It is a waste to continue litigating claims in district court when the claims may change mid-proceeding at the PTO. As discussed below in Part V, stay rates have increased significantly over the last two years.¹⁸⁴

In addition, the ability to amend claims during AIA trials is limited. Patent owners cannot broaden claims and their amendment is via a “motion to substitute claims” with limited back-and-forth examination. Therefore, the danger of amending claims to, for instance, capture a competitor’s technology is more limited than in continuation applications. In addition, by making it more difficult to amend patents during AIA trials, patent owners may turn to other methods such as reissue or continuation applications.¹⁸⁵ Moreover, the PTAB invalidates a large percentage of claims during AIA trials, not just because of its past use of BRI, but also because of the lower burden of proof.¹⁸⁶

B. CONS OF POST-ISSUANCE CLAIM AMENDMENTS

While the merits of a patent system that is fair to patent owners is well understood, policy makers have swung the balance too far. Post-issuance claim amendments during AIA trials should be limited for three reasons: (1) they undermine the AIA’s goal of mitigating burdensome litigation; (2) they create perverse drafting and strategic incentives for patent owners; and (3) not only are they redundant with other post-issuance claim amendment avenues

183. Anne S. Layne-Farrar, *The Cost of Doubling Up: An Economic Assessment of Duplication in PTAB Proceedings and Patent Infringement Litigation*, ABA (May 1, 2018), https://www.americanbar.org/groups/intellectual_property_law/publications/landslide/2017-18/may-june/cost-doubling-up/ (“A 2015 American Intellectual Property Law Association (AIPLA) Economic Survey found that the median cost of an IPR through a PTAB hearing was \$275,000 and through appeal was \$350,000. In contrast, even with relatively low stakes (\$1–\$10 million at risk), patent infringement litigation typically costs nearly \$1 million through the end of discovery and \$2 million through final disposition.”).

184. See also Graham C. Phero & Lauren A. Watt, *Success of Motions to Stay Rising, but Why?*, STERNE, KESSLER, GOLDSTEIN & FOX (Feb. 2020), <https://www.sternekessler.com/news-insights/publications/success-motions-stay-rising-why> (attributing these trends to “the all-or-nothing institution approach required under the *SAS* decision and the PTAB’s adoption of the Phillips standard for claim construction”).

185. Some firms, for example, have included this in their guidance to the public and clients. McCurdy, *supra* note 112 (“Maintaining pending continuation applications has long been a recommended practice to protect the patent applicant’s invention while the scope of such protection is being determined.”).

186. An IPR petition only needs to prove unpatentability of challenged claims by a preponderance of the evidence, 35 U.S.C. § 316(e), whereas in a lawsuit, each patent claim is presumed valid, 35 U.S.C. § 282, and the accused infringer must prove invalidity by clear and convincing evidence.

such as reissue and continuations, but also ALJs are in worse positions than examiners to judge the validity of new or amended claims.

First, post-issuance claim amendments during AIA trials undermine the AIA's goal of mitigating burdensome litigation. Congress believed that AIA trials, and IPR in particular, could serve as a "relatively low-cost and prompt alternative"—or even a "complete substitute"—to some district court litigation.¹⁸⁷ However, the re-liberalization of post-issuance claim amendments complicates that goal, given the greater likelihood that amended claims will emerge.¹⁸⁸ Because patents post-issuance create public reliance, post-issuance amendments increase uncertainty for courts in parallel proceedings, competitors, and follow-on innovators. Further, while district court stays pending AIA trials may save costs, stays also delay court proceedings and, because judges inconsistently apply stays, lead to venue shopping.¹⁸⁹

Second, post-issuance claim amendments during AIA trials create perverse drafting and strategic incentives for patent owners. Knowing that if challenged their originally granted claims can be amended to the amount of protection it was entitled to in the first place, patent owners are rewarded for drafting vague and overbroad claims. Although potential infringers may be protected by intervening rights, often, patent claims are amended to cover a competitor's product, undermining competition and follow-on innovation. Knowing this, accused infringers have less incentive to challenge weak patents in post-issuance invalidity proceedings. Further, often missing in the conversation are the effects of claim amendments on the staff at the PTO. As has been shown with continuation applications, drawn out examination wears down

187. See Sayres & Wahlstrand, *supra* note 20, and accompanying parenthetical.

188. *Aqua Products amici* in favor of the PTO have further noted that Congress's goal of "improving patent quality"—an argument that some have argued would be stifled by tightening post-issuance claim amendments—is in fact bolstered through the "low success rate of motions to amend." It is evidence that IPR is operating as Congress intended: to target and cancel especially weak patent claims. En Banc Brief of the Internet Association, the Computer & Communications Industry Association, Dell, Garmin, Intel, Red Hat, Samsung, SAP America, SAS Institute, the Software & Information Industry Association, Symmetry, and Vizio as Amici Curiae in Support of Intervenor, *In re Aqua Prods., Inc.*, No. 2015-1177 (Fed. Cir. Nov. 3, 2016) at 4, 14.

189. See Sayres & Wahlstrand, *supra* note 20, at 53 ("These goals [of IPR substituting for district court validity proceedings], however, have not been fully realized, in part because the variation and inconsistency in applying the factors commonly applied to stay motions during the days of inter partes reexamination have remained."); *How Increased Stays Pending IPR May Affect Venue Choice*, LAW360 (Nov. 15, 2019), <https://www.law360.com/articles/1220066/how-increased-stays-pending-ipr-may-affect-venue-choice> ("The Supreme Court's recent decision in *TC Heartland LLC v. Kraft Foods Group Brand LLC* appears to have amplified SAS Institute's impact by redistributing cases to courts that are more likely to grant stays. These trends are likely to significantly influence litigants' choice of venue in patent cases.").

examiners.¹⁹⁰ Weighing the incentives of patentees and the PTO demonstrates that examiners are not given enough time with each patent and suffer from burnout.¹⁹¹

Third, post-issuance claim amendments during AIA trials are redundant with other post-issuance claim amendment avenues such as reissuance and continuations: if patent owners' claims are overbroad, they can narrow them via reissuance; if their claims are too narrow, they can broaden them by filing a continuation application or seeking reissuance (within two years of issuance). Further, as discussed above, unlike reexamination and reissue, AIA trials take place before ALJs instead of examiners who are better positioned to act as first review of new or amended claims.¹⁹²

In conclusion, while there are benefits to allowing amendments during AIA review, the costs outweigh the benefits, especially in light of the availability of other avenues for amending claims after issuance.

V. EMPIRICAL ANALYSIS

Not only is a liberal post-issuance claim amendment practice bad in theory, but as the data below demonstrates, the problems identified are coming to fruition. The liberalization of post-issuance claim amendments during validity proceedings hurts the patent system and runs contrary to the AIA's goal of improving efficiency of patent litigation and increasing quality of patents. Since October 2017 (*Aqua Products*), we can see that (1) the rate of claim amendments filed and granted during AIA trials has increased; (2) the rate of petitions for IPR has stagnated or decreased; and (3) the rate of stays granted pending IPR has increased. Given the incentives created by a liberal stance towards post-issuance claim amendments, these patterns are expected.

190. Lemley & Moore, *supra* note 46, at 11.

191. See Michael D. Frakes & Melissa F. Wasserman, *Irrational Ignorance at the Patent Office*, 72 VAND. L. REV. 975, 978 (2019) ("If examiners are not given enough time to evaluate applications, they may not be able to reject applications by identifying and articulating justifications with appropriate underlying legal validity. Offering validation for these concerns, recent reports commissioned by the federal government bemoan that examiners believe they are 'fighting for their lives' and are 'not [given] enough time to do a proper job.'). See also David M. Longo & Ryan P. O'Quinn, Note, *Checking the Stats: How Long Is Too Long to Give Adequate Public Notice in Broadening Reissue Patent Applications?*, 10 DUKE L. & TECH. REV. 1, 4 ("The current patent system provides little incentive for patentees or the USPTO to spend sufficient time and money to prosecute a high-quality patent; the result is a kudzu-like thicket of low-quality, under-descriptive patents."); Arti K. Rai, *Addressing the Patent Gold Rush: The Role of Deference to PTO Patent Denials*, 2 WASH. U.J.L. & POL'Y 199, 218 (2000) (arguing for a change in the current patent examiners' incentive system that encourages them to grant patents).

192. See *supra* note 75.

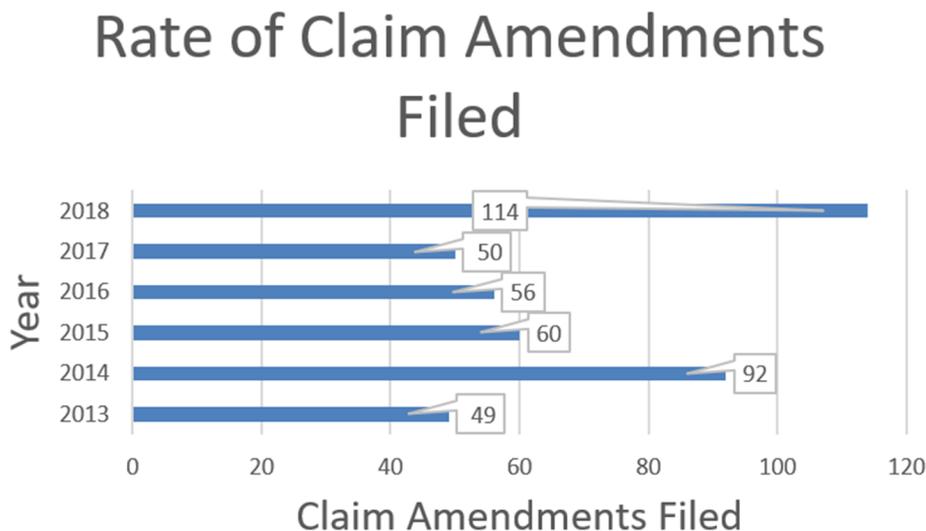
A. RATE OF CLAIM AMENDMENTS FILED AND GRANTED DURING IPR

With the liberalization of post-issuance claim amendments in AIA trials, beginning in October 2017, we can expect to see an increase in claim amendment filings and grant rates during AIA trials.

1. *Rate of Claim Amendments Filed*

Figure 2 demonstrates the increase in claim amendments filed in AIA trials since October 2017 by comparing claim amendment filings since 2013. This data was collected from Docket Navigator¹⁹³ and checked with the PTO's Motion to Amend Study.¹⁹⁴ Figure 2 illustrates that the number of motions to amend filed in 2018 (114) is greater than the number of motions to amend filed in any other year, and more than the number of motions to amend filed in 2017 (fifty) and 2016 (fifty-six) combined.

Figure 2: Rate of Claim Amendments Filed for years 2013–2018



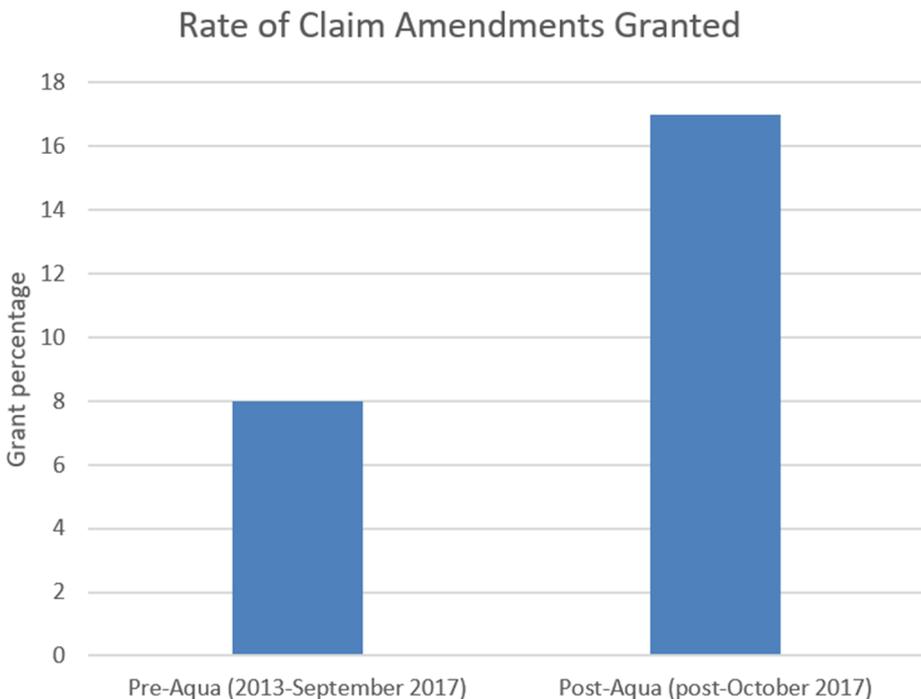
193. DOCKET NAVIGATOR, <https://www.docketnavigator.com/welcome/login>.

194. The data for 2019 was not yet available from the PTO at the time of writing this Note.

2. *Rate of Claim Amendments Granted*

Figure 3 compares the rate of claim amendments granted, or granted-in-part, both before and after October 2017.¹⁹⁵ Since October 2017, the PTAB has decided twenty-nine motions to amend and granted or granted in part five of these motions, resulting in a seventeen-percent grant rate, which is more than two times greater than the pre-Aqua grant rate of eight percent (granting, or granting-in-part, fourteen motions to amend out of 170 total motions). This is a small sample size and, currently, the Fischer Exact Hypothesis test¹⁹⁶ suggests that there is not yet enough evidence to reject the null hypothesis that the rate remains unchanged, but as more data is collected this may change. The author expects that the trend towards a higher grant rate will continue.

Figure 3: Rate of Claim Amendments Granted comparing Pre- and Post-Aqua Products



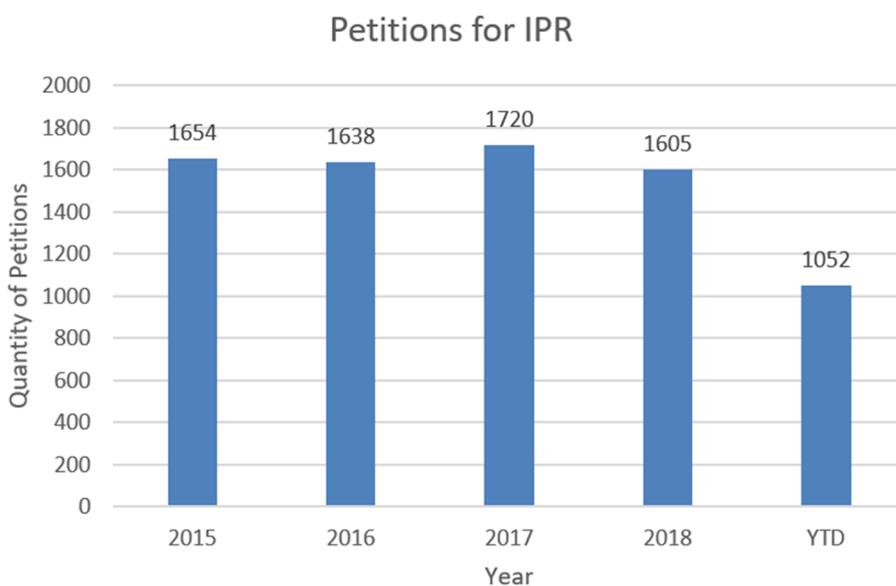
195. DOCKET NAVIGATOR, *supra* note 193.

196. The Fischer Exact Hypothesis test is a “statistical test used to determine if there are nonrandom associations between two categorical variables.” *Fisher’s Exact Test*, WOLFRAM MATHWORLD, <https://mathworld.wolfram.com/FishersExactTest.html> (last visited June 6, 2021).

B. RATE OF PETITIONS FOR IPR

With the liberalization of post-issuance claim amendments in AIA trials, we should expect to see a decrease in the rate of petitions for IPR since October 2017, because they have become less favorable for defendants. Patent owners are now more likely to retain their patent (albeit in amended form). Figures 4 and 5 demonstrate this decrease by comparing petitions both yearly for IPR, since 2015, and monthly.¹⁹⁷ This data was collected from the PTO's database on trial statistics.¹⁹⁸

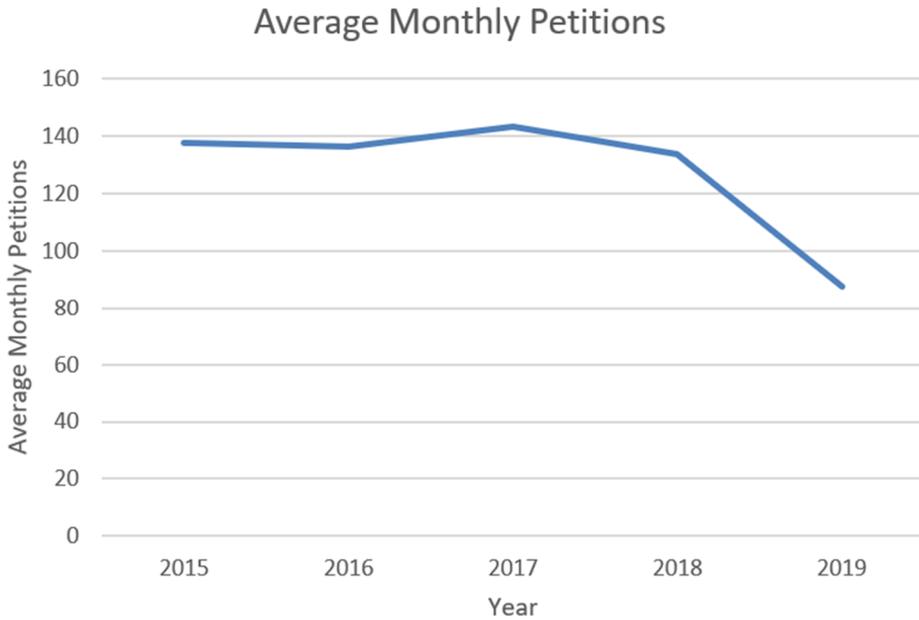
Figure 4: Petitions for IPR by year



197. The data was only available up to October 2019 at the time of writing this Note.

198. *Statistics*, USPTO, <https://www.uspto.gov/patents-application-process/patent-trial-and-appeal-board/statistics> (last visited June 6, 2021).

Figure 5: Average monthly petitions by year



Figures 6 and 7 further demonstrate this decrease by comparing rates of petitions by month. Figure 6 clearly demonstrates the decrease by comparing monthly petitions by year. As Figure 6 illustrates, the largest effect observed is in 2019. One bar demonstrates the number of petitions pre-October 2017 and the second bar the amount post-October 2017. Figure 7 adds another bar for 2019 with data available through November.

Further, a T-Test on pre- and post-Aqua Products petitions resulted in a T statistic of 3.51 with a p value of .004. This passes the significance test at level of .05. Some may argue that the results are skewed given that there were more years pre-Aqua Products, but, if we look at Figure 4, we can see that 2015 and 2016 seem fairly consistent and that the main difference in the data occurring after October 2017.

Figure 6: Comparing Petitions for IPR by Month pre- and post-*Aqua Products*

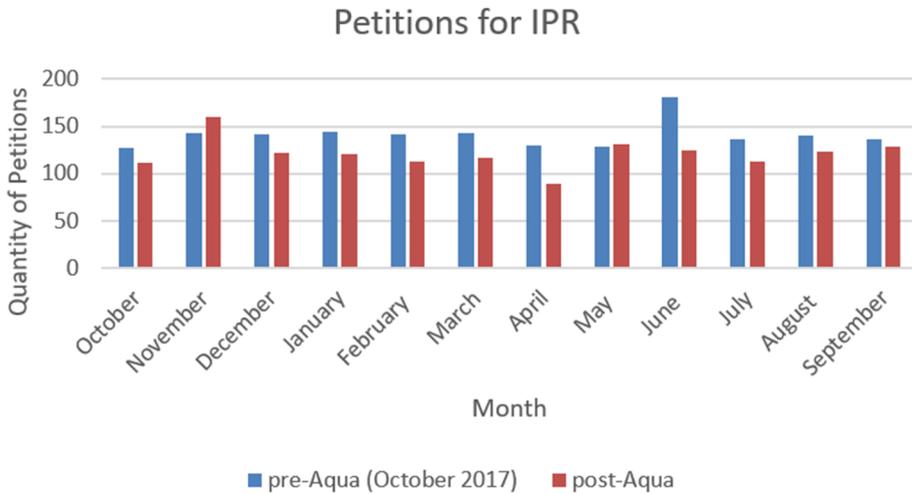
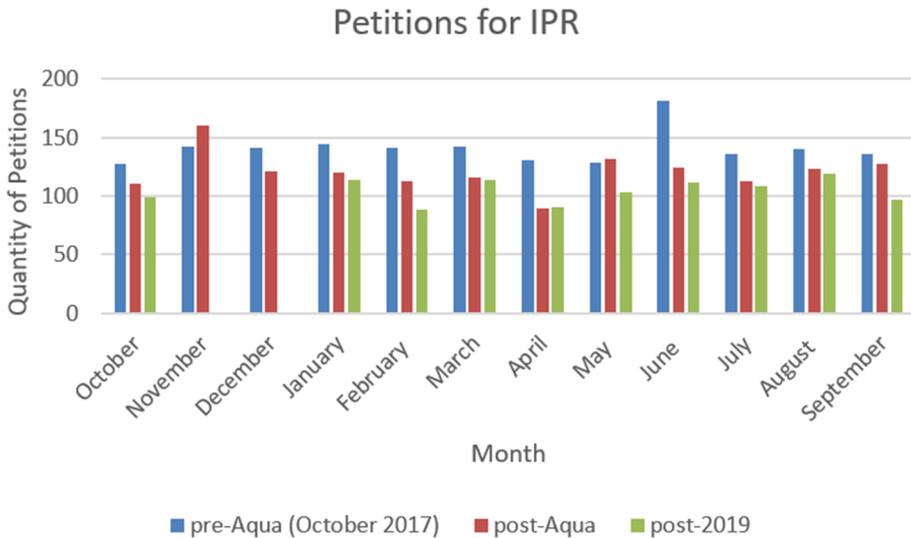


Figure 7: Comparing Petitions for IPR pre- and post-*Aqua Products*, and 2019



C. RATE OF STAYS GRANTED PENDING IPR

With the liberalization of post-issuance claim amendments in AIA trials since October 2017, we should expect to see an increase in the grant of stays pending IPR, because claims are likely to change during an IPR. Figure 8

demonstrates this increase by comparing the percentages of stays granted pending IPR by year, since 2013.¹⁹⁹

Figure 8: Comparing Yearly Percentages of Stays Granted Pending IPR

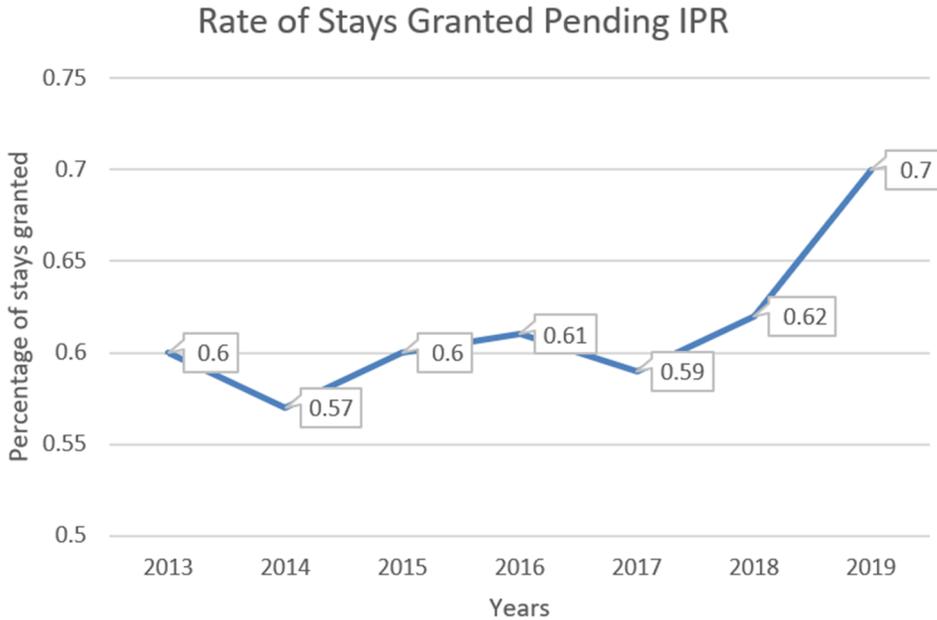
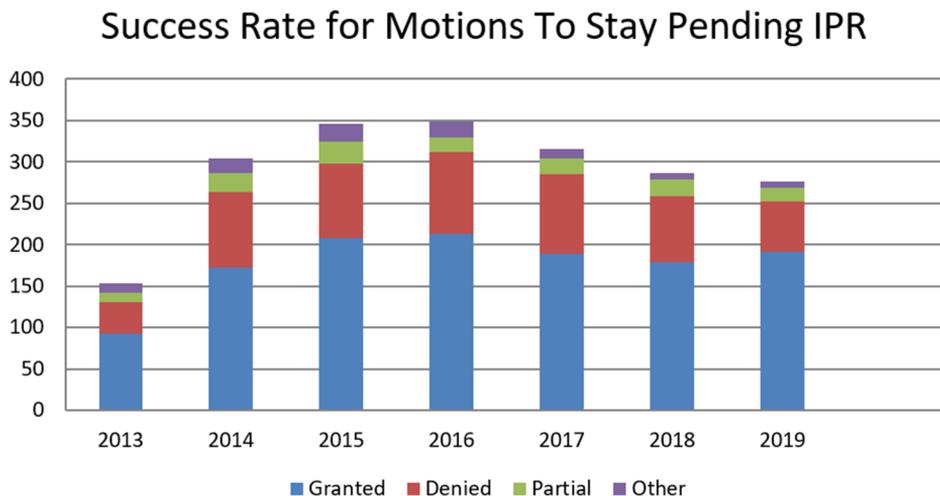


Figure 9, however, displays these totals as a bar graph and demonstrates that this trend may partly be explained because the patent bar is becoming more intelligent with motions to stay and moving for them less often.

199. The data here was collected from Docket Navigator and is complete through 2019.

Figure 9: Success Rate for Motions to Stay Pending IPR



In conclusion, the data demonstrate that the potential adverse effects of permitting post-issuance claim amendments during AIA trials have come to fruition. As demonstrated, since October 2017 (*Aqua Products*), (1) the rate of claim amendments filed and granted during AIA trials increased; (2) the rate of petitions for IPR stagnated or decreased; and (3) the rate of stays granted pending IPR increased.

VI. CONCLUSION

In conclusion, the “re-liberalization” of post-issuance claim amendments during AIA trials hurts the patent system. Claims serve two functions: forcing the patentee to define what she invented at the time of filing to prevent further incorporation of new insights and to give notice to the public about what she is claiming.²⁰⁰ Post-issuance claim amendments are detrimental for this second function. They are particularly detrimental for patents involved in concurrent district court litigation. Post-issuance claim amendments during validity trials undermine the AIA’s goal of mitigating burdensome litigation, create perverse drafting and strategic incentives for patent owners, and are redundant with other post-issuance claim amendment avenues. This Note offers empirical evidence to demonstrate that the hypothesized ill effects are in fact playing out. The rate of claim amendment motions filed and granted in AIA trials increased since October 2017. There has also been a decrease in the rate of

200. Chiang, *supra* note 15, at 560–61.

petitions for IPR and an increase in district court stays pending IPR, demonstrating empirically that IPR is not serving its intended purpose of mitigating burdensome litigation.

There are two obvious avenues for counteracting the ill effects of re-liberalization: abolishing claim amendments during AIA trials or enacting larger penalties for doing so. Along with these avenues, we should give more time to examiners up front to avoid “bad patents.”²⁰¹

Abolishing claim amendments during AIA trials would incentivize narrower claims at the outset during examination. This would not only help competitors more easily navigate patent boundaries, knowing that the boundaries of existing patents are less likely to change post-issuance, but would also help counteract the tremendous confusion surrounding the interpretation of patent claims by judges by pushing for clearer patent claims.²⁰² Rather than completely abolish the practice we could also more narrowly implement it by going after its more serious consequences. For example, we could only abolish post-issuance claim amendments for patents involved in concurrent litigation. We should, at a minimum, require notifying a district court if there is a likelihood of claim amendment. Regarding penalties, we could either increase fees or limit the doctrine of equivalents for amended claims. Either of these practices would help counteract the ill effects of post-issuance claim amendments during AIA trials.

201. Frakes & Wasserman, *supra* note 191, at 981.

202. This approach improves the quality of patent examination, enabling competitors to more easily navigate patent boundaries. It reduces the tremendous confusion surrounding the interpretation of patent claims by judges. See Peter S. Menell, *Reinvigorating Patent Notice Through Faithful Implementation of the Section 112(b) Claim Indefiniteness Provision* (U.C. Berkeley Pub. L. Rsch. Paper No. 2,403,902, 2014) (identifying that the innovation sector is awash with patents of uncertain scope because “the patent system rewards vague claiming of inventions in some technological fields”); Peter S. Menell & Michael J. Meurer, *Notice Failure and Notice Externalities*, 5 J. LEGAL ANALYSIS 1 (2013); Peter Menell, *It’s Time to Make Vague Software Patents More Clear*, WIRED (Feb. 7, 2013), <https://www.wired.com/2013/02/its-time-to-make-vague-software-patents-more-clear/>.

