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The Patent Trial and Appeal Board After 10 Years: Impact on Innovation and Small Businesses

Hearing Before the Subcommittee on Courts,
Intellectual Property, and the Internet
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Dear Chairman Johnson, Ranking Member Issa, and Members of the Subcommittee:¹

It has been clear for many years that having an education in the relevant technology helps a trier of fact to make more accurate decisions about a patent's validity.

Nearly a century and a half ago in *Cochrane v. Deener*,² the U.S. Supreme Court commented on the "desirability" of referring patent validity questions to "a commission of intelligent experts." Several decades later, in 1911, Judge Learned Hand expressed bewilderment that a federal judge was expected to decide a complex chemical patent case "without any knowledge of even the rudiments of chemistry." Judge Hand called for the creation of a system of "technical judges to whom technical questions are submitted." In the 1950s, Congress held hearings on and considered proposals to create a patent validity tribunal composed of technical experts.⁴

USPTO review provides "expertise in both patent law and technology"

Congress finally answered these calls in 1980 by creating the system of ex parte reexamination of patents. As the House of Representatives noted in the report that accompanied the Act, this system allows questions of an issued patent's validity to be referred "to an agency with expertise in both patent law and technology."⁵

In subsequent years, Congress decided that both sides needed to be able to participate in post-issuance proceedings and it created the system of inter partes reexamination. Although this system gave accused defendants an opportunity to be heard, the examination model did not work well in contested proceedings. Inter partes reexaminations were plagued with interminable delays.

Indeed, although the inter partes reexamination statute was repealed over a decade ago, as of today there are still 24 inter partes reexaminations that are pending before the USPTO and the courts. Regardless of the accuracy of its results, a system that takes this long to decide a case is not helpful—either to patent owners seeking an

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¹ My testimony reflects my own views and not those of Haynes and Boone, LLP or any of its clients.

² <u>94 U.S. 780</u> (1876).

³ <u>Parke-Davis & Co. v. H. K. Mulford Co.</u>, 189 F. 95 (C.C.S.D.N.Y. 1911).

⁴ Dr. Vannevar Bush, *Some Proposals for Improving the Patent System: Senate Subcommittee on Patents, Trademarks, and Copyrights*, 84th Cong., 2d sess. 10-11 (1956) (quoted in "The Role of the Court Expert in Patent Litigation," Study of the Subcommittee on Patents, Trademarks, and Copyrights of the Committee on the Judiciary, 84th Cong., 1st sess. (1958)).

⁵ See H.R. Rep. No. 107-120, at 3 (2001).

affirmation of their patent's validity or to accused infringers seeking to cancel invalid claims.

In the America Invents Act in 2011, Congress replaced inter partes reexamination with inter partes review. By shifting the proceedings to an adjudicative model with a statutory deadline, Congress aimed to wring out the delays in the system and create proceedings that could be completed in one year.

The America Invents Act succeeded in achieving that goal. AIA trials are overwhelmingly completed within their one-year deadline, allowing them to serve as a timely substitute for district court litigation.

By trying to make USPTO proceedings faster and more efficient, however, Congress by no means abandoned the original purpose of allowing questions of patent validity to be referred to the agency. That purpose remains the same in PTAB reviews: to allow technical experts who are trained in patent law to decide whether a patent is valid.

The America Invents Act requires that validity reviews be conducted by administrative patents judges (APJs), who are required by law to be "persons of competent legal knowledge and scientific ability." In compliance with this mandate, the agency requires that all of its APJs have at least an undergraduate education in a technical field. Many PTAB judges also have master's degrees or doctorates in science or engineering. And all of them have extensive patent legal experience prior to their appointment as APJs—many have even served as patent examiners.

PTAB review produces higher quality results

There is no reasonable dispute that PTAB judges have higher qualifications to decide patent cases than does the typical district judge or lay juror.

But do these qualifications matter—that is, are we getting higher quality and more accurate patent validity determinations by having these questions decided by the PTAB?

A recent academic study that comprehensively analyzed the results of appellate review of patentability determinations has answered this question in the affirmative. Professor Matthew Sipe complied and examined the results of all patent appeals that were docketed at the Federal Circuit in fiscal years 2015 and 2016.⁷ He then

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⁶ 35 U.S.C. § 6(a).

⁷ Matthew G. Sipe, <u>Experts, Generalists, Laypeople—and the Federal Circuit</u>, 32 Harv. J.L. & Tech. 576, 591 (2019).

compared the results for patent validity determinations made by PTAB panels to those made by district courts.

The study's conclusion was emphatic: it found that "the PTAB is affirmed notably more often than district courts on [patent] validity issues." Indeed, according to the data, district courts are almost two and a half times more likely to be reversed on appeal when deciding patent validity issues than is the PTAB.

The study ultimately determined that "the most straightforward conclusion" is that PTAB judges' technical expertise has "aided decision-making on the thorny scientific questions endemic to patent law."

It thus turns out that Learned Hand—and Congress—were right about the benefits of having a patent adjudicator know at least the "rudiments of chemistry." Indeed, it would be surprising if the results were otherwise—if scientific and legal knowledge were somehow a detriment rather than a benefit to patent validity decision making.

During the last decade, during my time at the USPTO and since, I have closely followed the public debate over PTAB proceedings. I have yet to hear anyone make a serious argument that the PTAB is reaching substantively wrong results—that its validity findings are somehow less rather than more accurate than those made in civil litigation.

There is no question that the PTAB's patentability determinations are more accurate and reliable than those reached in district courts.

PTAB validity review is needed now more than ever

The last four decades of the development of post-issuance proceedings at the USPTO have also coincided with a shift in how the courts resolve patent cases. As recently as 1978, judges decided over 90% of these cases, but as changes in Seventh Amendment jurisprudence have been absorbed by the plaintiff's bar, three quarters of patent cases now go before a jury.⁸

Although district judges' patent validity decisions have proven less accurate than those made by the PTAB, jury verdicts present even more difficulties. As compared to judges, juries are more likely to favor particular types of parties, more likely to favor the party that initiates the suit rather than the defendant (regardless of

⁸ See Mark A. Lemley, Why Do Juries Decide If Patents Are Valid?, 99 Va. L. Rev. 1673, 1706 (Dec. 2013); Mark A. Lemley, Jamie Kendall, Clint Martin, Rush to Judgment? Trial Length and Outcomes in Patent Cases, 41 AIPLA Q.J. 169, 174 (Spring 2013).

whether it is the patent owner or a declaratory judgment plaintiff), and more likely to decide all issues in favor of one party or another rather than distinguishing among the different questions before them.⁹

Lay juries often find complex technologies inaccessible, and they are notoriously resistant to engaging in an obvious analysis that combines prior patents and printed publications. Patent validity is just one of several issues before the jury—in addition to infringement, willfulness, and damages—and it is easy to simply defer to the USPTO's initial examination of the patent. Rather than scrutinize the teachings of the prior art, juries tend to focus on stories about the invention and the parties.

Few things are more dispiriting from a patent policy perspective than watching how skilled trial lawyers prepare for a patent jury trial. There is an enormous focus on narratives and themes, on trying to present one's own side as the "little guy," and on uncovering internal communications that can be presented in a bad light and thereby taint the jury's view of all the issues. What is often missing is an analysis of the limitations of the claims and how they are met by the prior art.

This is an absurd way to run an intellectual-property system, particularly when critical technologies are at stake. In many cases, a PTAB trial is not simply a less expensive or more technically accurate form of validity review—it is the *only* meaningful form of review.

It is also important to consider the character of much of the patent litigation in America today. A majority of infringement lawsuits are filed by parties that do not practice the invention, and the bulk of this litigation is brought by so-called patent assertion entities. These entities purchase their patents on the secondary market and often receive financial backing from hedge funds and other litigation financiers. Some of the largest investment funds are foreign owned and rely on investors from foreign countries, including undemocratic ones.

One might think that such a plaintiff—a foreign non-practicing entity (NPE) suing an American manufacturer—would cut an unsympathetic figure before a U.S. jury. In some districts, however, patent assertion entities have been allowed to

⁹ See The Honorable Kimberly A. Moore, Populism and Patents, 82 N.Y.U. L. Rev. 69, 98-99, 102-03 (2007); *see also* The Hon. Kimberly A. Moore, Judge, Juries, and Patent Cases—An Empirical Peek Inside the Black Box, 99 Mich. L. Rev. 365, 403-06 (2000).

¹⁰ See Pride in Patent Ownership: The Value of Knowing Who Owns a Patent: Hearing Before the Subcomm. on Intellectual Prop. of the S. Comm. on the Judiciary, 117th Cong. (2021) (statement of Allon Stabinsky, Chief Deputy General Counsel, Intel Corp.).

exclude evidence of their identity from the jury.¹¹ This effectively allows them to prey on the jury's sympathy by falsely implying that they are an independent inventor or an American start-up company.

One can hardly criticize a district judge for excluding this type of evidence. Patents are transferrable property, and the identity of the parties is irrelevant to whether the patent is valid. Except that in a jury case, we all know that this evidence *does* matter.

I am not here today to condemn our current system of litigation finance or to second guess whether foreign NPEs should be allowed to sue American companies. I simply to note that given that our system *does* operate this way—that a majority patent lawsuits are brought by entities that contribute very little to the U.S. economy—it is imperative that we provide American manufacturers with an accurate and reliable system for testing the validity of asserted patents.

But is PTAB review fair to small inventors and start-ups?

The argument is occasionally made that regardless of whether PTAB review is more accurate and less expensive, it is nevertheless an *additional* expense to civil litigation. A patent owner must file suit in district court to obtain its remedies, and thus allowing the defendant to challenge the patent in another forum—the PTAB—unfairly burdens the small inventor or a patent-backed startup company.

The question thus arises, to protect small entities, should Congress restrict access to PTAB review? Should it bar such review, for example, in favor of district court adjudication, or in cases in which the same patent has previously been challenged by another party?

As Congress considers these questions, I urge it to keep the following facts in mind:

1. Small entities both assert patents and are targets of patent assertions

If PTAB review were cut off in a particular case, that would benefit a small entity that is trying to assert its patent (as well as a large entity trying to do so). That entity would no longer need to mount any defense of its patent at the USPTO.

Small entities, however, regularly appear on both sides of the *v*. Indeed, small businesses and venture-backed startups are frequent targets of patent lawsuits, particularly those brought by non-practicing entities. NPEs will target small companies at the beginning of an assertion campaign because they are more likely to

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¹¹ See id.

settle, thereby providing funding to later sustain the tougher lawsuits against larger companies.¹² Patent plaintiffs also target small to medium companies that are about to make an initial public offering of stock, knowing that the company will pay a premium to prevent litigation from marring the offering.

PTAB review costs, on average, about one-ninth as much as a district court infringement suit. Legal fees in PTAB proceedings are measured in the hundreds of thousands of dollars, as opposed to the millions incurred in civil litigation. And, as discussed, PTAB review is more accurate and reliable than other forms of review. It is one of the rare cases in which an available option is both cheaper *and* better.

While blocking access to PTAB review would modestly reduce costs for a small-company plaintiff, doing so would be deeply unfair to a small entity that it is being sued for infringement of an invalid patent. A small company or startup often will be forced to settle an infringement suit simply because it cannot afford the millions of dollars that it costs to defend itself in district court. And even if it has a strong invalidity case, a defendant cannot reliably assume that a jury will recognize or even engage with that obviousness case.

Finally, the holder of a *valid* patent has little to fear from PTAB review. Aside from providing the benefit of the Board's expertise, the America Invents Act also requires a high up front showing to even start a PTAB review. To institute a proceeding, the petitioner must present a complete invalidity case that demonstrates a "reasonable likelihood" that the challenge will prevail.

In a typical year, one third of all PTAB petitions that are filed are dismissed for failure to meet this initial threshold. In such a case, the only expense to the patent owners is that of filing a preliminary response to the petition, and the PTAB proceeding is terminated within a few months.

Rather than trying to tip the scales of patent cases in favor of plaintiffs or defendants, Congress should aim to ensure that the system that is fair to both sides.

& Mark A. Lemley, Empirical Evidence of the Validity of Litigated Patents, 26 IPLA Q.J. 185, 205 (1998)).

¹² See Abby Rives, Engine IP Counsel, <u>Fortress Patent Fight Shows Abusive Litigation Hurts Startups</u>, March 25, 2020; Abby Rives, <u>Patent trolls kill startups</u>, but the <u>Biden administration has the power to help</u>, The Hill, November 30, 2021.

¹³ Unfortunately, a substantial portion of the patents that are asserted in civil litigation are ultimately determined to be invalid. *See* John R. Allison, Mark A. Lemley and David L. Schwartz, *Our Divided Patent System*, 82 U. Chi. L. Rev. 1073, 1099 (2015) (noting that of all patent infringement lawsuits that were filed in 2008 and 2009, "roughly 43.0 percent of patents that went to a final judgment on validity were invalidated"); Mark A. Lemley, *Ignoring Patents*, 2008 Mich. St. L. Rev. 19, 27 n.32 (2008) (noting that "[f]orty-six percent of patents litigated to judgement are invalid") (citing John R. Alison

Small entities and startups are both patent plaintiffs and defendants and need a system that is accurate and efficient in every case.

2. There is no public interest in allowing the enforcement of invalid patents

The parties to a patent lawsuit are not the only ones with a stake in the case. A patent can be enforced against anyone that makes, sells, or uses the claimed technology, regardless of the person's relation to the patent owner. And the licensing fees and damages awards that a patent secures will ultimately be passed along to consumers.

When a patent is valid and provides a benefit to consumers, these costs are reasonable. They are the price that America has decided is worth paying to incentivize innovation.

But if a patent is invalid—if it claims a technology that was already available to those skilled in the field—then enforcing the patent is unfair. It forces consumers to pay for something that was in the public domain and that should be freely available. And when numerous invalid patents are allowed to be enforced, the costs to consumers can be substantial.

The parties to patent lawsuits are simply pursuing their private interests. It is this Committee and the USPTO that must protect the public interest. And Congress is the only entity that can amend the laws to ensure that the patent system strikes the right balance—that it incentivizes innovation and disclosure without unfairly burdening consumers.

As the Supreme Court has long emphasized, "it is the public interest which is dominant in the patent system." Protecting that interest requires accurate and thoroughly reasoned assessments of patent validity. And the most effective way of testing issued patents (sometimes the only effective way) is through PTAB review. As the Committee adjusts the laws to serve the public interest, it must ensure that the parties to patent cases have reasonable access to PTAB proceedings.

3. America needs to protect manufacturers of microprocessors and other critical technologies—even if they are large companies

Finally, although the focus of this hearing is small businesses, not all of America's technology needs will be met by small companies and startups. Building a computer chip fabrication plant, for example, costs tens of billions of dollars. And

¹⁴ Mercoid Corp. v. Mid-Continent Inv. Co., 320 U.S. 661, 665 (1944).

semiconductors, networking equipment, and other advanced technologies are critical to much of the U.S. economy.

Just this year, for example, American automobile manufacturers are expected to lose almost \$300 billion in revenue because of a lack of access to the chips that control so many of the functions on a modern car. These technologies are also vitally important to our military's ability to defend our nation and its allies.

Events over the last two years have starkly illustrated the importance of PTAB review to the viability of manufacturing advanced technology in the United States. During this period, the USPTO has adopted several policies that have arbitrarily restricted access to PTAB proceedings—creating, in effect, an experiment in what happens when PTAB review is cut off.

During this period, for example, Intel, one of the world's premier chip manufacturers, was sued for patent infringement by Fortress Investment Group. Fortress's patent claimed simple insights into the voltage needs of integrated circuits.¹⁷ Intel responded with a PTAB petition that showed that these things had been understood by electrical engineers years before the patent was filed.¹⁸

Under the new USPTO policies, however, the agency refused to consider this challenge on its merits. The result: a \$2.2 *billion* judgment against Intel—one of the largest infringement verdicts in U.S. history.

If \$2 billion dollars can be extracted from Intel based on an invalid patent, it becomes difficult to guarantee a return on the investment in building a microchip fabrication plant.

There have certainly been cases in the past in which American companies have dominated an industry—steel production, ship building, or automobile

¹⁵ "Auto industry set to lose \$290 billion in revenue this year amidst shortage of computer chips," Just the News, Sep. 28, 2021.

The Russian Federation, facing an embargo on imports of computer chips because of its barbaric war against Ukraine, has found itself unable to manufacture precision munitions, advanced fighter jets, naval platforms, or air defense systems. *See* Jack Detsch, Pentagon Deputy: Russia's Defense Industry 'Will Feel' Pain of Ukraine War, Foreign Policy, May 25, 2022; Howard Altman, Sanctions Are Strangling Russia's Weapons Supply Chain, The War Zone, April 18, 2022; *see also* Aaron Reich, Russia-Ukraine war: Sanctions cripple Russia's tank production, Jerusalem Post, April 17, 2022.

17 See U.S. Patent No. 7,523,373. The patent—which was filed in 2006, 45 years after integrated circuits were first developed—purports to apply the "discovery" that the memory in a microprocessor sometimes needs a higher minimum voltage than the processor. *See id.* at 2:4-9.

18 See Intel v. VI SI Tech., IPR2020-00158, Paper 3 at 7-8 (Nov. 20, 2019).

manufacturing, for example—only to see their market share decline in favor of foreign manufacturers because, for various reasons, manufacturing conditions became unfavorable in the United States. There is certainly no guarantee that the United States will continue dominate the production of advanced semiconductors and networking equipment.

Over the years, the United States has also managed to persuade several foreign companies to build multi-billion-dollar chip fabs in the United States. Such investments greatly enhance America's economic and national security. These same foreign companies also closely follow U.S. patent policy, particularly with respect to PTAB proceedings.

These foreign companies have a choice where to build their next factory. They can easily choose to build at home or in one of the many countries where patent validity is not assessed by jury trial. If the United States continues to arbitrarily restrict access to PTAB review, it is inevitable that we will forfeit foreign direct investment in the United States.

Finally, some critics of the PTAB system have argued that allowing patent claims to be reviewed by the Board will hurt the United States in its economic competition with China.

In considering this argument, Congress should keep in mind that Chinese companies hold many U.S. patents. Huawei itself owns over 10,000 U.S. patents and is the single largest owner of 5G cellular communications patents.¹⁹ Huawei regularly asserts these patents in court, both in its own name and through patent-assertion entities.²⁰ Policies that block PTAB review of asserted patents have directly benefited Huawei.²¹

Consider, for example, Huawei's recent patent assertion campaigns against Samsung and Verizon. After it was excluded from the U.S. market, Huawei brought a set of infringement actions against Samsung. These lawsuits were stopped by PTAB

¹⁹ See Dr. Tim Pohlman & Dr. Knut Blind, "<u>Fact finding study on patents declared to the 5G standard</u>," at 3, IPlytics GmbH, Technische Universitat Berlin, Jan. 2020; Arjun Kharpal, "<u>Huawei to start charging royalties to smartphone makers using its patented 5G tech</u>," CNBC.com, Mar. 16, 2021.

²⁰ See Roslyn Layton, "Frozen Out of Network Infrastructure Markets, Huawei Hijacks US Patent Regime," Forbes.com, Jul. 14, 2020; "2020 Marketplace Trends: Former Operating Company Patents Remain a Strong Driver of NPE Litigation," RPX Insight, Dec. 7, 2020.

²¹ See Josh Landau, "Fintiv Denials Playing a Role in Huawei Assertion Campaign," PatentProgress, Feb. 12, 2021.

reviews—Samsung successfully showed that Huawei's claimed telecommunication protocols were previously disclosed in the technical specifications of standard setting organizations.²²

Huawei later asserted similar patents against Verizon, demanding a billion dollars in licensing fees. But when that company also filed PTAB challenges making the case that the patents were invalid, it received a total of six "discretionary denials" from the USPTO²³—the agency refused to consider the challenges on their merits. The case later settled out of court.²⁴

Before anyone asserts that the availability of PTAB review is undermining American economic competitiveness, they should ask this U.S company about its recent experience—and whether being forced to pay Huawei for patents that are reasonably likely invalid is helping the United States to "beat China."

Concerns about the role of Huawei and other companies that are controlled by China's government counsel in favor of, not against, allowing reliable access to USPTO validity review.

PTAB review works well, but Congress can improve the system

The 112th Congress got most things right, but it is inevitable that a decade of experience with PTAB review will disclose features of the system than can be adjusted and improved.

One such issue has already been identified by this Subcommittee: in a letter last year to the Government Accountability Office (GAO), the Subcommittee's leaders asked for an investigation into allegations of political interference in PTAB decision making.²⁵ I understand that a report is expected to issue shortly and that the Subcommittee intends to hold a hearing on its contents.

²² See, e.g., Huawei Techs. Co., Ltd. v. Iancu, No. 19-1493 (Fed. Cir. 2020); Huawei Techs. Co., Ltd. v. Iancu, No. 19-1497 (Fed. Cir. 2020).

²³ See Verizon Bus. Network Servs. v. Huawei Techs. Co., IPR2020-01290 (Jan. 25, 2021); Verizon Bus. Network Servs. v. Huawei Techs. Co., IPR2020-01291 (Jan. 25, 2021); Verizon Bus. Network Servs. v. Huawei Techs. Co., IPR2020-01292 (Jan. 25, 2021); Verizon Bus. Network Servs. v. Huawei Techs. Co., IPR2020-01278 (Jan. 26, 2021); Cellco Partnership d/b/a Verizon Wireless v. Huawei Techs. Co. Ltd., IPR2020-01352 (Mar. 2, 2021); Cellco Partnership d/b/a Verizon Wireless v. Huawei Techs. Co. Ltd., IPR2020-01356 (Mar. 5, 2021).

²⁴ See "Huawei, Verizon Strike Patent Deal Mid-Trial in Texas," Law360, Jul. 12, 2021.

²⁵ Congressmen Johnson, Issa Call on GAO to Investigate PTAB Decision-Making Practices, June 2, 2021.

According to the GAO letter, the Subcommittee's concerns were spurred in part by some of the Supreme Court's comments in its recent decision in the *Arthrex* case. The government had argued in the case that the PTAB is sufficiently supervised for Appointments Clause purposes because the Director can "jump[] in before the Board issues" its decision if he or she "catches wind of an unfavorable ruling on the way." It also argued that the Director can "manipulate the composition of the PTAB [rehearing] panel" with "APJs assumed to be more amenable to his preferences."

The Supreme Court's terse response was that such "machinations" are "the problem," not "the solution." It emphasized the need for a "transparent decision" that is made by "an impartial panel of experts."

It seems inevitable that GAO's report will raise questions about the Board's independence. Political interference in PTAB post-issuance proceedings creates substantial due process concerns. While the Supreme Court has never directly ruled on the issue, it has made clear its expectation that agency adjudications will be "structured so as to assure that the hearing examiner exercises his independent judgment on the evidence before him, free from pressures by the parties or other officials within the agency." The Court also has placed emphasis on the Administrative Procedure Act's guarantee that agency judges are "assigned to cases in rotation so far as is practicable."

The parties to PTAB cases frequently have much at stake in the proceedings. They are entitled to have their cases decided in a fair and transparent manner.

In the past, the Board did have statutorily guaranteed structural independence. As the Federal Circuit noted in its initial *Arthrex* decision, "prior to the 1975 amendment to Title 35, 'Examiners-in-Chief'—the former title of the current APJs—were subject to nomination by the President and confirmation by the Senate." And to this day, all officers in the U.S. military about the level of captain are required to be appointed by the President and confirmed by the Senate.²⁹

As the Committee reviews the GAO's findings, it should consider whether to return to a system of presidential appointment and Senate confirmation for the PTAB, or enact other statutory restrictions, to ensure that each PTAB judge exercises

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²⁶ See *United States v. Arthrex*, 141 S. Ct. 1970 (2021).

²⁷ Butz v. Economou, 428 U.S. 478 (1978).

²⁸ Arthrex, Inc. v. Smith & Nephew, Inc., No. 2018-2140 (2019).

²⁹ See 10 U.S.C. § 531.

his or her "independent judgment on the evidence," "free from pressures by other officials within the agency."