Statement of Philip S. Johnson Before the

Subcommittee on Courts, the Internet, and Intellectual Property of the Committee on the Judiciary House of Representatives

on

"Sovereign Immunity and the Intellectual Property System"

November 7, 2017 2 p.m.

Executive Summary of the Statement of Philip S. Johnson

I wish to thank the Subcommittee for the opportunity to testify on "Sovereign Immunity and the Intellectual Property System," and for maintaining open and transparent discussions concerning issues relating to the proper functioning of our intellectual property system.

Although I have testified before this Subcommittee in other contexts, I appear here today on my own behalf to offer my opinions as an expert with 44 years of experience in patent policy, procurement, acquisition, licensing and enforcement.

There are three issues relating to intellectual property and sovereign immunity that should be of concern to the Subcommittee:

- (1) Why do some patent owners now feel it is necessary to assign their patents to sovereign entities to aid in the enforcement of their patents?
- (2) When sovereign patent owners enforce their patents, why is it not enough to have any validity issues decided in the federal district courts (and/or in likely-available ex parte reexamination proceedings)?
- (3) What reforms are needed to "level the playing field" so that no meaningful advantage can be gained by assignments to sovereigns?

In answer to question (1), some patent owners now see it as necessary to the successful enforcement of their patents to assign them to sovereigns to avoid the unfairness of, and the many abuses that surround, inter partes reviews ("IPRs") as they currently exist.

In answer to question (2), when sovereign patent owners enforce their patents it *is* enough to have their issues decided only in the federal district courts, augmented if appropriate by likely-available third-party requests for ex parte reexamination. IPRs are unnecessary because only the federal courts can resolve all the issues between the parties. And to the extent additional input from the United States Patent & Trademark Office ("USPTO") might be helpful, ex parte reexaminations, which have not been held to be precluded by sovereign immunity, will still allow the USPTO to consider all of the issues that could have been raised in an IPR. While to some this may not seem ideal, it is a framework that respects the dignity to which sovereigns are entitled while still ensuring that all relevant issues pertaining to their patents will be heard and decided.

In answer to question (3), what is needed to remove any meaningful advantage from sovereign ownership of patents is a revision of the USPTO post-grant procedures so that they will conform in substance and outcomes with those achieved in the federal courts, thereby removing any incentive to arbitrage the differences between these two, which are now fueling a wide range of abuses.

What is at stake here is not just the fairness of the resolution of disputes between litigants, but the confidence of inventors and their investors in our Constitution's promise that Congress will encourage innovation by "securing for limited Times . . . to Inventors the exclusive Right to their...Discoveries." At present, even fully and fairly litigated court judgments are not being respected as final resolutions. They do not provide quiet title to patents because they may be challenged over and over again by the same or different persons in IPRs, thereby thwarting our Constitution's promise that the inventors' patent rights will be secured.

Fortunately, the problems with IPRs are now widely recognized within the IP community, and their fixes are well within this Subcommittee's purview. But time is of the essence, as this same recognition is now rapidly eroding confidence in our patent system. Since the implementation of IPRs just five years ago, the U.S. patent system has dropped in the U.S. Chamber of Commerce's ranking from 1st to 10th place, due largely to the impact IPRs are having on patent reliability.² Moreover, the ability of infringers to invalidate U.S. patents seemingly at will before the PTAB is emboldening foreign competitors to copy U.S. technology just when their home countries are strengthening their patent systems for likely use against U.S.-originated imports.

The benefit of a strong patent system in an advanced industrial society is its attraction of human and financial capital to create inventions that improve productivity, and thereby raise both GDP and our standard of living. By contrast, in countries where copying is tolerated, if not openly condoned, prices may drop for a short time but market incentives to improve products are lessened, and production often moves in search of the cheapest labor. This is why China (which no longer has the cheapest labor in its region) has evolved from wanting to be the place where products are made to wanting to be the place where new products are created. To accomplish this, the Chinese government has recognized that strong and enforceable patents are needed to achieve this conversion, and has established specialized regional patent courts for the purposes of meaningfully enforcing Chinese patents. As a result, venture capital investments are increasing in China and decreasing in the United States.³ This U.S decline should be reversed.

To attract more investment in innovation in this country, enhance our productivity, create more well-paying U.S. jobs, and increase our GDP, we must act now to strengthen the reliability and enforceability of U.S. patents. To do this, we must not only provide fair and consistent fora for determining validity and infringement, but also ensure that patent owners may enjoy quiet title to their patent properties without fear from unfair IPR proceedings. If we are successful in accomplishing these goals, patentees would not need to assign their patents to sovereigns, as there will be nothing to be gained by doing so.

¹ U.S. Constitution, Article I, Section 8.

² U.S. Chamber of Commerce, "International IP Index for Patents, Related Rights and Limitations" Fifth Edition, (identifying as key areas of patent system weakness as "Patent opposition system [that] adds substantial costs and uncertainty" and "somewhat narrow interpretation of patentability of biotech and computer-related inventions compared with international standards," page 111, available at http://www.ipwatchdog.com/wp-content/uploads/2017/03/2017-US-10th-patents.png and http://www.theglobalipcenter.com/wp-content/uploads/2017/02/GIPC IP Index 2017 Report.pdf

³ Rodriguez, Salvador, "U.S. Venture Funding Fell 11 Percent in 2016," Inc. Magazine, January 11, 2017, reporting a 11% drop in U.S. venture capital spending contrasted with a global increase of 19%, available at https://www.inc.com/salvador-rodriguez/venture-capital-crunchbase.html

Statement of Philip S. Johnson

Mr. Chairman and distinguished members of the Subcommittee:

Thank you for providing me this opportunity to testify on "Sovereign Immunity and the Intellectual Property System."

Brief Introduction

Although I have testified before this Subcommittee in other contexts, today I appear on my own behalf to offer my opinions as an expert with 44 years of experience in patent policy, procurement, acquisition, licensing, and enforcement.⁴

Sovereign Immunity in the IP System – In General

It has not been suggested that sovereign immunity is waived when sovereigns, such as states acting through their state agencies, engage in ex parte proceedings in the USPTO. Unless unequivocally waived, sovereign immunity does however shield sovereigns from involuntarily becoming parties to court-like adversarial proceedings, such as IPRs, conducted before administrative patent judges in the USPTO.⁵ When it comes to enforcing their patents in the district courts, sovereign patent owners waive immunity as to any defenses, including affirmative defenses and related compulsory counterclaims defendant may raise, but not as to unrelated claims or permissive counterclaims.⁶ Included within the waiver inherent in bringing an

⁴ A short biography of my qualifications and experience is attached as Exhibit A.

⁵ See Federal Maritime Commission v. South Carolina Ports Authority, 353 U.S. 743, 760 (2002) ("Simply put, if the Framers thought it an impermissible affront to a State's dignity to be required to answer the complaints of private parties in federal courts, we cannot imagine that they would have found it acceptable to compel a State to do exactly the same thing before the administrative tribunal of an agency, such as the FMC. Cf. Alden, supra, at 749 ("Private suits against nonconsenting States ... present 'the indignity of subjecting a State to the coercive process of judicial tribunals at the instance of private parties,' regardless of the forum" (quoting In re Ayers, supra, at 505) (citations omitted; emphasis added)). The affront to a State's dignity does not lessen when an adjudication takes place in an administrative tribunal as opposed to an Article III court. In both instances, a State is required to defend itself in an adversarial proceeding.") Indeed, the PTAB itself has thrice confirmed that sovereign immunity shields state agencies from PTAB proceedings. Covidien LP v. Univ. of Fla. Research Found. Inc., IPR2016-01274, Paper 21 at 39 (Jan. 25, 2017); Neochord, Inc. v. Univ. of Md., et al, IPR2016-00208, Paper 28 at 18-20 (May 23, 2017); Reactive Surface Ltd., LLP v. Toyota Motor Corp., IPR2016-01914, Paper 36 at 17 (July 13, 2017);). See also Vas-Cath, Inc. v. Curators of the Univ. of Mo., 473 F.3d 1376, 1380 (Fed. Cir. Jan. 23, 2007) ("[C]ontested interference proceedings in the PTO bear 'strong similarities' to civil litigation, . . . and the administrative proceeding can indeed be characterized as a lawsuit").

⁶ See Competitive Techs., Inc. v. Fujitsu Ltd., 374 F.3d 1098, 1102-03 (Fed. Cir. 2004) ("[W]hen a state files suit in federal court to enforce its claims to certain patents, the state shall be considered to have consented to have litigated in the same forum all compulsory counterclaims, i.e., those arising from the same transaction or occurrence that gave rise to the state's asserted claims." Accord Regents of the Univ. of N.M. v. Knight, 321 F.3d 1111, 1126 (Fed. Cir. 2003); see also Texas v. Caremark, Inc., 584 F.3d 655, 659 (5th Cir. 2009) ("When a state initiates a lawsuit, it waives its sovereign immunity to the extent required for the lawsuit's complete determination." (citing Clark v. Barnard, 108 U.S. 436, 448 (1883)); United States v. Oregon, 657 F.2d 1009, 1014-16 (9th Cir. 1981) (holding that tribe waives sovereign immunity by intervening in lawsuit).

⁶ See Tegic Communications Corp. v. Univ. of Texas System, 458 F.3d 1335, 1344 (Fed. Cir.2006) ("Although here the University obviously "made itself a party to the litigation to the full extent required for its complete

infringement action in district court are all of the invalidity defenses referred to in 35 U.S.C. § 282, including of lack of novelty (35 U.S.C. § 102) and obviousness (35 U.S.C. § 103), whether or not based solely on prior art patents and publications.

The Activities Prompting this Hearing

Among the matters that prompt today's hearing are the recent acquisitions of certain patents by the Saint Regis Mohawk Tribe (the "Tribe") which the Tribe is asserting against accused infringers in the federal district courts while at the same time invoking (or planning to invoke) sovereign immunity in the PTAB as to IPRs.

From the Tribe's point of view as a sovereign, it is reasonable for the Tribe to expect that its involvement in federal district court litigation should not expose the Tribe to the expenses and risks of IPRs. By bringing (or maintaining) a patent infringement suit in the federal courts, the Tribe is waiving its sovereign immunity "to the extent required for the lawsuit's complete determination."

I understand that the first of the cases with which the Tribe is involved concerns patents first asserted by the originator of a drug product against would-be generic manufacturers. In this case the defendants did successfully raise invalidity defenses, and the district court has already ruled that all of the asserted patent claims are invalid. Under these circumstances, it is unclear whether the PTAB will consider all issues to be moot, whether the Tribe's status as owner of the patents will be recognized, or whether the PTAB will continue with the already pending IPR proceedings without the Tribe. It is likely to take a year or more before these matters are finally resolved.

Regardless of the ultimate outcome of this particular case, three important issues remain relating to sovereign immunity and our intellectual property system that should be of concern to this Subcommittee:

- (1) Why some patent owners now feel it necessary to assign their patents to sovereign entities to aid in the enforcement of their patents;
- (2) Whether, when sovereign patent owners enforce their patents, it is enough to have any validity issues decided in the federal district courts (and/or in likely-available ex parte reexamination proceedings in the USPTO); and
- (3) What reforms are needed to "level the playing field" so that no meaningful advantage can be gained by assignments to sovereigns.

determination," Clark, 108 U.S. at 448, 2 S.Ct. 878, it did not thereby voluntarily submit itself to a new action brought by a different party in a different state and a different district court.")

⁷ Texas v. Caremark, Inc., 584 F.3d 655, 659 (5th Cir. 2009). See Quinault Indian Nation v. Pearson for Estate of Comenout, 2017WL3707898, ___ F.3d___ (9th Cir. 2017); Bodi v. Shingle Springs Band of Miwok Indians, 832 F.3d 1011 (9th Cir., 2016).

Because these issues did not exist before the America Invents Act's ("AIA's") creation of IPR proceedings, to answer these questions it is important to understand the origins of IPRs, and the five years of experience we have had with them.

The Nature and Origins of IPR Proceedings

After years of discussion, Congress created IPRs in the AIA as part of a hybrid "two-window" compromise allowing for initial all-issue challenges (Post Grant Reviews ("PGRs")), followed by life-of-the-patent limited-issue IPRs. Key to the compromise were assurances that IPRs would not become vehicles to harass patent owners. Effective protections would be built into the legislation that would enable patent owners to rely on their granted patent rights to protect the continuing investments needed to develop and market their inventions. By so doing, patent owners' "reliance rights" would be considered by the Director as a factor in deciding whether the institution of an IPR would have an adverse effect "on the economy, integrity of the patent system, the efficient administration of the Office, and ability of the Office to timely complete proceedings instituted." Patent owners would be further protected by a robust right to amend their challenged patent claims, ¹⁰ and a heightened institution threshold relative to that used in ex parte reexamination. Collectively, these protections would ensure that only facially-defective patents would be subjected to IPRs.

Important to the development of the overall structure of the AIA was the principle that the public should be encouraged to bring any challenges early. Members of the public would be allowed to bring prior art directly to the Examiner's attention during prosecution, and be allowed to petition for institution of a PGR for up to 9 months after issuance subject to estoppels pertaining only to issues actually raised. ¹² Challengers would be discouraged from waiting to petition for IPR reviews by limiting the substantive scope of IPRs, lowering the IPR institution rate as compared to ex parte reexaminations, and heightening the applicable IPR estoppel to the "raised or reasonably could have been raised" standard. ¹³

By contrast to district court infringement cases, which are actions of right, IPR proceedings were established as proceedings that are instituted entirely at the discretion of the Director of the USPTO with the hope that they would become "quick and cost effective alternatives to litigation" and provide "a meaningful opportunity to improve patent quality and restore

¹⁰ With the understanding that the amended claims could not be broadened as compared to the original claims of the patent and that they would be subject to intervening rights. 35 U.S.C. §§ 316(d) & 318(c) ¹¹ 35 U.S.C. § 314(a).

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⁸ For a more detailed discussion of the legislative origins of IPRs see, Johnson, Philip, "A Look Back at the Legislative Origins of IPRs," September 20, 2017, available at http://www.ipwatchdog.com/2017/09/20/look-back-legislative-origin-iprs/id=88075/

⁹ 35 U.S.C. § 316(b).

¹²Per the House Committee Report, "[p]ost-grant petitioners are only estopped from raising in civil litigation or ITC proceedings those issues that they actually raised in the post-grant review." *Pg.* 76. While this was clearly the intent of the AIA, because of a well-documented "scrivener's error," the AIA as actually enacted now applies a "raised or reasonably could have raised" estoppel in PGR proceedings as well. Matal, "A Guide to the Legislative History of the America Invents Act: Part II of II," The Federal Circuit Bar Journal, v. 21, n. 4, pg. 539, at 616-18 & nn.499-504 (providing a more detailed explanation of this error).

¹³ *Id.*, Matal at note 380

confidence in the presumption of validity that comes with issued patents in court."¹⁴ Unlike PGRs, IPRs allow for consideration only of the grounds of novelty and obviousness and then "only on the basis of prior art consisting of patents or printed publications."¹⁵ While the AIA prohibits the Director from instituting an IPR if certain minimum standards are not met, it provides the Director wide latitude to deny IPR institution if in his or her judgment it would not be in the best interests of the USPTO, the patent system or the economy to do so.¹⁶ For example, the Director has the discretion to deny institution or terminate an IPR if proposed IPR would be an abuse, if the USPTO has considered the same or similar prior art or arguments in another proceeding, or if such consideration would better be handled using a different administrative procedure, such as a reissue or ex parte reexamination.¹⁷ In short, unlike in federal district court, no member of the public has a right to have an IPR instituted or decided on any issue--IPRs are to be instituted and proceed only at the pleasure of the Director.

Unfortunately, many of the intended safeguards authorized by the AIA for IPRs were either never implemented by the USPTO or have been left to the discretion of individual panels of the PTAB, who rarely apply them. During the development of the AIA, the intentional separation of the executive function of the Director from the judicial function of the PTAB was seen as an important safeguard for patent owners. In converting the merits portion of the new proceedings from an administrative function previously undertaken in inter partes reexamination by patent examiners to a judicial one in PGRs and IPRs to be undertaken by APJs, a protective layer of internal appellate review was forsaken in the name of expedience. This was replaced by clearly separating those responsible for the institution phase from those who would conduct the adjudication phase. This kind of intra-agency separation is consistent with the approach of the Administrative Procedure Act, which prohibits any person engaged in the performance of prehearing activities (such as investigative or prosecuting functions) from participating or advising on the final merits decision. 18 This separation of personnel provides a different form of internal review, ensuring that unbiased PTAB judges will serve as a check on Director's initial determination as to whether the threshold and other requirements for institution have been met. As such, the role of the PTAB in IPR proceedings was defined in the AIA as being to conduct those IPRs that the Director has decided to institute. ¹⁹ Unfortunately, as implemented by the USPTO, the role of the Director as an independent IPR gatekeeper never materialized because the USPTO's implementing rules bypass the Director altogether, assigning the institution function to the PTAB, which in turn routinely assigns both the institution and final decisions to

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¹⁴ H.R. Rep. No. 98 Pt. 1, 112th Cong., 1st. Sess. 45, 48 (2011) (House Report).

¹⁵ America Invents Act, § 311(b).

¹⁶ America Invents Act, §§ 314(a), 315(d), 316(a)(2) & (6), 316(b) and 325(d); see General Plastics Industrial Co. v Canon Kabushiki, Case IPR2016-01357 (PTAB Sept. 6, 2017.

¹⁷ America Invents Act, Sections 315(d), 316(a)(6), 316(b) and 325(d).

¹⁸ 5 U.S.C. § 554(d).

¹⁹ This is reflected in the language of the statute requiring the Director to determine whether the IPR should be instituted (35 U.S.C. § 314), the grant to the PTAB of IPR-PGR authority only to "(4) conduct inter partes reviews and post-grant reviews pursuant to chapters 31 and 32," (35 U.S.C § 6(a)(4)), and the definition of the PTAB's role in chapter 31 as being, "in accordance with section 6, [to] conduct each inter partes review instituted under this chapter" (35 U.S.C. § 316(c)). As explained in the House Committee Report, "The Board of Patent Appeals and Interferences is replaced with the new Patent Trial and Appeal Board ("Board"). The Board is charged with (i) reviewing adverse decisions of examiners on applications and reexamination proceedings, (ii) conducting derivation proceedings, and (iii) conducting the post-grant review proceedings." Available at www.gpo.gov/fdsys/pkg/CRPT-112hrpt98/pdf/CRPT-112hrpt98-pt1.pdf at pg. 77.

the same three judge panel. As a result, most of the safeguards against patent owner harassment have been lost.

Although the USPTO did implement the statutory threshold showing required for institution, it effectively torpedoed its effectiveness by also implementing regulations that prohibited patent owners from submitting like-kind testimonial evidence in opposition to a petition,²⁰ making it nearly impossible to rebut a petitioner's factual allegations at the petition stage of the proceedings.²¹ While later modified in response to patent-owner outcry to allow patent owners to submit testimonial evidence, these new regulations still expressly favor the petitioner's evidence over that of the patent owner's even when the patent owner's evidence is material enough to raise a genuine issue of disputed fact.²²

Collateral IPR Challenges Unduly Favor Accused Infringers

Once patent litigation is commenced, institution of an IPR adds to the time and expense of successful patent enforcement. IPRs are usually duplicative of issues that can be more fully and fairly addressed in litigation, and often cannot resolve all of the grounds of invalidity that have been raised in the related court proceeding. Litigations are conducted according to well established due process standards which include the right to have disputed testimony considered during live cross-examination before Article III judges with lifetime appointments.

By contrast, IPRs are heard by panels of administrative patent judges who make their credibility determinations on a cold record without hearing live cross examination. And while the patent examiners who originally examined and granted the patent at issue were experts whose careers were focused on the particular art area to which the invention pertained, IPR judges, although typically holders of technical degrees, do not bring comparable technical expertise to the matters before them.

Ex parte reexamination proceedings may be requested by any person, including an accused defendant during a litigation. Ex parte reexaminations are conducted by an elite group of patent examiners who reexamine the patent as if it had been returned to original examination and consider the same kinds of prior art as IPRs.²³ Ex parte reexamination is a long-established

²⁰ 37 C.F.R. § 42.107(c) provides: "(c) No new testimonial evidence. The preliminary response shall not present new testimony evidence beyond that already of record, except as authorized by the Board."

²¹ As the House Committee Report explains, the statute requires that the information presented by *both* parties be considered in determining whether the threshold is satisfied: "Satisfaction of the new threshold will be assessed based on the information presented both in the petition for the proceeding and in the patent owner's response to the petition." *Supra* at pg. 47.

²² Compare 35 U.S.C § 314(a) requiring all preliminary response information to be considered to 37 CFR § 108(c) which directs that the "Board's decision will take into account a patent owner preliminary response where such a response is filed, including any testimonial evidence, but a genuine issue of material fact created by such testimonial evidence will be viewed in the light most favorable to the petitioner solely for purposes of deciding whether to institute an inter partes review." (italics added)

²³ There doesn't yet appear to be definitive precedent denying sovereign immunity in ex parte reexamination proceedings, however these proceedings do not have all the attributes discussed in *Federal Maritime Commission v. South Carolina Ports Authority*, 353 U.S. 743, 760 (2002), and recent expert commentary has opined that third-

procedure in the USPTO, and is generally viewed as reaching fair outcomes.²⁴ Courts have long managed the issues involved in having ex parte reexaminations run concurrently with their litigations, and most judges have learned how to discern when the expertise of the patent examiners conducting the reexamination will be helpful, and when initiation of the proceeding is nothing more than a delaying tactic.

Nonetheless, as matters of self-interest, parties who see themselves likely to be adjudged infringers in court still strongly favor the use of IPRs as collateral attacks on the patents in litigation because they don't want to lose the extra "bites at the validity apple" that IPR proceedings provide. In the absence of IPRs, they fear that they will be adjudged to infringe sovereign-owned patents that have been finally and fairly upheld in court proceedings, but which would not have been if subjected to one or more additional IPRs.

The available data suggests that these concerns are well founded, as accused infringers now fare much better before the PTAB than they do before the courts. Success rates for patent owners on validity in the federal courts generally range between 50 to 70 percent ²⁵ whereas the corresponding rate in PTAB proceedings is about 15 percent.²⁶ So far, of the 263 patents upheld by the federal courts on validity that have also been challenged in PTAB proceedings, the PTAB has disagreed with the courts 76% of the time, and have invalidated 200 of them.²⁷ While proponents of IPRs will argue that it is the PTAB that is getting it right, it is far more likely that the fuller and fairer development and consideration of evidence that occurs in district court proceedings leads to the better results. And regardless, the inconsistency is inefficient and cannot be defended on policy grounds.

party-requested ex parte reexaminations are available as against sovereign-owned patents. See Gardner et al, "Sovereign Immunity of Patents: While a Strong Benefit to Patent Owners, These Patents Remain Subject to Traditional Challenges," June 19, 2017 available at http://www.ipwatchdog.com/2017/06/19/sovereign-immunitypatents-benefit-patent-owners-patents-remain-subject-traditional-challenges/id=84589/ However Richard Torczon has questioned whether reexaminations may be subject to sovereign immunity, stating "[f]or reexaminations, however, appeals to the board have different rules [from IPRs], but the board's actions are undeniably an exercise of judicial power." Torczon, Richard, "Sovereign Immunity: A Wake-Up Call for USPTO Director?" March 3, 2017, Law360, accessible with subscription at https://www.law360.com/articles/897972 It would appear, however, that because the sovereign patent owner would be the party lodging any such appeal, the act of taking the appeal would itself constitute any needed waiver.

²⁴ The USPTO reports that between 1981 and September 30, 2016, 13,450 ex parte reexaminations were requested, of which 11,862 (92%) were initiated. Of those, 10,979 have been completed, 88% of which confirmed the validities of the reexamined patents (67% with some amendments to the patent's claims, and 21% with no claim amendments). USPTO Ex Parte Reexamination Filing Data - September 30, 2016. See www.USPTO.gov

²⁵ John R. Allison et al., "Understanding the Realities of Modern Patent Litigation," 92 TEX. L. REV. 1769, 1785 (2014). See also www.patstats.org reporting yearly on success rates in court by issue for years prior to the enactment

²⁶ See "PTAB, Patent Trolls, Bad Patents, and Data: A Wakeup Call to AIA Apologists" by Josh Malone, Oct. 30, 2017, available at http://www.ipwatchdog.com/2017/10/30/ptab-patent-trolls-bad-patents-wakeup-aiaapologists/id=89609/

²⁷ *Id.*, Malone.

The differences in the results reached between the courts and in IPRs are largely explained by the PTAB's candid application of different validity standards, ²⁸ a deliberate lack of gatekeeping, ²⁹ a lower burden of proof, ³⁰ its unique pro-petitioner procedures, ³¹ and inherent internal incentives to institute and hear serial or cumulative challenges of the same patents by the same or different petitioners. ³² As these PTAB practices became apparent, practitioners soon began to advise patent challengers to "file, file and file again." Indeed, as of the end of fiscal year 2016, about half (49.3%) of the 5,173 IPR and CBM petitions filed were second (1,1684), third (334), fourth (190), fifth (106), sixth (70), or more (171) challenges of the same patent. ³⁴ This "serial jeopardy" has led to "gang tackle" IPR filings that force all but the most well-heeled patent

https://www.uspto.gov/sites/default/files/documents/Chat_with_the_Chief_Boardside_Chat_Multiple_Petition_S tudy_20171024.pdf .

²⁸ The PTAB interprets patent claims challenged in IPRs under its "Broadest Reasonable Interpretation" ("BRI") standard, rather than the narrower Phillips standard utilized in the courts. By so doing, in IPRs patent claims are more likely to overlap with the prior art, and thus be invalidated. For a discussion of this difference, see "Why It Is Inappropriate to Use the "Broadest Reasonable Interpretation" ("BRI") for Patent Claims in Post-Grant Review, Inter Partes Review, and Covered Business Method Proceedings," Coalition for 21st Century Patent Reform, available at http://www.patentsmatter.com/issue/pdfs/BRI-AppropriateforExaminationNotforPGR-IPR-CBMReviewFINAL.pdf

²⁹ See A. Abbott, et al., at II(B), "Crippling the Innovation Economy: Regulatory Overreach at the Patent Office," released by the Regulatory Transparency Project of the Federalist Society, August 14, 2017, available at https://regproject.org/paper/crippling-innovation-economy-regulatory-overreach-patent-office/#row_1 316(e).

³¹ These pro-petitioner provisions include refusal to consider the patent owner's declaration evidence at the institution stage if it raises a material dispute of fact with the evidence submitted by the petitioner, lack of required initial disclosure of evidence known to the petitioner relating to the objective indicia of non-obviousness, sharply curtailed discovery, lack of subpoena power to compel witnesses favorable to the patent owner to appear, lack of a meaningful opportunity to present amended claims, acceptances of new rebuttal evidence without a meaningful opportunity to respond, and the inability to present live witnesses or to cross examine adverse witnesses before the triers of fact. *See Abbott, et all, ibid. See also,* Solomon, Neal, "Patent Trial and Appeal Board Procedures for IPR Fail to Satisfy the Fifth Amendment," October 19, 2017, available at http://www.ipwatchdog.com/2017/10/19/ptab-ipr-fail-satisfy-fifth-amendment/id=89338/

³² *Ibid, Abbott, et al., at III(1), stating,* "Recent research reveals both types of duplicative challenges within the PTAB: (1) multiple parties attacking the same patent and (2) multiple challenges brought by the same party. For inventions in the chemical, electrical, and computers and communication fields, for instance, most of the patents subject to petitions for review at the PTAB are in fact challenged multiple times again and again in filing after filing. In extreme cases, some patents are subjected to dozens of PTAB attacks in these serial petitions." (footnote omitted)

³³ T. Engellenner, "If at first you don't succeed: file, file and file again.", available at http://www.lexology.com/library/detail.aspx?g=10b3794f-d79b-4b6a-bc3b-663c66bd6898

³⁴ Data presented at the 2017 CPIP Summer IP Institute, Beaver Creek, CO. Recent USPTO data on multiple petitions show a similar trend. The USPTO reports a dataset of 7,168 petitions associated with 4,376 unique patents. According to the PTO, 2,932 patents were challenged in only one petition, meaning that the remaining 4,236 petitions – a remarkable 59% of all petitions in the USPTO dataset - are second, third, or subsequent petitions. See https://www.uspto.gov/sites/default/files/documents/Chat with the Chief Boardside Chat Multiple Petition Study 20171024.pdf slides 5 and 14 (reporting 2,932 patents that were challenged in only one petition; 885 patents were challenged in 2 petitions (n=1770 petitions); 256 were challenged in 3 petitions per patent (n=768 petitions); 142 were challenged in 4 petitions (n=568 petitions); 54 were challenged in 5 petitions per patent (n=270 petitions), 52 were challenged 6 petitions (n=312 petitions) and 55 patents were challenged in at least 385 petitions (7 or more per patent). Some USPTO statistics tend to understate the problem, reporting by patents challenged rather than petitions filed. Per the USPTO, 67% of all patents are challenged in only one petition, 20% in two petitions, 6% in three, and so on.

owners into submission, as petitioners "file, file and file again" to find combinations of prior art that one PTAB panel or another will find sufficient for invalidation.³⁵

IPRs Have Also Been Proven to be Subject to Abuse by IPR Patent Trolls

In addition to ensuring that its patent dispute will be heard and decided in a single proceeding in the federal courts, the exercise of sovereign immunity has the additional advantage of insulating the sovereigns (and their licensees) from other serious IPR abuses. The principal examples of these are "reverse" or IPR patent trolling and disruptions of other Congressionally-sanctioned patent dispute resolution procedures, such as those established by the Hatch Waxman and BPCIA Acts.

IPR Patent Trolling

By far the most common IPR abuses are the uses of threats to file an IPR petition, to proceed with an IPR petition after it has been filed, or to maintain an instituted IPR, as leverage to extort settlements of substantial value from patentees in return for not filing, abandoning or "settling" the IPRs. These opportunities are available to anyone, as no standing requirement must be met to petition for an IPR. These abuses are common and have come to be known as reverse or IPR trolling because of their similarities to abusive practices based on leveraging threats or filings of frivolous patent infringement actions for similar purposes. But unlike conventional "patent trolling," the reverse troll doesn't need to own a patent and the targeted patent owner doesn't need to be selling anything or providing any service.

IPR trolling takes many forms. In its simplest form, the reverse patent troll sends a demand letter, with or without a draft IPR petition, that seeks to extort compensation from the patent owner in an amount that is less than the cost of a successful defense of the IPR. But since IPRs are very expensive relative to the cost of obtaining a patent in the first place, the costs of these "settlements" may nonetheless be very high. In other cases, reverse trolls file an IPR petition and then negotiate for its withdrawal through a "settlement" which involves compensation in some form.

In some scenarios, the IPR troll waits until the patent owner obtains a substantial patent infringement judgment in federal district court, and then conditions the non-filing of a draft IPR on payment of a substantial portion of the awarded judgment. Another variation is to seek non-monetary compensation, such as the right to grant lump-sum-paid-up or other royalty bearing licenses to existing infringers or other interested parties. In still further scenarios, the IPR troll

³⁵ See Harter, Peter et al, "How IPR Gang Tackling Distorts PTAB Statistics," April 5, 2017, available at http://www.ipwatchdog.com/2017/04/05/ipr-gang-tackling-distorts-ptab-statistics/id=81816/

³⁶For a general discussion of different "settlement extraction" scenarios, see Abbott, et al, at III(B)(2), "*Crippling the Innovation Economy: Regulatory Overreach at the Patent Office," released by the Regulatory Transparency Project of the Federalist Society, August 14, 2017, available at https://regproject.org/paper/crippling-innovation-economy-regulatory-overreach-patent-office/#row_1; see also Quinn et al, "IPR Settlement: A Pyrrhic Victory for Patent Practitioners, a Loss for Patent Owners," June 18, 2017 available at http://www.ipwatchdog.com/2017/06/18/ipr-settlements-pyrrhic-victory/id=84759/ and Quinn, "Capitulation Settlements in IPR are No Win for Patent Owners," June 15, 2017 available at*

seeks to profit from the filing of an IPR by shorting the stock of the patent owner while publicizing the fact of the IPR filing.³⁷

What all these forms of reverse trolling have in common is that they seek financial gain by arbitraging the difference between the expected costs and outcomes in IPRs against those that would be expected in the federal district courts. Confirmation that this is the case comes from the fact that reverse trolling is virtually unheard of in connection with third-party-requested ex parte reexaminations, which consider exactly the same kinds of prior art as IPRs and where the validities of the reexamined patents are upheld at about the same rates as the federal courts.³⁸ In addition, once started, ex parte reexaminations can't be settled or abandoned by the original requester, thereby depriving would-be trolls of any ongoing leverage.

Using IPRs to Disrupt the Nature and Timing of other Congressionally-sanctioned Patent Challenge Structures

More recently IPRs have been employed to abuse and disrupt the statutory patent dispute resolution procedures established under the Hatch Waxman and BPCIA Acts, relating to approvals of generic and biosimilar drugs based upon the safety and efficacy clinical test data first compiled by the drug's originator. Congress does not appear to have anticipated this development, as while the AIA Congressional debate includes frequent references to problems in the hi-tech, e-commerce and financial services sectors, it is silent as to any intended uses of IPRs with regard to Hatch-Waxman and BPCIA proceedings. The experience with Hatch-Waxman cases is representative.

Background on the Hatch-Waxman Patent Dispute Resolution Procedure

Hatch Waxman requires drug originators to list patents that cover newly approved drugs in a public ledger known as the "Orange Book."³⁹ This listing allows would-be generic manufacturers to take the existence of these patents into account when developing any proposed generic equivalents. Hatch-Waxman further provides that generic companies may freely develop and test potential generic equivalents, and conduct all other activities solely reasonably related to the development and submission of the information needed to gain approval of a generic equivalent drug, free from fear of being sued for infringement. This is because Hatch-Waxman provides an explicit infringement exemption for these activities.⁴⁰

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³⁷ Abbott, et al, at III(B)(3), "PTAB Petitions Filed to Manipulate Stock Prices of Patent Owners," found in "Crippling the Innovation Economy: Regulatory Overreach at the Patent Office," released by the Regulatory Transparency Project of the Federalist Society, August 14, 2017, available at https://regproject.org/paper/crippling-innovation-economy-regulatory-overreach-patent-office/#row1; See also Allen, Joseph, "It's Time to Whack 'IPR Trolls'," June 27, 2015, available at https://www.ipwatchdog.com/2015/06/22/its-time-to-whack-ipr-trolls/id=58902/38 Standing requirements preclude this behavior from extending to threats of invalidation in federal court actions, as the would-be reverse troll could not establish declaratory judgment jurisdiction to carry out such a threat.

³⁹ These originators have successfully filed a New Drug Application ("NDA") and are referred to as NDA holders or owners.

⁴⁰ See 35 U.S.C. § 271(e)(1). Before Hatch-Waxman, under the Federal Circuit's ruling in *Roche v Bolar*, 733 F.2d 858 (Fed. Cir. 1984), would-be generic manufacturers were subject to the same rules that apply to all other industries, and thus could be sued for infringement on account of these activities. With the passage of Hatch-Waxman, patent owners were no longer able to do so, as there was no longer a case or controversy that would support federal court jurisdiction.

On or after the first day four years after the original drug approval, would-be generics may file for an Abbreviated New Drug Application ("ANDA") to gain marketing approval for their generic product, and may rely on the originator's original clinical test results to establish the safety and efficacy of the proposed generic product. ⁴¹ At the time of ANDA filing, the ANDA applicant must also certify that all of the Orange Book listed patents for the drug are expired, that marketing of the generic product will not begin until they expire, or that, as reasonably explained in a so-called "Paragraph IV Certification," the patent is either "invalid or will not be infringed by the manufacture, use, or sale of the new drug for which the application is submitted." ⁴² At this point, if the patent owner disagrees with the Paragraph IV Certification, the patent owner must bring suit an infringement suit in federal district court within 45 days or forfeit an otherwise automatic 30-month regulatory stay of the marketing approval for the proposed generic drug. ⁴³ Such infringement suits are made possible because the act of filing the ANDA with such a certification is defined by Hatch-Waxman as a technical act of infringement sufficient to establish federal court jurisdiction. ⁴⁴

Once the patent owner files suit, the FDA is precluded from approving the ANDA application for marketing for up to 30 months, or until the district court renders a decision in favor of the defendant, whichever occurs earlier. This statutory scheme is intended to provide ample time to litigate and decide any patent issues without any need for the court to determine whether to issue a preliminary injunction. Nonetheless, if the 30-month period expires without any district court ruling, and if by then the FDA has otherwise found the ANDA application to be approvable, the ANDA applicant may immediately begin marketing the generic equivalent. Under these conditions, such a launch will be "at risk," as the ANDA applicant may owe the patent owner infringement damages if the patent owner ultimately prevails in the litigation.

To encourage companies to develop and market generics, Hatch-Waxman also awards first filer(s) of ANDA applications that contain Paragraph IV certifications to listed Orange Book patents with 180 days of exclusivity relative to any other generic equivalents approved as the result of later-filed ANDA applications.⁴⁷ This 180-day generic exclusivity period is very

⁴¹ See FFDC Act, Section 505(j)(5)(F)(ii) (providing that an ANDA may be submitted four years after approval of the reference listed drug if the ANDA includes a Paragraph IV certification); 21 CFR 314.9(a)(7).

⁴² FFDC Act, Section 505(b)(2)(A)(vii)(IV); 21 CFR § 314(12)(i)(A)(4).

⁴³ See FFDC Act, Section 505(j)(5)(B)(iii). If forfeited and the ANDA is otherwise approvable, the ANDA will be approved and the generic drug may be marketed immediately. Arguments suggesting that sovereign immunity might hold up generic drug introductions if sovereign patent owners don't file suit within 45 days are misplaced. To the contrary, 21 C.F.R. 314.107(b)(1)(i)(C) provides that the ANDA may be approved "[i]mmediately" if the applicant further certifies that "the 45-day period provided for in section 505(c)(3)(C) and (j)(5)(B)(iii) ...has expired." Suggestions that 35 U.S.C. 271(e)(5) authorizes declaratory judgment suits are also misplaced, as the jurisdiction referred to is expressly limited "to the extent consistent with the Constitution," which requires the existence of a case or controversy that is not normally present as the result of the mere expiration of the 45 day period.

⁴⁴ 35 U.S.C § 271(e)(2)(A).

⁴⁵ FFDC Act, § 505(j)(5)(B)(iii).

⁴⁶ FFDC Act, § 505(j)(5)(B)(iii).

⁴⁷ See FFDC Act, § 505(j)(5)(B)(iv); 21 CFR § 314.107(b)(1).

valuable to a first filer(s), as the first generic equivalent is usually priced much higher during this period than later when other generics enter the market.⁴⁸

No reasonable person can dispute the success of Hatch-Waxman in balancing the desire to facilitate the timely introduction of generic drugs against the need to continue to support the development of innovative new drugs by respecting the appropriate patent protections pertaining to them. The U.S. generic drug industry, which was in its infancy when Hatch-Waxman was passed in 1984, has flourished to the point that about 90% of all prescriptions now filled in the U.S. are for generic drugs, one of the highest generic market penetration rates among industrialized countries. At the same time, U.S.-based pharmaceutical companies, which created only 31% of the new drug molecules worldwide prior to Hatch-Waxman, now create more new drugs than the rest of the world combined (57%). Hatch-Waxman has done so by preserving sufficient incentives for innovators so that the investments needed to develop innovative new drugs could be made, leading to many dramatic new treatments and cures for an array of life threatening conditions.

IPR Disruption of the Hatch-Waxman Dispute Resolution Procedure

The Hatch-Waxman drug approval framework is now being disrupted by IPRs in four different respects, each of which is undermining the careful Hatch-Waxman balance Congress intended.

First, because there is no standing requirement, reverse trolls may target patents pertaining to new drug discoveries at any time, as for example once the originators have committed substantial sums to develop them, but still years before the drugs they cover ever reach the market. By doing so they may seek to extort large sums from the originating company, and/or require the company to defend its patents long before the full potential of the drugs they cover are known, and long before there is any controversy as to their infringement. At the very least, these activities will necessarily increase the cost of developing a drug, and at worst, may induce the drug developer to scrap its efforts. Particularly vulnerable to this type of reverse trolling are startups and smaller pharmaceutical companies who may not be able to sustain the time and expense of defending one or more IPRs. This form of Hatch-Waxman abuse is particularly troublesome if the petitioning party is a company having a competing drug in development or in the market which may benefit from the failure of a would-be competitor.

Second, because IPRs may be sought at any time, would-be ANDA applicants may "jump the gun," beginning an IPR challenge before the four-year time when they may first submit their ANDA application and Paragraph IV certification. In such a case, the generic is trying to have its cake and eat it too, because during that same time it is still able to utilize the patent information it gained from the originator's Orange Book listing, is still able to take advantage of

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⁴⁸ Olson and Wendling, "The Effect of Generic Drug Competition on Generic Drug Prices During the Hatch-Waxman 180-Day Exclusivity Period," FTC Working Paper No. 317, April, 2013, available at https://www.ftc.gov/sites/default/files/documents/reports/estimating-effect-entry-generic-drug-prices-using-hatch-waxman-exclusivity/wp317.pdf

⁴⁹ http://accessiblemeds.org/sites/default/files/2017-07/2017-AAM-Access-Savings-Report-2017-web2.pdf; accord, Generic Pharmaceutical Association, "Generic Drug Savings in the U.S. Report," 2015.

⁵⁰ Milken Institute Review, The Global Biomedical Industry: Preserving U.S. Leadership (2011), available at http://www.milkeninstitute.org/publications/view/476

the statutory exemption on otherwise infringing pre-filing activities, and is still able to rely on the originator's clinical safety and efficacy test data. In short, these abusers of Hatch-Waxman want the protections of Hatch Waxman without respecting the timing of its patent challenge period.

Third, and now most commonly, ANDA applicants are petitioning for IPRs as fallbacks in the event they lose the federal district court litigations in which they become involved after service of their Paragraph IV certifications. But because district courts are "on the clock" due to the 30-month stay of regulatory approval, ANDA cases are usually not stayed in favor of IPRs. Accordingly, these IPRs are relegated to "second bite" fallbacks having no other purpose than upsetting a favorable district court ruling on patent validity. They qualify as abuses of Hatch-Waxman because Hatch-Waxman did not strike the balance between generics and innovator rights with these "second bite" proceedings in mind. Permitting them jeopardizes the successful balance Hatch-Waxman has thus far achieved.

Fourth, and becoming more common, are would-be generic companies who are or will become late ANDA filers and who are seeking use IPRs to disrupt the 180-day generic exclusivity period by removing the patents forming the basis for that exclusivity.

But abuses of IPRs are not limited to the biopharmaceutical industry. They are injuring companies of all sizes, in all technologies and all industries, especially smaller entities.

Concurrent and/or Serial IPRs are Discouraging the Innovation Activities of Independent Inventors, Venture Capitalists, Start Ups, Small Businesses and Private Universities

IPRs, especially serial IPRs, are pricing other important participants in the innovation ecosystem out of the market. It is generally accepted that defending an IPR now costs between \$300,000 and \$700,000. This is lower than the expected cost of a patent litigation, which was Congress's expectation when it created IPRs with the idea that they could become a cheaper and faster alternative to litigation. What Congress did not expect was that the principal use of IPRs (accounting for about 80% of the IPR petitions filed) would be to augment ongoing litigation, thus adding to, not replacing, the cost of litigation. Nor did Congress expect that half of the petitions filed would be serial IPR petitions challenging the same patent, meaning that IPR costs could be at least double the original estimates, and that in cases of "gang tackle" IPRs they could easily exceed the cost of a district court litigation.

Very few independent inventors, venture capitalists, startups, small businesses or private universities have the wherewithal to finance patent litigation on their own. This is particularly true if they are working to develop, manufacture and market their newly-invented products. In the past these parties could rely on contingent fee representation to bring patent infringement litigation, with the expectation that their counsel would be paid from the ensuing proceeds. But since there is no chance of a monetary recovery in IPRs, contingent fee representation is generally not available, meaning that the expected costs of defense and low probability of success now force them either to give up, or to accept very disadvantageous settlements.

As seen from the above discussion, some patent owners now feel that the IPR system is so unfair to them that for enforcement purposes they need to avoid IPRs, if possible, by assigning their patents to sovereigns. But by so doing, these patent owners may be avoiding IPR challenges, but they are neither shielding their patents from validity challenges in the courts, nor from likely-available third-party-requested ex parte reexamination procedures. While sovereigns may secondarily benefit from these assignments, there is no well-founded policy argument that such practices accord sovereigns more dignity than they deserve, particularly because accused infringers are also ensured that they will have their day in court. The fact that IPRs are currently much more challenger friendly than these other alternatives is not a good enough reason to deprive sovereigns of their immunities.

Proposed Path Forward

What is at stake here is not just the fairness of the resolution of disputes between litigants, but the confidence of inventors and their investors in our patent system's promise that Congress will secure "for limited Times . . . to Inventors the exclusive Right to their...Discoveries." ⁵¹

While issues raised today involve a party (the Tribe) whose sovereignty is within the purview of the Congress, if Congress were to act to restrict Native American sovereignty, it would just be a matter of time before states acting through their agencies, whose sovereignties are Constitutional, would fill the gap. But more importantly, U.S. patent owners should not have to resort to assigning their patents to sovereigns to gain quiet title to them, to shield them from IPR trolling abuse, or to ensure that the other statutory frameworks Congress has established for testing their validities will not be disrupted. This situation can only be remedied by correcting the underlying problem – the unfairness of IPRs – not by enacting legislation that discriminates against one class of sovereigns – Native American Tribes.

I am not alone in my views about IPRs. ⁵² The current problems with IPRs are now widely recognized within the IP community, ⁵³ and proposed fixes have been suggested, most of which

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⁵¹ U.S. Constitution, Article I, Section 8.

⁵² See, "The America Invents Act on its Fifth Anniversary: A Promise Thus Far Only Partially Fulfilled," September 15, 2016, by Philip S Johnson, available at http://www.ipwatchdog.com/2016/09/15/aia-promise-partiallyfulfilled/id=72680/; "A Look Back at the Legislative Origin of IPRs," September 20, 2017, by Philip S Johnson, available at http://www.ipwatchdog.com/2017/09/20/look-back-legislative-origin-iprs/id=88075/ ⁵³ Slifer, Russell, "Weakened Patent System Causes U.S. to Slip as a Global Leader of IP Protection," August 4, 2017, available at http://thehill.com/blogs/congress-blog/judicial/345370-weakened-patent-system-causes-us-to-slipas-a-global-leader-of; Abbott, et al, at III(C), "Extensive Uncertainty for Patent Rights with Harmful Implications," "Crippling the Innovation Economy: Regulatory Overreach at the Patent Office," released by the Regulatory Transparency Project of the Federalist Society, August 14, 2017, available at https://regproject.org/paper/cripplinginnovation-economy-regulatory-overreach-patent-office/#row 1; Solomon, Neal, "The Problem of Inter-Partes Review (IPR), August 8, 2017 available at http://www.ipwatchdog.com/2017/08/08/problem-inter-partes-reviewipr/id=86287/; Abbott, Alden, "Constitutional and Economic Policy Problems Raised by Inter Partes Review (IPR) Suggest Congress Should Consider Acting," September 12, 2016, available at http://www.ipwatchdog.com/2016/09/12/constitutional-economic-policy-problems-raised-inter-partes-review-iprsuggest-congress-consider-acting/id=72673/; Solomon, Neal, "Patent Trial and Appeal Board Procedures for IPR Fail to Satisfy the Fifth Amendment," October 19, 2017, available at http://www.ipwatchdog.com/2017/10/19/ptabipr-fail-satisfy-fifth-amendment/id=89338/

are within the legislative purview of this Subcommittee.⁵⁴ The former Deputy Director of the USPTO, who was also a member of the PTAB, Russell Slifer, has suggested that IPRs be saved, but be substantially revised. Deputy Director Slifer proposes making eight significant changes to improve the IPR process to make "the system. . . fairer, afford patent owners more due process, and protect patent owners from harassment and hardship while still fulfilling the statutory mandate to provide an alternative forum for administrative resolution of validity challenges."⁵⁵ The Federalist Society's study of the subject similarly concludes with a non-exhaustive list of eight changes suggested to address "the overall problem of regulatory overreach."⁵⁶ More recently in supplemental testimony to this Subcommittee, former Chief Judge Paul Michel has suggested seven legislative changes needed to improve our patent system, the first of which is to "fix the PTAB system and reinstate confidence in the U.S. patent system" by implementing six important IPR reforms.⁵⁷ ⁵⁸

These and other proposals to fix PTAB proceedings, eliminate IPR trolling abuses, restore patent eligibility and enhance the quality, reliability and enforceability of U.S. patents merit this Subcommittee's close attention, and are a much better answer than fixes that will only perpetuate a system already in decline.

Legislative Attention is Urgently Needed

The recognition that the U.S. patent system is in decline, buttressed by the U.S. Chamber of Commerce's drop in its rank from 1st to 10th place because of the uncertainties being created by IPRs and recently narrowed patentable subject matter eligibility, is quickly eroding U.S. stakeholder confidence.⁵⁹ Even worse, it is emboldening foreign competitors to copy U.S. technology just as their home countries are strengthening their patent systems for likely use against U.S. originated imports.

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⁵⁴ Former USPTO Commissioner of Patents, Robert Stoll, has urged a "thoughtful review and assessment...[of] what needs to be done to improve the [IPR] system." Stoll, Robert, "A Review at Five Years of Inter Partes Review," September 12, 1917, available at http://www.ipwatchdog.com/2017/09/12/five-years-inter-partes-review/id=87424/

⁵⁵ See "How to Improve IPRs Without Tossing the Baby Out with the Bathwater," April 11, 1917, available at http://www.ipwatchdog.com/2017/04/11/how-to-improve-iprs/id=81946/

⁵⁶ Abbott, et al, at IV, "Possible Reforms to Consider That Address the PTAB's Regulatory Overreach," in "Crippling the Innovation Economy: Regulatory Overreach at the Patent Office," released by the Regulatory Transparency Project of the Federalist Society, August 14, 2017, available at https://regproject.org/paper/crippling-innovation-economy-regulatory-overreach-patent-office/#row1

⁵⁷ Supplemental Statement of Paul R. Michel, submitted to the House IP Subcommittee on September 12, 2017, available at https://innovationalliance.net/wp-content/uploads/2017/09/Supplemental-Statement-of-Paul-R-Michel-Sept-12-2017.pdf

⁵⁸ See also, Solomon, Neal, "Solutions for Inter Partes Review: Restoring patent rights and respect for the presumption of validity," August 10, 2017 available at http://www.ipwatchdog.com/2017/08/10/solutions-inter-partes-review-restoring-patent-rights-respect-presumption-validity/id=86680/

⁵⁹ U.S. Chamber of Commerce, "International IP Index for Patents, Related Rights and Limitations" Fifth Edition, (identifying as key areas of patent system weakness as "Patent opposition system [that] adds substantial costs and uncertainty" and "somewhat marrow interpretation of patentability of biotech and computer-related inventions capered with international standards," page 111, available at http://www.ipwatchdog.com/wp-content/uploads/2017/03/2017-US-10th-patents.png and http://www.theglobalipcenter.com/wp-content/uploads/2017/02/GIPC IP <

The benefit of a strong patent system in an advanced industrial society is its attraction of human and financial capital to creating innovations that improve productivity, raise the standard of living and/or gross domestic product and create well-paying new jobs. ⁶⁰ By contrast, in countries where copying is tolerated, if not openly condoned, prices may drop for a short time but market incentives to improve products are lessened and production often moves in search of the cheapest labor. This is why China (which no longer has the cheapest labor in its region) has evolved from wanting to be the place where products are made to wanting to be the place where new products are created. To accomplish this, the Chinese government has recognized that strong and enforceable patents are needed to achieve this conversion.

Time is of the essence, as it is not yet too late to reverse the outflow of venture capital and reinvigorate the innovators in this country to invest heavily in our futures based on the restoration of a patent system that has traditionally been the best in the world.

I thank you for this opportunity to appear to discuss these issues that are so important to our future prosperity and wellbeing. As always, I stand ready to help this Subcommittee, and look forward to doing so again in the future, should the occasion arise.

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⁶⁰ Lybecker, Kristina, "The Economic Case for Strong Protection for Intellectual Property," May 2, 2014, available at http://www.ipwatchdog.com/2014/05/02/the-economic-case-for-strong-protection-for-intellectual-property/id=49376/

Exhibit A Short Biography of Philip S Johnson

Phil Johnson is an advocate of sound IP public policy who currently works as an independent consultant and expert on intellectual property policy and strategy matters. Phil is also currently a member of the Board and Executive Committee of the Intellectual Property Owners Association ("IPO"), Steering Committee Member and Co-Chapter Editor of the Sedona Conference WG10 biopharmaceutical patent litigation project, and member of the board of the Monell Chemical Senses Center. On February 28, 2017, Phil retired as Senior Vice President - Intellectual Property Policy & Strategy of Johnson & Johnson – Law Department. Prior to April of 2014, he was Senior Vice President and Chief Intellectual Property Counsel of Johnson & Johnson, where he managed a worldwide group of about 270 IP professionals, of whom over 100 were patent and trademark attorneys.

Before joining Johnson & Johnson in 2000, Phil was a senior partner and co-chair of IP litigation at Woodcock Washburn in Philadelphia. During his 27 years in private practice, Phil counseled independent inventors, startups, universities and businesses of all sizes in all aspects of intellectual property law. His diverse practice pertained to advances in a wide variety of technologies, including pharmaceuticals, diagnostics, medical devices, consumer products, semi-conductor fabrication, automated manufacturing, materials and waste management. During his time in private practice, Phil served as trial counsel in countless IP disputes, including cases resolved by arbitration, bench trials, jury trials and appeals to the Federal Circuit Court of Appeals, many of which resulted in reported decisions.

During his tenure at Johnson & Johnson, Phil served terms on the Medical Device & Diagnostics and Pharmaceutical Group Operating Committees responsible for managing J&J's many businesses in these fields, while also serving on the senior management team responsible for J&J's legal organization, which has now grown to over 450 attorneys located in 70+ locations in 35+ countries.

Phil has previously served as the Chair of the Board of American Intellectual Property Law Education Foundation, as President of the Intellectual Property Owners Association, as President of INTERPAT, as President of the Association of Corporate Patent Counsel, as President of the Intellectual Property Owners Education Foundation, as co-founder and member of the Steering Committee of the Coalition for 21st Century Patent Reform, as Chair of PhRMA's IP Focus

Group and as Board Member of the American Intellectual Property Law Association.

Since 2005, Phil has periodically testified before both the House and Senate Judiciary Committees on proposed patent legislation, abusive patent practices, and patent law reform. Phil served as a member of Chief Judge Michel's Advisory Council on Patent Reform, and was recognized in the Congressional Record as a member of the Minority Whip Jon Kyle's "Kitchen Cabinet" for the America Invents Act ("AIA"). Thereafter, Phil served as IPO's representative on the ABA-AIPLA-IPO committee of six experts ("COSE") formed at Director Kappos' request to propose regulations to the USPTO for implementing the PGR-IPR post-grant proceedings created by the AIA.

Phil co-authored "Compensatory Damages Issues In Patent Infringement Cases, A Pocket Guide for Federal District Court Judges," and its 2017 edition, "Compensatory Damages Issues in Patent Infringement Cases," both published by the Federal Judicial Center, and has served that Center as a faculty member on its IP-related judicial education programming. Phil was featured in the Landslide Publication March/April 2013 issue. Phil also authored "The America Invents Act on Its Fifth Anniversary: A Promise Thus Far Only Partially Fulfilled," (9/15/2016) and "A Look Back at the Legislative Origin of IPRs" (9/19/2017), both published in IP Watchdog.

Phil's awards include the Woodcock Prize for Legal Excellence (1997); the New Jersey Intellectual Property Law Association's Jefferson Medal (2013); the Philadelphia Intellectual Property Association's Distinguished Intellectual Property Practitioner award (May, 2017), induction into the international IP Hall of Fame by the IP Hall of Fame Academy (June, 2017) and the Intellectual Property Owners Association "Carl B. Horton President's Distinguished Service Award" (September, 2017).

Phil received his Bachelor of Science degree, *cum laude* with distinction in biology from Bucknell University, and his J.D. degree from Harvard Law School.