

REINING IN ON IPR ESTOPPEL

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I. Introduction.....	187
II. What is an IPR?.....	189
III. Legal Standard and Statutory Interpretations of 35 U.S.C. § 315(e).....	193
A. “Grounds”	194
B. “Raised or Reasonably Could Have Raised”	195
C. Due Process.....	198
IV. Evolution of IPR Estoppel and Recent Developments.....	201
A. Shaw Industries.....	201
B. SAS Institute	204
1. Post-SAS Scope of Estoppel in District Courts	207
2. Post-SAS Scope of Estoppel at the PTAB	210
C. California Institute of Technology v. Broadcom Ltd.....	212
V. Evidence Subject to IPR Estoppel Under the Broadened Application.....	215
A. Estoppel’s Reach of Product and System Art	215

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B. Estoppel’s Reach of “Known or Used” Invalidity Defenses 221

C. Fragmenting of Petitions 222

VI. Consequences of a Broad Estoppel for IPRs 225

A. Word Count 226

B. Stipulation as a Prerequisite to Stay District Court Proceedings 227

C. PGR’s Broad Estoppel: A Precursor for IPR Estoppel 229

D. Broad Estoppel Negates the Cost-Saving Benefits of Avoiding a Merits Inquiry 230

VII. Legislative Response to IPR Estoppel 230

A. STRONGER Patents Act 231

B. The Restoring the America Invents Act (RAIA) 233

VIII. Response to Legislative Proposals and Considerations for IPR Estoppel’s Proper Scope 235

IX. Conclusion 239

I. INTRODUCTION

Inter partes review (“IPR”) estoppel bars a petitioner who has received a final written decision in an IPR proceeding by the Patent Trial and Appeals Board (“PTAB”) from later raising in a district court or International Trade Commission (“ITC”) proceedings any ground of invalidity that the petitioner raised or reasonably could have raised during that IPR.¹ In essence, the quid

¹ 35 U.S.C. § 315(e)(2).

pro quo of an IPR affords petitioners an expedited and economically advantageous patent validity proceeding in exchange for the foreclosing of certain patent validity challenges in district court.²

While there is little disagreement that IPR petitioners are estopped from raising in district court litigation the same invalidity grounds asserted in an IPR, estoppel's reach of grounds that a petitioner "reasonably could have raised" remains in flux.³ District courts have increasingly taken a broad approach to IPR estoppel, barring invalidity theories that a defendant-petitioner excluded, but reasonably could have raised in its IPR petition, even if such invalidity theories are beyond the scope of the subject matter that may be included in an IPR petition.⁴ Further, the Federal Circuit has recently affirmed this approach among district courts in *California Institute of Technology v. Broadcom Ltd.*⁵

This article seeks to determine the proper scope of IPR estoppel by examining the evolution of the doctrine, the modern expansion in district courts, and the practical impact on IPR parties involved in parallel district court or ITC proceedings. This article will analyze how courts determine whether a reference reasonably could have been raised in an IPR. Further, this article will discuss how district courts have extended estoppel to cover invalidity

² See *id.*

³ James Pawlowski, *The Expansion of IPR Estoppel—The Potential Win for Patent Owners*, JD SUPRA (Oct. 10, 2022), <https://www.jdsupra.com/legalnews/the-expansion-of-ipr-estoppel-potential-3830221/> [https://perma.cc/E68J-A4FN].

⁴ Brett Cooper & Kevin Schubert, *IPR Estoppel Increasingly Applies*, LAW360 (Feb. 22, 2019 2:59 PM) <https://www.mckoolsmith.com/assets/htmldocument/2019%2002%2025%20IPR%20Estoppel%20Increasingly%20Applies%20-%20Law360.pdf> [https://perma.cc/L7YN-GUXK].

⁵ *Cal. Inst. of Tech. v. Broadcom Ltd.*, 25 F.4th 976, 991 (Fed. Cir. 2022).

theories based on product and system prior art and the likely expansion into other non-patent and non-printed publication invalidity theories. This article will also discuss recent legislative proposals that respond to the uncertainty on the scope of IPR estoppel. Finally, this article will identify the problems with the current liberal application of IPR estoppel and suggest possible solutions for the proper scope of estoppel that balances policy concerns of efficiency and completeness.

II. WHAT IS AN IPR?

In 2011, following a static 60-year period of patent law, Congress adopted the America Invents Acts (“AIA”), which was designed to “establish a more efficient and streamlined patent system that [would] improve patent quality and limit unnecessary and counterproductive litigation costs.”⁶ The AIA created three methods for challenging patent validity: inter partes review (“IPR”), post-grant review (“PGR”), and covered business method review (“CBMR”).⁷ To adjudicate these proceedings, the AIA created the PTAB, an administrative body with authority to conduct derivation, IPR and PGR proceedings, review adverse patent application examination decisions, and review reexamination appeals.⁸

IPRs permit a petitioner to argue that a patent claim is invalid “only on a ground that could be raised under” 35 U.S.C. § 102 or § 103 “and only on the basis of prior art consisting of patents or printed publications.”⁹ An IPR

⁶ H.R. REP. NO. 112-98, pt. 1, at 40 (2011); *see also* Leahy-Smith America Invents Act, Pub. L. No. 112-29, §§ 6(a)–(b), 125 Stat. 283, 299–302 (Sept. 16, 2011).

⁷ Leahy-Smith America Invents Act §§ 6, 18.

⁸ Leahy-Smith America Invents Act § 7.

⁹ 35 U.S.C. § 311(b); *Milwaukee Elec. Tool Corp. v. Snap-On Inc.*, 271 F. Supp. 3d 990, 1030 (E.D. Wis. 2017) (noting that an IPR “can only be instituted on narrow grounds—anticipation and

begins when a party files a petition to institute an IPR proceeding before the PTAB, requesting to cancel at least one claim on the basis that it was unpatentable when it was issued.¹⁰ In the IPR petition, the petitioner must identify, within 14,000 words or less, each challenged claim and the grounds over which such claims are allegedly unpatentable.¹¹ The USPTO director will then make a final, non-appealable decision to institute or deny the IPR petition based on whether “there is a reasonable likelihood that the petitioner would prevail with respect to at least one of the claims challenged in the petition.”¹² If the IPR is instituted, the petitioner has the burden of proving, by a preponderance of the evidence, that the challenged claims are invalid.¹³ Within twelve months of instituting an IPR proceeding, a panel of three administrative judges issues a Final Written Decision (“FWD”) on the patentability of patent claims challenged by the petitioner.¹⁴

Pursuing an IPR comes at a price under 35 U.S.C. § 315, as the defendant-petitioner is estopped from raising any ground in litigation that they raised or reasonably could have raised in the IPR proceedings.¹⁵ Specifically, this prevents “[t]he petitioner in an inter partes review of a claim in a patent . . . that results in a final written decision” from asserting, in a civil action, “that the claim is invalid on any ground that the petitioner raised or reasonably could

obviousness on the basis of prior art consisting of patents or printed publications.”).

¹⁰ 35 U.S.C. §§ 311(a)–(b).

¹¹ 35 U.S.C. § 312(a)(3); 37 C.F.R. § 42.24(a)(1)(i) (2021).

¹² 35 U.S.C. §§ 314(a), (d).

¹³ 35 U.S.C. § 316(e).

¹⁴ 35 U.S.C. §§ 6(a)–(c), 318(a); 37 C.F.R. § 42.100(c) (2021).

¹⁵ *Am. Tech. Ceramics Corp. v. Presidio Components, Inc.*, No. 14-CV-06544, 2019 WL 365709, at *5 (E.D.N.Y. Jan. 30, 2019) (“When a party chooses to seek IPR, but only on certain grounds, that comes with consequences, notably the risk of estoppel under § 315(e)(2).”) (citations omitted).

have raised during that inter partes review.”¹⁶ However, if the IPR is not instituted, then there will be no final written decision and thus no estoppel.¹⁷ Therefore, any prior art that the petitioner could have raised in the IPR will be estopped if the PTAB’s FWD maintains the validity of the challenged claims.

In creating the IPR proceeding, Congress hoped to “create a timely, cost-effective alternative to litigation” and “establish a more efficient and streamlined patent system that [would] improve patent quality and limit unnecessary and counterproductive litigation costs.”¹⁸ The purpose of § 315(e)(2) estoppel is to prevent a defendant-petitioner from pursuing one round of invalidity at the PTAB and another in district court.¹⁹ Further, a defendant-petitioner can’t “get two bites at the [invalidity] apple” by contending

¹⁶ 35 U.S.C. § 315(e)(2).

¹⁷ *Finjan, Inc. v. Cisco Sys.*, No. 17-CV-00072-BLF, 2020 WL 532991, at *3 (N.D. Cal. Feb. 3, 2020) (declining to apply IPR estoppel where no final written decision was issued).

¹⁸ *Milwaukee Elec. Tool Corp. v. Snap-On Inc.*, 271 F. Supp. 3d 990, 1027 (E.D. Wis. 2017); *see also SAS Inst., Inc. v. ComplementSoft, L.L.C.*, 825 F.3d 1341, 1357 (Fed. Cir. 2016) (Newman, J., concurring in part and dissenting in part) (“The America Invents Act was designed—after a decade of hearings and revisions—to reduce the cost of patent litigation, to resolve major validity issues in an expert tribunal, and to put an end to repetitive challenges.”); *Microchip Tech. Inc. v. Aptiv Servs. U.S. L.L.C.*, No. 1:17-CV-01194-JDW, 2020 WL 4335519, at *1 (D. Del. July 28, 2020).

¹⁹ *SiOnyx, L.L.C. v. Hamamatsu Photonics K.K.*, 330 F. Supp. 3d 574, 599 (D. Mass. 2018) (“Congress included an estoppel provision in an attempt to avoid duplicative validity challenges before the PTAB and the district courts.”); *Parallel Networks Licensing, L.L.C. v. IBM Corp.*, No. 13-CV-2072 (KAJ), 2017 WL 1045912, at *12 (D. Del. Feb. 22, 2017) (“Allowing [the petitioner] to raise arguments here that it elected not to raise [before the PTAB] would give it a second bite at the apple and allow it to reap the benefits of the IPR without the downside of meaningful estoppel.”).

that it had a narrow understanding of the patent.²⁰ Otherwise, the petitioner would be incentivized to prudently take a narrow construction before the PTAB and preserve a more expansive view in district court.²¹ Therefore, IPR estoppel also functions as an equitable device to “prevent a litigant from withholding references at the IPR proceeding in order to use them in later litigation.”²²

Although the filing of IPRs has grown,²³ filing an IPR petition is not something that parties treat lightly because IPRs are expensive, the consequences of estoppel may outweigh the benefit, and the PTAB applies a lower standard to invalidate claims than the standard applied in district court.²⁴

²⁰ *GREE, Inc., v. Supercell Oy*, No. 2:19-CV-00071-JRG-RSP, 2020 WL 4999689, at *6 (E.D. Tex. July 9, 2020) (“Supercell will not get two bites at the apple just because it contends that it understood the patent more narrowly than GREE. Such a holding would provide the perverse incentive for a petitioner to take a purposefully narrow construction before the Board and, if unsuccessful, try again in district court when the patent holder takes a more expansive view.”).

²¹ *Id.*

²² *Palomar Techs., Inc. v. MRSI Sys., L.L.C.*, No. 18-10236-FDS, 2020 WL 2115625, at *4 (D. Mass. May 4, 2020) (citations omitted); *see also* *Intell. Ventures II L.L.C. v. Kemper Corp.*, No. 6:16-CV-0081, 2016 WL 7634422, at *3 (E.D. Tex. Nov. 7, 2016) (“The absence of a full statutory estoppel not only increases the ability of litigants to ‘game the system’ and devise an unfair second bite at the apple, it also has the potential to increase rather than reduce the complexity of the validity issues that may come before the Court.”).

²³ DAVID CAVANAUGH, JOSHUA STERN, MICHAEL SMITH & GREG ISRAELSEN, *CURRENT PTAB GUIDANCE ON MULTIPLE IPR PETITIONS 2* (2019), <https://www.wilmerhale.com/en/insights/publications/20190913-current-ptab-guidance-on-multiple-ipr-petitions> [https://perma.cc/3JVQ-LM5F].

²⁴ *Finjan, Inc. v. Cisco Sys.*, No. 17-CV-00072-BLF, 2020 WL 532991, at *2 (N.D. Cal. Feb. 3, 2020) (noting that “(1) IPRs are expensive, (2) there are serious estoppel considerations (i.e., if IPR is instituted and fails, the petitioner is statutorily estopped from asserting

III. LEGAL STANDARD AND STATUTORY INTERPRETATIONS OF 35 U.S.C. § 315(E)

Much of the uncertainty on the scope of IPR estoppel and the ultimate expansion of the doctrine have stemmed from disagreements on the statutory language of § 315(e).²⁵ The IPR estoppel statute is divided into two subsections: § 315(e)(1) estopping petitioners from repeated challenges at the Patent Office and § 315(e)(2) estopping petitioners from subsequently raising certain patent validity challenges in a parallel district court or ITC proceedings.²⁶ The full form of these subsections are as follows:

- (1) The petitioner in an inter partes review of a claim in a patent under this chapter that results in a final written decision under § 318(a), or the real party in interest or privy of the petitioner, may not request or maintain a proceeding before the Office with respect to that claim on any ground that the petitioner raised or reasonably could have raised during that inter partes review.
- (2) The petitioner in an inter partes review of a claim in a patent under this chapter that results in a final written decision under § 318(a), or the real party in interest or privy of the petitioner, may not assert either in a civil action arising in whole or in part under section 1338 of title 28 or in a proceeding before the International Trade Commission under section 337 of the Tariff Act of 1930 that the claim is invalid on any ground

in district court litigation, any ground that was raised or reasonably could have been raised during the IPR), and (3) the standard require to invalidate claims before the PTAB is lower than the standard in a district court litigation.”).

²⁵ See Christa Laser, *The Scope of IPR Estoppel: A Statutory, Historical, and Normative Analysis*, 70 FLA. L. REV. 1127, 1136–58 (2018).

²⁶ 35 U.S.C. § 315(e).

that the petitioner raised or reasonably could have raised during that inter partes review.²⁷

A. “Grounds”

35 U.S.C. § 312(a), which defines the requirements for an IPR petition, identifies as separate elements to be included in an IPR petition “the *grounds* on which the challenge to each claim is based, and the *evidence* that supports the grounds for the challenge to each claim.”²⁸ However, the § 315(e)(2) estoppel statute specifically mentions only “grounds.”²⁹ The term “ground” is not expressly defined in the Patent Act, creating divisions among courts on the true reach of the IPR estoppel statute.³⁰

Some courts have interpreted “ground” to mean “the basis or bases on which a petitioner challenges a claim.”³¹ Proscribing a narrower interpretation of “ground,” these courts would likely not estop a petitioner’s invalidity theory relying on prior art other than patents and printed publications, such as product or system prior art, because such references cannot be used to challenge the validity of a patent claim in an IPR.³² Other courts have

²⁷ 35 U.S.C. §§ 315(e)(1)-(2).

²⁸ 35 U.S.C. § 312(a) (emphasis added).

²⁹ 35 U.S.C. § 315(e)(2).

³⁰ 35 U.S.C. § 100 (defining certain terms without defining “ground”); Andrew Russell, *Judge Noreika Chooses a Side on IPR Estoppel: No Prior Art Products*, IP/DE (July 12, 2022), <https://ipde.com/blog/2022/07/12/judge-noreika-chooses-a-side-on-ipr-estoppel-no-e-stoppel-of-prior-art-products/> [<https://perma.cc/MLG2-7LNE>].

³¹ *Pavo Sols. L.L.C. v. Kingston Tech. Co.*, No. 8:14-CV-01352-JLS-KES, 2020 WL 1049911, at *2 (C.D. Cal. Feb. 18, 2020) (citation omitted).

³² *Medline Indus. v. C.R. Bard, Inc.*, No. 17 C 7216, 2020 U.S. Dist. LEXIS 167052, at *11 (N.D. Ill. Sept. 14, 2020) (noting that “any invalidity theory that relies upon a product as a prior art reference is not a ‘ground’ that reasonably could have been raised during the IPR.”).

compared the statutory use of both “evidence” and “ground” in § 312 with the sole use of “ground” in § 315(e)(2) to arrive at a broader reach of § 315(e)(2) estoppel.³³ These courts would be more likely to find non-IPR prior art, such as prior art systems, to be subject to estoppel because even if a piece of “evidence” was not available for IPR purposes, a petitioner may still be estopped from asserting IPR-rejected “grounds” that were based on different, but essentially the same, information carried in that “evidence.”³⁴ For example, these courts might estop a defendant (IPR petitioner) from raising system art if, during the IPR, the petitioner had raised or could have raised printed publications, such as a product manual, which revealed the relevant elements of the system art.

B. “Raised or Reasonably Could Have Raised”

Much of the controversy on the scope of estoppel stems from the “reasonably could have raised” language in the statute, which estops a defendant-petitioner from raising grounds in litigation that it could have—but did not—raise in its IPR petition.³⁵ A prior-art reference may be estopped under 35 U.S.C. § 315(e)(2) if (1) the IPR petitioner raised the reference in the IPR petition, which was instituted, and received a final written decision; (2) the IPR petitioner did not raise the reference in the petition, but “actually knew of the reference”; or (3) the IPR petitioner did not raise the

³³ See *Wasica Fin. GmbH v. Schrader Int’l, Inc.*, 432 F. Supp. 3d 448, 454 (D. Del. 2020) (quoting 35 U.S.C. § 312(a)(3)).

³⁴ *Id.*

³⁵ *SiOnyx, L.L.C. v. Hamamatsu Photonics K.K.*, 330 F. Supp. 3d 574, 602 (noting that “reasonably could have raised” refers to “grounds that were not actually in the IPR petition, but reasonably could have been included.”).

reference in the IPR petition, but “a skilled searcher conducting a diligent search reasonably could have been expected to discover the reference.”³⁶ The standard thus has a subjective prong—the petitioner’s actual knowledge of the reference—and an objective prong—whether a reasonable search would have located the reference.³⁷

As to the objective prong, the inquiry is not whether a reasonable search could have, or might have, discovered the disputed reference because a search scenario can easily be constructed to locate a reference with a relatively small number of steps, particularly with the benefit of hindsight.³⁸ Rather, the standard acknowledges that the relevant databases are huge, that the technologies are often complex, and that there are nearly infinite ways to construct a search.³⁹ The touchstone for the objective prong is reasonableness, not perfection, and the appropriate standard is one of probability, not possibility.⁴⁰ The inquiry is “whether it is more probable than not that a skilled searcher conducting a diligent search reasonably could have been expected to discover the disputed reference.”⁴¹ The analysis of the objective prong often proceeds by “(1) identify[ing] the search string and search source that would

³⁶ *Palomar Techs., Inc. v. MRSI Sys., L.L.C.*, No. 18-10236-FDS, 2020 WL 2115625, at *2–3 (D. Mass. May 4, 2020); *see also* *Wi-LAN Inc. v. LG Elecs., Inc.*, 421 F. Supp. 3d 911, 925–26 (S.D. Cal. 2019) (“Evidence that [petitioner-defendant] discovered these references through a prior art search is clear evidence that [petitioner-defendant] reasonably could have discovered these references through a diligent search.”).

³⁷ *Palomar Techs.*, 2020 WL 2115625, at *3.

³⁸ *Id.* at *3, *14 (“It stands to reason, therefore, that in hindsight there will almost always be a seemingly simply search pathway that could have led a searcher from the patent to the reference. But that cannot be the standard by which to judge a reasonable search.”).

³⁹ *Id.* at *3.

⁴⁰ *Id.*

⁴¹ *Id.*

identify the allegedly unavailable prior art, and (2) present[ing] evidence, likely expert testimony, why such a criterion would be part of a skilled researcher's diligent search."⁴² Thus, rather than tainting the analysis with hindsight, the inquiry must begin with what a reasonable diligent searcher should have been expected to do at the outset, such as selecting the proper place to begin the search and combining the keywords used.⁴³ Once the search is underway, this analysis should proceed by examining the searcher's judgments on the leads that were pursued and ignored as well as when the searcher concluded the search altogether.⁴⁴

As is often the case, an IPR petitioner may engage counsel to conduct all or part of the search.⁴⁵ Thus, the reasonableness of any prior-art search that was actually performed on behalf of the IPR petitioner will be relevant to both the subjective and objective prongs.⁴⁶ This inquiry sheds light on whether the actual search identified the reference (the subjective prong) and how the search was constructed and performed (the objective prong).⁴⁷ However, as a practical matter, the petitioner may be able to assert privilege to block any subsequent inquiry into the actual search, limiting the scope of the factual inquiry.⁴⁸

⁴² Clearlamp, L.L.C. v. LKQ Corp., No. 12 C 2533, 2016 WL 4734389, at *9 (N.D. Ill. Mar. 18, 2016).

⁴³ Palomar Techs., Inc. v. MRSI Sys., L.L.C., No. 18-10236-FDS, 2020 WL 2115625, at *14–15 (D. Mass. May 4, 2020).

⁴⁴ *See id.*

⁴⁵ Pedram Sameni, *Report: Almost One-Third of IPR Proceedings are Settled*, IPWATCHDOG (Sept. 11, 2021, 12:15 PM), <https://ipwatchdog.com/2021/09/11/report-almost-one-third-ipr-proceedings-settled/id=137459/#:~:text=However%2C%20during%20the%20second%20quarter,2021%2C%20and%20perhaps%20in%202022> [https://perma.cc/QD34-XSWH].

⁴⁶ *Palomar Techs.*, 2020 WL 2115625, at *4.

⁴⁷ *Id.*

⁴⁸ *Id.*

Some courts have declined to apply estoppel if the support for the invalidity theory comes from non-patent, non-printed publication, and non-public documents that could have been relied upon in the IPR.⁴⁹ A party seeking to characterize information as a printed publication “should produce sufficient proof of its dissemination or that it has otherwise been available and accessible to persons concerned with the art to which the document relates and thus most likely to avail themselves of its contents.”⁵⁰ Thus, petitioners seeking to rely on printed publications after a FWD should establish that an extensive, rather than a “reasonable,” search was necessary to uncover the printed reference, such as a foreign reference with no available English translation or a thesis in a library that was not properly indexed. In general, the more difficult the reference is to uncover, the greater the likelihood that the petitioner will not be estopped from relying on such reference.⁵¹

C. *Due Process*

The common law has two primary types of preclusion: *res judicata* (referred to as claim preclusion)

⁴⁹ *Ilife Techs., Inc. v. Nintendo of Am., Inc.*, No. 3:13-CV-4987, 2017 U.S. Dist. LEXIS 87769, at *20 (N.D. Tex. May 30, 2017) (“[A] petitioner could not have reasonably raised a combination of a prior art product with a patent or printed publication as a ground for invalidity before the PTAB”); *In re Lister*, 583 F.3d 1307, 1311–14 (Fed. Cir. 2009) (“In order to qualify as a printed publication within the meaning of § 102, a reference must have been sufficiently accessible to the public interested in the art.”) (citations omitted).

⁵⁰ *Philips Elec. & Pharm. Indus. Corp. v. Thermal & Elecs. Indus., Inc.*, 450 F.2d 1164, 1171 (3d Cir. 1971).

⁵¹ Zachary Ian Ruby, *Diligent and Skilled: The Changing Standard for IPR Estoppel*, IP LITIGATOR, May-June 2020, at 1, 1, <https://www.crowell.com/files/20200622-Diligent-and-Skilled-The-Changing-Standard-for-IPR-Estoppel.pdf> [<https://perma.cc/NTZ9-R9BJ>].

and estoppel (referred to as issue preclusion).⁵² Res judicata prevents the same party from litigating successive claims arising from the same circumstances.⁵³ Res judicata (claim preclusion) comprises two sub-doctrines: merger and bar.⁵⁴ Merger provides that when a plaintiff receives a favorable final judgment, “another action may not be maintained between the parties on the same ‘claim,’ and defenses that were raised or could have been raised in that action” because they are extinguished and merged into the final judgment.⁵⁵ Under the doctrine of bar, when a defendant receives a final favorable judgment, a plaintiff will be barred from raising another action encompassing the same claim.⁵⁶

⁵² 18 DANIEL R. COQUILLETTE ET AL., *MOORE’S FEDERAL PRACTICE: CIVIL* § 131.11 (3d ed. 2022). (citing Harv. L. Rev. Ass’n, *Developments in the Law—Res Judicata*, 65 HARV. L. REV. 818, 820–21 (1952)) (“The doctrine of claim preclusion has its origins in Roman civil law but has been part of English common law for almost nine centuries.”); Alexandra Bursak, *Preclusions*, 91 N.Y.U. L. REV. 1651, 1660–69 (2016) (noting the separate histories of res judicata arising under Roman law, and collateral estoppel arising under Anglo-Norman law).

⁵³ Bursak, *supra* note 52, at 1661–63 (“[T]he policy rationale offered in Roman treatises . . . reflects the private nature of res judicata.”).

⁵⁴ *Migra v. Warren City Sch. Dist. Bd. of Educ.*, 465 U.S. 75, 77 n.1 (1984) (“Claim preclusion therefore encompasses the law of merger and bar.”); RESTATEMENT (SECOND) OF JUDGMENTS, ch. 3, topic 2, tit. D, intro. note (AM. L. INST. 1982) (“Ordinarily, if the judgment was rendered for the plaintiff, the claim is held to be extinguished and merged in the judgment; if the judgment was rendered for the defendant, the claim is likewise held to be extinguished, and the judgment is a bar to the second action on the same claim.”).

⁵⁵ *Halloco Mfg. Co. v. Foster*, 256 F.3d 1290, 1294 (Fed. Cir. 2001) (“The general concept of claim preclusion is that when a final judgment is rendered on the merits, another action may not be maintained between the parties on the same ‘claim,’ and defenses that were raised or could have been raised in that action are extinguished.”).

⁵⁶ RESTATEMENT (SECOND) OF JUDGMENTS § 19 cmt. a (AM. L. INST. 1982) (“It is frequently said that a valid and final personal

Estoppel (issue preclusion) provides that “[w]hen an issue of fact or law is actually litigated and determined by a valid and final judgment, and the determination is essential to the judgment, the determination is conclusive in a subsequent action between the parties, whether on the same or a different claim.”⁵⁷ In 1971, the Supreme Court held that estoppel could be applied to any party that had a “full and fair opportunity to litigate” the currently disputed issue in a prior proceeding.⁵⁸ This “full and fair opportunity to litigate” arises from principles of procedural due process.⁵⁹ To subject a party to estoppel, due process requires the party to have had an opportunity to present the issue at a hearing,⁶⁰ before an impartial tribunal,⁶¹ with the opportunity to cross-examine witnesses,⁶² and a decision of record.⁶³ Under this background of common law preclusion, IPR estoppel should not apply unless a party has had a full and fair opportunity to litigate, in accordance with the principles of procedural due process.

judgment for the defendant will bar another action on the same claim only if the judgment is rendered ‘on the merits.’”)

⁵⁷ *Id.* § 27.

⁵⁸ *Blonder-Tongue Lab’ys, Inc. v. Univ. of Ill. Found.*, 402 U.S. 313, 329 (1971).

⁵⁹ 18 DANIEL R. COUILLETTE ET AL., *MOORE’S FEDERAL PRACTICE: CIVIL* § 132.04 (3d ed. 2022) (“A determination can have issue preclusive (or collateral estoppel) effect only if the proceeding in which it was made afforded the party against whom estoppel is asserted a hearing on that issue that comports with due process.”).

⁶⁰ *Id.*; see *Matthews v. Eldridge*, 424 U.S. 319, 333 (1976).

⁶¹ See *Goldberg v. Kelly*, 397 U.S. 254, 271 (1970).

⁶² *Id.* at 269 (“A party is entitled to present his case or defense by oral or documentary evidence, to submit rebuttal evidence, and to conduct such cross-examination as may be required for a full and true disclosure of facts.”).

⁶³ *Id.* at 271 (“[T]he decision maker should state the reasons for his determination and indicate the evidence he relied on . . .”).

IV. EVOLUTION OF IPR ESTOPPEL AND RECENT DEVELOPMENTS

The evolution of IPR estoppel can be analyzed under three classes: (1) petitioned, instituted; (2) petitioned, non-instituted; and (3) non-petitioned grounds.⁶⁴ There is little disagreement that IPR estoppel will attach to the first category—petitioned and instituted—because the statute clearly prevents the petitioner from asserting any ground “raised . . . during that IPR.”⁶⁵ The cases discussed in this Section will illuminate IPR estoppel’s application to the remaining two categories.

A. *Shaw Industries*

In the Federal Circuit’s 2016 decision in *Shaw Industries Group v. Automated Creel Sys.*, the court held that IPR estoppel was limited to invalidity grounds that the PTAB specifically addressed in its FWD.⁶⁶ Shaw defended against a patent infringement suit brought by Automated Creel Systems (“ACS”) by filing an IPR petition against the asserted patent.⁶⁷ The PTAB determined that some of the grounds raised in the petition were redundant and only partially instituted Shaw’s IPR petition.⁶⁸ After the PTAB invalidated only a portion of the challenged claims, Shaw sought a writ of mandamus, arguing that “because it

⁶⁴ Barbara Clarke McCurdy et al., *Where Are We Now? Are You Estopped or Not?*, FINNEGAN (Feb. 19, 2020) <https://www.finnegan.com/en/insights/blogs/at-the-ptab-blog/where-are-we-now-are-you-estopped-or-not.html> [<https://perma.cc/76WA-CAWG>].

⁶⁵ *Shaw Indus. Grp., Inc. v. Automated Creel Sys., Inc.*, 817 F.3d 1293, 1300 (Fed. Cir. 2016).

⁶⁶ *Id.* at 1296.

⁶⁷ *Id.*

⁶⁸ *Id.* at 1297 (citing *Shaw Indus. Grp., Inc. v. Automated Creel Sys., Inc.*, No. IPR2013-00132 (JTA), 2013 Pat. App. Filings LEXIS 1677, at *51 (P.T.A.B. July 25, 2013)).

brought the [redundant] ground in its petition and the PTO denied IPR [did not institute] on that ground, it may be estopped from arguing that [non-instituted redundant] ground in any future proceedings.”⁶⁹ In other words, Shaw would be estopped under § 315(e)(2) from raising the redundant ground in district court, even though the PTAB had declined to institute review of the redundant ground in Shaw’s IPR petition.⁷⁰

Agreeing with the USPTO’s opposing briefs,⁷¹ the Federal Circuit held that “Shaw did not raise—nor could it have reasonably raised—the [non-instituted] Payne-based ground *during* the IPR” because “IPR does not begin until it is instituted” and only arguments made after its institution are considered to have been made “during” that IPR.⁷² Thus, IPR estoppel did not bar the petitioner, Shaw, from raising the Payne-based ground in litigation because the court eliminated estoppel’s reach on petitioned, non-instituted grounds (category 2)—grounds that were raised in a petition but over which the PTAB declined institution.⁷³ Shortly thereafter, the Federal Circuit affirmed *Shaw* in *HP Inc. v. MPHJ Technology Investments L.L.C.*, holding that estoppel does not extend to petitioned, non-instituted grounds—those grounds raised by the

⁶⁹ *Id.* at 1299.

⁷⁰ *Id.* at 1299–1300 (noting “that because it brought the Payne-based ground in its petition and the PTO denied IPR on that ground, it may be estopped from arguing the ground in any future proceedings.”).

⁷¹ *Shaw Indus. Grp., Inc. v. Automated Creel Sys., Inc.*, 817 F.3d 1293, 1300 (Fed. Cir. 2016) (quoting Brief for Intervenor at 38, *Shaw Indus. Grp., Inc. v. Automated Creel Sys., Inc.*, 817 F.3d 1293 (Fed. Cir. 2016) (No. 15-1116)) (arguing that under § 315(e)(2), “the denied ground never became part of the IPR.”).

⁷² *Id.*

⁷³ *Id.* (holding that “[t]he plain language of the statute prohibits the application of estoppel under these circumstances.”).

petitioner but over which the PTAB denies institution.⁷⁴ Thus, following *Shaw* and *HP*, a petitioner was permitted to raise invalidity grounds in district court that had not been considered by the PTAB during the IPR proceeding.

Shaw represents a narrow view of § 315(e) estoppel. There is no dispute that grounds that were included in an IPR petition and instituted by the PTAB (category 1) are estopped in subsequent litigation if the IPR resulted in a FWD finding the challenged claims valid.⁷⁵ However, in the wake of *Shaw*, district courts were split over the scope of IPR estoppel to grounds that were petitioned, but not instituted (category 2), and grounds that were non-

⁷⁴ *HP Inc. v. MPHJ Tech. Invs. L.L.C.*, 817 F.3d 1339, 1347 (Fed. Cir. 2016) (“[T]he non[-]instituted grounds do not become a part of the IPR. Accordingly, the non[-]instituted grounds were not raised and, as review was denied, could not be raised in the IPR. Therefore, the estoppel provisions of § 315(e)(1) do not apply.”) (citations omitted).

⁷⁵ *Finjan, Inc. v. Blue Coat Sys., L.L.C.*, 283 F. Supp. 3d 839, 856 (N.D. Cal. 2017) (holding that “estoppel applies only to grounds that were both raised in the IPR petition and instituted in the IPR proceeding.”); *Verinata Health, Inc. v. Ariosa Diagnostics, Inc.*, No. 12-CV-05501-SI, 2017 WL 235048, at *2–3 (N.D. Cal. Jan. 19, 2017) (holding that “estoppel applies only to grounds raised, or that reasonably could have been raised, after institution of the IPR” because “limiting IPR estoppel to grounds actually instituted ensures that estoppel applies to those arguments, or potential arguments, that received (or reasonably could have received) proper judicial attention.”); *Koninklijke Phillips N.V. v. Wangs Alliance Corp.*, No. CV 14-12298 DJC, 2018 WL 283893, at *4 (D. Mass. Jan 2, 2018) (finding that “the broader reading of the estoppel provision [which would extend estoppel to claims that could have been but were not raised] is foreclosed by *Shaw*”); *Intell. Ventures I L.L.C. v. Toshiba Corp.*, 221 F. Supp. 3d 534, 553–54 (D. Del. 2016) (holding that *Shaw* precluded estoppel’s reach of prior art references that could have been, but were not, raised in an IPR petition, while acknowledging that such logic “confounds the very purpose of this parallel administrative proceeding”).

petitioned (category 3).⁷⁶ Although district courts continue to grapple with the proper treatment for categories two and three, the Supreme Court provided much needed clarity in *SAS Institute, Inc. v. Iancu*, which was decided two years after the Federal Circuit’s ruling in *Shaw*.

B. SAS Institute

In 2018, the U.S. Supreme Court in *SAS Institute, Inc. v. Iancu*, held that the PTAB must either issue a FWD on every issue raised in the IPR petition or deny review of the entire petition.⁷⁷ In *SAS Institute* (“SAS”), the PTAB instituted review on only some of the grounds raised in SAS’s IPR petition (also known as “partial institution”).⁷⁸ Interpreting 35 U.S.C. § 318(a), the Supreme Court removed the USPTO’s discretion to institute on only some of the petition.⁷⁹ Shortly thereafter, the USPTO issued

⁷⁶ *Oil-Dry Corp. of Am. v. Nestle Purina Petcare Co.*, No. 15-CV-1067, 2017 WL 3278915, at *8 (N.D. Ill. Aug. 2, 2017) (“If a party does not include an invalidity ground in its petition that it reasonably could have included, it necessarily has not raised a ground that it “reasonably could have raised during . . . IPR.”); *Milwaukee Elec. Tool Corp. v. Snap-On Inc.*, 271 F. Supp. 3d 990, 1028 (E.D. Wis. 2017) (holding that estoppel extends to non-petitioned grounds); *Cobalt Boats L.L.C. v. Sea Ray Boats, Inc.*, 254 F. Supp. 3d 836, 2017 WL 2605977, at *3 (E.D. Va. June 5, 2017) (holding that estoppel applies “to grounds that the petitioner . . . could have raised in the IPR petition” and reasoning that “[t]he court in *Shaw* was only making observations in dicta.”); *see also* *Great West Casualty Co. v. Intell. Prop. Ventures II L.L.C.*, No. IPR2016-01534, 2017 WL 11139840, at *6 (P.T.A.B. Feb. 15, 2017) (noting that when “a petitioner makes an affirmative choice to avail itself of inter partes review only on certain grounds . . . [t]hat choice . . . comes with consequences.”) (citations omitted).

⁷⁷ *SAS Inst., Inc. v. Iancu*, 138 S. Ct. 1348, 1354–56 (2018).

⁷⁸ *Id.* at 1354.

⁷⁹ *Id.* at 1353 (finding that 35 U.S.C. § 318(a) means the Board “must issue a final written decision with respect to the patentability of any patent claim challenged by the petitioner The agency cannot curate the claims at issue but must decide them all.”).

guidance on the impact of SAS, stating that “the PTAB will institute as to all claims or none. If the PTAB institutes a trial, the PTAB will institute on all challenges raised in the petition.”⁸⁰ While the SAS Court did not explicitly rule that the PTAB must institute review on every ground asserted in the petition, a few months later in *PGS Geophysical AS v. Iancu*, the Federal Circuit relied on SAS and the USPTO guidance to conclude that if an IPR is instituted, then all grounds raised in a petition must also now be instituted.⁸¹ Thus, SAS and its progeny eliminate the second category at issue in *Shaw*, where estoppel reaches grounds that are petitioned but not instituted because the PTAB no longer has authority to partially institute.⁸² Under SAS, the PTAB’s discretion is now limited to either completely institute or completely deny an IPR petition.

Although SAS left untouched the central tenant of *Shaw*, that “IPR does not begin until it is instituted,” both SAS and *PGS Geophysical* place greater significance on the IPR petition because institution is based on grounds raised

⁸⁰ *Guidance on the Impact of SAS on AIA Trial Proceedings*, U.S.P.T.O. (April 26, 2018), <https://www.uspto.gov/patents/ptab/trials/guidance-impact-sas-aia-trial> [<https://perma.cc/LZ9Y-DEMH>].

⁸¹ *PGS Geophysical AS v. Iancu*, 891 F.3d 1354, 1359 (Fed. Cir. 2018) (“In light of SAS, the PTO issued a ‘Guidance’ declaring that the Board will now institute on all claims and all grounds raised included in a petition if it institutes at all.”); *see also* *BioDelivery Scis. Int’l, Inc. v. Aquestive Therapeutics, Inc.*, 898 F.3d 1205, 1209 (Fed. Cir. 2018) (“We agree that SAS requires institution on all challenged claims and all challenged grounds.”) (citations omitted).

⁸² *Wi-LAN Inc. v. LG Elecs., Inc.*, 421 F. Supp. 3d 911, 923–24 (S.D. Cal. 2019) (“SAS rendered the circumstances by the Federal Circuit in *Shaw* a nullity. There can no longer be such a thing as a non-instituted ground”); *SiOnyx, L.L.C. v. Hamamatsu Photonics K.K.*, 330 F. Supp. 3d 574, 602 (D. Mass. 2018) (“Because the PTAB must now institute review (if at all) on all claims and grounds, there will be no such thing as a ground raised in the petition as to which review was not instituted.”).

in the petition as a whole rather than piecemeal challenges.⁸³ Because *SAS* categorically eliminated estoppel’s application to petitioned, non-instituted grounds (category 2), one would expect that the pool of prior art grounds that are subject to estoppel has expanded because now the PTAB must either institute or deny the entire petition. References among the partially denied (non-instituted) grounds of an IPR petition that were previously preserved for invalidity challenges in district court before *SAS* are now subject to estoppel. Further, because the FWD often does not opine on each ground instituted, “the scope of the [FWD] could be narrower than the petition.”⁸⁴ However, the reach of estoppel is based on the scope of the broader petition, not the narrower FWD, suggesting further expansion of the IPR estoppel. Thus, *SAS*’s elimination of partial institution has likely led to some grounds being deprived of due process.

SAS failed to address whether estoppel applies to petitioned grounds that the PTAB did not rely on in its FWD.⁸⁵ Further, in response to the elimination of partial institution, petitioners will likely resort to filing serial IPR petitions to ensure that each invalidity ground receives due process before subjecting such grounds to estoppel. However, *SAS* did not touch this emerging issue of whether

⁸³ *Asetek Danmark A/S v. Coolit Sys.*, No. 19-cv-00410-EMC, 2019 U.S. Dist. LEXIS 225134, at *17 (N.D. Cal. Dec. 30, 2019).

⁸⁴ Brent Batzer, *IPR Estoppel—A Truly Double-Edged Sword*, UPADHYE TANG LLP (Sept. 8, 2021, 12:00 PM), <https://ipfdalaw.com/ipr-estoppel-a-truly-double-edged-sword/> [<https://perma.cc/F697-WKQT>].

⁸⁵ See Jennifer Esch, Paula Miller, Stacy Lewis & Tom Irving, *Petitioner Estoppel from Patent Trial and Appeal Board Proceedings after SAS Institute Inc. v. Iancu*, 18 CHI.-KENT J. INTELL. PROP. 10, 19–20 (2019) (noting that “[i]f the PTAB is permitted to treat some challenges as moot in drafting FWDs that find the patent unpatentable on other grounds . . . [d]istrict courts might then disagree as to whether . . . estoppel applies.”).

estoppel captures invalidity challenges contained in serial petitions filed in conjunction with or subsequent to an initially filed petition.⁸⁶ Finally, SAS did not address or provide any clarity on issues of whether non-petitioned grounds (category 3) are subject to estoppel.⁸⁷

1. Post-SAS Scope of Estoppel in District Courts

Before the Supreme Court issued its 2018 decision in SAS, district courts were split on whether IPR estoppel should either apply (1) broadly to non-petitioned grounds (category 3) which the petitioner “reasonably could have raised,” or (2) narrowly to only those grounds that the PTAB instituted, thereby preserving the petitioner’s withheld grounds for use in subsequent proceedings.⁸⁸ Courts subscribing to the narrower approach reasoned that the holding in *Shaw*—that an IPR did not “begin” until it was instituted—prevented estoppel’s reach of non-petitioned grounds because they could not reasonably have been raised “during that inter partes review.”⁸⁹

This line of reasoning was vitiated with the elimination of the PTAB’s discretion in SAS. Following SAS, district courts relied on three key considerations to apply IPR estoppel more expansively, concluding that the narrower application “cannot be correct”⁹⁰ because non-

⁸⁶ See Matt Johnson et al., *All or Nothing: Why the Supreme Court SAS Mandate Does Not Eliminate the Shaw Safe Harbor*, 18 CHI.-KENT J. INTELL. PROP. 33, 35–36 (2019).

⁸⁷ See *id.*

⁸⁸ See Andrew V. Moshirnia, *I Fought the Shaw: A Game Theory Framework and Approach to the District Courts’ Struggle With IPR Estoppel*, 17 CHI.-KENT J. INTELL. PROP. 411, 414–17 (2018).

⁸⁹ See *Intell. Ventures I L.L.C. v. Toshiba Corp.*, 221 F. Supp. 3d 534, 553 (D. Del. 2016) (finding that non-instituted grounds are not estopped, based on the reading of § 315(e) in *Shaw*).

⁹⁰ *Palomar Techs., Inc. v. MRSI Sys., L.L.C.*, 373 F. Supp. 3d 322, 331 (D. Mass. 2019).

petitioned grounds must be estopped under the “reasonably could have raised” language of § 315(e)(2).⁹¹ First, the “reasonably could have raised” language of § 315 would be meaningless if non-petitioned grounds were not subject to estoppel.⁹² Second, immunizing non-petitioned grounds against estoppel would negate the efficiency-promoting purpose underlying the statute and encourage petitioners to preserve invalidity arguments “for a second bite at the invalidity apple once in the district court.”⁹³ Third, the

⁹¹ *Asetek Danmark A/S v. Coolit Sys.*, No. 19-cv-00410-EMC, 2019 U.S. Dist. LEXIS 225134, at *18 (N.D. Cal. Dec. 30, 2019) (noting that all of the district courts “that have considered the question of whether non-petitioned grounds are estopped under the ‘reasonably could have raised’ language of § 315(e)(2) in the aftermath of *SAS* and *PGS Geophysical* have ruled that estoppel applies to non-petitioned grounds.”); *Am. Tech. Ceramics Corp. v. Presidio Components, Inc.*, No. 14-CV-6544(KAM)(GRB), 2019 WL 365709, at *4 (E.D.N.Y. Jan. 30, 2019).

⁹² *SiOnyx, LLC v. Hamamatsu Photonics K.K.*, 330 F. Supp. 3d 574, 602 (D. Mass. 2018) (noting that after *SAS* “for the words ‘reasonably could have raised’ to have any meaning at all, they must refer to grounds that were not actually in the IPR petition, but reasonably could have been included.”); *GREE, INC., v. Supercell Oy*, No. 219-cv-00071-JRG-RSP, 2019 WL 5677511, at *4 (E.D. Tex. Oct. 30, 2019) (“A looser interpretation would allow, if not encourage, petitioners to hold back invalidity grounds from a PTAB review to avoid estoppel, in direct contradiction to the statute and the policy behind it.”); *Palomar Techs.*, 373 F. Supp. 3d at 330 (finding non-petitioned grounds outside the scope of IPR estoppel “would ‘reward gamesmanship,’ rather than advancing the goals of the IPR process.”).

⁹³ *Cal. Inst. of Tech. v. Broadcom Ltd.*, No. CV 16-3714 GW (AGRX), 2018 WL 7456042, at *6 (C.D. Cal. Dec. 28, 2018) (“In order for IPR to fulfill its mission of streamlining patent litigation in the district courts and promoting efficient dispute resolution, a petitioner cannot be left with the option to institute a few grounds for IPR while holding some others in reserve for a second bite at the invalidity apple once in the district court.”); *Trs. of Colum. Univ. v. Symantec Corp.*, 390 F. Supp. 3d 665, 680 (E.D. Va. 2019) (“[A] more ‘efficient’ patent litigation process flows from . . . interpreting § 315(e)(2) estoppel to

fairness and due process concerns at stake in petitioned, non-instituted grounds (partial instituted category 2), where the petitioner has not had a full hearing on the merits of its invalidity contentions, are distinguishable from concerns at stake in non-petitioned grounds because such concerns arise when the petitioner fails to assert a ground it could have asserted in its petition.⁹⁴ Further, as one court noted, limiting estoppel to grounds both petitioned and instituted would define estoppel out of existence, applying only in the “virtually nonexistent situation” where “a petitioner raises a ground in a petition, the PTAB institutes [inter partes review] on that ground, the petitioner abruptly changes course and fails to pursue that ground before the PTAB post-institution, and then . . . seeks to raise that invalidity ground in federal court.”⁹⁵

In the wake of *SAS Institute*, district courts have nearly unanimously adopted the broader view of IPR estoppel and limited *Shaw* to the (now no longer existing) partially instituted situations.⁹⁶ For example, in *Pavo*

apply to non-petitioned grounds that entities such as Symantec chose to omit.”).

⁹⁴ *Am. Tech. Ceramics Corp.*, 2019 WL 365709, at *5 (quoting *Milwaukee Elec. Tool Corp. v. Snap-On Inc.*, 271 F. Supp. 3d 990, 1029 (E.D. Wis. 2017)) (“[A] petitioner who raises grounds that are not instituted, ‘to no faults of its own,’ has not had a full hearing on the merits of its invalidity contentions Conversely, a petitioner that chooses not to raise certain invalidity grounds in its IPR only has itself to blame.”); *Trs. of Colum. Univ.*, 390 F. Supp. 3d at 680–81 (“fairness does not preclude the Court’s holding—it compels it.”).

⁹⁵ *Trs. of Colum. Univ.*, 390 F. Supp. 3d at 677, 677 n.23 (citing *Oil-Dry Corp. of Am. v. Nestle Purina Petcare Co.*, No. 15-CV-1067, 2017 WL 3278915, at *8 (N.D. Ill. Aug. 2, 2017)).

⁹⁶ Anthony Blum, *IPR Estoppel: The Federal Circuit Finally Speaks, and Affirms the Broader Interpretation for Estoppel*, THOMPSON COBURN, LLP (Feb. 23, 2022), <https://www.thompsoncoburn.com/insights/publications/item/2022-02-10/ipr-estoppel-the-federal-circuit-finally-speaks-and-affirms-the-broader-interpretation-for-estoppel> [<https://perma.cc/WBE3-BP3X>].

Solutions v. Kingston Technology Co., the court rejected a narrow application of IPR estoppel, reasoning that “reasonably could have raised” would be superfluous if it did not account for grounds that were not actually in the IPR petition, but reasonably could have been included.⁹⁷ The court reasoned that § 315(e)(2) must capture those grounds of which the petitioner was aware and merely elected not to incorporate into its IPR petition because the IPR policy goals of streamlining litigation and promoting efficient dispute resolution would otherwise be vitiated by permitting the petitioner to hold other grounds in reserve for a second invalidity attempt once in district court.⁹⁸ Further, as the U.S. Southern District of California explained in 2019, “every post-SAS district court decision the Court has found addressing IPR estoppel and *Shaw* has rejected the contention that IPR estoppel does not apply to non-petitioned grounds.”⁹⁹

2. Post-SAS Scope of Estoppel at the PTAB

With respect to non-petitioned grounds that the petitioner failed to include in its petition, the PTAB has also taken a broad approach, applying estoppel to any grounds that the petitioner reasonably could have identified through a diligent search and included in its IPR petition.¹⁰⁰

⁹⁷ *Pavo Sols. L.L.C. v. Kingston Tech. Co.*, No. 8:14-cv-01352-JLS-KES, 2020 WL 1049911, at *3 (C.D. Cal. Feb. 18, 2020) (quoting *SiOnyx, L.L.C. v. Hamamatsu Photonics K.K.*, 330 F. Supp. 3d 574, 602 (D. Mass. 2018)).

⁹⁸ *Id.* at *3.

⁹⁹ *Wi-LAN Inc. v. LG Elecs., Inc.*, 421 F. Supp. 3d 911, 924 (S.D. Cal. 2019).

¹⁰⁰ *See, e.g.*, *Apotex Inc. v. Wyeth L.L.C.*, No. IPR2015-00873 (P.T.A.B. Sept. 16, 2015); *Johns Manville Corp. v. Knauf Insulation Inc.*, No. IPR2016-00130 (P.T.A.B. May 8, 2017); *Great W. Cas. Co. v. Intell. Ventures II L.L.C.*, No. IPR2016-01534 (P.T.A.B. Feb. 15, 2017); *Ford Motor Co. v. Paice L.L.C.*, No. IPR2015-00722 (P.T.A.B.

In assessing whether the petitioner could have raised a ground in its petition, the PTAB considers prior art references cited during prosecution or grounds that the petitioner previously cited in earlier proceedings.¹⁰¹

In *SK Hynix Inc. v. Netlist, Inc.*, the petitioner initially filed two IPR petitions on December 22, 2017, and subsequently filed two additional petitions five days later on, December 27, 2017.¹⁰² After instituting each of the four petitions, the PTAB consolidated the two initially filed petitions into a single IPR proceeding and consolidated the remaining two petitions into a separate IPR proceeding.¹⁰³ Before the second IPR proceeding was complete, the PTAB issued a final written decision on the first IPR, and subsequently determined that the petitioner was “estopped from maintaining the [second] IPR under subsection 315(e)(1).”¹⁰⁴ In response to petitioner’s argument that the IPR petition page limit requirement prevented the filing of a single petition, the PTAB responded:

Whether Petitioner was able to fit all grounds in one petition is not relevant as long as they could have been raised in one or more additional petitions filed on the same day. That is, Petitioner could have filed contemporaneously multiple petitions to argue persuasively additional grounds that it determined could not be effectively argued within the word limit of the first petition.¹⁰⁵

Sept. 26, 2016); *Praxair Distrib., Inc. v. INO Therapeutics L.L.C.*, No. IPR2016-00781 (P.T.A.B. Aug. 25, 2016).

¹⁰¹ *Ford Motor Co. v. Paice*, No. IPR2015-00722 (P.T.A.B. Sept. 26, 2016).

¹⁰² *SK Hynix Inc. v. Netlist, Inc.*, No. IPR2018-00364 (P.T.A.B. Aug. 5, 2019).

¹⁰³ *Id.* at 2–3.

¹⁰⁴ *Id.* at 10.

¹⁰⁵ *Id.* at 9–10.

Thus, the petitioner’s failure to file all four IPR petitions on the same day led the subsequently filed petitions to be estopped under § 315(e)(1).¹⁰⁶ Just as district courts have expanded estoppel’s reach following *SAS*, the PTAB is also applying estoppel more aggressively.

C. *California Institute of Technology v. Broadcom Ltd.*

On February 4, 2022, the *Shaw* decision of 2016 was expressly overruled when the Federal Circuit, in *California Institute of Technology v. Broadcom Ltd.*, held that petitioners are estopped from asserting invalidity grounds in district court that they reasonably could have raised in the IPR petition.¹⁰⁷ In *California Institute*, the defendant-petitioners, Apple and Broadcom, brought invalidity challenges in district court based on grounds that were not addressed in the prior IPR decisions (category 3).¹⁰⁸ The U.S. Central District of California held that estoppel barred these invalidity challenges because the defendant-petitioners “were aware of the prior art references at the time they filed their IPR petitions and reasonably could have raised them in those petitions even if they could not have been raised in the proceedings post-institution.”¹⁰⁹

The Federal Circuit affirmed the District Court’s decision, reasoning that “[g]iven the statutory interpretation in *SAS*, any ground that could have been raised in a petition is a ground that could have been reasonably raised ‘during

¹⁰⁶ *Id.* at 10.

¹⁰⁷ *Cal. Inst. of Tech. v. Broadcom Ltd.*, 25 F.4th 976, 991 (Fed. Cir. 2022).

¹⁰⁸ *Id.* at 982–83.

¹⁰⁹ *Id.*

inter partes review.”¹¹⁰ The Federal Circuit also expressly overruled *Shaw*:

To be sure, SAS did not explicitly overrule *Shaw* or address the scope of statutory estoppel under § 315(e)(2). But the reasoning of *Shaw* rests on the assumption that the Board need not institute on all grounds, an assumption that SAS rejected . . . Accordingly, we take this opportunity to overrule *Shaw* and clarify that estoppel applies *not just to claims and grounds asserted* in the petition and instituted for consideration by the Board, *but to all claims and grounds* not in the IPR but which reasonably could have been included in the petition.¹¹¹

After recognizing that the decision suggested that estoppel would apply to *claims* that reasonably could have been challenged in the petition, the Federal Circuit issued a February 22 errata opinion, clarifying that estoppel did not extend to all claims that reasonably could have been raised in the IPR, but merely to “all grounds not stated in the petition but which reasonably could have been asserted against the claims included.”¹¹² Thus, while estoppel will attach to all “grounds” that reasonably could have been raised, estoppel will not extend to all claims that reasonably could have been challenged in an IPR.¹¹³

While the Post-SAS *Institute* trend was to adopt the broader view of IPR estoppel, some ambiguity remained because *Shaw* had not been expressly overruled and non-petitioned grounds (category 3) were untouched by SAS.¹¹⁴

¹¹⁰ *Id.* at 990–91.

¹¹¹ *Id.* at 991 (emphasis added).

¹¹² *Cal. Inst. of Tech. v. Broadcom Ltd.*, Nos. 2020-2222, 2021-1527, errata op. at 1–2 (Fed. Cir. Feb. 22, 2022).

¹¹³ *Id.*

¹¹⁴ *Cal. Inst. of Tech. v. Broadcom Ltd.*, 25 F.4th 976, 991 (Fed. Cir. 2022).

However, the Federal Circuit, in *California Institute*, has finally put to rest any narrower interpretations of IPR estoppel. As such, the Federal Circuit’s *California Institute* decision resolves any lingering doubts on the “reasonably could have raised” standard for IPR estoppel. This language of § 315(e)(2) is no longer limited to those grounds that the PTAB received notice of in an IPR petition or chose to institute. Rather, it subjects to estoppel any prior art that the petitioner actually raised in an IPR petition (petitioned, instituted) or that reasonably could have been raised in the petition (non-petitioned).¹¹⁵

California Institute’s overruling of *Shaw*’s narrower interpretation of “reasonably could have raised” has expanded the bounds of IPR estoppel by eliminating much of the ambiguity on non-petitioned grounds (category 3). Under *California Institute*, the absence of a ground in an IPR petition has no bearing on whether that ground will be subject to estoppel.¹¹⁶ Thus, because *California Institute* subjects all non-petitioned grounds to estoppel, post-*California Institute* petitioners will find it difficult to hold back additional grounds for district court litigation.

However, because *California Institute* decision left unresolved what constitutes a “ground,”¹¹⁷ post-*California Institute* litigation will center on defining “grounds” and establishing the criteria for when such non-petitioned grounds “reasonably could have been raised.”

¹¹⁵ *Cal. Inst. of Tech.*, Nos. 2020-2222, 2021-1527, errata op. at 1–2

¹¹⁶ *Cal. Inst. of Tech.*, 25 F.4th at 991.

¹¹⁷ *See id.* at 989–91.

V. EVIDENCE SUBJECT TO IPR ESTOPPEL UNDER THE BROADENED APPLICATION

A. *Estoppel's Reach of Product and System Art*

Invalidity theories based on product or system prior art often rely on user guides or manuals, which a court may deem a printed publication that could have been raised in an IPR and thus subject to estoppel.¹¹⁸ 35 U.S.C. § 311 explicitly restricts a petitioner's invalidity challenges to anticipation and obviousness on "the basis of prior art consisting of patents and printed publications."¹¹⁹ Therefore, because physical devices, products, or systems prior art are beyond the statutory reach of allowable IPR subject matter, § 311 does not literally estop a defendant-petitioner from relying on physical prior art, whether standing alone or in combination with a printed reference.¹²⁰ However, "the contours of IPR estoppel are

¹¹⁸ Cisco Sys., Inc. v. Centripetal Networks, Inc., IPR2018-01436, at 25, January 23, 2020 (citing Samsung Elecs. Co. v. Infobridge Pte. Ltd. 1363, 1369) (Fed. Cir. 2019)); Matthew Kreeger & Michael Guo, *8 Ways to Avoid Inter Partes Review Estoppel*, MOFO IP QUARTERLY, May 2017, at 1, 3, <https://media2.mofo.com/documents/171023-mofo-ip-newsletter.pdf> [<https://perma.cc/RBB4-D8AH>].

¹¹⁹ 35 U.S.C. § 311(b); see Vaporstream, Inc. v. Snap Inc., No. 2:17-cv-00220-MLH (KSx), 2020 U.S. Dist. LEXIS 5642, at *63 (C.D. Cal. Jan. 13, 2020) ("§ 102 and § 103 invalidity grounds that are based on non-patent/non-printed publication references, such as 'known or used by others' references under pre-AIA § 102(a) or 'in public use or on sale' references under pre-AIA § 102(a), cannot be raised in IPR proceedings.").

¹²⁰ Intell. Prop. Ventures II LLC v. Kemper Corp., No. 6:16-cv-0081, 2016 WL 7634422, at *3 (E.D. Tex. Nov. 7, 2016) ("Petitioners may use only patents or printed publications in IPR proceedings. Therefore, regardless of any estoppel, defendants have considerable latitude in using prior art systems (for example, software) embodying the same patents or printed publications placed before the PTO in IPR proceedings."); Microchip Tech. Inc. v. Aptiv Servs. U.S.

hard to define,”¹²¹ “particularly in circumstances where prior art theories in litigation supposedly involve prior art that is not a patent or printed publication.”¹²² Like minds may disagree whether an invalidity ground falls within the realm of a prior art patent or printed publication theory of invalidity (subject to IPR estoppel) or into the realm of an invalidity theory that is not subject to estoppel (such as a presentation at a conference or a physical product) because printed publications are often implicated in proving these alternative invalidity theories.¹²³ Neither the Supreme Court nor Federal Circuit have provided guidance on this issue, causing division and various conclusions among district courts.¹²⁴ As the boundaries of IPR estoppel

L.L.C., No. 1:17-cv-01194-JDW, 2020 WL 4335519, at *4 (D. Del. July 28, 2020) (“If [defendant-petitioner] wanted to bring up written prior art, it had to do so in the IPR proceeding that it initiated However, nothing estops [defendant-petitioner] from raising invalidity arguments based on a combination of written and physical references.”).

¹²¹ *Milwaukee Elec. Tool Corp. v. Snap-On Inc.*, No. 140-CV-1296-JPS, 2017 WL 4570787, at *5 (E.D. Wis. Oct. 12, 2017).

¹²² *SPEX Techs. Inc. v. Kingston Tech. Corp.*, No. SACV 16-01790 JVS (AGRx), 2020 WL 4342254, at *14 (C.D. Cal. June 16, 2020) (“District courts considering these statutory provisions have thus grappled with the appropriate scope of IPR estoppel, particularly in circumstances where prior art theories in litigation supposedly involve prior art that is not a patent or printed publication.”).

¹²³ See Sasha Vujcic & Stephen B. Maebius, *District Court Sheds Light on Scope of IPR Estoppel*, FOLEY & LARDNER (Sept. 12, 2019), <https://www.foley.com/en/insights/publications/2019/09/district-court-sheds-light-ipr-estoppel> [<https://perma.cc/EL84-JJQQ>] (“One area of estoppel arising from an unsuccessful AIA petition that remains poorly understood relates to prior art that is described both in a printed publication or patent and also was in use by others, such as to create prior use, prior sale, or other non-printed types of prior art.”)

¹²⁴ *Wasica Fin. GmbH v. Schrader Int’l, Inc.*, 432 F. Supp. 3d 448, 454, n.6 (D. Del. 2020), *appeal dismissed*, No. 2020-2124, 2020 WL 8374870 (Fed. Cir. Sept. 24, 2020) (noting “the division among District Courts that have considered” these issues).

expand, petitioners should explicitly distinguish patent and printed publication prior art theories pursued at the PTAB from product and system prior art theories, which are unavailable for IPR at the PTAB, to insulate the latter from IPR estoppel in litigation.

Although invalidity theories based on product or system prior art are beyond the statutory scope of an IPR, IPR estoppel may pose a hindrance to a petitioner’s method of raising product or system-based invalidity theories in district court. For instance, some district courts have upheld § 315(e)(2) estoppel if the IPR petitioner is cloaking its prior art grounds to “skirt” estoppel by “simply swapping labels for what is otherwise a patent or printed publication invalidity ground.”¹²⁵ These courts would estop

¹²⁵ See, e.g., *Cal. Inst. of Tech. v. Broadcom Ltd.*, No. 16-CV-3714-GW(AGRX), 2019 WL 8192255, at *7 (C.D. Cal. Aug. 9, 2019) (holding that IPR estoppel applies in litigation to “a patent challenge [that] is simply swapping label estoppel.”); *Milwaukee Elec. Tool Corp.*, 271 F. Supp. 3d at 1032 (“To the extent these written materials fall within the scope of Section 311(b), they are of course affected by IPR estoppel. Snap-On cannot skirt it by purporting to rely on a device without actually relying on the device itself.”); *Oil-Dri Corp. of Am. v. Nestlé Purina Petcare Co.*, No. 15-CV-1067, 2019 WL 861394, at *10 (N.D. Ill., Feb. 22, 2019) (“Where there is evidence that a petitioner had reasonable access to printed publications corresponding to or describing a product that it could have proffered during the IPR process, it cannot avoid estoppel simply by pointing to its finished product (rather than the printed materials) during litigation.”); *Biscotti Inc. v. Microsoft Corp.*, No. 2:13-CV-01015-JRG-RSP, 2017 WL 2526231, at *8 (E.D. Tex. May 11, 2017) (“If, however, Microsoft’s purported system prior art relies on . . . patents or printed publications that Microsoft would otherwise be estopped from pursuing at trial, e.g. patents or printed publications that a ‘skilled searcher conducting a diligent search reasonably could have been expected to discover,’ then Microsoft should be estopped from presenting those patents and printed publication”); *Clearlamp, L.L.C. v. LKQ Corp.*, No. 12 C 2533, 2016 WL 4734389, at *9 (N.D. Ill. Mar. 18, 2016) (“While LKQ seeks to cloak its reliance upon UVHC3000 as a product, so as to avoid § 315(e)(2) estoppel, such an argument is disingenuous as it is the

a petitioner from relying on printed publications under the guise of a product or system-based prior art theory. In *Oil-Dri Corp. of America v. Nestlé Purina Petcare Co.*, the court held that “[w]here there is evidence that a petitioner had reasonable access to printed publications corresponding to or describing a product that it could have proffered during the IPR process, it cannot avoid estoppel simply by pointing to the finished product (rather than the printed materials) during litigation.”¹²⁶

Likewise, in *Wasica Financial GmbH v. Schrader International, Inc.*, after asserting the Oselin reference in an IPR, the defendant attempted to present three obviousness challenges at trial: “(1) Oselin in view of the ZR-1 Sensors, (2) Oselin in view of the ZR-1 Sensors and in further view of [certain] patents or printed publications, and (3) the ZR-1 Sensors in view of Oselin.”¹²⁷ The court estopped the defendant from relying on the ZR-1 physical sensors because a 1990 article, ‘Siuru,’ disclosed all of the relevant features of the ZR-1 Sensors and Siuru reasonably could have been raised during the IPR.¹²⁸ The court reasoned that the defendant was merely swapping evidentiary proofs supporting the same “ground” for invalidity.¹²⁹ Thus, because the only difference between the invalidity grounds was the evidence supporting these grounds, estoppel attached to the physical sensors.¹³⁰

Other district courts have declined to extend § 315(e)(2) estoppel to non-patent or non-printed publication references if such references disclose additional

UVHC3000 datasheet upon which LKQ relies to invalidate the asserted claims.”).

¹²⁶ *Oil-Dri Corp. of Am.*, 2019 WL 861394, at *10.

¹²⁷ *Wasica*, 432 F. Supp. 3d at 452.

¹²⁸ *Id.* at 453.

¹²⁹ *Id.* at 453–54.

¹³⁰ *Wasica Fin. GmbH v. Schrader Int’l, Inc.*, 432 F. Supp. 3d 448, 454–55 (D. Del. 2020), *appeal dismissed*, No. 2020-2124, 2020 WL 8374870 (Fed. Cir. Sept. 24, 2020).

features such that they are “superior and separate.”¹³¹ This “superior and separate” standard seeks to determine whether the non-patent and non-printed publication prior art reference independently satisfies certain claim limitations in a way that is different from an associated prior art patent or printed publication.¹³² In *SiOnyx, LLC v. Hamamatsu Photonics K.K.*, the district court did not estop the IPR petitioner’s invalidity expert from relying on both printed publications and non-public manufacturing specifications describing a product because the printed publication was not the sole evidence of how the product functions.¹³³ Likewise, in *Star Envirotech v. Redline*

¹³¹ *Polaris Indus., Inc. v. Arctic Cat. Inc.*, No. CV 15-4475 (JRT/TNL), 2019 WL 3824255, at *2–3 (D. Minn. Aug. 15, 2019) (declining to apply IPR estoppel against defendant’s obviousness combinations involving vehicles, despite plaintiff’s contention that defendant “reasonably could have raised those grounds during [IPR] using the manuals of the physical vehicles instead of the vehicles themselves”); *SiOnyx L.L.C. v. Hamamatsu Photonics K.K.*, 330 F. Supp. 3d 574, 603 (D. Mass. 2018) (declining to extend estoppel to a certain aspect of a product, which was reflected in a potentially non-public manufacturing specification, as “the only citation for certain claim limitations.”); *Zitovault, L.L.C. v. Int’l Bus. Machs. Corp.*, No. 3:16-CV-0962-M, 2018 WL 2971178, at *4 (N.D. Tex. Apr. 4, 2018) (“Defendants . . . could not have raised prior art systems, such as products and software, during IPR proceedings . . . Defendants can rely on the prior art systems in their invalidity contentions to argue anticipation or obviousness.”); *Star Envirotech, Inc. v. Redline Detection, L.L.C.*, No. SACV 12-01861 JGB (DFMx), 2015 WL 4744394, at *4 (C.D. Cal. Jan. 29, 2015) (finding that “the physical machine itself discloses features claimed in the ‘808 Patent that are not included in the instruction manual, and it therefore a superior and separate reference.”).

¹³² *Cal. Inst. of Tech. v. Broadcom Ltd.*, No. CV 16-3714-GW(AGRx), 2019 WL 8192255, at *7 (C.D. Cal. Aug. 9, 2019) (noting that the “superior and separate reference” standard prior art independently satisfy claim limitations “in a way that is different from an associated prior art patent or printed publication”).

¹³³ 330 F. Supp. 3d at 601–04 (“If defendants were relying on the datasheet alone, this might be a close question . . . Defendants’

Detection, the court did not estop the defendant’s product art invalidity theory that showed aspects of the product’s features through disassembly because these features were not described or ascertainable in the product manuals (printed publications).¹³⁴ Thus, defendants seeking to raise a product or system-based invalidity theory following an IPR should look to evidence other than printed publications to establish the features of the product or system prior art.

Some courts, however, have rejected the “superior and separate” standard, reasoning that because “redundant” prior art grounds are common in patent litigation and such a requirement is absent in the statute, the “superior and separate” standard extends the reach of IPR estoppel beyond its intended scope.¹³⁵ For these courts, surviving estoppel is not contingent on a reference being “superior and separate”; rather, there must be a substantive difference between the invalidity theories that is “germane to the invalidity dispute.”¹³⁶ These decisions suggest that so long as an overall system invalidity theory is substantively different from an invalidity theory based solely on patents or printed publications, then printed publications can still be used to support a system-based invalidity theory.¹³⁷

Most courts that have attached estoppel to product or system-based prior art appear to be motivated by preventing gamesmanship of laundering a printed

expert may rely on the combination of the publicly available datasheet and the private manufacturing specification to form his opinion that the publicly available product (in combination with other references) meets the elements of the claims.”).

¹³⁴ 2015 WL 4744394, at *3 .

¹³⁵ *California Inst. of Tech.*, 2019 WL 8192255, at *7.

¹³⁶ *Id.* at *8; *In re DMF, Inc.* 858 F. App’x 361, 362 (Fed. Cir. 2021) (noting that “courts in this District and elsewhere require that . . . there be some substantive difference between the product and the printed prior art that is germane to the invalidity dispute at hand.”).

¹³⁷ *California Inst. of Tech.*, 2019 WL 8192255, at *8; *In re DMF, Inc.*, 858 F. App’x at 362.

publication prior art theory under the guise of a product or system-based invalidity theory.¹³⁸ However, the expansion of IPR estoppel may ultimately lead courts to estop petitioners from relying on products or systems if such prior art is described in a printed publication that reasonably could have been raised in an IPR. Thus, defendants should avoid relying on product manuals or datasheets to support product or system-based art because a court may estop such art as simply “printed subject matter in disguise.”¹³⁹

B. Estoppel’s Reach of “Known or Used” Invalidity Defenses

Like product and system-based invalidity theories, an interplay also exists between § 315(e)(2) and “known or used” invalidity theories. In *California Institute of Technology v. Broadcom Ltd.*, after the PTAB issued a final written decision upholding the claims of the plaintiff’s patent, the defendant-petitioner sought to rely on certain references under a “known or used” invalidity defense, arguing that estoppel did not attach because they could not have raised those same references under a “known or used” theory in the IPR.¹⁴⁰ The court rejected the defendants’ argument that estoppel did not apply, reasoning that because the core elements that form the basis of defendants’ “known or used” prior art includes the same documents as its printed publication invalidity theory, there

¹³⁸ *Milwaukee Elec. Tool, Corp. v. Snap-On Inc.*, 271 F. Supp. 3d 990, 1032 (E.D. Wis. 2017) (“To the extent these written materials fall within the scope of Section 311(b), they are of course affected by IPR estoppel. Snap-On cannot skirt it by purporting to rely on a device without actually relying on the device itself.”).

¹³⁹ *Biscotti Inc. v. Microsoft Corp.*, No. 2:13-CV-01015-JRG-RSP, 2017 WL 2526231, at *8 (E.D. Tex. May 11, 2017).

¹⁴⁰ *Cal. Inst. of Tech. v. Broadcom Ltd.*, 2019 WL 8192255, at *10–11 (C.D. Cal. Aug. 9, 2019).

is no “substantive difference” between its “known or used” theory and the invalidity theories that the defendants raised or reasonably could have raised before the PTAB.¹⁴¹ As the court explained, printed publications that were raised or reasonably could have been raised before the PTAB “cannot serve as the primary source of information for a known or used theory Instead, for a ‘known or used’ theory to possibly take on any meaningful difference from an invalidity theory based on a printed publication itself, these documents should merely play a corroborating or supportive role to other evidentiary sources.”¹⁴²

Thus, petitioners seeking to rely on printed publications to support an invalidity theory that cannot be raised in an IPR, such as a “known or used” theory, should identify timely-disclosed evidence that is germanely and substantively different from the prior art documents themselves that would support their purported invalidity theory based on knowledge or use.¹⁴³

C. Fragmenting of Petitions

As previously discussed, so long as the petitions are filed on the same day, petitioners are permitted to file several IPR petitions against the same patent.¹⁴⁴ As a consequence of the broadening of § 315(e)(2) estoppel, sophisticated IPR petitioners may see value in fragmenting their invalidity arguments into multiple petitions to avoid foreclosing such arguments under estoppel. For instance, if a petitioner has weaker invalidity arguments that may result in the PTAB upholding a claim in its FWD, it would be prudent for the petitioner to raise these invalidity arguments

¹⁴¹ *Id.* at *13.

¹⁴² *Id.* at *12.

¹⁴³ *Id.* at *14.

¹⁴⁴ *SK Hynix Inc. v. Netlist, Inc.*, No. IPR2018-00364, Paper 32, 910 (P.T.A.B. Aug. 5, 2019).

in a separate petition that may be denied institution. Thus, if the PTAB denies institution on the weaker petitions, the defendant will retain these arguments for litigation, rather than being estopped under § 315(e)(2) if the PTAB rejects these arguments in its FWD.¹⁴⁵

Indeed, some courts have endorsed this practice, noting that “nothing in the text of section 315(e)(2) nor the Supreme Court’s holding in *SAS* expressly requires that an IPR petitioner file only one IPR petition including all its grounds. In fact, IPR petition requirements, such as word limits, discourage raising all possible grounds in a single petition.”¹⁴⁶ Further, the statutory aim of preventing parties from strategically splitting some grounds in an IPR petition and saving others for litigation will not be frustrated where all grounds are asserted in same-day IPR petitions.¹⁴⁷

However, the advantage of avoiding estoppel under § 315(e)(2) by filing multiple concurrently filed petitions may be negated by the risk being estopped under § 315(e)(1) if the separately filed petitions are instituted. In *Intuitive Surgical, Inc. v. Ethicon L.L.C.*, petitioner Intuitive Surgical concurrently filed three IPR petitions against claim 24, which was common to all three petitions, and claims 25–56, which was common to two of the petitions.¹⁴⁸ The PTAB instituted the first two petitions in

¹⁴⁵ *Fundamental Innovation Sys. Int’l, L.L.C. v. ZTE Corp.*, 2019 WL 6220895, at * 2 (N.D. Tex. 2019) (agreeing that “a petitioner is not required to raise all its grounds in a first IPR petition and that estoppel does not apply because [the petitioner] did raise its invalidity arguments in a petition that was denied institution.”).

¹⁴⁶ *Id.*

¹⁴⁷ *Milwaukee Elec. Tool, Corp. v. Snap-On Inc.*, 271 F. Supp. 3d 990, 1029 (E.D. Wis. 2017) (“[A] petitioner cannot be left with the option to institute a few grounds for IPR while holding some others in reserve for a second bite at the invalidity apple once in the district court.”).

¹⁴⁸ *Intuitive Surgical, Inc. v. Ethicon L.L.C.*, 25 F.4th 1035, 1038 (Fed. Cir. 2022).

January 2019 and the third petition in February 2019.¹⁴⁹ In January 2020, the PTAB issued FWDs in the first two petitions, upholding the patentability of claims 24–26.¹⁵⁰ Thereafter, the Board granted patent owner Ethicon’s motion to terminate the petitioner as a party to the third IPR because § 315(e)(1) estopped the petitioner from maintaining a proceeding on grounds that “reasonably could have been raised” in first two previously decided IPRs.¹⁵¹ On appeal, the Federal Circuit upheld the Board’s application of § 315(e)(1), reasoning that the petitioner “reasonably could have raised” the grounds in the third IPR petition by making its challenges more “pointed and specific” to fit all grounds within the first two petitions.¹⁵² The court also noted that because § 315(e)(1) estoppel applies on a “claim by claim basis,” the petitioner could have avoided estoppel by filing separate petitions that were directed to separate claim sets.¹⁵³ Third, the petitioner could have requested a consolidation of the three IPRs under 35 U.S.C. § 315(d), which would have resulted in a single final written decision.¹⁵⁴ Under 35 U.S.C. § 319 and 35 U.S.C. § 141(c), only a “party” to an IPR has a right to appeal a FWD and the petitioner was estopped under § 315(e)(1) from maintaining the third IPR.¹⁵⁵ Thus, the court found that the petitioner was no longer a “party” with a right to appeal the FWD of the third IPR.¹⁵⁶

Accordingly, any advantage of fragmenting IPR petitions to avoid estoppel under § 315(e)(2) may be negated by the risk of being estopped under § 315(e)(1) if

¹⁴⁹ *Id.*

¹⁵⁰ *Id.* at 1038–39.

¹⁵¹ *Id.* at 1039.

¹⁵² *Id.* at 1041.

¹⁵³ *Id.* at 1041–42.

¹⁵⁴ *Intuitive Surgical, Inc. v. Ethicon L.L.C.*, 25 F.4th 1035, 1041–42 (Fed. Cir. 2022).

¹⁵⁵ *Id.* at 1043.

¹⁵⁶ *Id.*

each of the separately filed petitions are instituted. It is difficult to fathom a situation where the prior art references and grounds omitted from an initially filed petition but included in a separately filed petition could not have “reasonably been raised” in the initially filed petition. Following the Federal Circuit’s guidance in *Intuitive Surgical*, petitioners seeking to file multiple petitions against a single patent should direct each petition to a different non-overlapping claim set. Conversely, if the petitioner seeks to file multiple petitions against the same set of claims, the petitioner should request a consolidated written decision under 35 U.S.C. § 315(d) to avoid being estopped under § 315(e)(1) from the first petition that results in a FWD. While fragmenting petitions may be viewed as a response to the expanding boundaries of § 315(e)(2) estoppel, the risk avoided under § 315(e)(2) may be negated by the increased risk of estoppel under § 315(e)(1).

VI. CONSEQUENCES OF A BROAD ESTOPPEL FOR IPRs

In *American Technical Ceramics Corp. v. Presidio Components, Inc.*, upon return to district court proceedings, the defendant-petitioner attempted to assert new grounds of invalidity that were not raised in a prior IPR.¹⁵⁷ In response to the plaintiff’s § 315(e)(2) estoppel objection, the court held that the IPR petitioner was estopped from subsequently raising invalidity contentions based on prior art that it reasonably could have, but chose not to, raise in its IPR petition.¹⁵⁸ In articulating its holding, the court was persuaded by the “legislative history of 315(e) [which] indicates that Congress intended IPRs to serve as a

¹⁵⁷ *Am. Tech. Ceramics Corp. v. Presidio Components, Inc.*, No. 14-CV-6544(KAM)(GRB), 2019 WL 365709, at *4 (E.D.N.Y. Jan. 30, 2019).

¹⁵⁸ *Id.* at *5.

complete substitute for litigating the validity of patent claims in the district court.”¹⁵⁹ However, PTAB proceedings are not an equivalent alternative forum to litigation, and broadening IPR estoppel to substitute for invalidity challenges in district court may undermine the value of IPRs.¹⁶⁰

A. *Word Count*

Among the procedural limitations the PTAB incorporated into its post-grant proceedings is a word count of 14,000 words for IPR petitions.¹⁶¹ This requirement, which includes claim charts, applies irrespective of the complexity of the technology or the quantity of prior art on which the petitioner may need to rely to satisfy the burden of proving invalidity.¹⁶² In other words, a petitioner may be unable to raise all available invalidity grounds within the word count requirement but may nonetheless be estopped in subsequent litigation proceedings under the broad application of the “reasonably could have raised” language of § 315(e)(2).¹⁶³ Thus, IPR estoppel, in conjunction with this word count limitation, could prevent the defendant-petitioner from having a forum to raise certain invalidity grounds.

¹⁵⁹ *Id.* at *2 (emphasis added).

¹⁶⁰ See Practical Law Intellectual Property & Technology, *Coordinating PTAB and District Court Litigation*, Westlaw (database updated Nov. 20, 2014). The PTAB’s fundamental substantive differences from district court litigation include no presumption of patent validity before the PTAB, lower burdens of proof on the patent challenger, and a broader claim construction standard. The procedural differences between the PTAB and district court litigation include limited discovery, fixed, typically shorter, timelines, lower costs, and patentability decisions by a specialized, three-judge panel. *Id.*

¹⁶¹ See 37 C.F.R. § 42.24 (2017) (listing procedural requirements).

¹⁶² *Id.*

¹⁶³ See 35 U.S.C. § 315(e)(2).

Even if Congress did envision post-grant proceedings to function as a complete alternative to invalidity disputes in litigation, the procedural limitations imposed by the PTAB deprive the petitioner of due process by restricting the opportunity to raise all legitimate grounds for patent invalidity. An incomplete review at the PTAB cannot be squared with a broad application of IPR estoppel where a petitioner is precluded from raising grounds in district court litigation that it could not fit within the word count limitations of the IPR petition. This issue is amplified when estoppel extends to invalidity theories based on product and system prior art. While IPR estoppel seeks to prevent multiple “bites” of the invalidity “apple,”¹⁶⁴ precluding petitioners from a full and fair opportunity to raise all patent and printed publication invalidity grounds can unjustly reward the patent owner at the expense of the petitioner, frustrating the purpose of pursuing an IPR.

***B. Stipulation as a Prerequisite to Stay
District Court Proceedings***

In deciding whether to stay litigation pending an IPR of a patent-in-suit, district courts consider three factors: “(1) whether granting the stay will simplify the issues for trial; (2) the stage of litigation; and (3) whether a stay would cause the non-movant to suffer undue prejudice from any delay, or allow the movant to grant a clear tactical

¹⁶⁴ See *GREE, Inc., v. Supercell Oy*, No. 2:19-CV-00071-JRG-RSP, 2020 WL 4999689, at *6 (E.D. Tex. July 9, 2020) (“Supercell will not get two bites at the apple just because it contends that it understood the patent more narrowly than GREE. Such a holding would provide the perverse incentive for a petitioner to take a purposefully narrow construction before the Board and, if unsuccessful, try again in district court when the patent holder takes a more expansive view.”).

advantage.”¹⁶⁵ As a result of the uncertainty of the scope of IPR estoppel, some courts, as a condition to stay court proceedings pending the results of an IPR, have required parties to stipulate to a broader scope of estoppel.¹⁶⁶

In *Infernal Technology, L.L.C. v. Electronic Arts Inc.*, the court suggested that it would only grant a stay pending an IPR if the petitioner “stipulates that for any claims surviving IPR, [it] will not assert a defense under §§ 102 or 103 based on prior art that it raised or reasonably could have raised in its IPR petitions.”¹⁶⁷ The court defined “reasonably could have raised” as prior art that a “skilled searcher conducting a diligent search reasonably could have been expected to discover,” which would include “any applicable references cited in [its] invalidity contentions or relied upon by [its] expert witness in [the] opening expert report regarding invalidity.”¹⁶⁸

While the defendant “agreed” to enter the stipulation,¹⁶⁹ the court effectively used the defendant’s position to manufacture an estoppel that may go beyond the scope of § 315(e)(2) or the precedent of higher courts. Should similar deals become a prerequisite for pursuing post-grant proceedings at the PTAB, the orderly administration of justice may be harmed, and defendant-

¹⁶⁵ *Wonderland Switz. AG v. Britax Child Safety, Inc.*, No. 0:19-cv-02475-JMC, 2020 U.S. Dist. LEXIS 226315, at *4–5 (D.S.C. Dec. 2, 2020).

¹⁶⁶ *See, e.g., Lighting Sci. Grp. Corp. v. Shenzhen Jiawei Photovoltaic Lighting Co.*, No. 16-CV-03886-BLF, 2017 WL 2633131, at *6 (N.D. Cal. June 19, 2017); *FastVDO L.L.C. v. AT&T Mobility LLC*, No. 3:16-cv-00385-H-JVG, 2017 WL 2323003, at *8 (S.D. Cal. Jan 23, 2017); *Infernal Tech., L.L.C. v. Elec. Arts Inc.*, No. 2:15-CV-01523-JRG-RSP, 2016 WL 9000458, at *4, *5 (E.D. Tex. Nov. 21, 2016); *e-Watch Inc. v. Avigilon Corp.*, No. H-13-0347, 2013 WL 6633936, at *3 (S.D. Tex. Dec. 17, 2013).

¹⁶⁷ *Infernal Tech., L.L.C.*, 2016 WL 9000458, at *4.

¹⁶⁸ *Id.* at *4 n.5 (quoting 157 CONG. REC. S1375 (daily ed. Mar. 8, 2011) (statement of Sen. Jon Kyl)).

¹⁶⁹ *Id.* at *1.

petitioners may go to greater lengths to forum shop or forgo IPRs entirely.

C. PGR's Broad Estoppel: A Precursor for IPR Estoppel

PGRs comprise only 1% of post-grant proceedings.¹⁷⁰ Unlike IPRs, PGRs must be filed within nine months of issuance and permit the petitioner to raise invalidity challenges on any grounds and evidence, not just § 102 or § 103 based on patents and printed publications.¹⁷¹ However, PGRs are subject to the same “reasonably could have raised” estoppel language.¹⁷² Many believe that the infrequent filing of PGRs reflects the concerns of litigants that an unfavorable outcome at the PTAB may preclude them from raising any invalidity defense in later litigation.¹⁷³

Litigants may display similar concerns with IPR filings that expand the reach of estoppel to non-petitioned grounds and product and system art, as seen among district courts. Rather than risking an invalidity defense being swept into a broad reading of “reasonably could have raised,” litigants may elect to remain in district court to

¹⁷⁰ U.S.P.T.O., PATENT TRIAL AND APPEAL BOARD STATISTICS 2 (Mar. 31, 2017), https://www.uspto.gov/sites/default/files/documents/AIA%20Statistics_March2017.pdf [<https://perma.cc/4PXT-ZR6Q>] (noting that among the 6,700 AIA petitions filed to date, IPRs comprised 92%, CBRMs constituted 7%, and PGRs constituted 1%).

¹⁷¹ 35 U.S.C. § 321.

¹⁷² 35 U.S.C. § 325(e).

¹⁷³ John Marlott, *PGRs Still Rare – Is Estoppel The Reason?*, PTAB LITIGATION BLOG (June 4, 2021), <https://www.ptablitigationblog.com/pgrs-still-rare-is-estoppel-the-reason/> [<https://perma.cc/3YF8-A9F7>] (noting that the unpopularity of PGRs may be due to the “broad reach of § 325(e)(2) estoppel to all grounds that a PGR challenger ‘reasonably could have raised’”).

preserve their arguments and ensure a full and fair opportunity to raise all grounds of invalidity.

D. Broad Estoppel Negates the Cost-Saving Benefits of Avoiding a Merits Inquiry

The proper scope of IPR estoppel must strike a balance between completeness and efficiency. The emergence of a broad reading of “reasonably could have raised” likely reflects the preference for efficiency among district courts. Limiting the scope of estoppel may hinder efficiency by increasing litigation regarding patent validity. However, such a consequence is acceptable if litigation can ensure due process and promote patent quality goals by challenging issued patents that fall short of the conditions of patentability. In other words, limiting litigation to unresolved questions of invalidity in order to promote efficiency cannot come at the expense of providing a forum to raise all grounds for invalidity.

Even if efficiency is the motivation behind the current preference for a broad application of estoppel, this interest would be better served under a narrow scope of estoppel. Expanding the reach of estoppel creates greater uncertainty for the scope of litigation as the court and the parties attempt to define the grounds and prior art references that the petitioner should have included in its petition. This could potentially increase the expense of discovery and motion practice. Thus, a broad estoppel may consume more judicial resources in defining the scope of estoppel, frustrate the efficiency benefits of IPR estoppel, and detract from a substantive decision on patent validity.

VII. LEGISLATIVE RESPONSE TO IPR ESTOPPEL

While the Supreme Court can rein in the Federal Circuit’s expansion of IPR estoppel, true patent reform is the job of Congress. This section highlights two legislative

acts—the STRONGER Patents Act and the RAI—implicate IPR estoppel. Notably, both acts were proposed before the Federal Circuit’s ruling in *California Institute*.¹⁷⁴

A. STRONGER Patents Act

In July 2019, Congress introduced the Support Technology and Research for Our Nation’s Growth and Economic Resilience Patents Act of 2019 (STRONGER Patents Act).¹⁷⁵ Among other things, the Act responds to trends in litigation by proposing changes to many IPR statutes.

The Act proposes the following revision to the IPR estoppel provisions of § 315(e):

- (1) A [petitioner] may not petition for a subsequent inter partes review before the Office with respect to that patent on any ground that the petitioner raised or reasonably could have raised in the initial petition, unless, after the filing of the initial petition, the petitioner . . . is charged with infringement of additional claims of the patent.
- (2) A person petitioning for an inter partes review of a claim in a patent under this chapter that results in an institution decision under section 314 . . . may not assert either in a civil action . . . or in a proceeding before the International Trade Commission
- (3) . . . that the claim is invalid based on section 102 or 103 of this title, unless the invalidity argument is based on allegations that the claimed invention was in public use, on sale,

¹⁷⁴ STRONGER Patents Act of 2019, S. 2082, 116th Cong. § 102(f) (2019); Restoring the America Invents Act, S. 2891, 117th Cong. § 2(3)(A)(ii) (2021) (amending 35 U.S.C. § 311).

¹⁷⁵ STRONGER Patents Act § 102(f).

or otherwise available to the public before the effective filing date of the claimed invention.¹⁷⁶

The proposed revision to the IPR estoppel statute would overhaul current IPR practice. § 315(e)(1) would be amended to prevent petitioners from filing serial petitions on grounds that the petitioner previously raised or could have reasonably raised in the initial IPR petition unless charged with infringement of additional claims in the asserted patent.¹⁷⁷ § 315(e)(2) would be amended to restrict novelty and obviousness invalidity arguments in district court and the ITC to challenges that the “claimed invention was in public use, on sale, or otherwise available to the public.”¹⁷⁸

In its current state, an IPR petitioner must prove unpatentability by a “preponderance of the evidence.”¹⁷⁹ The STRONGER Patents Act seeks to recalibrate the IPR evidentiary standard to align with traditional civil proceedings under 35 U.S.C. § 282(a) by raising the burden of proof to a “clear and convincing evidence” standard.¹⁸⁰ Given that many IPR petitioners are at least partially motivated by the lower evidentiary standard under current IPR practice, this change may remove the incentive to pursue an IPR with the continued risk of estoppel.

¹⁷⁶ *Id.*; Countering Communist China Act, H.R. 4792, 117th Cong. § 805(f) (2021).

¹⁷⁷ STRONGER Patents Act § 102(f); Countering Communist China Act § 805(f).

¹⁷⁸ STRONGER Patents Act § 102(f); Countering Communist China Act § 805(f).

¹⁷⁹ 35 U.S.C. § 316(e).

¹⁸⁰ STRONGER Patents Act of 2019, S. 2082, 116th Cong. § 102(b) (2019) (“In an inter partes review instituted under this chapter, the petitioner shall have the burden of proving a proposition of unpatentability of a previously issued claim by clear and convincing evidence.”).

Finally, even if a petitioner could demonstrate a likelihood of success with respect to at least one claim, the STRONGER Patents Act would deny an IPR petition from being instituted if any claim challenged in the petition had previously been instituted in an IPR or PGR.¹⁸¹ Given the elimination of partial institution in *SAS*, the USPTO Director would be required to deny institution if any one claim in a petition had previously been instituted in an IPR, even if the remaining claims had never been challenged in an IPR.

The proposed revision to § 315(e)(2) effectively prevents any party from filing an IPR petition against a patent that has been challenged in an IPR. While estoppel should bar parties who have had the opportunity to challenge a patent in an IPR from later raising those same arguments in litigation, estopping unrelated parties from challenging that same patent violates the fundamental principle of issue preclusion, which requires a “full and fair opportunity, or incentive, to litigation in the initial action.”¹⁸²

B. The Restoring the America Invents Act (RAIA)

In September 2021, Senators Leahy and Cornyn introduced the Restoring the America Invents Act (RAIA), which has many implications for IPR practice.¹⁸³ First, the RAIA expands the scope of invalidity challenges that can be brought in an IPR to include statutory or obviousness-

¹⁸¹ *Id.* § 102(d) (“The Director may not authorize an inter partes review to be instituted on a claim challenged in a petition if the Director has previously instituted an inter partes review or post-grant review with respect to that claim.”).

¹⁸² Kevin M. Clermont, *Res Judicata as Requisite for Justice*, 68 RUTGERS L. REV. 1067, 1121 (2016).

¹⁸³ Restoring the America Invents Act, S. 2891, 117th Cong. § 2(3)(A)(ii) (2021) (amending 35 U.S.C. § 311).

type double patenting and admissions of prior art in the patent specification, drawings, or claims.¹⁸⁴ Second, the RAI A extends estoppel to parties who participate in an IPR via a request for joinder (“joined parties”) and to their real parties in interest and privies to the same extent as the party that filed the original petition.¹⁸⁵ This is a change from current practice, where joined parties are estopped only as to those grounds that are part of the original petition that is joined, allowing petitioners to join the original petition and file their own petition on different grounds.¹⁸⁶

Third, rather than triggering IPR estoppel upon issuance of the PTAB’s final written decision as seen under current practice, the RAI A would delay estoppel until any appeals of the final written decision have been exhausted or the time to appeal has expired.¹⁸⁷ Fourth, in order to establish standing to appeal a loss before the PTAB, the Act would presume injury-in-fact based on the consequences of estoppel.¹⁸⁸ If a party cannot establish standing to appeal a PTAB decision, the party will not later be subject to estoppel based on the outcome of the IPR.¹⁸⁹

Finally, district courts have routinely estopped petitioners who prevail before the PTAB—by invalidating claims of an asserted patent—from asserting their winning arguments under § 315(e)(2).¹⁹⁰ The RAI A would continue

¹⁸⁴ *Id.*

¹⁸⁵ *Id.* § 2(3)(C)(ii)

¹⁸⁶ Josh Landau, *Leahy and Cornyn Introduce Bill to Restore The America Invents Act*, PATENT PROGRESS (Oct. 1, 2021) <https://www.patentprogress.org/2021/10/leahy-and-cornyn-introduce-bill-to-restore-the-america-invents-act/> [<https://perma.cc/2468-6MGE>].

¹⁸⁷ Restoring the America Invents Act, S. 2891, 117th Cong. § 2(3)(C)(v)(I)(aa) (amending 35 U.S.C. § 315(e)(1)).

¹⁸⁸ *Id.* § 2(3)(F)(ii)

¹⁸⁹ *Id.*

¹⁹⁰ Jonathan Tuminaro & Paige E. Cloud, *IPR Estoppels: A Power Imbalance for Plaintiffs and Defendants*, STERNE, KESSLER, GOLDSTEIN & FOX (Mar. 2022), <https://www.sternekessler.com/news->

to estop petitioners from asserting invalidity challenges if the claim is valid in the final written decision, but it would not estop petitioners from asserting their winning invalidity arguments (those claims found invalid during the IPR) in parallel district court proceedings.¹⁹¹

VIII. RESPONSE TO LEGISLATIVE PROPOSALS AND CONSIDERATIONS FOR IPR ESTOPPEL'S PROPER SCOPE

The two recent legislative proposals highlight the misunderstanding and disagreement among legislators on the proper scope of IPR estoppel. The STRONGER Patents Act represents the expansive view of IPR estoppel gaining traction in districts courts, which elevates efficiency over completeness and undermines the fundamental principle of issue preclusion by taking the preclusive effects too far. Conversely, the RAI, which has been described as “a wish list of patent-killers seeking to cancel rights via *inter partes* review,”¹⁹² takes a narrow view of IPR estoppel, promoting the incentive to pursue post-grant proceedings by ensuring that the petitioner receives due process.

insights/publications/ipr-estoppels-power-imbalance-plaintiffs-and-defendants#:~:text=IPR%20Estoppels%3A%20A%20Power%20Imbalance%20for%20Plaintiffs%20and,are%20grappling%20with%20and%20patent%20litigants%20must%20consider [https://perma.cc/3K8U-MYT3] (“Even after a victory, the IPR petitioner is unable to make the same arguments in a later proceeding.”); *see also* SiOnyx, L.L.C. v. Hamamatsu Photonics K.K., 330 F. Supp. 3d 574, 600 (D. Mass. 2018) (“[T]he statute makes no distinction between successful and unsuccessful grounds.”).

¹⁹¹ Restoring the America Invents Act, S. 2891, 117th Cong. § 2(3)(C)(iv).

¹⁹² Dennis Crouch, *Restoring the America Invents Act*, PATENTLY-O (Sept. 29, 2021), <https://patentlyo.com/patent/2021/09/restoring-america-invents.html> [https://perma.cc/QX7V-HXL3].

Legislative reform of the current law governing IPRs is needed. Following the recent Federal Circuit decision in *California Institute* and the Supreme Court decision in *SAS*, the reach of IPR estoppel has greatly expanded without any guidance from Congress. In light of the case law and policy considerations discussed above, a narrow view of IPR estoppel should be adopted. If district courts continue to broaden IPR estoppel in the wake of *California Institute*, defendants may forgo the risk of losing arguments that were not properly reviewed before the PTAB and elect to remain in district court. Such a result would create additional burdens on district courts while undermining the role that IPRs have played in eliminating wrongly issued patents.¹⁹³ The Federal Circuit's prioritization of efficiency, as most recently illuminated in *California Institute*, has gone too far. Thus, Congress should pass legislation that upholds the due process rights of petitioners and revives the policy interest in challenging bad patents.

The amendments to § 315(e) proposed in the STRONGER Patents Act provide needed clarity to district courts on the boundaries of IPR estoppel, but the amended version of § 315(e) goes too far. The amended version of § 315(e)(1) prevents petitioners from filing repetitive IPR petitions against an asserted patent unless the grounds could not have reasonably been raised in the initially filed

¹⁹³ Neal Solomon, *The Problem of Inter-Partes Review (IPR)*, IPWATCHDOG (Aug. 8, 2017, 9:15 AM), <https://www.ipwatchdog.com/2017/08/08/problem-inter-partes-review-ipr/id=86287/> [<https://perma.cc/BY6U-CU24>] (“The theory was that the PTO contained expertise to review patents, which expertise the federal district courts lacked, and that questions of validity were therefore best reviewed in the PTO.”); see also Alex Moss, *The Stronger Patents Act Would Make Bad Patents Stronger Than Ever*, ELECTRONIC FRONTIER FOUNDATION (Sept. 3, 2019), <https://www.eff.org/deeplinks/2019/09/stronger-patents-act-would-make-bad-patents-stronger-ever> [<https://perma.cc/6XUD-6PT2>].

IPR or the petitioner is charged with infringement of additional claims.¹⁹⁴ Although not a significant departure from the current statute, this amendment may foreclose the filing of serial petitions, a technique that has emerged in response to the broadening of IPR estoppel.¹⁹⁵

The amended version of § 315(e)(2) eliminates the ambiguous “reasonably could have raised” language of the statute and permits patent validity challenges in district court so long as they are based on grounds that are beyond the subject matter allowed in an IPR.¹⁹⁶ The amended version of the statute prohibits defendant-petitioners from raising in district court any invalidity theory based on patents or printed publications.¹⁹⁷ This is a significant departure because it puts an end to litigation on the “reasonably could have raised” issue, leaving no doubt where estoppel begins and ends. However, in codifying the current form of IPR estoppel, Congress did not intend to extend “reasonably could have raised” to “prior art that ‘only a scorched the earth search’ would have found.”¹⁹⁸ Eliminating the “reasonably could have raised” language from the statute effectively requires the petitioner to perform a “scorch the earth” search of all potentially useful patents and printed publications before filing an IPR petition, broadening estoppel even further. Given the time required to perform such an exhaustive search, a defendant may benefit more from the slower pace of trial in district court that can provide additional time to locate damaging references rather than an IPR’s expedited review and

¹⁹⁴ *Id.*

¹⁹⁵ See *supra* notes 132–145 and accompanying text.

¹⁹⁶ *Id.*

¹⁹⁷ *Id.*

¹⁹⁸ Linda A. Wadler et al., *IPR Estoppel: Current District Court Trends and Practice Tips*, 30 No. 1 INTELL. PROP. & TECH. L.J. 3, 6 (2018) (citing 157 Cong. Rec. S1375 (daily ed. Mar. 8, 2011) (statement of Sen. Jon Kyl)).

potential estoppel. Although the amended version of the statute offers much needed clarity on the boundaries of IPR estoppel, these boundaries have gone too far by foreclosing litigation on patents and printed publications.

As in the STRONGER Patents Act, IPR estoppel should not reach evidence that the claimed invention was in public use, on sale, or otherwise available to the public before the patent's effective filing date. In addition to the types of evidence that cannot be raised in an IPR, the estoppel provision should no longer be applied to prior art products and systems unless the defendant is merely swapping labels between printed publication art that fully discloses all relevant features that a product or system also discloses. Thus, the plaintiff's burden of showing that a product or system is subject to IPR estoppel should be high unless it is clear that the defendant is engaging in gamesmanship.

Extending estoppel to types of evidence that cannot be raised in an IPR ignores important differences in the underlying evidence used to support a prior art theory. For instance, compared to a patent or publication reference, product and system art can be more persuasive in a jury trial because physical evidence can make it easier to visualize how a particular technology functions. Further, system art, such as an application or a software tool that uses the claimed invention as described in a patent, can be valuable to prove when the patented technology was first in use. Product and system art also offer the advantage of showing that the invention was not just being discussed in literature but was also practiced before the critical date. Likewise, similar to a "known or used" theory, proving public use, on sale, or otherwise available to the public is more likely to require highly factual evidence in the form of testimony than an invalidity theory relying on patents or printed publications.

Rather than estopping the defendant-petitioner based on the grounds and evidence raised in the petition, the scope of estoppel should be limited to the grounds and evidence that the PTAB rules on in its FWD. This would ensure that estoppel is no broader than the rulings that the petitioner received in its petition, thereby preventing estoppel from attaching to grounds raised in the petition that were never addressed or relied upon by the PTAB. The change would also recalibrate the quid pro quo of IPR, as petitioners would receive a complete, expedited, and less expensive proceeding to challenge patent validity in exchange for the foreclosing of arguments in litigation that implicate subject matter raised in an IPR.¹⁹⁹ Applying estoppel only to those grounds that the PTAB relied on in its FWD would also add an additional layer of accountability to the post-grant review process by discouraging the panel from issuing a FWD that is narrower than the grounds that were asserted in the petition. Critics may argue that this proposal is a return to pre-SAS because limiting estoppel to grounds that were relied upon in the FWD is similar to partial institution. However, this proposal, in conjunction with SAS, should provide petitioners with assurance that they will receive a full and fair hearing on the merits and incentivize the panel judges to evaluate the petition more thoroughly before instituting.

IX. CONCLUSION

Following the issuance of a FWD, liberal applications of IPR estoppel among district courts have severely impacted the invalidity theories available to IPR petitioners in parallel district court or ITC actions. The consequences of an expanding estoppel doctrine are great. Until the boundaries of IPR estoppel are properly defined

¹⁹⁹ See 35 U.S.C. § 316(e) (2012).

and curtailed to ensure the petitioner receives due process, defendants are likely to reconsider pursuing an IPR because the risks of foreclosing arguments in litigation outweigh the benefits of a more efficient and economical patent validity proceeding at the PTAB. The expansion of estoppel has gone too far such that some grounds for invalidity not tested in post-grant proceedings may be further barred from judicial review, undermining Congress's patent quality goals.