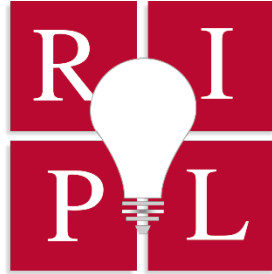


UIC REVIEW OF INTELLECTUAL PROPERTY LAW



PATENT OWNERS FACE UNKNOWN ARGUMENTS AS TO WHETHER IPR ESTOPPEL ATTACHES TO PHYSICAL PRODUCTS

CHRISTIAN KARPINSKI

ABSTRACT

When challenging a patent in an inter partes review (“IPR”), petitioners are limited to arguing that the patent is anticipated or obvious based on existing patents and printed publications. According to 35 U.S.C. § 315(e)(1) and (2), a petitioner in an IPR that results in a final written decision (FWD) may not raise in the USPTO or a civil action or an ITC proceeding “any ground that the petitioner raised or reasonably could have raised during that inter partes review.” But, what if a prior art physical product is cumulative of a printed publication raised in an IPR? Courts have been asked to consider whether estoppel attaches to physical products that are described in patents or printed publications. Petitioners need to be aware of this potential situation where prior art materials may not qualify as printed publications for purposes of an IPR proceeding but will be found sufficiently similar to printed publication materials for estoppel to apply in litigation.

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I. INTRODUCTION

Imagine you have invented a new off-road vehicle that allows the user to travel across unpaved terrain with ease. You file a patent application with the United States Patent and Trademark Office (“USPTO”) seeking patent prosecution, knowing that your invention will accomplish great commercial success.¹ During prosecution, your attorney defends your application against every rejection the examiner cites against your application.² The examiner, having found no adequate prior art evidence in support of an anticipation or obviousness rejection, grants you a patent.³

Now imagine that your company has just received a letter challenging your issued patent on the grounds that it is not novel or it is obvious in light of prior art.⁴ After years of hard work conceiving your invention, a competing third-party company petitions the Patent Trial and Appeal Board (“PTAB”) at the USPTO to institute an inter partes review (“IPR”) of certain claims of your patent, asserting invalidity based on anticipation or obviousness under 35 U.S.C §§ 102 or 103.⁵ The competing party asserts that your patent is invalid as obviousness based on combinations of prior art.⁶

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¹ 35 U.S.C. § 101 (2020) (requiring that an invention maybe patentable if the inventor discovers any new and useful process, machine, manufacture, or composition of matter). *See generally Table 5.6.5. Private Fixed Investment in Intellectual Property Products by Type*, U.S. BUREAU OF ECON. ANALYSIS, <https://apps.bea.gov/iTable/iTable.cfm?reqid=19&step=2#reqid=19&step=2&isuri=1&1921=survey> (interactive table; follow “Begin using the data” button) (last revised July 30, 2019) (demonstrating that in 2018 U.S. companies invested \$ 854.2 billion into IP investments, compared to \$ 621.7 billion in 2011).

² 35 U.S.C. § 102(a) (2020) (a person shall be entitled to a patent unless the claimed invention was patented, described in a printed publication, or in public use, on sale, or otherwise available to the public).

³ *Id.* *See also* 35 U.S.C. § 103 (2020) (“A patent for a claimed invention may not be obtained . . . if the differences between the claimed invention and the prior art are such that the claimed invention as a whole would have been obvious . . .”).

⁴ 35 U.S.C. § 311(a) (2020).

⁵ 35 U.S.C. § 314 (2020) (“The Director may not authorize an inter partes review to be instituted unless the Director determines that the information presented in the petition filed under section 311 [35 U.S.C. § 311] and any response filed under section 313 [35 U.S.C. § 313] shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.”); *see also* *Ethicon Endo-Surgery, Inc. v. Covidien LP*, 812 F.3d 1023, 1028 (Fed. Cir. 2016) (in the interest of efficiency, the decision to institute and the final decision with respect to patentability should be made by the same Board panel).

⁶ *See* *SCA Hygiene Products Aktiebolag v. First Quality Baby Products, LLC*, 767 F.3d 1339, 1339 (Fed. Cir. 2014), (reh'g en banc granted), (opinion vacated), No. 2013-1564, 2014 WL 7460970 (Fed. Cir. Dec. 30, 2014) (the defendant argued both, that it did not infringe the claims of the patent because its product was different than the patented invention, and that the patent was invalid because the PTO should have never issued it).

The PTAB issues a final written decision, denying the IPR petition and stating that the petitioner "has not shown by a preponderance of the evidence that any of the challenged claims are unpatentable."⁷ The losing IPR petitioner reasserts the same invalidity arguments with respect to the same patent claims at a later proceeding brought either in the U.S. district court or the U.S. International Trade Commission (ITC). This time, the IPR petitioner points to a physical product, albeit one which was the subject matter of the previous written prior art, as the newly asserted prior art. You then bring a motion for summary judgment that the IPR petitioner should be estopped from asserting the new invalidity grounds.⁸ The IPR petitioner argues that prior physical off-road vehicles are prior art and could not have been raised in the IPR because this prior art is not a patent or printed publication.⁹ The IPR petitioner then references prior physical products to invalidate your claims.¹⁰

The estoppel statute 35 U.S.C. § 311(b) states that a patent challenger can file an IPR petition "only on the basis of . . . patents or printed publications."¹¹ Federal district courts have been split on this issue and have either been applying a "bright-line" approach,¹² a "superior and separate" approach, or a "substantive difference" approach. The federal circuits need to adopt a clear interpretation of the estoppel requirements for patent invalidity claims that relate to whether physical products can be attached.

Part II of this comment provides background about the patent system, the procedure of IPR proceedings, and the three most common approaches. Part III reviews the most recent circuit court cases that discuss this issue, and which respective approaches the courts chose to adopt in determining if estoppel applies. The comment then concludes in Part IV with a discussion of why the substantive difference approach should be considered the correct approach for IPR reviews pertaining to estoppel, specifically prior physical products.

⁷ *Polaris Indus. v. Arctic Cat Inc.*, 2019 U.S. Dist. LEXIS 138210, 2019 WL 3824255, at *4-5 (D. Minn. Aug. 15, 2019). *See also* 35 U.S.C. § 315(e)(1) (2020) (covers proceedings before the PTAB while 35 U.S.C. § 315(e)(2) covers proceedings in federal courts and before the ITC).

⁸ *See* Jennifer C. Bailey, *Lessons Learned from the First Year of Inter Partes Reviews*, AMERICAN BAR ASSOCIATION (June 29, 2017), https://www.americanbar.org/groups/intellectual_property_law/publications/landslide/2013-14/november-december/lessons_learned_the_first_year_inter_partes_reviews/#ref26.

⁹ 35 U.S.C. § 315(e) (stating that estoppel applies only to any claim that the petitioner "raised or reasonably could have raised" during the IPR).

¹⁰ *See* Linda A. Walder et al., *IPR Estoppel: Current District Court Trends and Practice Tips*, FINNEGAN (Jan. 2018), <https://www.finnegan.com/en/insights/ipr-estoppel-current-district-court-trends-and-practice-tips.html> (discussing current issues regarding estoppel and prior physical products).

¹¹ 35 U.S.C. § 315(e).

¹² *See* Matthew Bultman, *Arctic Cat Ruling Showcases Growing Split On PostIPR Args*, STERNE KESSLER (Aug. 30, 2019, 6:51 PM EDT), <https://www.sternekeessler.com/news-insights/news/arctic-cat-ruling-showcases-growing-split-post-ipr-args>; *see also* *Clearlamp, LLC v. LKQ Corp.*, No. 12-C-2533, 2016 WL 4734389, at *8-9 (N.D. Ill. Mar. 18, 2016) (no estoppel for physical prior art, reasoning "[m]erely being redundant to a ground that could have been asserted during inter partes review does not estop the alleged infringer from relying upon a ground based upon prior art that was not reasonably available during inter partes review."). *See* *Star Envirotech, Inc. v. Redline Detection, LLC*, No. SACV 12-01861 JGB, 2015 U.S. Dist. LEXIS 107149, at *9-11 (C.D. Cal. Jan. 29, 2015) (court held the physical machine itself discloses features claimed in the '808 Patent that are not included in the instruction manual, and it is therefore a superior and separate reference).

II. BACKGROUND

The Congress shall have power “[t]o promote the progress of science and useful arts, by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries”¹³ Article 1 of the Constitution grants a patent owner the exclusive right to a monopoly by preventing others from making, using, or offering for sale the patented invention.¹⁴ A patent is, in effect, “a bundle of rights which may be divided and assigned or retained in whole or part.”¹⁵ The main objective of patent law is to create a system that incentivizes innovation, thereby fulfilling the constitutional purpose of promoting progress and useful arts.¹⁶ The Constitution bestows on Congress the power to grant patents, which, in turn, allows Congress to enact federal statutes and rules governing patents that encourage unique and useful invention.¹⁷ The current patent system hinges on a delicate balance of granting limited property rights in exchange for public disclosure.

In 2011, Congress enacted a series of patent reforms meant to decrease the cost of patent litigation, reduce the number of “uncertain” or improperly granted patents, and increase the certainty of patent rights.¹⁸ To accomplish this goal, Congress created a set of new administrative review procedures housed in the Patent and Trademark Office (“PTO”).¹⁹ Congress decided to increase the power of the PTO to adjudicate certain patent disputes and streamline proceedings.²⁰ These proceedings, collectively known as “post-issuance proceedings,” allowed the PTO to correct any mistake conducted during prosecution of the patent.²¹

¹³ U.S. CONST. art. I, § 8, cl. 8.

¹⁴ See *Precision Instrument Manufacturing Co. v. Automotive Maintenance Machinery Co.*, 324 U.S. 806, 816 (1945). For a similar statement describing the policy behind patents, see *Pope Manufacturing Co. v. Gormully & Jeffery Manufacturing Co.*, 144 U.S. 244, 234 (1892) (“It is as important to the public that competition should not be repressed by worthless patents, as that the patentee of a really valuable invention should be protected in his monopoly.”).

¹⁵ *Alfred E. Mann Found. for Sci. Research v. Cochlear Corp.*, 604 F.3d 1354, 1360 (Fed. Cir. 2010) (citation omitted); *accord Morrow v. Microsoft Corp.*, 499 F.3d 1332, 1341 (Fed. Cir. 2007) (noting that “parties are free to assign some or all patent rights as they see fit based on their interests and objectives”); *Propat International Corp. v. RPost US, Inc.*, 473 F.3d 1187, 1189 (Fed. Cir. 2007) (discussing the transfer of rights in a patent to a grantee).

¹⁶ See Melissa F. Wasserman, *The Changing Guard of Patent Law: Chevron Deference for the PTO*, 54 WM. & MARY L. REV. 1959, 1966 (2013) (stating that the policy behind patent law is to provide an “institutional foundation for infusing economic policy into the patent system, enabling the tailoring of patentability standards to advance the system’s constitutionally mandated goal: the promotion of innovation.”).

¹⁷ *Motion Picture Patents Co. v. Universal Film Mfg. Co.*, 243 U.S. 502, 511 (1917) (quoting U.S. CONST. art. I, § 8).

¹⁸ See Gregory Dolin, *Dubious Patent Reform*, 56 B.C. L. REV. 881, 881-82 (2015) (noting Congress’s attempt to reform the patent system and the problems it was trying to address).

¹⁹ See Rochelle Cooper Dreyfuss, *Giving The Federal Circuit A Run For Its Money: Challenging Patents in the PTAB*, 91 NOTRE DAME L. REV. 235, 235-39 (2015) (discussing the procedures created to remedy prior issues regarding patent appeals).

²⁰ See Joe Matal, *A Guide to the Legislative History of the America Invents Act: Part II of II*, 21 FED. CIR. B.J. 539, 601 (2012) (citing *Patent Quality Improvement: Post-Grant Opposition: Hearing before the Subcomm. on Courts, the Internet, and Intellectual Prop. of the H. Comm. on the Judiciary*, 108th Cong., at 29–30 (2004) (statement of Michael Kirk, Executive Director, AIPLA)).

²¹ See *Recasting the U.S. International Trade Commission’s Role in the Patent System*, 126 HARV. L. REV. 2337, 2342 (2013) [hereinafter *Recasting*] (the enactment of the AIA was designed to remedy

These proceedings have had a severe effect on patent owners and the value of their patents.²² The chance for a patent to be declared invalid is never minimal.²³ The higher the chance the patent can be invalidated, the lower the economic value of the patent is to the owner.²⁴ Thus, lowering the price a patent owner will obtain in any licensing or sale of that patent is inevitable.²⁵ Suspect infringers may start to file IPR petitions more readily in the future, but the evolution of IPR estoppel and the current complexity in evaluating whether estoppel will apply may influence how parties approach future patent invalidity claims.

A. Mechanics of Inter Partes Review

In an IPR, one of the most commonly used proceedings²⁶, a party may challenge a patent's validity by adjudicating in the USPTO, rather than in a district court²⁷. An expert body of specialized Administrative Patent Judges adjudicate the disputes allowing the new system to be faster and conclude with more consistent outcomes.²⁸ Any person other than the patent owner can file an IPR petition challenging an issued patent on the grounds that it is not novel or obvious due to prior art.²⁹

When a petitioner decides to challenge a patent's validity through an IPR proceeding, they submit a petition.³⁰ The petitioner must identify the patent claims he believes to be improperly issued and submit documents that would support his allegations.³¹ The PTAB will only grant an IPR on claims that it believes the petitioner has a "reasonable likelihood" of invalidating the claim.³² If the PTAB grants the petition and institutes the IPR proceedings, the matter goes to trial before the PTAB, which then renders the final decision on the validity of the claims.³³ When a patent is

the "endemic problem of low patent quality."). See H.R. Rep. No. 112-98, pt. 1, at 40 (2011) ("The legislation is designed to establish a more efficient and streamlined patent system that will improve patent quality and limit unnecessary and counterproductive litigation costs.").

²² See Stephen Yelderman, *Do Patent Challenges Increase Competition?*, 83 U. CHI. L. REV. 1943, 1951-54 (2016) (discussing patent challenges and the impact they have to patent holders).

²³ See Josh Landau, *A Little More Than Forty Percent: Outcomes At The PTAB, District Court, and the EPO*, PATENT PROGRESS (May 1, 2018), <https://www.patentprogress.org/2018/05/01/a-little-more-than-forty-percent/> (states that around 40-45% of all challenged patents are determined to be invalid in whole or in part).

²⁴ See *Recasting*, *supra* note 21, at 2346 ("invalidation is 'the death knell' for a patent.") (quoting John R. Allison et al., *Patent Quality and Settlement Among Repeat Patent Litigants*, 99 GEO. L.J. 677, 678 (2011)).

²⁵ John R. Allison et al., *Patent Quality and Settlement Among Repeat Patent Litigation*, 99 GEO. L.J. 677, 678 (2011) ("[A]n invalid patent is worthless since it prevents a patentee from ever again suing anyone for patent infringement, thereby relieving all potential infringers from having to bear the risk of litigation or having to pay license fees.").

²⁶ See *Patent Trial and Appeal Board Statistics*, USPTO (Aug. 2019), <https://www.uspto.gov/patents-application-process/patent-trial-and-appeal-board/statistics> (93% of all petitions by trial are by IPRs).

²⁷ 35 U.S.C. § 316(c) (2020).

²⁸ *Id.*

²⁹ 35 U.S.C. § 311(a).

³⁰ 35 U.S.C. § 312(a)(3) (2020).

³¹ *Id.*

³² *Id.* § 314(a).

³³ 35 U.S.C. §§ 316(a)(II), 318(a) (2020).

challenged in court, the patent is presumed to be valid, and the challenger must rebut this presumption.³⁴ In contrast, in an IPR, the challenged patent is not entitled to a presumption of validity.³⁵ This difference between a traditional court proceeding and IPR proceedings means that the petitioner has a lower burden of proof in an IPR. Petitioner must prove unpatentability by a preponderance of the evidence,³⁶ rather than meeting the heightened standard of “clear and convincing evidence” traditional courts impose.³⁷

The losing party may appeal to the Federal Circuit.³⁸ If the IPR decision finding invalidation is upheld on appeal, the court will no longer have jurisdiction to render a decision, and the case will be dismissed.³⁹ IPR proceedings are designed to be concluded within one year, and the Federal Circuit has exclusive appellate jurisdiction over IPR decisions.⁴⁰

B. Claim Construction

At the end of IPR, the PTAB will issue a claim construction.⁴¹ A claim construction defines the scope and meaning of a claim.⁴² It is required that the patentee must particularly point out and distinctly claim his invention.⁴³ Claims are construed to understand what the inventor has claimed for himself and to delineate the scope of the

³⁴ See Eric C. Cohen, *A Primer on Inter Partes Review, Covered Business Method Review, and Post-Grant Review Before the Patent Trial and Appeal Board*, 24 FED. CIR. B.J. 1, 15 (2014).

³⁵ *Id.* at 15.

³⁶ 35 U.S.C. § 316(e).

³⁷ *Microsoft Corp. v. i4i Ltd. P'ship*, 564 U.S. 91, 113 (2011) (holding that a heightened standard of proof applies to patent validity challenges because it “properly limits the circumstances in which a lay jury overturns the considered judgment of an expert agency”).

³⁸ 35 U.S.C. § 319 (2020). See, e.g., *St. Jude Med., Cardiology Div., Inc. v. Volcano Corp.*, 749 F.3d 1373, 1376 (Fed. Cir. 2014) (the court of appeals was not authorized to hear an appeal from the USPTO because the denial of a petition for inter partes review was not a “final written decision” of the Patent Trial and Appeal Board under 35 USCS § 318(a)).

³⁹ See Cohen, *supra* note 34, at 24 (“[T]he final written decision of the PTAB does not, itself, cancel the patent, unless the patent owner decides not to appeal.”).

⁴⁰ 35 U.S.C. § 141(c) (2020) (providing that the Federal Circuit is the only forum an appellant may appeal the PTAB’s decision). See Andrei Iancu et al., *Inter Partes Review Is the New Normal: What Has Been Lost? What Has Been Gained?*, 40 AM. INTELL. PROP. L. ASS’N Q.J. 539, 541-42, 560 (2012) (“The final decision must be issued one year after the IPR was instituted. In some cases, this timeline can be extended for up to six months.”).

⁴¹ See Scott A. McKeown, *Early PTAB Claim Construction - The Faster, Cheaper Markman Order*, PATENTS POST-GRANT (Oct. 2, 2013), <http://www.patentspostgrant.com/lang/en/2013/10/early-ptab-claim-construction-to-drive-litigation-settlements>.

⁴² See *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (en banc) (“It is a ‘bedrock principle’ of patent law that ‘the claims of a patent define the invention to which the patentee is entitled the right to exclude.’”) (quoting *Innova/Pure Water, Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d 1111, 1115 (Fed. Cir. 2004)).

⁴³ *SRI Int'l v. Matsushita Elec. Corp. of Am.*, 775 F.2d 1107, 1121 (Fed. Cir. 1985) (en banc); see also *Smith v. Snow*, 294 U.S. 1, 11 (1935) (reiterating that it is the claims of the patent, and not its specifications, that measure the invention); *Aro Manufacturing Co. v. Convertible Top Replacement Co.*, 365 U.S. 336, 356-57 (1961) (it is “the claims that measure the invention”).

patentee's right to exclude.⁴⁴ Accordingly, issued claims are construed by reference to their "ordinary and customary meaning."⁴⁵ Similarly, claims are used to determine the novelty and non-obviousness of the applicant's invention and to prevent something from being removed from the public that may already be known. The claim must be construed and then compared to the prior art.⁴⁶ The patentee desires to avoid an overly broad claim construction because that would increase the chances of the claim being found invalid.⁴⁷ In all patent examinations and litigations, claim construction analysis is used in determining infringement and invalidity.⁴⁸

C. Estoppel Provisions of Inter Partes Review

Once the PTAB releases its claim construction, it then determines whether the patent's claims read on the prior art, which would render the claims anticipated or obvious.⁴⁹ If the PTAB determines none or only some of the claims are invalid, litigation may continue in another forum. Petitioners, therefore, have an opportunity for a court to declare a patent invalid. However, this opportunity is tempered by the IPR's estoppel provision.⁵⁰

A party filing a petition for an IPR may be subject to two forms of estoppel.⁵¹ First, if the petitioner files a petition that results in a final written decision by the PTAB, it may not request a subsequent proceeding with respect to a claim that is the subject of the PTAB's decision "on any ground that the petitioner raised or reasonably could have raised during that inter partes review."⁵² Second, the petitioner is also estopped from asserting, in an infringement action in a district court or before the ITC, that the claim "is invalid on any ground that the petitioner raised or reasonably could have raised during that inter partes review."⁵³

⁴⁴ See David L. Schwartz, *Pre-Markman Reversal Rates*, 43 LOY. L.A. L. REV. 1073, 1078 (2010) (discussing that the first step to prove infringement is to construe the patent claim at issue in order to determine the scope and compare the construed claim with the accused device or method).

⁴⁵ *Vitronics Corp. v. Conceptronc, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996).

⁴⁶ See Schwartz, *supra* note 44, at 1078.

⁴⁷ See Tun-Jen Chiang, *Fixing Patent Boundaries*, 108 MICH. L. REV. 523, 550-51 (2010) ("The key is to understand the difference between nominal claim language (what the claim purports to cover) and legal claim scope. A nominally narrowing amendment to avoid prior art thus broadens the legal scope of the claim, and increases its monopoly cost, because the amendment transforms legal scope from zero to something greater.").

⁴⁸ See Schwartz, *supra* note 44, at 1078; see also Thomas Chen, *Patent Claim Construction: An Appeal for Chevron Deference*, 94 VA. L. REV. 1165, 1169 (2008) (discussing that during patent litigation, claim construction determines not only whether a patent has been infringed, but also whether the patent itself is valid or invalid).

⁴⁹ *Idle Free Sys., Inc. v. Bergstrom, Inc.*, No. IPR2012-00027, 109 U.S.P.Q.2d 1443, 1447 (P.T.A.B. Jan. 7, 2014).

⁵⁰ See Walder, *supra* note 10. See, e.g., *Star Envirotech, Inc. v. Redline Detection, LLC*, No. SACV 12-01861 JGB, 2015 U.S. Dist. LEXIS 107149, at *3 (C.D. Cal. Jan. 29, 2015) ("IPR estoppel attaches once the PTAB issues a final written decision.").

⁵¹ 35 U.S.C. § 315.

⁵² *Id.* § 315(e)(1).

⁵³ *Id.* § 315(e)(2). See, e.g., *Synopsys, Inc. v. Mentor Graphics Corp.*, 814 F.3d 1309, 1316 (Fed. Cir. 2016) ("The validity of claims for which the Board did not institute inter partes review can still be litigated in district court."); see also *Princeton Dig. Image Corp. v. Konami Dig. Entm't Inc.*, No. 12-1461-LPS-CJB, 2017 WL 239326, at *4 (D. Del. Jan. 19, 2017) (court held that estoppel did not

D. Current Federal District Court Decisions

The U.S. District Court for the Northern District of Texas has applied a “bright-line” approach in determining if estoppel applies. In *Zitavault*, the plaintiffs argued that the defendants should be estopped from arguing that any claims in the 257 patent⁵⁴ are obvious or anticipated in light of prior art systems—namely, HydraWEB Load Manager and Network Dispatcher—charted in their invalidity contentions.⁵⁵ The court held that estoppel does not apply as the defendants could not have raised prior art systems, such as products and software, during IPR proceedings because those products are not patents or printed publications.⁵⁶ Applying a strict “bright-line” approach, the court held that the defendants could rely on the prior art systems in their invalidity contentions to argue anticipation or obviousness.

The Central District of California was one of the first to adopt the “superior and separate” approach.⁵⁷ In *Star Envirotech*, it was undisputed that the instruction manual did not fully disclose relevant details about the product.⁵⁸ The court noted that disassembly of the machine could shed light on whether a claim limitation was met.⁵⁹ The court declined to extend statutory estoppel to preclude an invalidity argument based on a machine, finding that “the physical machine itself disclose[d] features

apply to invalidity arguments concerning patent claims 14, 19, and 20 because those patent claims were not the subject of a final written decision in an IPR proceeding).

⁵⁴ See generally U.S. Patent No. 6,484,257 (issued Nov. 19, 2002) (The patent relates to the encryption and decryption of data conducted over a distributed computer network).

⁵⁵ See *Zitovault, LLC v. IBM*, 3:16-cv-0962-M, 2018 U.S. Dist. LEXIS 117339, at *1-18 (N.D. Tex. Apr. 4, 2018). The plaintiff ZitoVault, LLC sued the defendants IBM and Softlayer Technologies, Inc. for infringing its '257 patent. After the case was filed, the patent was subject to two inter partes review proceedings. The first proceeding began after the PTAB granted Amazon.com, Inc.'s petition to claims 1, 3, 5-8, and 10 of the plaintiff's '257 patent. Shortly thereafter, the PTAB allowed IBM to join Amazon.com, Inc.'s IPR. The PTAB ultimately decided not to invalidate any of the claims. The defendants again petitioned for review of the '257 patent, but on different prior art references. There, the PTAB declined to institute IPR. The plaintiffs, here, moved for summary judgment, which the court granted in part and denied in part: holding that under 35 U.S.C. § 315(e)(2) the defendants were estopped from arguing that the instituted claims of the '257 patent are anticipated or obvious, but that the defendants were not estopped from arguing the validity of the claim in which the PTAB refused to institute IPR.

⁵⁶ *Id.* at *12.

⁵⁷ See *Star Envirotech, Inc. v. Redline Detection, LLC*, No. SACV 12-01861 JGB, 2015 U.S. Dist. LEXIS 107149, at *9-11 (C.D. Cal. Jan. 29, 2015).

⁵⁸ *Id.* at *2-4. Star manufactures equipment used for detecting leaks in different systems. Defendant Ken Pieroni, helped develop Star's early leak detection technology in the late 1990's. Pieroni and Star's President Jim Eli Saffie were the named inventors on the '808 patent. The patent was assigned to Star. After leaving Star, Defendant Pieroni sold both his interest in the company and the '808 Patent. Star alleges that after Pieroni left Star, he and Defendant (Redline) began infringing and inducing others to infringe the '808 Patent. On January 7, 2013, Defendants filed their petition for an IPR with the PTO. On June 30, 2014, the PTAB issued its final written decision determining that Defendant Redline failed to show that claims nine and ten were unpatentable.

⁵⁹ See *id.* at *11 (claim nine of the '808 Patent requires “locating a heating element within a closed smoke producing chamber.”).

claimed in the '808 Patent⁶⁰ that [were] not included in the instruction manual, and it [was] therefore a superior and separate reference.”⁶¹

A new approach has come to light known as the “substantive difference” approach. The court in *California Institute of Technology v. Broadcom Ltd.*, cleared up the analysis.⁶² Broadcom wanted to use certain papers and public presentations⁶³ to argue that various CalTech patent⁶⁴ claims were invalid.⁶⁵ Broadcom did not treat them as printed publications, as done in an IPR, but as evidence that CalTech's invention was known or used. Broadcom argued that its theory was not subject to IPR statutory estoppel. The court held that estoppel should attach in situations like this unless there is some "substantive" difference between the two invalidity arguments.⁶⁶

III. ANALYSIS

The Patent Trial and Appeal Board's revised, all-or-nothing approach to patent reviews has settled some debate over a rule that prevents invalidity arguments from being re-litigated.⁶⁷ But estoppel questions continue to linger—and one emerging trend is changing the calculations for companies considering a patent challenge.⁶⁸

When challenging a patent in an IPR, petitioners are limited to arguing that the patent is anticipated or obvious based on patents and printed publications, such as textbooks.⁶⁹ Courts have been asked to consider whether estoppel attaches to physical products that are described in publications.⁷⁰ IPR estoppel generally does not apply to prior art physical products.⁷¹ But, what if a prior art physical product is cumulative of a printed publication raised in IPR?

⁶⁰ See generally U.S. Patent No. 6,526,808 (issued Mar. 4, 2003). (It covers a method for (1) detecting leaks in a fluid system, such as the brake or evaporative system of a car, and (2) delivering smoke into the system so that a detected leak can be physically located.)

⁶¹ *Star Envirotech*, 2015 U.S. Dist. LEXIS 107149, at *10-11.

⁶² See *California Institute of Technology v. Broadcom Ltd.*, No. CV 16-3714-GW, 2019 U.S. Dist. LEXIS 141103, at *23-24 (C.D. Cal. Aug. 9, 2019).

⁶³ See *N. Telecom, Inc. v. Datapoint Corp.*, 908 F.2d 931, 936 (Fed. Cir. 1990) (for a document to be considered a "printed publication," it must have been publicly available).

⁶⁴ See generally U.S. Patent No. 7,116,710 (issued Oct. 3, 2006). (The patent speaks about the technique for encoding and decoding turbo codes.)

⁶⁵ See *California Institute of Technology*, 2019 U.S. Dist. LEXIS 141103, at *6-9.

⁶⁶ *Id.* at *24.

⁶⁷ See *SAS Inst., Inc. v. Iancu*, ___ U.S. ___, 138 S. Ct. 1348, 1353 (2018) (“The agency cannot curate the claims at issue but must decide them all.”). The U.S. Supreme Court put an end to partial reviews at the PTAB in April 2018, holding the board must examine all of the challenged claims if it is going to review a patent. Following the ruling, the board said it would also review all the arguments made in the petition.

⁶⁸ 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> (“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.”).

⁶⁹ 35 U.S.C. § 311(b).

⁷⁰ See Vujcic & Maebius, *supra* note 68.

⁷¹ 35 U.S.C. § 311(b).

The lack of uniformity among the various courts in their interpretation of IPR estoppel⁷² has resulted in the aforementioned federal district court splits. Courts often mention the other approaches' strengths and weaknesses in their judicial opinions, along with statutory and policy arguments that weigh in favor of one approach over the other. Ultimately, only one approach should be used, which would bring about a uniform application of the law. This comment will proceed to describe the three different approaches: the (1) "bright-line" approach, (2) "superior and separate" approach, and (3) "substantive difference" approach. The following analysis will further elaborate on each approach's reasoning and interpretation of 35 U.S.C. § 315(e)(2)⁷³ and 35 U.S.C. § 311(b)⁷⁴ in deciding whether estoppel applies to physical products.

The first section of the analysis will discuss the major issues regarding the reasoning of federal district courts that have adopted the "bright-line" approach, specifically how these courts merely rely on the "plain language" of the statute, and nothing more. The second section will discuss why the "superior and separate" approach is also not suitable. The final section will discuss why the "substantive difference" approach is the more suitable approach because it contemplates: the "plain language," the overall purpose of the statute as a whole, and pertinent policy considerations.

A. The "Bright-Line" Approach in Reliance on the Plain Meaning of 35 U.S.C. §§ 311, and 315

Currently, federal district courts are split on the estoppel provision.⁷⁵ Some courts have favored a bright-line rule, strictly construing 35 U.S.C. § 311(b)⁷⁶. District courts

⁷² 35 U.S.C. §§ 315(e)(2).

⁷³ The relevant language of the statute reads as follows:

The petitioner in an inter partes review of a claim in a patent under this chapter [35 USCS §§ 311 et seq.] that results in a final written decision under section 318(a) [35 USCS § 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 [19 USCS § 1337] that the claim is invalid on any ground that the petitioner raised or reasonably could have raised during that inter partes review.

Id.

⁷⁴ The relevant language of the statute reads as follows:

A petitioner in an inter partes review may request to cancel as unpatentable 1 or more claims of a patent only on a ground that could be raised under section 102 or 103 [35 USCS § 102 or 103] and only on the basis of prior art consisting of patents or printed publications.

35 U.S.C. § 311(b).

⁷⁵ See generally Bultman, *supra* note 12 (stating that "there is not consensus" between district courts on whether estoppel attaches to physical products that are described in a publication).

⁷⁶ See *Universal Elecs. v. Universal Remote Control*, 943 F. Supp. 2d 1028, 1032 (C.D. Cal. 2013); *Wildcat Licensing WI, LLC v. Johnson Control, Inc.*, No. 13-CV-328-WMC, 2014 U.S. Dist. LEXIS 7594, 2014 WL 232106, at *3 (W.D. Wis. Jan. 22, 2014); *Evolutionary Intelligence, LLC v. Millennial Media, Inc.*, No. 5-13-CV-04206-EJD, 2014 WL 2735801, at *4 (N.D. Cal. June 11, 2014). These cases

in both Minnesota and Texas have made the determination that the IPR estoppel provision, as it reads⁷⁷, requires only patents and printed publications to be estopped from arguing in district courts.⁷⁸ These courts have held that because the actual product could not have been raised in an IPR, estoppel does not attach.⁷⁹ Meaning that products exemplifying patent or printed publications are not subject to § 315(e)(2) estoppel.⁸⁰

The Northern District of Texas has applied a similar standard in determining if estoppel applies. In *Zitovault*, the plaintiff claimed that the defendants are estopped from arguing anticipation or obviousness based on prior art patents and publications that they were aware of before joining Amazon's IPR.⁸¹ The plaintiff explained that by allowing the defendants to raise arguments which they chose not to raise during the prior IPR would give them a second chance at the patent.⁸²

The plaintiff in this case further sought to extend statutory estoppel in two ways. First, the plaintiff claimed that the defendants should be estopped from arguing claim 4 is obvious or anticipated.⁸³ Second, the plaintiff claimed that the defendants are also estopped from arguing that any claims in the '257⁸⁴ patent are obvious or anticipated in light of prior art systems.⁸⁵ Explaining that the "accused infringer cannot avoid statutory estoppel simply by relying on a system where all of the teachings of the system also exist in patents or printed publications because that ground reasonably could have been raised during the IPR."⁸⁶

In response to the plaintiff's arguments, the defendants claimed that the PTAB did not institute IPR as to Claim 4, and the statutory estoppel provision is explicit that

do not set forth much more than the statutory language itself and provide little insight as to the breadth of U.S.C § 315(e)(2).

⁷⁷ See *ClearCorrect Operating, LLC v. Int'l Trade Comm'n*, 810 F.3d 1283, 1296 (Fed. Cir. 2015) (quoting *King v. Burwell*, 135 S. Ct. 2480, 2492 (2015)) (internal quotation marks omitted) (holding "Their ultimate meaning should remain consistent with the remainder of the statute.").

⁷⁸ See *Polaris Industries v. Arctic Cat Inc.*, 2019 U.S. Dist. LEXIS 138210, 2019 WL 3824255, at *8-9 (D. Minn. Aug. 15, 2019) (favored a bright-line rule, holding that because the actual product could not have been raised in an IPR, estoppel does not attach); see also *Zitovault, LLC v. IBM*, No. 3:16-cv-0962-M, 2018 U.S. Dist. LEXIS 117339, at *12-13 (N.D. Tex. Apr. 4, 2018) ("Defendants can rely on the prior art system in their invalidity contentions to argue anticipation or obviousness" because such are not subject to 35 U.S.C. § 311(b)).

⁷⁹ See *Biscotti Inc. v. Microsoft Corp.*, 2017 U.S. Dist. LEXIS 92091, 2017 WL 2526231, at *8 (E.D. Tex. May 11, 2017) ("[The defendant] therefore could not have raised a prior art system during IPR proceedings.").

⁸⁰ 35 U.S.C. § 315 (e)(2). IPR is limited to invalidity grounds "that could be raised under section 102 or 103 and only on the basis of prior art consisting of patents or printed publications" under 35 U.S.C. § 311(b).

⁸¹ *Zitovault*, 2018 U.S. Dist. LEXIS 117339, at *8. See *Shaw Indus. Grp., Inc. v. Automated Creel Sys., Inc.*, 817 F.3d 1293, 1300 (Fed. Cir. 2016) (concluding that the defendant is estopped from asserting prior art references and combinations that it reasonably could have raised).

⁸² *But see Synopsys, Inc. v. Mentor Graphics Corp.*, 814 F.3d 1309, 1316 (Fed. Cir. 2016) ("The validity of claims for which the Board did not institute inter partes review can still be litigated in district court.").

⁸³ *Zitovault*, 2018 U.S. Dist. LEXIS 117339, at *10-11.

⁸⁴ See generally U.S. Patent No. 6,484,257 (issued Nov. 19, 2002) (The patent relates to the encryption and decryption of data conducted over a distributed computer network).

⁸⁵ *Zitovault*, 2018 U.S. Dist. LEXIS 117339, at *10-11.

⁸⁶ *Id.* at *12.

estoppel only applies to the *instituted* claims.⁸⁷ The defendants also explained that they could not have raised prior art systems, such as products and software, during IPR proceedings.⁸⁸ The court held that the defendants could rely on prior art systems in their invalidity contentions to argue anticipation or obviousness.⁸⁹

Ultimately, courts that use the “bright-line” approach believe that providing a deeper analysis would render the estoppel provision meaningless.⁹⁰ Additionally, these courts further contend that deeper analysis would complicate cases because it would precipitate a dispute as to whether such a combination fell within the carefully worded limited estoppel provision.⁹¹ Such courts note that the absence of full statutory estoppel not only increases the ability of litigants to “game the system,” but it also has the potential to increase rather than reduce the complexity of the validity issues that may come before the Court.⁹² In order to avoid such chicanery, a “bright-line” approach is argued to be best suited.

Such reasoning is flawed. The “bright-line” approach fails to discuss the differences between physical products and patent or printed publications. In addition, such an approach would supersede the defendant’s “right to have its invalidity arguments properly considered on the merits.”⁹³ Thus, a “bright-line” approach can allow patent challengers to circumvent estoppel.

B. The Reasoning behind District Courts that have Adopted a “Superior and Separate” Approach

Other courts believe that a deeper analysis is needed to prevent estoppel fraud. The Central District of California was one of the first courts to adopt the “superior and separate” approach.⁹⁴ This approach adopts the interpretation of 35 U.S.C. § 311(b) as applied to the IPR estoppel provision as requiring that a reference must be superior

⁸⁷ See 35 U.S.C. § 315(e)(2) (“The petitioner in an inter partes review of a *claim* in a patent under this chapter that results in a final written decision . . . may not assert . . . that *the claim* is invalid.”) (emphasis added); see also *Synopsys*, 814 F.3d at 1316 (“The validity of claims for which the Board did not institute inter partes review can still be litigated in district court.”).

⁸⁸ 35 U.S.C. § 311(b). This is because IPR is limited to invalidity grounds “that could be raised under section 102 or 103 and only on the basis of prior art consisting of patents or printed publications.”

⁸⁹ *Zitovault*, 2018 U.S. Dist. LEXIS 117339, at *12-13.

⁹⁰ See, e.g., *Douglas Dynamics, LLC v. Meyer Products LLC*, No. 14-cv-886-jdp, 2017 U.S. Dist. LEXIS 58773, at *12-13 (W.D. Wis. Apr. 18, 2017); *Parallel Networks Licensing, LLC v. Int’l Bus. Machines Corp.*, No. 13-2072, 2017 U.S. Dist. LEXIS 28461, at *30 (D. Del. Feb. 22, 2017) (Jordan, J.) (“Allowing IBM to raise arguments here that it elected not to raise during the IPR 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.”).

⁹¹ See *Intellectual Ventures II LLC v. Kemper Corp.*, No. 6:16-cv-0081, 2016 U.S. Dist. LEXIS 181431, at *8-10 (E.D. Tex. Nov. 7, 2016).

⁹² *Id.*

⁹³ *Ilife Technologies, Inc. v. Nintendo of America, Inc.*, No. 3:13-cv-4987-M, 2017 U.S. Dist. LEXIS 87769, at *18 (N.D. Tex. May 30, 2017).

⁹⁴ See *Star Envirotech, Inc. v. Redline Detection, LLC*, No. SACV 12-01861 JGB, 2015 U.S. Dist. LEXIS 107149, at *9-11 (C.D. Cal. Jan. 29, 2015).

and separate to be allowed during district court litigation.⁹⁵ A “superior and separate” approach requires the court to determine if the physical product discloses features that are not included in the printed publication.⁹⁶

In *Star Envirotech*, the defendants contended they could not have put forward the Leakmaster reference⁹⁷ in the IPR because it is an actual physical machine, not a patent or printed publication.⁹⁸ The defendants argued that that the Leakmaster is properly combined with the other six disputed references to create new grounds of invalidity, which could not have been presented in the IPR.⁹⁹ While the plaintiff argued that—even though the LeakMaster itself could not have been admitted—the defendants could have instead put forward the LeakMaster's owner's manual, which the defendants had in their possession at the time of the IPR.¹⁰⁰ However, the physical machine itself discloses features claimed in the '808¹⁰¹ Patent that are not included in the instruction manual, and it is, therefore, a superior and separate reference.¹⁰²

Proponents of the “superior and separate” approach acknowledge that a party cannot “cloak its reliance upon [prior art] as a product, so as to avoid § 315(e)(2) estoppel,”¹⁰³ when it is or could be relying on a depiction of the product in a printed publication. In doing so, a deeper analysis is needed to find such a separate and superior difference. The reasoning is that a physical product contains details to show relevant features that patents or printed publications cannot depict and should not be estopped from being raised. Yet, this approach requires certain claim limitations to be independently satisfied by prior art in a way that is different from an associated prior art patent or printed publication.¹⁰⁴ In conducting a “superior and separate” approach, the district court wastes time by deconstructing each physical art. The statute does not include such requirements, which in effect, would extend statutory estoppel.¹⁰⁵

⁹⁵ See *Clearlamp, LLC v. LKQ Corp.*, No. 12 C 2533, 2016 U.S. Dist. LEXIS 186028, at *23 (N.D. Ill. Mar. 18, 2016) (a party cannot “cloak its reliance upon [prior art] as a product, so as to avoid § 315(e)(2) estoppel,” when it is or could be relying on a depiction of the product in a printed publication. But when the product itself is a “superior and separate reference” from the printed publication, use of the product is not estopped.).

⁹⁶ See *SRAM, LLC v. RFE Holding Can. Corp.*, No. 15 C 11362, 2019 U.S. Dist. LEXIS 149884, at *17 (N.D. Ill. Jan. 25, 2019) (although the Boone Chainring was depicted in a printed publication, it was not depicted at an appropriate angle or in enough detail to show its relevant feature of offset tooth tips).

⁹⁷ A LeakMaster A240 smoke machine (the “LeakMaster”) made by Star Envirotech and sold on July 1, 1998 in Encinitas, California.

⁹⁸ *Star Envirotech*, 2015 U.S. Dist. LEXIS 107149, at *9-11.

⁹⁹ *Id.*

¹⁰⁰ *Id.*

¹⁰¹ See generally U.S. Patent No. 6,526,808 (issued Mar. 4, 2003) (Covers a method for (1) detecting leaks in a fluid system, such as the brake or evaporative system of a car, and (2) delivering smoke into the system so that a detected leak can be physically located).

¹⁰² *Star Envirotech*, 2015 U.S. Dist. LEXIS 107149, at *9-11.

¹⁰³ See *Biscotti Inc. v. Microsoft Corp.*, No. 2:13-CV-01015-JRG-RSP, 2017 U.S. Dist. LEXIS 144164, at *24 (E.D. Tex. May 11, 2017) (the plaintiff characterized the defendant's system prior art “as printed subject matter in disguise”).

¹⁰⁴ See *ACCO Brands, Inc v. Pc Guardian Anti-Theft Products*, 592 F. Supp. 2d 1208, 1218 (N.D. Cal. 2008) (software manuals are very likely to explain detailed functionality found in computer-implemented patent claims).

¹⁰⁵ See *SAS Inst., Inc. v. ComplementSoft, LLC*, 825 F.3d 1341, 1357 (Fed. Cir. 2016) (Newman, J.) (concurring in part, 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

C. The Reasoning behind District Courts that have Adopted a “Substantive Difference” Approach

After considering two different approaches, both at opposite ends of interpreting IPR estoppel and whether physical products apply, the “substantive difference” approach has major advantages when one considers both the policy implications and the efficiency of the approach. The “substantive difference” approach does not extend the estoppel approach; but at the same time, it does take into consideration substantive differences between the physical products and the patented or printed publications. A court must determine if there is some substantive difference between the reference (e.g., a speech at an industry conference or a physical product) and patented or printed publications.¹⁰⁶

In *California Institute of Technology v. Broadcom Ltd.*, the court makes the observation that a reference does not need to be a superior and separate reference from the patent or printed publication.¹⁰⁷ First, requiring claim limitations to be satisfied by the prior physical art in a different way as the associated prior art that was either a patent or printed publication is not required by the IPR estoppel provision.¹⁰⁸ Second, the court addressed that in a “superior and separate” approach, a patent challenger may try to “cloak” its prior art ground and “skirt” estoppel.¹⁰⁹ For instance, a primary reference may be used to argue that the majority of claim limitations are disclosed, and a patent challenger may then simply swap out secondary references to show that one final limitation is also disclosed in the prior art.¹¹⁰

Proponents of the “substantive difference” approach explain that IPR estoppel bars nothing except prior art consisting of patents and printed publications,¹¹¹ and on

expert tribunal, and to put an end to repetitive challenges.”). The procedural framework for IPRs was implemented as part of the Leahy-Smith America Invents Act (“AIA”), Pub. L. No. 112-29, 125 Stat. 284 (2011) (effective September 16, 2012). *See generally* 35 U.S.C. § 311(b) (Section 311 describes the scope of inter partes review and limits such review to challenges that “could be raised under section 102 and 103 and only on the basis of prior art consisting of patents or printed publications”).

¹⁰⁶ *See California Institute of Technology v. Broadcom Ltd.*, No. CV 16-3714-GW, 2019 U.S. Dist. LEXIS 141103, at *23-24 (C.D. Cal. Aug. 9, 2019) (the Court does not believe that a “known or used” invalidity theory need be “superior” to a printed publication invalidity theory to survive estoppel. There must be some substantive difference between the two theories that is germane to the invalidity dispute at hand.).

¹⁰⁷ *But see Star Envirotech*, 2015 U.S. Dist. LEXIS 107149, at *9-11.

¹⁰⁸ *See California Institute of Technology*, 2019 U.S. Dist. LEXIS 141103, at *22-23; *see also Milwaukee Electric Tool Corp. v. Snap-On Inc.*, 271 F. Supp. 3d 990, 1032 (E.D. Wis. 2017) (the court disagreed with the argument that “excluding non-petitioned grounds [physical products] should be extended so far, given the clear limitation of Section 311(b) to written materials”).

¹⁰⁹ *Milwaukee Electric Tool Corp.*, 271 F. Supp. 3d at 1032 (the court similarly expressed concerns that the defendant should not be allowed to “skirt” estoppel “by purporting to rely on a device without actually relying on the device itself,” but otherwise found that estoppel would not extend to prior art grounds including products).

¹¹⁰ *See, e.g., Biscotti Inc. v. Microsoft Corp.*, No. 2:13-CV-01015-JRG-RSP, 2017 U.S. Dist. LEXIS 144164, at *24 (E.D. Tex. May 11, 2017) (Biscotti characterizes their system prior art as printed subject matter).

¹¹¹ 35 U.S.C. § 311(b). The text of Section 311 is unmistakable: “A petitioner in an inter partes review may request to cancel as unpatentable 1 or more claims of a patent only on a ground that could be raised under section 102 or 103 and only on the basis of prior art consisting of patents or printed publications.” Thus, any other types of prior art references do not qualify. *See Douglas Dynamics, LLC*

grounds-based on references not mentioned at all in the IPR petitions.¹¹² This approach is based on two theories—(1) not extending the reach of statutory estoppel, (2) while allowing defendants the right to have their invalidity arguments properly considered on the merits. This approach focuses on not allowing the defendant to skirt estoppel by relying on physical products that have similar materials that on a printed publication would fall within the scope of IPR estoppel.¹¹³ The approach also relies on the principle that an opposing party should not be expected to locate associated printed publications using a physical device.¹¹⁴ There must be a germane difference in the reference to not be estopped.

IV. PROPOSAL - A REALISTIC APPROACH THAT WILL UNITE THE COURTS AND RESOLVE DISCREPANCIES

In order to create uniformity amongst the courts, clarification of the law is essential. Additionally, potential plaintiffs need clarification so as to be sure at what point an infringement suit can be brought. The foregoing analysis and interpretation of the various district courts demonstrates that only the “substantive difference” approach can bring about both uniform application of the law and clarification for potential plaintiffs.

The most obvious way to resolve the discrepancy between the “bright-line” and “superior and separate” approach is for Congress to clarify section § 315(e)(2)¹¹⁵ of the statute. Unfortunately, this is the least likely solution despite the obvious controversy that has been building between the courts. Congress could clarify the statute with a sentence similar to the following: For purposes of this subsection, the Court acknowledges and recognizes that such grounds include only those that could be reasonably raised under sections 102¹¹⁶ or 103¹¹⁷ and that only consist of patents or

v. Meyer Products LLC, No. 14-cv-886-jdp, 2017 U.S. Dist. LEXIS 58773, at *2 n.1 (W.D. Wis. Apr. 18, 2017).

¹¹² See *Milwaukee Electric Tool Corp.*, 271 F. Supp. 3d at 1032 (Plaintiffs have not met their burden to show that a skilled searcher's diligent search would uncover the underlying printed publications for the physical devices in question); see *Clearlamp, LLC v. LKQ Corp.*, No. 12 C 2533, 2016 U.S. Dist. LEXIS 186028, at *9; *Kennedy v. United States*, 965 F.2d 413, 417 (7th Cir. 1992) (“The burden of proof is on the party claiming estoppel.”).

¹¹³ See *Diomed v. Angio Dynamics, Inc.*, 450 F. Supp. 2d 130, 142 (D. Mass 2006) (“The definition of ‘printed’ cannot be stretched to include a presentation which does not include a paper component or, at minimum, a substitute for paper such as the static presentation of slides.”) (citing *In re Klopfenstein*, 380 F.3d 1345, 1349 n.4 (Fed. Cir. 2004)).

¹¹⁴ See *Milwaukee Electric Tool Corp.*, 271 F. Supp. 3d at 1032 (“Yet Plaintiffs go further, claiming that even the physical specimens should be estopped, as a diligent searcher, presented with a particular physical device, could be expected to locate the underlying printed publications.”).

¹¹⁵ 35 U.S.C. § 315(e)(2) (IPR petitioner may not assert, in a civil action or ITC proceeding, any ground that the petitioner raised or reasonably could have raised during an IPR “that results in a final written decision”).

¹¹⁶ 35 U.S.C. § 102(a)(1) (“a person shall be entitled to a patent unless the claimed invention was patented, described in a printed publication”).

¹¹⁷ The statute reads as follows:

A patent for a claimed invention may not be obtained, notwithstanding that the claimed invention is not identically disclosed as set forth in section 102 [35 U.S.C. § 102], if the differences between the claimed invention and the prior art are such

printed publications unless there is a substantive difference in the prior art from that asserted at the PTAB.

This would invariably clarify and resolve the litany of issues that have arisen from the discrepancy. Cooperation from Congress would allow the application approach to prevail while maintaining the consistency and integrity of the other sections of IPR. Unfortunately, such cooperation from Congress is improbable, which is why the next portion of this comment will examine the Central District of California's clarified approach in *California Institute of Technology v. Broadcom Ltd.*¹¹⁸

A. The Overwhelmingly Favorable, Purposeful, and Efficient Considerations in Favor of the "Substantive Difference" Approach

One of the most recent district court cases to address the issue of whether estoppel applies to physical products is *California Institute of Technology v. Broadcom Ltd.*¹¹⁹ In this case, the court took a different approach to interpret the statute than other district courts.¹²⁰ The court here declined to adopt the "superior and separate" approach.¹²¹ As the court explained, this standard would likely extend the reach of IPR estoppel beyond its intended scope. The "superior and separate" approach ignores a commonly found practice in patent litigation: using one prior art reference to meet the same claim limitations in a number of different invalidity arguments. Instead, the court favored the analysis in *Clearlamp*,¹²² finding that there must be *some substantive* difference between the two invalidity grounds that is germane to the invalidity dispute at hand to avoid estoppel.¹²³ Ultimately, even with the clarification, the court arrived at the same conclusion—namely, that IPR estoppel applied to all but one invalidity ground.

By looking directly into the text of the statute and the history of IPR proceedings, this approach expresses concern about extending the reach of statutory estoppel.¹²⁴ It

that the claimed invention as a whole would have been obvious before the effective filing date of the claimed invention to a person having ordinary skill in the art to which the claimed invention pertains. Patentability shall not be negated by the manner in which the invention was made.

35 U.S.C. § 103.

¹¹⁸ *California Institute of Technology v. Broadcom Ltd.*, No. CV 16-3714-GW, 2019 U.S. Dist. LEXIS 141103, at *23-24 (C.D. Cal. Aug. 9, 2019).

¹¹⁹ *Id.*

¹²⁰ See *Polaris Industries v. Arctic Cat Inc.*, 2019 U.S. Dist. LEXIS 138210, 2019 WL 3824255, at *8-9 (D. Minn. Aug. 15, 2019) (favored a bright-line rule, explaining that products embodying patents or printed publications are not subject to § 315(e)(2) estoppel); see also *SRAM, LLC v. RFE Holding Can. Corp.*, No. 15 C 11362, 2019 U.S. Dist. LEXIS 149884, at *16-17 (N.D. Ill. Jan. 25, 2019) (the product itself disclosed features not depicted in the patent claims, allowing the physical product to be a superior and separate art).

¹²¹ See *SRAM, LLC*, 2019 U.S. Dist. LEXIS 149884, at *9-11, 16-17.

¹²² See *Clearlamp, LLC v. LKQ Corp.*, No. 12 C 2533, 2016 U.S. Dist. LEXIS 195516, at *1-8 (N.D. Ill. July 1, 2016).

¹²³ See *California Institute of Technology*, 2019 U.S. Dist. LEXIS 141103, at *23-24.

¹²⁴ See *Milwaukee Electric Tool Corp. v. Snap-On Inc.*, 271 F. Supp. 3d 990, 1032 (E.D. Wis. 2017) ("Snap-On cannot skirt [estoppel] by purporting to rely on a device without actually relying on the device itself."). The Court attempted to discern if a patent challenge is simply swapping labels for

understands Congress' intended purpose to streamline patent litigation.¹²⁵ It also takes into account that "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."¹²⁶

Courts should use the "substantive difference" approach because it does not extend the reach of statutory estoppel. Any other higher standard that would require, for instance, that certain claim limitations be independently satisfied by prior art in a way that is different from an associated prior art patent or printed publication would likely extend the reach of statutory IPR estoppel beyond its intended scope. This standard would be reading into the statute requirements that are not enumerated in the statutory provision.¹²⁷

Next, the "substantive difference" approach makes it difficult for a defendant to "skirt estoppel." A defendant should not be allowed to "skirt" estoppel "by purporting to rely on a device without actually relying on the device itself." By applying this approach, the defendant must focus on differences that are germane to invalidity.

Finally, the "substantive difference" approach allows the defendant to have its invalidity rights considered. This approach does not try to supersede a defendant's "right to have its invalidity arguments properly considered on the merits."¹²⁸ It allows the court to dig deeper into the claims to determine if a legitimate germane difference exists.

B. The Flawed Reasoning of District Courts That have adopted a "Superior and Separate" Approach, that Extends the Reach of Statutory IPR estoppel

In one instance, the Central District of California declined to extend estoppel to a physical machine when the machine disclosed features not included in the printed publication.¹²⁹ The court considered the machine a "superior and separate" reference. The "superior and separate" approach is flawed as it allows (1) the defendant to extend

what is otherwise a patent or printed publication invalidity ground in order to "cloak" its prior art ground and "skirt" estoppel.

¹²⁵ *Id.* at 1029.

¹²⁶ See *Cobalt Boats, LLC v. Sea Ray Boats, Inc.*, Civil Action No. 2:15cv21, 2017 U.S. Dist. LEXIS 96909, at *8-9 (E.D. Va. June 5, 2017) ("[T]he broad reading of Shaw renders the IPR estoppel provisions essentially meaningless because parties may pursue two rounds of invalidity arguments as long as they carefully craft their IPR petition."); *Douglas Dynamics, LLC v. Meyer Products LLC*, No. 14-cv-886-jdp, 2017 U.S. Dist. LEXIS 58773, at *12 (W.D. Wis. Apr. 18, 2017) ("A patent infringement defendant does not have to take the IPR option; it can get a full hearing of its validity challenge in district court. If the defendant pursues the IPR option, it cannot expect to hold a second-string invalidity case in reserve in case the IPR does not go defendant's way.")

¹²⁷ See *Milwaukee Electric Tool Corp.*, 271 F. Supp. 3d at 1031-32 ("IPR estoppel bars nothing except prior art consisting of patents and printed publications. The text of Section 311 is unmistakable: 'A petitioner in an inter partes review may request to cancel as unpatentable 1 or more claims of a patent only on a ground that could be raised under section 102 or 103 and only on the basis of prior art consisting of patents or printed publications.'" 35 U.S.C. § 311(b) (emphasis added)).

¹²⁸ *Ilife Technologies, Inc. v. Nintendo of America, Inc.*, No. 3:13-cv-4987-M, 2017 U.S. Dist. LEXIS 87769, at *18 (N.D. Tex. May 30, 2017).

¹²⁹ See *Star Envirotech, Inc. v. Redline Detection, LLC*, No. SACV 12-01861 JGB, 2015 U.S. Dist. LEXIS 107149, at *9-11 (C.D. Cal. Jan. 29, 2015).

statutory estoppel, and (2) “skirt” the estoppel provision. Under such a standard, the defendant may be able to cloak its reliance on a product to avoid estoppel.¹³⁰

C. The Flawed Reasoning of District Courts That have adopted a “Bright-Line Approach” in Reliance on the Plain Meaning of §§ 311, and 315

Finally, some federal district courts¹³¹ have drawn a bright-line¹³² rule believing that providing a deeper analysis would fraud the estoppel provision. Such reasoning is flawed. In failing to discuss the differences between physical products and patent or printed publications, the “bright-line” approach ignores the concerns that a defendant could defraud the estoppel provision. In addition, such an approach would supersede the defendant’s “right to have its invalidity arguments properly considered on the merits.”¹³³ By not allowing an argument to be heard, due process¹³⁴ violations may be alleged.¹³⁵ Thus, a “bright-line” approach can allow patent challengers to end-run estoppel.

V. CONCLUSION

The debate between the three approaches needs to come to an end in order to provide patent owners with clarity regarding the rights they have, as well as when they can exercise them. Whether a defendant is barred from initiating an infringement action should not be determined by the district court to which they avail themselves. Instead, whether the defendant is barred or not from initiating an infringement action should be determined by the law. Widespread adoption of the “substantive difference” approach would make the law more uniform, efficient, and fair. With this in mind, a

¹³⁰ See *SiOnyx, LLC v. Hamamatsu Photonics K.K.*, 330 F. Supp. 3d 574, 602 (D. Mass. 2018) (the court questioned whether the defendants were relying on the datasheet alone to “escape estoppel by dressing up a ground based on publicly available datasheets as a ground based on a product”).

¹³¹ See *Universal Elecs. v. Universal Remote Control*, 943 F. Supp. 2d 1028, 1032 (C.D. Cal. 2013); *Wildcat Licensing WI, LLC v. Johnson Control, Inc.*, No. 13-CV-328-WMC, 2014 U.S. Dist. LEXIS 7594, at *3 (W.D. Wis. Jan. 22, 2014); *Evolutionary Intelligence, LLC v. Millennial Media, Inc.*, No. 5-13-CV-04206-EJD, 2014 WL 2735801, at *4 (N.D. Cal. June 11, 2014).

¹³² See *Polaris Industries Inc. v. Arctic Cat Inc.*, No. 2015-4475, 2019 WL 3824255, at *2 (D. Minn. Aug. 15, 2019). The District Court of Minnesota denied-in-part the plaintiff’s motion for summary judgment that defendant should be estopped from asserting three invalidity grounds, which each included a prior art product, specifically physical vehicles, even though aspects of the physical vehicles were described in a printed publication or patent. In so denying, the court held that the combinations could not have reasonably been raised in a previous Inter Partes Review (“IPR”) proceeding, because prior art in IPR proceedings is limited to “patents or printed publications.”

¹³³ *Ilife Technologies, Inc. v. Nintendo of America, Inc.*, No. 3:13-cv-4987-M, 2017 U.S. Dist. LEXIS 87769, at *18 (N.D. Tex. May 30, 2017).

¹³⁴ See U.S. CONST. amend. V (“No person shall be . . . deprived of life, liberty, or property, without due process of law; nor shall private property be taken for public use, without just compensation.”).

¹³⁵ See *Ilife Technologies*, 2017 U.S. Dist. LEXIS 87769, at *18. *I*Life’s re-writing of the estoppel provision of Section 315(e)(2) to cover arguments made prior to institution (such as in petitions that are never instituted) would raise serious due process concerns. There is a significant difference between a mere petition (where a party does not have an opportunity to fully litigate an issue) and an inter partes review that has actually been instituted and results in a final written decision.

defendant that asserts a “known or used by others” invalidity theory should be prepared to articulate the substantive differences in the prior art from that asserted at the PTAB in order to avoid IPR estoppel.¹³⁶ In doing so, defendants should focus on differences that are germane to invalidity. The ambiguity should be resolved by adopting a uniform approach that coincides with not only the plain language of the Patent Act, but that also benefits the patent holder, and continues to promote “the progress of science and useful arts.”¹³⁷

¹³⁶ See *Clearlamp, LLC v. LKQ Corp.*, No. 12 C 2533, 2016 U.S. Dist. LEXIS 186028, at *22-23 (N.D. Ill. Mar. 18, 2016) (“Although the Court does not believe that a ‘known or used’ invalidity theory need be ‘superior’ to a printed publication invalidity theory to survive estoppel (or similarly, that it needs to provide some disclosure of an independent claim limitation that was not provided by the printed publication), there must be some substantive difference between the two theories that is germane to the invalidity dispute at hand.”).

¹³⁷ See generally U.S. CONST. art. I, § 8, cl. 8 (“To promote the progress of science and useful arts, by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries.”). Because this clause is also the source of Congress’ power to enact legislation governing copyrights and patents, it is often also referred to as the “Patent and Copyright Clause.”