

Fall 2001

Prosecution History Estoppel: The Choice Between Public Interests and Inventor's Property Rights

Thomas P. Riley

Follow this and additional works at: <https://scholar.valpo.edu/vulr>



Part of the [Law Commons](#)

Recommended Citation

Thomas P. Riley, *Prosecution History Estoppel: The Choice Between Public Interests and Inventor's Property Rights*, 36 Val. U. L. Rev. 239 (2001).

Available at: <https://scholar.valpo.edu/vulr/vol36/iss1/5>

This Notes is brought to you for free and open access by the Valparaiso University Law School at ValpoScholar. It has been accepted for inclusion in Valparaiso University Law Review by an authorized administrator of ValpoScholar. For more information, please contact a ValpoScholar staff member at scholar@valpo.edu.



PROSECUTION HISTORY ESTOPPEL: THE CHOICE BETWEEN PUBLIC INTERESTS AND INVENTOR'S PROPERTY RIGHTS

I. INTRODUCTION

The United States patent system was considered so important by the Founders of this country that they conferred upon Congress the constitutional power to grant patents in order to promote the advancement of science and the arts.¹ To achieve this desired advancement, Congress enacted a system that offers a quid pro quo: in order to secure patent rights, the inventor must in return give a full disclosure of the invention to the public.² By adding the inventor's new knowledge to the public store, the system promotes the technological advancement of all civilization for the relatively low cost of a short wait in order to utilize that knowledge freely . . . forever.³ However, this constitutional mandate is currently threatened by the recent Federal

¹ U.S. CONST. art. I, § 8, cl. 8. Congress shall have the 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." *Id.* In his brief discussion of the patent clause of the Constitution, James Madison wrote in *THE FEDERALIST*:

The utility of this power will scarcely be questioned. The copyright of authors has been solemnly adjudged in Great Britain, to be a right at common law. The right to useful inventions, seems with equal reason to belong to the inventors. The public good fully coincides in both cases with the claims of individuals. The states cannot separately make effectual provision for either of the cases, and most of them have anticipated the decision of this point, by laws passed at the instance of congress.

THE FEDERALIST NO. 43, at 338 (James Madison) (John C. Hamilton ed., J.B. Lippincott & Co. 1873). For a general history of the development of intellectual property rights from ancient times, see F.D. Prager, *The Early Growth and Influence of Intellectual Property*, 34 J. PAT. OFF. SOC'Y 106 (1952).

² See generally RONALD B. HILDRETH, *PATENT LAW: A PRACTITIONER'S GUIDE* 1 (2d ed. 1993).

A patent is a contract between an inventor and the United States government under which the government grants the inventor a limited monopoly. The limited monopoly gives the inventor the right to exclude others from making, using, or selling a claimed invention in the United States for [twenty] years. In return for these patent rights, the inventor discloses the complete invention to the public in order to promote the progress of science.

Id.

³ See, e.g., Simone A. Rose, *Patent "Monopolyphobia": A Means of Extinguishing the Fountainhead?* 49 CASE W. L. REV. 509, 512 (1999) (describing the public disclosure of the patented technology as a building block for future technological advances). The current patent term is twenty years from the date of application with some adjustments that can be made to compensate for delays caused by the United States Patent and Trademark Office ("PTO"). See 35 U.S.C. §§ 154-55 (2000).

240 VALPARAISO UNIVERSITY LAW REVIEW [Vol. 36

Circuit ruling in *Festo Corp. v. Shoketsu Kinzoko Kogyo Kabushiki Co., Ltd.*,⁴ which essentially eviscerated the doctrine of equivalents (“DOE” or “equivalents”) by overemphasizing prosecution history estoppel (“PHE” or “estoppel”) and subsequently turning a patent into a nearly useless piece of paper that protects an inventor from only the duller and rarest type of literal copying.

The patent system that Congress erected serves two main competing functions: first, to protect the inventor’s rights to the benefits of his or her invention, and second, to put the public on notice as to the bounds of the patentee’s property rights.⁵ On the one hand, patentees must “point out with particularity” and claim their invention in order to put the public on notice as to the bounds of their property rights.⁶ On the other hand, in order to protect the inventor’s rights from the vagaries of language, the courts have allowed the inventor to assert exclusionary rights over other technologies that may not be exactly identical to what

⁴ 234 F.3d 558 (Fed. Cir. 2000) (en banc).

⁵ See *Warner-Jenkinson Co. v. Hilton Davis Co.*, 520 U.S. 17, 33 (1997) (noting “[t]he doctrine of equivalents is often said to breed tension between competing policy concerns. These policy concerns are often described as ‘clear notice’ to the public and the polar ‘fairness’ to the patentee.”); see also Scott P. Zimmerman, Note, *Hughes Aircraft and the Warner-Jenkinson Presumption: The Certiorari That Should Have Been*, 40 IDEA 131, 132-33 (2000); Note, *To Bar or Not to Bar: Prosecution History Estoppel After Warner-Jenkinson*, 111 HARV. L. REV. 2330, 2330 (1998) [hereinafter Note]. These two competing functions often come into direct conflict during an infringement action in the courts. See generally 3 PETER D. ROSENBERG, PATENT LAW FUNDAMENTALS § 17.01 (2d ed. 2000). The patentee will try to prevent an accused infringer from producing or selling technology that the patentee believes is the same basic technology that the patent protects. *Id.* The infringer will claim that the technology at issue is not the same because it is not exactly what the patent claims. *Id.* Both sides, of course, will often truly believe that they are in the right, and that the other side is in the wrong. *Id.*

⁶ 38 U.S.C. § 112, para. 2 (1994) (“The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.”). The rationale behind the particularity requirement is that the public deserves clear notice of what the patentee claims as his invention in order to compete in the marketplace without the fear of being accused of infringing upon the patentee’s proprietary claims. See Zimmerman, *supra* note 5, at 132-33. Because of the many different people who may read and need to understand the patent, the importance of drafting a well written patent that both clearly and eloquently conveys to potential readers what the invention is cannot be overstated. See STEPHEN A. BECKER, PATENT APPLICATIONS HANDBOOK § 1.01[1] (8th ed. 1999). Those people include the patent examiner, who must ultimately accept or reject the patent application; a person skilled in the art, who will want to learn how to make and use the new technology; other patent agents and attorneys, who will need to use the patent as a reference; judges, who will have to preside over patent disputes; jury members, who are ordinary citizens answering questions of fact in a patent trial; and prospective competitors, who must try to avoid infringement of the patented technology. *Id.*

the patent claims spell out, but are substantially similar.⁷ It is under these circumstances that the courts are faced with applying the competing DOE and PHE theories in order to reach an equitable result.⁸

In the long anticipated decision of *Warner-Jenkinson Co. v. Hilton Davis Chemical Co.*,⁹ the Supreme Court addressed both issues.¹⁰ The holding, however, did little more than to reaffirm the DOE as good law.¹¹ The decision also presented a new theory for PHE: the rebuttable presumption that a claim amendment was made for substantial reasons related to patentability.¹² This left many questions unanswered, not the least of which is how to functionally implement the DOE and PHE to achieve both policy objectives, while still maintaining some minimum quantum of certainty and predictability.¹³

In its November 2000 decision, made only three years after *Warner-Jenkinson*, the Court of Appeals for the Federal Circuit made its first

⁷ See Zimmerman, *supra* note 5, at 232-33. The particularity requirement burdens the inventor with the uncertain task of trying to accurately and effectively describe a new technological advance in the limited and inexact medium of words. *Id.* "The doctrine of equivalents (or something akin to the doctrine of equivalents) must exist to protect patentees from the vagaries of language." *Id.*; see also *Graver Tank & Mfg. Co. v. Linde Air Products Co.*, 339 U.S. 605, 607 (1950). Justice Jackson set forth the reasoning of the Court for the DOE as follows:

[T]o permit imitation of a patented invention which does not copy every literal detail would be to convert the protection of the patent grant in a hollow and useless thing. . . . Outright and forthright duplication is a dull and very rare type of infringement. To prohibit no other would place the inventor at the mercy of verbalism and would be subordinating substance to form. It would deprive him of the benefit of his invention and would foster concealment rather than disclosure of inventions, which is one of the primary purposes of the patent system.

Graver Tank, 339 U.S. at 607.

⁸ See generally ROSENBERG, *supra* note 5.

⁹ 520 U.S. 17 (1997).

¹⁰ *Id.* For some years prior to the *Warner-Jenkinson* decision, patent attorneys and commentators had questioned whether the DOE had survived the 1952 Patent Act. See, e.g., *infra* note 92 and accompanying text (discussing the Supreme Court's decision in the *Warner-Jenkinson* case).

¹¹ See *infra* notes 91-104 and accompanying text; see also Toshiko Takenaka, *The Doctrine of Equivalents After Warner-Jenkinson: Questions Solved and Unresolved*, 3 INT'L PERSP. INTELL. PROP. 26 (1997).

¹² See *infra* notes 101-04 and accompanying text.

¹³ See *infra* notes 169-74 and accompanying text. The Supreme Court explicitly left the details of what procedures should be used to implement the DOE up to the Federal Circuit. *Warner-Jenkinson*, 520 U.S. at 39 n.8 (stating that "[w]e leave it to the Federal Circuit how best to implement procedural improvements to promote certainty, consistency, and reviewability to this area of the law").

242 VALPARAISO UNIVERSITY LAW REVIEW [Vol. 36

concerted effort to overhaul the DOE in light of the controlling precedent.¹⁴ The court accomplished this by limiting the application of the DOE through dramatic alterations of PHE law.¹⁵ The court reversed a seventeen-year-old precedent relating to the way the courts protect an inventor's patented right to exclude others from making or using his invention by overturning the use of PHE as a flexible bar to the DOE in favor of a strict bar.¹⁶ The ruling requires a court to ignore any equivalency between a patent's claim element that has been narrowed during prosecution of an accused infringer.¹⁷ This ruling, although made under the rubric of promoting public certainty of the boundaries of a patent's protection, has used a stone ax where a surgeon's scalpel is required.¹⁸ In its zeal to promote public (and judicial) certainty with an easy to apply elementary patent analysis, the Federal Circuit has tied the hands of lower courts by not allowing them to inquire into the fine nuances and subtleties that surround the manner in which a patent is issued and then applied to allow an inventor to capitalize on his invention.¹⁹ The Supreme Court has granted *certiorari* and is in a position to both clearly demarcate the doctrinal law regarding PHE, and clarify the underlying public policy relationship between the DOE and PHE.²⁰ This Note proposes that the Supreme Court should reverse the Federal Circuit's decision in part, re-assert that the preferred public policy should tip in favor of strong patent protection of the inventor's rights, establish a specific and flexible bar test for determining when prosecution history estops a patentee from asserting the DOE, and explicitly enunciate that Section 112 rejections and objections are not *substantially* related to patentability.

Part II of this Note lays the legal foundation for this proposition by discussing the lineage of both the DOE and PHE, the *Warner-Jenkinson* decision itself, and finally, the Federal Circuit's *Festo* decision.²¹ Part III

¹⁴ *Festo Corp. v. Shoketsu Kinzoku Koguo Kabushiki Co., Ltd.*, 234 F.3d 558 (Fed. Cir. 2000) (en banc).

¹⁵ See *infra* notes 163-68 and accompanying text.

¹⁶ *Festo*, 234 F.3d at 574 (expressly rejecting the flexible bar approach that originated in *Hughes Aircraft Co. v. United States*, 717 F.2d 1351 (Fed. Cir. 1983)).

¹⁷ See, e.g., *Lockeed Martin Corp. v. Space Systems/Loral, Inc.*, 249 F.3d 1314 (Fed. Cir. 2001) (woodenly applying PHE to an element even where it was clear that the limitations added during prosecution had nothing to do with the limitation at issue in the litigation); see also *infra* notes 246-49 and accompanying text.

¹⁸ See *Festo*, 234 F.3d at 575 (stating that the notice function of patent claims has become paramount and requires greater predictability than the flexible bar can give).

¹⁹ See *supra* note 17.

²⁰ *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., Ltd.*, 121 S. Ct. 2519 (2001).

²¹ See *infra* notes 25-127 and accompanying text.

analyzes the Federal Circuit's decision to create a strict bar to equivalents for all claim elements that are subject to PHE in view of both policy arguments and then by analyzing a subsequent decision controlled by the *Festo* decision.²² Part IV proposes an alternative theory for limiting the DOE with PHE that is more consistent with the Supreme Court's prior holdings.²³ Part V concludes with a brief summary.²⁴

II. LEGAL BACKGROUND

PHE is inextricably intertwined with the DOE, and a discussion of one must necessarily include the other, due to the fact that the development of the DOE was the impetus for the development of PHE.²⁵ The parallel development of these doctrines reflects the underlying tension inherent in American patent principles. On the one hand, the DOE is meant to protect the inventor's rights to his invention, without being subject to the vagaries of language.²⁶ On the other hand, PHE is meant to help the public identify the boundaries of an inventor's exclusionary rights in order to facilitate the development of new technology.²⁷ The need to balance between the inventor's right to his invention and the public's need for notifications of the boundaries of the invention has produced these competing doctrines.²⁸

The DOE is a judicially-created equitable doctrine used by a patentee to assert patent infringement.²⁹ The policy behind the doctrine is to

²² See *infra* notes 128-250 and accompanying text.

²³ See *infra* notes 251-95 and accompanying text.

²⁴ See *infra* notes 296-304 and accompanying text.

²⁵ See, e.g., John F. Sweeney & James F. Bush, *The Doctrine of Equivalents and Prosecution History Estoppel: What has Warner-Jenkinson Changed?* 573 P.L.I./PAT. 135, 137-38 (1999) (discussing how the two doctrines are interrelated). It is universally recognized in the patent bar that PHE exists solely as a limitation on the DOE. See, e.g., *Speech of the Honorable Paul R. Michel Given to the New Jersey Intellectual Property Law Association*, 9 FED. CIR. B.J. 139, 141 (1999) (discussing various legal bars to the DOE, including PHE).

²⁶ See, e.g., *Graver Tank & Mfg. Co. v. Linde Air Products Co.*, 339 U.S. 605, 607-08 (1950) (noting that limiting the patent protection to the literal meaning of the claims "would place the inventor at the mercy of verbalism . . ." and "would deprive him of the benefit of his invention . . .").

²⁷ See, e.g., *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., Ltd.*, 234 F.3d 558, 575 (Fed. Cir. 2000) (en banc). By putting the public on notice of what material the patentee disclaims, PHE enables competitors to improve on and design around patented technology without being inhibited by the fear of lawsuits, which would try to reclaim the abandoned material by using the DOE. *Id.* at 577.

²⁸ See generally T. Whitley Chandler, *Prosecution History Estoppel, The Doctrine of Equivalents, and the Scope of Patents*, 13 HARV. J.L. & TECH. 465, 466-68 (2000) (discussing the generally competitive nature of the two doctrines).

²⁹ See ROSENBERG, *supra* note 5, at § 17.01[1].

244 VALPARAISO UNIVERSITY LAW REVIEW [Vol. 36

prevent would-be copiers from making only insignificant changes to a patented technology in order to avoid the literal meaning of the claim verbiage, but without really doing anything substantially different.³⁰ It is applied when the accused technology infringes subject matter that is not exactly the same as the patent's claimed subject matter, but is so substantially similar as to be equivalent.³¹ Under this non-literal infringement, the courts generally use the tripartite function-way-result test, whereby the finder of fact must determine if the accused subject matter performs substantially the same function, in substantially the same way, to achieve substantially the same result.³²

PHE acts as a bar to the DOE.³³ The policy behind the DOE is to protect the reasonable expectations of the public by precluding patentees from recapturing material that they surrendered during prosecution in the Patent and Trademark Office, or during a subsequent infringement action in the courts.³⁴ Therefore, if applicants narrow the scope of a claim by an amendment during prosecution, they are estopped from claiming, via the DOE material, that they previously surrendered in order to obtain the patent.³⁵ To allow otherwise, the Supreme Court has concluded, would allow the patentee to work a fraud upon the public.³⁶

³⁰ See *Graver Tank*, 339 U.S. at 607 (discussing the problem of "piracy" by an "unscrupulous copyist").

³¹ See *id.* Literal infringement is where an accused technology is exactly the same as what is described in the patent claims. See generally DONALD S. CHISUM, CHISUM ON PATENTS § 16.02 (1999). Non-literal infringement, or equivalency, is where the accused technology is not exactly the same as the technology described in the patent claims, but is so substantially similar as to be equivalent thereto. See generally *id.* at § 16.02, 18.04.

³² See *Warner-Jenkinson Inc. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 40 (1997); *Penwalt Corp. v. Durand-Wayland, Inc.*, 833 F.2d 931, 935 (Fed. Cir. 1987) (en banc). Literal infringement is where every element of the accused subject matter matches exactly the corresponding patent claim elements. See *Jurgens v. McKasy*, 927 F.2d 1552, 1560 (Fed. Cir. 1991). Literal infringement cases are relatively rare, and such cases are often settled before ever going to trial because of the simple nature of the determination. See *Graver Tank*, 339 U.S. at 607 (noting that "[o]utright and forthright duplication is a dull and very rare type of infringement"). The function-way-result test is the most frequently used test for equivalency, but the Supreme Court has specifically allowed other formulations that have been used in the past to also be used. See *Warner-Jenkinson*, 520 U.S. at 39-40 (stating that the particular formulation of the test is not important as long as the all-elements rule is followed).

³³ See ROSENBERG, *supra* note 5, at § 17.07[2].

³⁴ See *id.*

³⁵ See *id.*

³⁶ *Leggett v. Avery*, 101 U.S. 256, 259 (1879). "The allowance of claims once formally abandoned by the applicant, in order to get his letters-patent through, is the occasion of immense frauds against the public." *Id.* Such action by the courts would allow the

A. Historical Development of the Doctrine of Equivalents and Prosecution History Estoppel

1. The Doctrine of Equivalents

The DOE is deeply rooted in American patent law.³⁷ The underlying theory seems to have first appeared in 1814 in the case of *Odiorne v. Winkley*.³⁸ Writing for the Circuit Court for the District of Massachusetts, Judge Story laid the principal foundations for the DOE.³⁹ The plaintiff owned a patent for a machine for cutting and heading nails in a single operation.⁴⁰ The defendant used two distinct machines that performed the same functions as the plaintiff's single machine.⁴¹ In his instructions to the jury on the issue of infringement, Judge Story opined that, "mere colorable differences, or slight improvements [to an invention], cannot shake the right of the original inventor."⁴² The court's reasoning was based on the equitable theory that the inventor of new technology is entitled to patent protection of the full range of embodiments of the invention, not just a particularized version, which might be suggested by the patent claims.⁴³

The Supreme Court's first application of the underlying principles of the DOE occurred in the 1822 case of *Evans v. Eaton*.⁴⁴ In a dispute over whether the plaintiff's patent was valid over a machine in the prior art, the Court framed the test for equivalency between two machines as whether the accused device operated on the same principle but merely

patentee to "procure[] a valuable monopoly to which he has not the slightest title." *Id.* Therefore, "[u]nder such circumstances, . . . the applicant should seem to be estopped from [such reclamation]." *Id.* at 260.

³⁷ See *Warner-Jenkinson*, 520 U.S. at 28 (stating that "the lengthy history of the doctrine of equivalents" strongly supports not abolishing it).

³⁸ 18 F. Cas. 581 (C.C.D. Mass. 1814) (No. 10,432).

³⁹ *Id.* This case was cited by the plaintiff in error in *Winans v. Demmead*, 56 U.S. (15 How.) 330, 337 (1854). In turn, the latter became the Supreme Court's original source for the DOE. See *Warner-Jenkinson*, 520 U.S. at 26 n.3; *Graver Tank & Mfg. Co. v. Linde Air Products Co.*, 339 U.S. 605, 608 (1950).

⁴⁰ See *Odiorne*, 18 F. Cas. at 581.

⁴¹ See *id.*

⁴² *Id.* at 582.

⁴³ See *id.* at 581. Judge Story commented that "[t]he original inventor of a machine is exclusively entitled to a patent for it." *Id.* This opinion also anticipated the current test for infringement under the DOE, the so-called function-way-result test. See *Graver Tank*, 339 U.S. at 608. Judge Story's method of determining equivalency was to determine if the accused device produced the same effect by substantially the same mode of operation and combination of powers. See *Odiorne*, 18 F. Cas. at 582.

⁴⁴ 5 U.S. (7 Wheat.) 356 (1822).

246 VALPARAISO UNIVERSITY LAW REVIEW [Vol. 36

differed in form, proportion, and utility.⁴⁵ In this case, the Court adopted the principle, propounded in *Odiorne*, that a patentee is entitled to patent protection for his or her invention.⁴⁶

By 1853, when the Court decided *Winans v. Denmead*,⁴⁷ the DOE was firmly entrenched in American patent jurisprudence.⁴⁸ However, the closely divided Court argued about the same issues that courts and the patent bar still debate today: whether the DOE is beneficial because it protects an inventor's intellectual property, or whether it is detrimental because it allows an inventor to protect more than was literally claimed in the patent.⁴⁹ In holding that a patentee could protect against non-literal infringement, the Court affirmed the doctrine set forth in *Odiorne* and adopted by the Supreme Court in *Evans*.⁵⁰

The last seminal case regarding the DOE prior to *Warner-Jenkinson*, was *Graver Tank & Manufacturing Co. v. Linde Air Products Co.*⁵¹ In *Graver Tank*, the Court re-affirmed the DOE and solidified the function-way-result test for determining equivalency.⁵² Again in *Graver Tank*, the dissent rejected the doctrine in favor of a strict interpretation of patent claims that would allow a patentee to show infringement only for literal infringement.⁵³ Despite the Court's repeated reaffirmation of the DOE,

⁴⁵ See *id.* at 364.

⁴⁶ See *supra* Zimmerman, note 5, at 137.

⁴⁷ 56 U.S. (15 How.) 330 (1853).

⁴⁸ *Id.* The Court stated: "[I]t being a familiar rule that, to copy the principle or more of operation described, is an infringement, although such copy should be totally unlike the original in form or proportions." *Id.* at 342.

⁴⁹ See *id.* at 342-47. The Court split five to four on this issue, deciding in favor of the patentee's right to his invention. *Id.* at 344. These are generally the same arguments that arise whenever the wisdom of the DOE is discussed. See *Warner-Jenkinson Co. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 26 n.3 (1997). In response to the accused infringer's argument that the DOE was inconsistent with the statutory requirement that the patentee specifically claim the invention covered by the patent, the Court said: "Indeed, petitioner's first argument was not new even in 1950. Nearly 100 years before *Graver Tank*, this Court approved of the doctrine of equivalents in *Winans v. Denmead* . . ." *Id.*

⁵⁰ See *supra* notes 37-46 and accompanying text.

⁵¹ 339 U.S. 605 (1950).

⁵² See *id.* at 608. Under the test, a court must determine if the accused device performs substantially the same function, in substantially the same way, to obtain substantially the same result. *Id.* (confirming *Sanitary Refrigerator Co. v. Winters*, 280 U.S. 30, 42 (1929)).

⁵³ See *id.* at 613-14 (Black, J., dissenting). Justice Black's dissent centered on the arguments that the doctrine of equivalents is contrary to the principle of public notice. *Id.* at 614-15.

however, judges, commentators, and the patent bar still chafe under the equitable doctrine.⁵⁴

2. Prosecution History Estoppel (a.k.a. File Wrapper Estoppel)⁵⁵

PHE developed some time later as a check on the DOE. The estoppel doctrine appears to have its Supreme Court roots in the 1879 case of *Leggett v. Avery*.⁵⁶ Although the issue in *Leggett* surrounded a reissue application, instead of infringement under the DOE, the decision enunciates the reasoning that became the foundation for PHE's later application as a bar to non-literal infringement under the DOE.⁵⁷ The Court reasoned that allowing a patentee to later claim material that he had previously abandoned in order to obtain the patent would work a fraud upon the public.⁵⁸ The fraud of which the Court wrote would be allowing the patentee to procure "a valuable monopoly to which he has not the slightest title."⁵⁹ The Court concluded that the patentee should be estopped from claiming such matter outside the scope of the amended claims.⁶⁰

The next year, in *Goodyear Dental Vulcanite Co. v. Davis*,⁶¹ the Court ruled that an accused cellulite dental plate did not infringe a patented

⁵⁴ See, e.g., *Warner-Jenkinson*, 520 U.S. at 27 n.4 (1997). The Court noted that the issues raised in *Warner-Jenkinson* were roughly the same as those raised in *Graver Tank* in 1950, and *Winans v. Denmead* in 1854. *Id.*

⁵⁵ See, e.g., *id.* at 30 (noting that PHE is the same thing as file wrapper estoppel).

⁵⁶ 101 U.S. 256 (1879).

⁵⁷ See *Shepard v. Carrigan*, 116 U.S. 593 (1886) (citing to *Leggett* in support of estopping a patentee from asserting non-literal infringement over technology which had been specifically excluded by the amendment process). A reissue application is a process whereby a patentee attempts to correct potentially fatal errors in an issued patent by submitting the patent to the PTO for re-examination by an examiner. See generally PETER D. ROSENBERG, *PATENT LAW FUNDAMENTALS* 251 (1975). Therefore, because application amendments and reissue amendments have the same effect of changing the scope and wording of a claim, amendments under either are generally treated the same. *Id.*

⁵⁸ See *Leggett*, 101 U.S. at 259. Although this statement was made in reference to a re-issue application, the connecting similarity to PHE is the Court's recognition that a patentee is estopped from claiming material that he was required to abandon in the first place. *Id.* Interestingly, this reasoning appears to have been necessary due to poor record-keeping in the patent office. *Id.* In its reasoning, the Court discussed how this rule was necessary to prevent a patentee from gaining new material during reissue because of a change in patent examiners where the new examiner was unaware of what transpired during the original prosecution. *Id.*

⁵⁹ *Id.*

⁶⁰ See *id.* at 260.

⁶¹ 102 U.S. 222 (1880).

248 VALPARAISO UNIVERSITY LAW REVIEW [Vol. 36

vulcanized rubber dental plate either literally or as an equivalent.⁶² The application claim had been amended during prosecution to limit the scope from including all rubber to vulcanized rubber specifically.⁶³ Although the Court did not specifically mention the word “estoppel,” it clearly considered the effect of the patent’s prosecution history on the scope of the claims.⁶⁴ The limiting amendments adding the vulcanization element notwithstanding, the Court then considered the scope of equivalents available for the “vulcanized rubber” element.⁶⁵ Only after finding no equivalents did the Court hold no infringement.⁶⁶

Six years later, in *Shepard v. Carrigan*,⁶⁷ the patentee held the rights to a hem protector for dresses applied to the lower hem in order to protect it from wear and dirt.⁶⁸ The patentee claimed that the invention consisted of a strip of fluted or plaited water-proof material.⁶⁹ The broadest claims originally consisted of the use of water-proof material in any form to protect the lower hem of clothing from wear and dirt.⁷⁰ The

⁶² *Id.* at 229.

⁶³ *Id.* at 228.

⁶⁴ *Id.* at 227-28. The Court apparently was not yet settled on the notion of PHE because it began its discussion of the prosecution history by disclaiming the notion that the language of a patent could be enlarged or diminished thereby. *Id.* at 227. However, in the next sentence, the Court recognizes that the construction given to the patent can be informed by the prosecution history. *Id.* The Court then proceeded to consider the effect of the patentee’s correspondence with the examiner during the application of prosecution on the scope and meaning of the vulcanized rubber element. *Id.* In this case, the Court’s actions do indeed seem to speak louder than its words to show that the Court recognized that prosecution history informs the scope and meaning of the patent claims.

⁶⁵ *Id.* at 229-30. The Court found that the accused celluloid material was not an equivalent to vulcanized rubber because it was not formed in the same manner. *Id.* The discussion clearly intimates, however, that if the accused material had been formed the same way as vulcanized rubber, i.e., by being hardened via a heating process as opposed to a cooling process, then the accused cellulite material would have infringed as an equivalent. *See id.*

⁶⁶ *Id.* at 230.

⁶⁷ 116 U.S. 593 (1886).

⁶⁸ *See id.*

⁶⁹ *See id.* at 596. The claim in the patent read:

My invention consists in protecting the lower edge of dresses and other garments by affixing thereto a portion of water-proofed or enameled material, or in water-proofing the material itself; and I claim as a new article of manufacture a skirt facing or protector, having a plaited or fluted border bound with or composed of enameled cloth or other water-proof material, substantially as and for the purpose set forth.

Id.

⁷⁰ *See id.* The broadest claim was not the first claim, but a substituted claim for the original claim. *Id.* The original claim actually was much narrower than the first amendment, which substituted the broad language for the narrow language of the original claim. *Id.* The first amended claim read:

Court then noted that the narrower language of the amendment, which included the fluted or plaited requirement, had been necessary to overcome the prior art, which included using plain strips of enameled cloth.⁷¹ The Court then applied the estoppel rule originally advanced in *Leggett*, in conjunction with reissue applications to the current situation of claimed, non-literal infringement.⁷² In rejecting the patentee's claim of infringement, the Court held that, where a patent applicant accepts a narrower claim than originally sought in order to obtain the patent, the patentee cannot then enlarge the scope of the patent to cover those elements that were explicitly abandoned by amendment when suing for infringement.⁷³ The Court then applied this reasoning to the facts at issue by interpreting the claim strictly and found no infringement because the accused hem protector was neither fluted nor plaited.⁷⁴

Next, in *Hurlbut v. Schillinger*,⁷⁵ the patentee, Schillinger, originally claimed a process of laying concrete slabs with joints by inserting tar paper or its equivalent between successive slabs while still plastic so as to control crack propagation and facilitate segmented repair.⁷⁶ After adding a second, narrower claim in reissue, Schillinger specifically disclaimed any right to exclude the formation of blocks from concrete without interposing something between them while still plastic because that was part of the prior art.⁷⁷ The accused process involved laying sections of concrete slab and joining them by running a trowel along the

My invention consists in protecting the lower edge of dresses and other garments by affixing thereto a portion of water-proofed material, or in waterproofing the material itself; and I claim as my invention the use of water-proofed material, in whatsoever form it now exists or may hereafter exist, for the purpose of protecting the lower edge of all garments from wear and soiling, either from friction or moisture, and refer to the inclosed [sic] samples as substantially representing my invention.

Id.

⁷¹ *Id.* at 597.

⁷² *See id.* at 597-98.

⁷³ *Shepard*, 116 U.S. at 598. The Court specifically linked the reasoning of *Leggett* as applied to reissue proceedings to the infringement suit before it. *Id.*

⁷⁴ *See id.*

⁷⁵ 130 U.S. 456 (1889).

⁷⁶ *Id.* at 462-63. The two claims, after reissue read as follows:

1. A concrete pavement laid in detached blocks or sections, *substantially in the manner shown and described.*
2. The arrangement of tar paper, *or its equivalent*, between adjoining blocks of concrete, *substantially as and for the purpose set forth.*

Id. at 463 (emphasis added).

⁷⁷ *See id.*

250 VALPARAISO UNIVERSITY LAW REVIEW [Vol. 36

joint line while the concrete was still plastic.⁷⁸ In deciding whether the accused process infringed on the patented process, the Court clearly considered whether separating the concrete with a trowel while still plastic was equivalent to separating the concrete with tar paper while still plastic.⁷⁹ The Court then held both patent claims to be infringed by the accused process as equivalents.⁸⁰

In *Hubbell v. United States*,⁸¹ the Court used estoppel as a strict bar to the patentee's claim of equivalency.⁸² Hubbell invented a new primer ignition combination for metallic bullet cartridges, but was forced to narrow his claim significantly after repeated rejections over the prior art by the examiner.⁸³ The Court first acknowledged that a combination claim could be infringed by equivalents.⁸⁴ However, the Court then stated that claim limitations imposed by the inventor as amendments to overcome rejections "must be strictly construed against the inventor and in favor of the public."⁸⁵ Although the legal conclusions drawn by the Court appear to conflict with each other, the Court, in disposing of the case, appears to have used PHE as a strict bar because, after finding no literal infringement, it declined to even consider infringement by equivalents.⁸⁶

In 1942, the Court's application of PHE established a clear process for defining the scope of what material is estopped from the DOE in *Exhibit Supply Co. v. Ace Patents Corp.*⁸⁷ This process consists of four

⁷⁸ *Id.* at 468.

⁷⁹ *See id.* at 467-69. The Court, after comparing the accused process with the patented process, concluded that the accused process was substantially the same as the patented process. *Id.* at 469.

⁸⁰ *See id.*

⁸¹ 179 U.S. 77 (1900).

⁸² *See id.* at 83-84.

⁸³ *See id.* at 79-80.

⁸⁴ *See id.* at 82. In *Festo*, Judge Michel based his dissenting argument on this statement. *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., Ltd.*, 234 F.3d 558, 598 (Fed. Cir. 2000) (en banc) (Michel, J. dissenting). As pointed out below, however, his argument seems to omit the immediately following limitation imposed by the Court. *See infra* text accompanying note 85. A "combination claim" is older terminology that is used to describe a patent in which the invention is a novel combination of known subcombination elements (as opposed to an invention for a previously unknown subcombination). *See, e.g.*, M.P.E.P. § 806.05(a) (8th ed. 2001). Today, the PTO generally discourages the use of this terminology because it confuses the issue of what is valid with older versions of the law. *See generally id.* at § 2173.05(k).

⁸⁵ *Hubbell*, 179 U.S. at 82.

⁸⁶ *See id.* at 86.

⁸⁷ 315 U.S. 126, 135 (1942).

distinct steps: first, defining the scope of the broadest proposed form of the claim in question; second, determining whether the accused item is encompassed by that claim; third, defining the scope of the claim as issued; and fourth, determining whether the accused item is encompassed by the claim as issued.⁸⁸ If the accused item is encompassed by the original claim but not the claim as issued, then the patentee is estopped from asserting infringement under the DOE.⁸⁹ In applying this process, the Court utilized a strict interpretation of the claim's amended language with regard to what the inventor had actually disclaimed, not allowing any equivalents within the zone of explicitly abandoned material.⁹⁰

B. *The Warner-Jenkinson Decision*

The Supreme Court last revisited the DOE and PHE in *Warner-Jenkinson v. Hilton Davis Chemical Co.*⁹¹ *Warner-Jenkinson* was decided mainly to eradicate some misconceptions in the patent field that the 1952 amendments to the Patent Act had somehow eliminated the DOE.⁹² The Court also established that equivalency must be decided on an element-by-element analysis as opposed to looking at the invention as a whole.⁹³ The underlying dispute was whether Warner-Jenkinson had infringed Hilton Davis' patented method for purifying dye "at a pH from

⁸⁸ See *id.* The Court does not lay out the steps this distinctly in its opinion. *Id.* Nevertheless, an analysis of the Court's application shows that this is what the Court actually did. See *id.* at 136 (stating that "[b]y the amendment he recognized and emphasized the difference between the two phrases and proclaimed his abandonment of all that is embraced in that difference").

⁸⁹ See *id.* at 136-37.

⁹⁰ See *id.* at 137. The Court stated:

The difference which he thus disclaimed must be regarded as material, and since the amendment operates as a disclaimer of that difference it must be strictly construed against him [W]hat the patentee, by a strict construction of the claim, has disclaimed - [description] - cannot now be regained by recourse to the doctrine of equivalents, which at most operates, by liberal construction, to secure to the inventor the full benefits, not disclaimed, of the claims allowed.

Id.

⁹¹ 520 U.S. 17 (1997).

⁹² See *id.* at 25-27. In the introductory remarks, Justice Thomas, writing for a unanimous court, stated that the Court granted certiorari in order to clarify the proper scope of the DOE. See *id.* at 21.

⁹³ See *id.* at 29. The Court found this to be particularly important so as to prevent the application of the DOE from vitiating the central function of the patent claims themselves. *Id.* at 30. In other words, if important nuances in the prior art are avoided by particular elements of the claim, the patentee should not be able to gloss over those nuances during litigation by having the jury consider the patent as a whole without considering the fine nuances and reasons for each element of the claim. *Id.*

252 VALPARAISO UNIVERSITY LAW REVIEW [Vol. 36

approximately 6.0 to 9.0.”⁹⁴ The pH range was not in the claim as originally filed but was added to overcome a rejection over the prior art that disclosed such a process above a pH of 9.0.⁹⁵ There was no reason in the record for the addition of the lower pH limit of 6.0.⁹⁶

After holding that the DOE was still good law, the Court went on to discuss the application of PHE.⁹⁷ The Court rejected the petitioner’s proposed rule that any limiting amendments made during prosecution, regardless of the reason, preclude recapture of that part later under the DOE.⁹⁸ Instead, the Court insisted that the reason for an amendment is always relevant to determining what, if any, material the applicant has abandoned to the public.⁹⁹ Therefore, the Court concluded, a limiting amendment that was not included to avoid the prior art does not necessarily preclude infringement by equivalents.¹⁰⁰

Rejecting the petitioner’s proposed bright line rule, the Court next addressed what a court should do when faced with an amendment for which the file does not give any reason.¹⁰¹ In order to overcome that obstacle, the Court created a rebuttable presumption of patentability for any unexplained amendment.¹⁰² Thereby, if the patent holder does not present any contrary reason for an amendment, courts should presume that the patent holder had a “substantial reason related to patentability” for the limiting language.¹⁰³ Under such circumstances, the Court added, “prosecution history estoppel would bar the application of the doctrine of equivalents as to that element.”¹⁰⁴

C. *Two Lines of Authority in the Federal Circuit Regarding the Proper Scope of Equivalents for Claims Subject to Estoppel*

It is generally accepted that, from 1984 until the recent *Festo* decision, there were two divergent lines of authority regarding the proper scope

⁹⁴ See *id.* at 21-22.

⁹⁵ See *id.* at 22.

⁹⁶ See *id.*

⁹⁷ See *Warner-Jenkinson v. Hilton Davis Chem. Co.*, 520 U.S. 17, 30-34 (1997).

⁹⁸ See *id.* at 30. “[P]etitioner reaches too far in arguing that the reason for an amendment during patent prosecution is irrelevant to any subsequent estoppel.” *Id.*

⁹⁹ See *id.* at 32.

¹⁰⁰ See *id.* at 33.

¹⁰¹ See *id.* at 33-34.

¹⁰² See *id.* at 33.

¹⁰³ *Warner-Jenkinson v. Hilton Davis Chem. Co.*, 520 U.S. 17, 33 (1997).

¹⁰⁴ *Id.*

of equivalents for claims subject to PHE.¹⁰⁵ One line followed the *Hughes Aircraft Co. v. United States* ("Hughes I") decision, which applied a flexible bar approach to PHE.¹⁰⁶ Under this approach, where PHE applied to a claim element, the court applied a sliding scale whereby, "[d]epending on the nature and purpose of an amendment, [prosecution history estoppel] may have a limiting effect within a spectrum ranging from great to small to zero It is not fatal to application of the doctrine [of equivalents] itself."¹⁰⁷ The other line followed the *Kinzenbaw v. Deere & Co.* decision, which applied a strict bar approach to PHE.¹⁰⁸ Under this approach, when the patentee gave no convincing reason for the court to enlarge the literal scope of the claim, which was narrowed by amendment in order to avoid the prior art, the court refused to consider equivalents to the estopped claim element.¹⁰⁹ Although the court subsequently followed the flexible bar approach of *Hughes I* most frequently, it never explicitly rejected or reconciled the two lines of authority.¹¹⁰ Therefore, until the en banc decision in *Festo*, which dealt with these competing lines of authority, a patentee or competitor could

¹⁰⁵ See, e.g., Gregory J. Smith, *The Federal Circuit's Modern Doctrine of Equivalents in Patent Infringement*, 29 SANTA CLARA L. REV. 901, 921 (1989) (noting the apparent conflict between the two lines of authority); Douglas A. Strawbridge et al., *Area Summary, Patent Law Developments in the United States Court of Appeals for the Federal Circuit During 1986*, 36 AM. U. L. REV. 861, 887-88 (1987) (discussing the two divergent lines of authority regarding the proper scope of PHE). Professor Chisum commented that:

shortly after its creation in 1982, the Federal Circuit developed two lines of authority on the scope of an estoppel based on an amendment or argument that distinguished the prior art. One line followed a strict approach, according to which a court refused to speculate whether a narrower amendment would have been allowed. The other line followed a flexible or spectrum approach, which recognized that amendments did not invariably preclude all equivalence.

CHISUM, *supra* note 31, § 18.05[3][b] at 18-492. In its decision, the *Festo* majority opinion cites to all of these commentators to support its conclusion that an irreconcilable conflict of authority exists within the Federal Circuit's own decisions. *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co. Ltd.*, 234 F.3d 558, 573-74 (Fed. Cir. 2000) (en banc). *But see id.* at 634-35 (Newman, J., dissenting) (proposing that the two lines are not actually in conflict, but merely rulings on either end of a continuum of situations from those where a strict bar was appropriate to those where an extremely flexible bar was appropriate).

¹⁰⁶ 717 F.2d 1351 (Fed. Cir. 1983).

¹⁰⁷ *Id.* at 1363.

¹⁰⁸ 741 F.2d 383 (Fed. Cir. 1984).

¹⁰⁹ *Id.* at 389.

¹¹⁰ CHISUM, *supra* note 31, § 18.05(3)(b)(i). "Most Federal Circuit panel decisions from 1984 to 1997 followed the flexible approach, which had been initiated in 1983 by the *Hughes Aircraft* decision" *Id.*; see also *Festo*, 234 F.3d at 574 (stating, "this court has neither repudiated *Kinzenbaw* nor reconciled the inconsistency between the *Hughes I* and *Kinzenbaw* lines of authority").

254 VALPARAISO UNIVERSITY LAW REVIEW [Vol. 36

not predict with certainty which line of authority any given Federal Circuit panel would follow in any given case.¹¹¹

D. *The Festo Decision*

The confusion caused by these two decisions came to a head in *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., Ltd.*¹¹² *Festo* involved a suit for infringement on two patents relating to magnetically coupled rodless cylinders: the Carroll patent and the Stoll patent.¹¹³ Following the Supreme Court's grant, vacate, and remand order, a Federal Circuit panel applied the *Warner-Jenkinson* presumption to both patents.¹¹⁴ In regard to the Carroll patent, the court concluded that a voluntary amendment that was not relevant to patentability, and for which the applicant gave no reasons, does not necessarily generate an estoppel.¹¹⁵ Therefore, the court found no reversible error in the previous ruling.¹¹⁶ In regard to the Stoll patent, the court affirmed the prior ruling as to one amended element, but remanded for further fact finding regarding the reasons for another amended element.¹¹⁷ In its reasoning, the court emphasized the distinction between a "required" amendment and a "voluntary" amendment.¹¹⁸ The court reasoned that the *Warner-Jenkinson* presumption was aimed strictly towards those amendments required by the examiner during prosecution.¹¹⁹ Therefore, the court concluded that *Warner-Jenkinson* allowed it to determine the scope of a voluntary amendment not required to overcome the prior art.¹²⁰

¹¹¹ *Festo*, 234 F.3d at 574. "Under these circumstances, it is unclear whether in any given case the court will apply the *Kinzenbaw* approach as opposed to the more generally accepted *Hughes I* approach." *Id.*

¹¹² 72 F.3d 857 (Fed. Cir. 1995), *vacated sub. nom.*, *Shoketsu Kinzoku Kogyo Kabushiki Co., Ltd. v. Festo Corp.*, 520 U.S. 1111 (1997) (remanding to the Federal Circuit for further consideration in light of *Warner-Jenkinson*), *on remand*, 172 F.3d 1361 (Fed. Cir. 1999), *vacated and withdrawn by*, 187 F.3d 1381 (Fed. Cir. 1999) (granting petition for rehearing *en banc*), *on rehearing en banc*, 234 F.3d 558 (Fed. Cir. 2000), and *certiorari granted*, 121 S.Ct. 2519 (2001).

¹¹³ *See Festo*, 72 F.3d at 860.

¹¹⁴ *See Festo*, 172 F.3d at 1364.

¹¹⁵ *See id.* at 1374.

¹¹⁶ *Id.*

¹¹⁷ *See id.* at 1378-81. The court affirmed the decision on the element regarding the magnetizable material for the outer sleeve. *See id.* at 1380. The court remanded the decision on the element regarding the sealing rings. *See id.*

¹¹⁸ *See id.* at 1379-80.

¹¹⁹ *Id.*

¹²⁰ *See Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., Ltd.*, 172 F.3d 1361, 1380 (Fed. Cir. 1999).

Four months after the *Festo* decision, on remand, the Federal Circuit granted Shoketsu's petition for an en banc rehearing and withdrew the previous decision.¹²¹ In the order for rehearing, the court presented five questions to which the parties and *amici curiae* could respond.¹²²

In a potentially landmark decision, the Federal Circuit answered the first four questions as follows.¹²³ In response to its first question, the court held that, "a substantial reason related to patentability" is not limited to overcoming or avoiding prior art but instead includes any reason which relates to the statutory requirements for a patent. Therefore, a narrowing amendment made for any reason related to the statutory requirements for a patent will give rise to PHE with respect to the amended claim element.¹²⁴ In response to its second question, the court held that, voluntary claim amendments are treated the same as other claim amendments. "Therefore, a voluntary amendment that narrows the scope of a claim for a reason related to the statutory requirements for a patent will give rise to prosecution history estoppel as to the amended claim element."¹²⁵ In answer to its third question, the

¹²¹ *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., Ltd.*, 187 F.3d 1381 (Fed. Cir. 1999).

¹²² See *id.* at 1381-82. The five questions presented by the court were:

1. For the purposes of determining whether an amendment to a claim creates prosecution history estoppel, is "a substantial reason related to patentability," *Warner-Jenkinson*, limited to those amendments made to overcome the prior art under §§ 102 and 103, or does "patentability" mean any reason affecting the issuance of a patent?
2. Under *Warner-Jenkinson*, should a "voluntary" claim amendment - one not required by the examiner or made in response to a rejection by an examiner for a stated reason - create prosecution history estoppel?
3. If a claim amendment creates prosecution history estoppel, under *Warner-Jenkinson* what range of equivalents, if any, is available under the doctrine of equivalents for the claim element so amended?
4. When "no explanation [for a claim amendment] is established," *Warner-Jenkinson*, thus invoking the presumption of prosecution history estoppel under *Warner-Jenkinson*, what range of equivalents, if any, is available under the doctrine of equivalents for the claim element so amended?
5. Would a judgment of infringement in this case violate *Warner-Jenkinson's* requirement that the application of the doctrine of equivalents "is not allowed such broad play as to eliminate [an] element in its entirety." [*Warner-Jenkinson*]. In other words, would such a judgment of infringement, post *Warner-Jenkinson*, violate the "all elements" rule?

Id. (full citations omitted).

¹²³ See *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., Ltd.*, 234 F.3d 558 (Fed. Cir. 2000) (en banc). The court did not answer the fifth question because the nature of its holdings to the first four obviated any need to answer the fifth. See *id.* at 578.

¹²⁴ *Id.* at 566.

¹²⁵ *Id.* at 568.

256 VALPARAISO UNIVERSITY LAW REVIEW [Vol. 36

court held that “[w]hen a claim amendment creates prosecution history estoppel with no regard to an element of a claim, there is no range of equivalents available for the amended claim element.”¹²⁶ Finally, in answer to its fourth question, the court held that, “‘unexplained’ amendments are not entitled to any range of equivalents.”¹²⁷

III. ANALYSIS

In its decision to make PHE a strict bar to the DOE, the *Festo* majority went to great length to justify its reversal of eighteen years of precedent.¹²⁸ The court used a three-step analysis to reach the new ruling.¹²⁹ First, the court reviewed the Supreme Court’s decisions from *Goodyear Dental Vulcanite*¹³⁰ through *Warner-Jenkinson*¹³¹ to ascertain whether the Court had ever addressed the issue of what scope of equivalents is available for an explained amendment that gives rise to PHE.¹³² The court concluded that “none of the [Supreme Court] language . . . constitutes explicit and carefully considered language regarding the range of equivalents available when a claim amendment gives rise to prosecution history estoppel.”¹³³ Therefore, the court found that it had the power to independently decide the issue.¹³⁴ Next, the court reviewed its own precedent from *Hughes I*¹³⁵ through *Hughes II*.¹³⁶

¹²⁶ *Id.* at 569.

¹²⁷ *Id.* at 564.

¹²⁸ *Id.* at 572. Since 1983, the Federal Circuit, and the Supreme Court following their lead, has established and followed a flexible bar approach to equivalents affected by PHE. See *supra* notes 105-11 and accompanying text.

¹²⁹ See *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., Ltd.*, 234 F.3d 558, 569-77 (Fed. Cir. 2000) (en banc).

¹³⁰ 102 U.S. 222 (1880); see also *supra* notes 61-66 and accompanying text (discussing *Goodyear*).

¹³¹ 520 U.S. 17 (1997); see also *supra* notes 91-104 and accompanying text (discussing *Warner-Jenkinson*).

¹³² See *Festo*, 234 F.3d at 569-71. The court discussed the following cases: *Warner-Jenkinson Co. v. Hilton Davis Chem. Co.*, 520 U.S. 17 (1997); *Exhibit Supply Co. v. Ace Patents Corp.*, 315 U.S. 126 (1942); *Smith v. Magic City Kennel Club*, 282 U.S. 784 (1931); *Weber Elec. Co. v. E.H. Freinan Elec. Co.*, 256 U.S. 668 (1921); *Hurlbut v. Schillinger*, 130 U.S. 456 (1889); *Goodyear Dental Vulcanite Co. v. Davis*, 102 U.S. 222 (1880). *Id.* The court also considered the following cases cited by Judge Michel and dismissed them as not bearing upon the issue: *Hubbell v. United States*, 179 U.S. 77 (1900); *Royer v. Coupe*, 146 U.S. 524 (1892); *Phoenix Caster Co. v. Spiegel*, 133 U.S. 360 (1890); *Artificial Stone-Paving Co. v. Schalicke*, 119 U.S. 401 (1886); *Sutter v. Robinson*, 119 U.S. 530 (1886); *Shepard v. Carrigan*, 116 U.S. 593 (1886); *Fay v. Cordesman*, 109 U.S. 408 (1883). *Id.*

¹³³ *Id.* at 571.

¹³⁴ *Id.*

¹³⁵ *Hughes Aircraft Co. v. United States*, 717 F.2d 1351 (Fed. Cir. 1983); see also *supra* notes 106-07 and accompanying text (discussing the case).

The court discussed its two apparently divergent lines of cases: the *Hughes I* line, which represented the flexible bar approach, and the *Kinzenbaw* line, which represented the strict bar approach.¹³⁷ The court concluded that the two lines of cases were at odds with each other, that the courts had never reconciled the inconsistency between the two, and that the result was uncertainty and unpredictability in the law.¹³⁸

Finally, after deducing that a problem existed, the court pronounced the new law and set forth its reasoning.¹³⁹ The court found that the state of the law at that time was “unworkable” due to the difficulty in predicting the scope of patent protection with any degree of certainty under the flexible bar approach to PHE.¹⁴⁰ In reaching this conclusion, the court relied on three policy objectives: first, giving effect to an applicant’s disclaimer; second, preserving the notice function of claims; and third, promoting certainty in the patent law.¹⁴¹

The disclaimer policy objective comes from the long history of preventing a patentee from reclaiming under the DOE that which he has expressly disclaimed during patent prosecution.¹⁴² The court reasoned that the *Hubbel* decision directly supported applying a strict bar because of the Supreme Court’s statement that a limiting amendment “must be strictly construed against the inventor and in favor of the public, and looked upon as in the nature of disclaimers.”¹⁴³ Admitting that the late nineteenth century Supreme Court cases did not speak directly to the

¹³⁶ *Hughes Aircraft Co. v. United States*, 140 F.3d 1470 (Fed. Cir. 1998); see also *Festo*, 234 F.3d at 571-74.

¹³⁷ *Festo*, 234 F.3d at 571-74. Under the flexible bar approach, PHE acts as a flexible bar where the scope of equivalents allowed must be determined on a case-by-case basis, and the estoppel can range from absolute to almost none. See *supra* notes 106-07 and accompanying text; see also *Modine Mfg. v. United States Int’l Trade Comm’n*, 75 F.3d 1545 (Fed. Cir. 1996); *Black & Decker, Inc. v. Hoover Service Ctr.*, 886 F.2d 1285 (Fed. Cir. 1989); *LaBounty Mfg. v. United States Int’l Trade Comm’n*, 867 F.2d 1572 (Fed. Cir. 1989). Under the strict bar approach, PHE acts as an absolute bar to all equivalents, thereby eliminating the need for a case-by-case determination. See *supra* notes 108-09 and accompanying text.

¹³⁸ See *Festo*, 234 F.3d at 574.

¹³⁹ See *id.* at 574-78.

¹⁴⁰ See *id.* at 574-75.

¹⁴¹ See *id.* at 575-78.

¹⁴² *Id.* at 575-76. The court cites this doctrine as having its roots in *Shepard v. Carrigan*, 116 U.S. 593, 598 (1886). *Id.*; see also *supra* notes 67-74 and accompanying text (discussing *Shepard*). This is also known as the doctrine of recapture. See *Chandler, supra* note 28, at 515-19 (discussing the origins of prosecution history from the doctrine of recapture through *Shepard v. Carrigan* and *Leggett v. Avery*).

¹⁴³ See *Festo*, 234 F.3d at 576 (quoting *Hubbel v. United States*, 179 U.S. 77, 83-84 (1900)).

issue, the court found that the cases suggested that the Supreme Court intended a strict use of estoppel on limiting amendments.¹⁴⁴

Turning next to the notice function of patent claims, the court stated its underlying reason for supporting the strict bar: the benefit to the public from having notice of the exact boundaries outweighed the expense to the inventor of possibly losing some part of his invention.¹⁴⁵ This policy judgment is the true essence of the public notice objective.¹⁴⁶ The court cited the Supreme Court's *Warner-Jenkinson* presumption to support its judgment, reasoning that the strict application of PHE gives proper deference to the public notice function of claims.¹⁴⁷ However, none of the language cited by the court requires the policy decision it made.¹⁴⁸

Finally, the court turned to the certainty argument and found that it was virtually impossible to ascertain the exact range of equivalents under the flexible bar approach.¹⁴⁹ Apparently accepting the assumption that computer-like certainty of results is preferable to equitable wiggle room, the court propounded the theory that a complete bar will bring certainty to both the public and inventor alike by clearly defining the

¹⁴⁴ *Id.* ("Although we do not understand older Supreme Court cases to have spoken directly to the question before us, we think the language used in those cases suggesting a strict measurement of the scope of equivalents is consistent with our answer to this question [of appropriate scope].").

¹⁴⁵ *Id.* ("Allowing some range of equivalents gives the patentee some benefit of the doubt as to what was disclaimed, a benefit that comes at the public's expense. A complete bar therefore best serves the notice and definitional function of patent claims."). From this language and the court's conclusion, it is clearly evident that the court has judged that the public interests outweigh the private interests. *Id.*

¹⁴⁶ See, e.g., *Warner-Jenkinson Co. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 29, 33 (1997) (discussing the conflict between public notice and inventors' rights); *Sweeney & Bush*, *supra* note 25, at 151 (discussing the public notice function and PHE).

¹⁴⁷ *Festo*, 234 F.3d at 576. The court reasoned that since the Supreme Court felt that a complete bar for unexplained amendments would give the proper deference to the role of claims in providing public notice, then a complete bar would do the same for all limiting amendments. *Id.*

¹⁴⁸ See *id.* Although the court pointed to language in *McClain v. Ortinayer*, 141 U.S. 419 (1891), and *Warner-Jenkinson* to support its policy judgment, the language cited merely fails to forbid such a result. *Id.* (citing *Warner-Jenkinson*, 520 U.S. at 29; *McClain*, 141 U.S. at 424). None of the language cited by the court compels the outcome that the Federal Circuits reached in weighing the competing policies. See *id.*

¹⁴⁹ *Id.* at 577. "Under the flexible bar approach, however, the exact range of equivalents when prosecution history estoppel applies is virtually unascertainable, with only the prior art marking the outer limits of the claim's scope." *Id.*

outer boundaries of amended claims.¹⁵⁰ Thus, the court concluded, such certainty will stimulate investment and activity in design-arounds because the risk of infringement will be easier to determine.¹⁵¹ The court ended its reasoning by asserting that it saw no overriding benefit to keeping the flexible bar approach since it did not believe that the benefit to the inventor outweighed the cost of uncertainty to the public.¹⁵²

A. The Festo Holding Goes Too Far by Effectively Eviscerating the Supreme Court's Warner-Jenkinson Ruling

The analysis for infringement under the new *Festo* ruling completely changes the analysis for infringement under the DOE by significantly and disproportionately strengthening the PHE bar defense.¹⁵³ Under the new *Festo* analysis for infringement by equivalents, the first inquiry is whether the claim elements in question have been amended to narrow their literal scope.¹⁵⁴ If not, then the analysis proceeds under the

¹⁵⁰ *Id.* "A complete bar, unlike a flexible bar, thus lends certainty to the process of determining the scope of protection afforded by a patent." *Id.*

¹⁵¹ *Id.* The court seems to herald the advent of a great new age when the previously hazy borders of technological advances will now be clearly within the public domain, and bold competitors will no longer need to attempt to market valuable design-arounds and fear legal reprisals from unscrupulous patentees trying to hoard more than their ought due. *See id.* Although not stated in such specific terms, the court basically justifies its policy on the assumption that patent counsel will now be able to provide their design-around clients with crystal-clear infringement opinions with a greatly reduced risk of committing malpractice for incorrect prediction of how a court will rule on the equitable decision. *See id.* at 577-78.

¹⁵² *Id.* at 578.

¹⁵³ *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabishiki Co., Ltd.*, 234 F.3d 558, 587-89 (Fed. Cir. 2000) (en banc) (providing a clear example of the new analysis structure as applied by the court to the Stoll patent); *see also* *ACLARA Biosciences, Inc. v. Caliper Tech. Corp.*, 125 F. Supp. 2d 391, 393-400 (N.D. Cal. 2000) (discussing the application of PHE both prior to and after the *Festo* decision).

¹⁵⁴ *Pioneer Magnetics, Inc. v. Micro Linear Corp.*, 238 F.3d 1341, 1344-45 (Fed. Cir. 2001); *see also* *Biovail Corp. v. Andrx Pharm., Inc.*, 239 F.3d 1297 (Fed. Cir. 2001); *Litton Sys., Inc. v. Honeywell Inc.*, 238 F.3d 1376 (Fed. Cir. 2001). The court does limit its scope of amendments that give rise to estoppel to those that narrow the claim's scope as opposed to amendments that enlarge the claim's scope. *Festo*, 234 F.3d at 566. Although the court does not add the narrowing limitation into its stated holding for question one, the next sentence includes the limitation: "Therefore, a *narrowing* amendment . . ." *Id.* (emphasis added). In addition, the court stated in its analysis of the patent claims at issue that the first step was to determine whether the amendment narrowed the literal scope of the claim. *Id.* at 587. Since the nature of PHE is to prevent a patentee from reclaiming subject matter that he has previously surrendered, it is only logical that the estoppel can only operate where an amendment narrows the scope of the claim and not where it enlarges the scope. *Id.* Further, Judge Linn's concurring opinion states that the majority opinion is "very clear" that the new PHE rule only applies to a narrowing amendment. *Id.* at 622 (Linn and Rader,

traditional function-way-result and all-elements analysis of *Graver Tank*.¹⁵⁵ If, however, the answer is yes, then the second question is whether the amendment was made for reasons of patentability.¹⁵⁶ Under *Festo*, a reason for patentability includes amendments made for any reason which relate to the statutory requirements, not just amendments made to overcome the prior art.¹⁵⁷ Therefore, amendments made to meet any of the relevant United States Code provisions are subject to PHE.¹⁵⁸ Of course, an unexplained limiting amendment still gives rise to PHE.¹⁵⁹ If the court determines that a limiting amendment was made for any one of these reasons, then that claim element is subject to PHE under the holding of question one in *Festo*.¹⁶⁰ Finally, under the holding of question three in *Festo*, a claim element that is subject to PHE can have no range of equivalents.¹⁶¹ In other words, PHE acts as a complete bar to any use of the DOE for that claim element, and the patentee is limited to preventing only literal infringement of that element.¹⁶²

JJ., concurring). From the court's subsequent holdings, it is obviously necessary that the amendment has narrowed the literal scope of the claim element for PHE to even be considered. See, e.g., *Biovail*, 239 F.3d at 1303; *Litton Sys.*, 238 F.3d at 1380; *Pioneer Magnetics*, 238 F.3d at 1344-45.

¹⁵⁵ See *ACLARA*, 125 F. Supp. 2d at 398. ("If some of the relevant limitations were not amended, the patentee may assert infringement under the doctrine of equivalents for those unaltered limitations."). See *supra* notes 51-54 and accompanying text (discussing the *Graver Tank* function-way-result test for equivalence).

¹⁵⁶ See *Pioneer Magnetics*, 238 F.3d at 1344-45 ("A court next must examine the reason why an applicant amended a claim If the reason for the amendment is related to patentability, no equivalency is available as to the subject matter of the amendment.").

¹⁵⁷ *Festo*, 234 F.3d at 566.

¹⁵⁸ *Id.* Section 101 deals with what type of material is patentable. 35 U.S.C. § 101 (1994). Section 102 defines the novelty requirements and statutory bars for patentability. 35 U.S.C. § 102 (1994). Section 103 deals with the non-obviousness requirement for patentability. 35 U.S.C. § 103 (1994). Section 112 deals with the formal requirements of the specification and claims. 35 U.S.C. § 112 (1994). Section 112, paragraph 1, includes the written description requirement, the enablement requirement, and the best mode requirement. 35 U.S.C. § 112, para. 1. Section 112, paragraph 2 deals with the particularity and distinctness requirements for claims. 35 U.S.C. § 112, para. 2.

¹⁵⁹ See *Biovail*, 239 F.3d at 1303 (quoting *Festo*, 234 F.3d at 576).

¹⁶⁰ *Festo*, 234 F.3d at 566 (stating that a narrowing amendment made for any reason related to the statutory requirements will give rise to PHE for that element).

¹⁶¹ *Id.* at 569; see also *Litton Systems, Inc. v. Honeywell Inc.*, 238 F.3d 1376 (Fed. Cir. 2001) (holding that under the complete bar rule of *Festo*, a patentee is estopped from claiming any equivalents to the estopped subject matter); *Pioneer Magnetics*, 238 F.3d at 1345 (stating that if prosecution history applies, then "no equivalency is available as to the subject matter of the amendment").

¹⁶² *Festo*, 234 F.3d at 566; see also *Biovail*, 239 F.3d at 1304 ("[W]hen application of the doctrine of equivalents to a limitation is completely barred due to prosecution history estoppel, a patentee asserting infringement must show by a preponderance of the evidence

By making PHE a complete bar to equivalents, this ruling goes well beyond the scope of the Supreme Court's *Warner-Jenkinson* decision.¹⁶³ In *Warner-Jenkinson*, the Court clearly accepted the Federal Circuit's flexible bar approach advanced in *Hughes I*, by noting that the Patent and Trademark Office had been requesting amendments with the expectation that the new language could allow for a range of equivalents.¹⁶⁴ Under this approach, a court had to determine what subject matter was dedicated to the public and what was retained by the patentee on a case-by-case basis.¹⁶⁵ Although the Supreme Court introduced a new, rebuttable presumption that eliminated all equivalents for unexplained narrowing amendments made for reasons related to patentability, it did not, and had no intention of, holding that all estoppel eliminated all equivalents for all claim elements affected by PHE.¹⁶⁶ In fact, the Court explicitly rejected such a "wooden" application of estoppel, which was advanced by *Warner-Jenkinson*.¹⁶⁷ This difference is the essence of the dramatic expansion of the power of PHE that the *Festo* dissenters so

that an allegedly infringing device literally reads on that limitation as properly construed."). One district court has already found a distinguishing feature to this rule, which is subject to interpretation. See *ACLARA Biosciences, Inc. v. Caliper Tech. Corp.*, 125 F. Supp. 2d 391, 399-403 (D. Cal. 2000). This district court was able to evade the absolute effect of PHE by narrowly defining the claim "limitation." *Id.* at 401-03. Essentially, the court looked beyond the plain text of the claim language and considered the underlying functions of the amendments in parsing out what limitations were actually estopped from excluding equivalents. *Id.* at 402.

¹⁶³ The *Warner-Jenkinson* decision was meant mostly to reaffirm the viability of the doctrine of equivalents. See *supra* note 92 and accompanying text. Although the Court also introduced the new presumption regarding unexplained amendments, it also reaffirmed that PHE and the DOE are equitable doctrines that should not be "woodenly" applied by the courts. See *supra* notes 98-99 and accompanying text. Therefore, by the *Festo* majority's own admission, this decision goes beyond anything the Supreme Court has said regarding this issue. See *Festo*, 234 F.3d at 569-70.

¹⁶⁴ *Warner-Jenkinson Co. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 32 (1997). The Court also stated that, "[t]o change so substantially the rules of the game now could very well subvert the various balances the PTO sought to strike when issuing the numerous patents which have not yet expired and which would be affected by our decision." *Id.* at 32 n.6.

¹⁶⁵ Generally, the court had to determine the scope of both the original claim and the amended claim, examine the dialog between the applicant and the examiner, and then decide what subject matter had been disclaimed by the applicant in order to receive the patent. See generally *supra* notes 88-89 and accompanying text (discussing the application of prosecution history estoppel prior to *Festo*).

¹⁶⁶ See *Warner-Jenkinson*, 520 U.S. at 30-33. The defendant had proposed that any amendment, regardless of the reason or effect on scope, should give rise to an absolute estoppel bar to equivalents. *Id.* However, in flatly rejecting such an idea without much discussion, it is apparent that the Court did not believe that such a powerful bar to equivalents is the correct approach to reigning in the DOE. See *id.*

¹⁶⁷ See *supra* note 163 and accompanying text.

vigorously opposed.¹⁶⁸ Therefore, the Supreme Court's handling of the appeal could be most informative on this issue.

The essence of the *Warner-Jenkinson* ruling contained five basic holdings. First, the DOE is still a valid method of finding infringement.¹⁶⁹ Second, some limiting claim amendments raise PHE and some do not, depending on why the limitation was added.¹⁷⁰ Third, where a limiting amendment was made for reasons other than avoiding the prior art, it may or may not preclude the protection of equivalents.¹⁷¹ Fourth, where a limiting amendment is made for a substantial reason related to patentability, PHE precludes protection for equivalents.¹⁷² Fifth, where there is no reason proffered for a limiting amendment, the courts should assume that the amendment was made for a substantial reason related to patentability and apply a strict bar to claiming protection for equivalents.¹⁷³

These conclusions, on the face of the *Warner-Jenkinson* decision, leave open at least two questions regarding the scope of equivalents available when there is PHE. First, where the limiting amendment is related to avoiding the prior art, does PHE act as a strict bar to all equivalents? Second, where the limiting amendment is not related to avoiding the prior art, what reasons allow the patentee to claim equivalents, i.e., what does, or does not, constitute a "substantial reason related to

¹⁶⁸ See, e.g., *Festo*, 234 F.3d at 633-34 (Neuman, J., dissenting). "The [Supreme] Court's emphasis on a 'limited set of reasons' is in striking contrast to the unconstrained estoppel established by the majority In *Warner-Jenkinson* the Court unequivocally rejected this position The majority adopts the brighter line that the Court rejected." *Id.*

¹⁶⁹ See *Warner-Jenkinson*, 520 U.S. at 21 (declining to "speak the death" of the DOE).

¹⁷⁰ See *id.* at 32 (stating that "[o]ur prior cases have consistently applied prosecution history estoppel only where claims have been amended for a limited set of reasons, and we see no substantial cause for requiring a more rigid rule invoking an estoppel regardless of the reasons for a change").

¹⁷¹ See *id.* at 33. This conclusion is logically derived from the statement made by the Court that "[w]here the reason for the change was not related to avoiding the prior art, the change may introduce a new element, but it does not necessarily preclude infringement by equivalents of that element." *Id.* In other words, where the added claim limitation was not made to overcome the prior art, it may or may not preclude infringement by equivalents.

¹⁷² *Id.* In creating the new presumption, the Court held that "[w]here no explanation is established, however, the court should presume that the patent applicant had a substantial reason related to patentability . . . [under which circumstances] prosecution history estoppel would bar the application of the doctrine of equivalents as to that element." *Id.* Therefore, although the Court was speaking specifically about the situation where the reason for an amendment is unknown, the logic extends that the bar is equally applicable where the presumption is found to be valid from the prosecution history.

¹⁷³ See *id.* This is merely the essence of the *Warner-Jenkinson* presumption. *Id.*

patentability?"¹⁷⁴ In order to answer these questions, it is necessary to both look beyond the plain text of *Warner-Jenkinson* and consult previous Supreme Court decisions.

The answer to the first question is found both implicitly within the text of *Warner-Jenkinson* itself and also in the Court's prior decisions. Reading between the lines of *Warner-Jenkinson*, one must conclude that amending a claim to avoid the prior art acts as a strict bar. Avoiding the prior art is unquestionably the most substantial reason for limiting any patent claim.¹⁷⁵ The fourth holding evidences that a limiting amendment made for substantial reasons related to patentability creates a strict bar to the use of the DOE.¹⁷⁶ Therefore, a limiting amendment made for the purpose of avoiding the prior art must necessarily also create a strict bar to finding equivalents. Looking at prior decisions, one must also come to the same conclusion. In *Hubbel*, the Court clearly applied a strict bar to equivalents for a limiting amendment made to overcome a rejection over the prior art.¹⁷⁷ Similarly, in *Shepard*, the Court construed an amendment made to overcome the prior art strictly, effectively applying PHE as a strict bar to equivalents.¹⁷⁸ Therefore, the logical conclusion reached from the *Warner-Jenkinson* decision is also supported by prior Supreme Court decisions.

Although this conclusion supports part of the *Festo* holding, it does not instruct the Federal Circuit regarding either what scope of equivalents should be allowed for amendments that were not made for substantial reasons related to patentability, or what constitutes non-substantial reason. Instead, the Federal Circuit forges its own new path into uncharted legal regions by holding that a substantial reason related to patentability includes Sections 101 and 112 issues as well as Section 102 and Section 103 issues.¹⁷⁹ In deciding to define Section 101

¹⁷⁴ See *supra* note 103 and accompanying text.

¹⁷⁵ The statutory authority to confer patents extends only to "new" technology. 35 U.S.C. § 101 (1994). Therefore, a technology is not patentable if it has been "known or used by others [i.e. not the patent applicant] . . . before the invention thereof by the applicant . . ." 35 U.S.C. § 102(a) (1994). This is a logical extension of the constitutional authority which allows Congress to confer patents only for "Discoveries." See U.S. CONST. art. I, § 8, cl. 8. Thus, if a technology is not new (i.e. it is part of the "prior art"), it logically follows that it really is not a "discovery" in the constitutional sense.

¹⁷⁶ See *supra* note 172 and accompanying text.

¹⁷⁷ See *supra* notes 81-86 and accompanying text (discussing *Hubbel*).

¹⁷⁸ See *supra* notes 67-74 and accompanying text (discussing *Sheppard*).

¹⁷⁹ See *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., Ltd.*, 234 F.3d 558, 566-68 (Fed. Cir. 2000) (en banc). The majority opinion comes to the same conclusion: that the

and Section 112 issues as substantial reasons, the court has substantially expanded and strengthened PHE as a limit to the DOE.¹⁸⁰ The court justified this bold step simply by stating that it saw no reason why PHE should not arise from amendments made for these reasons, and it again concluded that the notice function outweighs the patentee's rights.¹⁸¹

Each of the five individual holdings made by the court is arguably well-founded in itself.¹⁸² However, the aggregate effect of these holdings dramatically shifts the delicate balance established between protecting the inventor's rights through the DOE and protecting the public's interest in clear and certain notification with PHE.¹⁸³ Under the new system, the *Festo* court has clearly shifted the balance in favor of the public's interests over the private patentee's rights.¹⁸⁴ Contrary to the court's offhand statements otherwise, there are good reasons for not shifting the balance so unfavorably against the patentee's interests by creating a legalistic, bright line rule merely for the sake of simplifying adjudication of tough questions, such as where the exact location of a patentee's property lines are in specific situations.¹⁸⁵ Furthermore, the *Festo* decision appears to run contrary to the general attitude of the Supreme Court toward the interplay between the DOE and PHE.¹⁸⁶

Supreme Court's previous decisions did not instruct the court as to this issue. *Id.* at 567. See *supra* note 158 (explaining Sections 101, 102, 103, and 112 of the U.S. Code).

¹⁸⁰ See generally *Festo*, 234 F.3d at 633-34 (Newman, J., concurring).

¹⁸¹ See *id.* at 567.

¹⁸² See, e.g., *supra* notes 175-78 and accompanying text (arguing the precedential support for a strict bar interpretation of prosecution history estoppel). See also *infra* notes 283-85 and accompanying text (proposing that PHE should only be a strict bar to art that was actually considered by the PTO). But see *infra* notes 253-60 and accompanying text (arguing that Section 112 amendments are not "substantial" amendments related to patentability).

¹⁸³ See *Festo*, 234 F.3d at 620-21 (Linn, J., concurring in part and dissenting in part).

¹⁸⁴ See *supra* notes 179-80 and accompanying text.

¹⁸⁵ See *supra* text accompanying note 180 (explaining that the court saw no good reason for not changing the law). The fact that four judges dissented in four different opinions seems to contradict the majority's conclusion that there are no good reasons not to implement the strict bar. See, e.g., *Festo*, 234 F.3d at 598 (Michel & Rader, JJ., dissenting on the strict bar rule); *id.* at 619 (Rader, J., dissenting on the strict bar rule); *id.* at 620 (Linn & Rader, JJ., dissenting on the strict bar rule); *id.* at 630 (Newman, J., dissenting on both the substantial reasons rule and the strict bar rule).

¹⁸⁶ See, e.g., *supra* notes 93, 98-99 and accompanying text (discussing the Supreme Court's *Warner-Jenkinson* decision). The Supreme Court explicitly rejected using "bright line" rules merely for the sake of predictive certainty. *Warner-Jenkinson Co. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 32 (1997). Where the Court did create a bright line rule - the *Warner-Jenkinson* presumption - it was merely a rebuttable presumption, not an absolute bar to equivalents. *Id.* Although the Court did acknowledge that the DOE seemed to have taken on "a life of its own," the Court also refused to "speak the death" of the DOE. *Id.*

Perhaps the strongest argument against the complete bar approach to PHE is the "Equitable Argument."¹⁸⁷ This argument generally relies on the basic premise that the DOE is an equitable doctrine promulgated by judges in order to protect the interests of the inventor against the "unscrupulous copyist" who is merely making insubstantial changes to the inventor's property.¹⁸⁸ Similarly, PHE is an equitable doctrine promulgated to protect the interests of an "innocent," near-infringer from an unscrupulous patentee who tries to reclaim subject matter that he has expressly disclaimed and upon which the near-infringer should be able to reasonably rely.¹⁸⁹ When both situations arise in a particular case, the courts must necessarily look to the facts of that case to determine a fair and just outcome particular to that specific set of circumstances.¹⁹⁰ Because these are equitable doctrines, the courts should not try to make algorithmic legal formulas just to facilitate ease of predictability.¹⁹¹ To the contrary, the courts and judges are peculiarly well suited for performing just such an equitable balancing approach.¹⁹² Therefore, the mere fact that the outcome of such an equitable determination is not absolutely predictable is not a good enough reason to justify abandoning the equitable nature of the DOE and PHE in favor of a legalistic formula.¹⁹³

Therefore, it seems apparent that even the current Supreme Court supports the equitable balancing that courts must apply between the DOE and its counterpart, PHE.

¹⁸⁷ See *Festo*, 234 F.3d at 617 (Michel, J., dissenting).

¹⁸⁸ See, e.g., *id.* at 617 (stating that "protection against such 'close copying' is the central office of the doctrine of equivalents"); see also Chandler, *supra* note 28, at 467 (discussing near copyists).

¹⁸⁹ See *Festo*, 234 F.3d. at 617 (Michel, J., dissenting).

¹⁹⁰ See *id.* "By its very purpose, equity jurisprudence provides a remedy individually tailored to the circumstances of the dispute at hand." *Id.*

¹⁹¹ See generally *id.* at 622-25 (Linn, J., concurring in part and dissenting in part). *But see* Michel, *supra* note 25, at 139-40 (proposing that litigation avoidance, case settlement, and the ability of patent counsel to write reliable opinion letters about potential infringement all require "outcome predictability," which is not possible under the formulation of the DOE).

¹⁹² See *Festo*, 234 F.3d. at 617 (Michel, J., dissenting). The dissent states:

The essence of equity jurisdiction has been the power of the Chancellor to do equity and to mould each decree to the necessities of the particular case. Flexibility rather than rigidity has distinguished it. The qualities of mercy and practicality have made equity the instrument for nice adjustment and reconciliation between the public interest and private needs as well as between competing private claims.

Id. (quoting *Hecht Co. v. Bowles*, 321 U.S. 321, 329-30 (1944)).

¹⁹³ *Warner-Jenkinson Co. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 32 n.6 (1997). There, the Supreme Court explicitly rejected this type of argument:

That petitioner's rule might provide a brighter line for determining whether a patentee is estopped under certain circumstances is not a sufficient reason for

266 VALPARAISO UNIVERSITY LAW REVIEW [Vol. 36

A close, policy-based corollary to the equitable argument is that, in weighing the equities of any given case, the patentee's right to his invention should outweigh the public's right to clear notice.¹⁹⁴ When one strips away the myriad of legal layers and looks at the bare essence of the patent quid pro quo, the public is receiving the better part of the bargain in the end, no matter how clear the claim language.¹⁹⁵ The public receives the inventor's entire knowledge regarding his invention from the issue date unto eternity.¹⁹⁶ In return, the inventor receives only a limited time to capitalize on his idea before his rights are effectively eviscerated by public disclosure.¹⁹⁷ Furthermore, the patentee assumes all of the business risks associated with developing markets for the new technology.¹⁹⁸ If there is no demand for the technology, only the patentee has lost money in trying to bring his invention to the marketplace.¹⁹⁹ On the other hand, the public assumes none of those risks.²⁰⁰ If, after the patent term expires, the idea has been unprofitable, the public has not lost one cent.²⁰¹ However, if the idea is profitable, then the public is free to copy and capitalize on it without restriction

adopting such a rule. This is especially true where, as here, the PTO may have relied upon a flexible rule of estoppel when deciding whether to ask for a change in the first place. To change so substantially the rules of the game now could very well subvert the various balances the PTO sought to strike when issuing the numerous patents which have not yet expired and which would be affected by our decision.

Id.

¹⁹⁴ See, e.g., Rose, *supra* note 3 (arguing for strong protection of patentees' intellectual property rights).

¹⁹⁵ See, e.g., David Silverstein, *Patents, Science and Innovation: Historical Linkages and Implications for Global Technological Competitiveness*, 17 RUTGERS COMPUTER & TECH. L. J. 261, 264-66 (1991) (discussing the Schumpeterian growth model); see also *infra* notes 196-97 and accompanying text.

¹⁹⁶ Once the inventor's knowledge regarding his invention is published in the issued patent, that knowledge is part of the public domain. That was the whole purpose of giving Congress the constitutional power to confer letters of patent to inventors. See *supra* notes 1-2 and accompanying text.

¹⁹⁷ Under the current law, other than some minor extensions to account for excessive procedural delays, most patents are only good for twenty years from the date of application. 35 U.S.C. § 154(a)(2) (1994). Design patents are only good for fourteen years from the date of issue. 35 U.S.C. § 173 (1994).

¹⁹⁸ See *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., Ltd.*, 234 F.3d 558, 627 (Fed. Cir. 2000) (en banc) (Linn, J., dissenting) (concluding that the new strict application of estoppel will be a disincentive for inventors to bear the commercial risk in developing new technology).

¹⁹⁹ *Id.* at 640 (Newman, J., dissenting).

²⁰⁰ *Id.*

²⁰¹ *Id.*

after the patent expires.²⁰² In such a one-sided bargain, it seems that equity and good faith should require the public to uphold its end of the patent contract by zealously protecting the inventor's rights during the patent period.²⁰³ The inventor did not have to inform the public about his invention in the first place, but he was induced to do so by the promise of limited monopoly rights.²⁰⁴ Because the public receives a more significant benefit in the end, in accordance with justice, the public must be required to honor its contractual obligation generously, instead of begrudgingly.

Another argument against the complete bar approach is centered on the economic analysis of the need for certainty versus the need to protect the inventor.²⁰⁵ The ultimate issue for the certainty argument is that a broad interpretation of the DOE makes it hard to predict whether a competitor will be adjudged to infringe when he is skirting at the edges of patented subject matter.²⁰⁶ The conclusion drawn is that such uncertainty will inhibit the progress of the useful arts by chilling potential design-around solutions.²⁰⁷ This argument is flawed for at least two reasons. First, it does not appear that a liberal construction of the DOE in favor of protecting the patentee's rights has ever inhibited the progression of technology in the marketplace.²⁰⁸ In fact, the opposite appears more likely because, from 1983 until the present - the time

²⁰² *Id.*

²⁰³ See, e.g., Rose, *supra* note 3, at 518-24.

²⁰⁴ *Id.*

²⁰⁵ See, e.g., *Festo Corp. v. Shoketsu Kogyo Habushiki Co., Ltd.*, 234 F.3d 558, 618-19 (Fed. Cir. 2000) (en banc) (Michel, J., dissenting); *id.* at 638-41 (Newman, J., dissenting).

²⁰⁶ See, e.g., *Warner-Jenkinson Co. v. Hilton Davis Chem. Co.* 520 U.S. 17, 28-29 (1997). "We do, however, share the concern of the dissenters below that the doctrine of equivalents, as it has come to be applied since *Graver Tank*, has taken on a life of its own, unbounded by the patent claims." *Id.*

²⁰⁷ See, e.g., Robert P. Merges & Richard R. Nelson, *On the Complex Economics of Patent Scope*, 90 COLO. L. REV. 839, 886 (1990) (discussing the negative effects of broad patent scopes on emergent technologies); see also *Festo*, 234 F.3d at 597 (Lourie, J., concurring). In justifying the strict bar approach, Judge Lourie stated:

In today's world, the specter of unpredictable equivalence claims haunts too many business decisions It is more than justified to lessen this fear and hold patent applicants to the consequences of their public prosecution decisions. The rule we announce today should encourage innovation, lessen uncertainty, and diminish the volume of unnecessary litigation

Festo, 234 F.3d at 597 (Lourie, J., concurring).

²⁰⁸ See, e.g., Rochelle Cooper Dreyfuss, *The Doctrine of Equivalents: An Economic Analysis of Patent Scope*, in 3 INT'L PERSP. INTELL. PROP. 74, 77 (1997) (arguing that broad interpretation of the DOE is not harmful to patent economics). *But see* Silverstein, *supra* note 195, at 264-66 (discussing how overbroad patents have stifled innovation).

268 VALPARAISO UNIVERSITY LAW REVIEW [Vol. 36

period that the flexible bar approach to PHE of *Hughes I* was in effect - technology has advanced at a faster rate than ever before.²⁰⁹ Whatever the actual underlying reason for this phenomena, the facts apparently belie the theory. As a more scientifically-oriented branch of the law, such observation in apparent contradiction to an advanced theory should wave a red flag to the proponents of the certainty argument that something is amiss with their theory.²¹⁰

Second, when the scope of an inventor's patent protection is increased, it naturally increases the value of a patent.²¹¹ Thereby, with increased value, it is probable that more money and effort will be expended on making new technological advances.²¹² Conversely, narrowing the scope of patent protection merely encourages copying with insubstantial variations that avoid the literal meaning of a patent's claims but gives no incentive for investing time and money into

²⁰⁹ See, e.g., *Festo*, 234 F.3d at 641 (Newman, J., dissenting) (stating that "[t]he present patent law has supported a blossoming of technology-based industry in a competitive environment that is conspicuous for its entrepreneurial vigor").

²¹⁰ In order to become a registered patent agent or attorney, one must have a scientific education. See 37 C.F.R. § 10.7 (2000). Under the classic "scientific method," a theory is first advanced to explain a natural phenomena. Then experiments are conducted and the results observed. Then, the results are compared to the theory. If the results agree with the theory, the theory is not discarded. However, if the results do not agree with the theory, the theory is either discarded or reformulated to try to account for the observations. The process is then reiterated *ad infinitum*. Thereby, a theory is almost never proved to be correct, but after a long time it can be accepted as true. Consider, for example, one of Newton's basic theories of motion, the conservation of momentum: force equals mass times acceleration ($F=M \times A$). This theory cannot ever be unquestionably proven to be true, but after some four hundred years of not being proved incorrect, it has been generally accepted as a true "law" of motion.

²¹¹ Merges & Nelson, *supra* note 207, at 839. "The economic significance of a patent depends on its scope . . ." *Id.* For example, the value of Thomas Edison's patent on the incandescent electric light bulb, U.S. Pat. No. 223,898, increased dramatically after the courts construed it broadly in *Edison Elec. Light Co. v. United States Elec. Lighting Co.*, allowing the company to increase its market share from 40% to 75% in just two years. See ARTHUR BRIGHT, *THE ELECTRIC-LAMP INDUSTRY: TECHNOLOGICAL CHANGE AND ECONOMIC DEVELOPMENT FROM 1800 TO 1947*, at 89 (1949); see also *Edison Elec. Light Co. v. United States Elec. Lighting Co.*, 47 F. 454 (C.C.S.D.N.Y. 1891). Although Merges & Nelson's article concludes that broad patents diminishes incentives for other inventors to continue to invent in the same field, the authors qualify their conclusion to apply only to a small number of extremely broad patents for so-called pioneering breakthrough inventions. See Merges & Nelson, *supra* note 207, at 916.

²¹² See, e.g., Dreyfuss, *supra* note 208, at 81 (questioning whether narrowing the scope of the DOE will squelch the incentive to invest in research and development).

developing truly new technology.²¹³ Therefore, limiting patent protection by creating a complete bar under PHE serves not to promote the advancement of the arts but merely the legal copying of established technology.²¹⁴ Such a policy, while possibly having positive short-term effects on the marketplace by increasing competition, may ultimately have negative long-term effects by slowing the development of new technology.²¹⁵ With the advent of the information age and the establishment of intellectual property as the ultimate driver of the modern first-world economy, such an effect can only be detrimental to the United States economy in the long run.²¹⁶

One final argument against the strict bar, the "After-Arising Technology" argument, proceeds as follows.²¹⁷ Under PHE, a patentee is estopped from reclaiming what he has expressly disclaimed in order to obtain the patent.²¹⁸ However, one can only expressly disclaim that

²¹³ See, e.g., *Festo*, 234 F.3d at 626-28 (Linn, J. dissenting). But see *Merges & Nelson*, *supra* note 207, at 908-09 (reaching the opposite conclusion for a relatively small group of broad, pioneer patents).

²¹⁴ See *Festo*, 234 F.3d at 626-28 (Linn, J., dissenting) (positing that "the majority's new rule hands the unscrupulous copyist a free ride . . .").

²¹⁵ See *id.* at 639 (Newman, J., dissenting). "It is generally agreed that long-term economic growth requires a policy framework that encourages the creation and commercialization of new technologies, as contrasted with a policy that facilitates appropriation of the creative product, lest the creative product dry up in the face of too-easy appropriation." *Id.*; see also *Merges & Nelson*, *supra* note 207, at 874-79 (discussing the positive effects of narrow patent scope on market competition).

²¹⁶ See generally *Merges & Nelson*, *supra* note 207. "[T]he following general points seem to be widely accepted: First, increases in research and development expenditures yield more inventions. Second, the larger numbers of inventions from increased research and development have a positive effect on future productivity growth. And third, productivity growth is important for economic well-being." *Id.* at 878 (citations omitted). "The new technologies, new processes, and new products that constitute intellectual property now form the economic bedrock of international trade and national wealth." FRED WARSHOFKY, *THE PATENT WARS: THE BATTLE TO OWN THE WORLD'S TECHNOLOGY* 3 (1994). "In the competition for world markets, it is the nation that innovates best and has the means to both encourage and protected those innovations that will provide the jobs and the highest standard of living for its citizens." *Id.* at 271.

²¹⁷ See *Warner-Jenkinson Co. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 37 (1997). This argument is recognized as a potential problem by the Supreme Court in its *Warner-Jenkinson* decision. *Id.* The argument is also discussed in Judge Rader's dissent in *Festo*. See *Festo*, 234 F.3d at 619-20 (Rader, J., dissenting).

²¹⁸ See *supra* text accompanying note 73. But see *Chandler*, *supra* note 28, at 501-08 (concluding that principles of equitable estoppel provide an inadequate justification for PHE).

270 VALPARAISO UNIVERSITY LAW REVIEW [Vol. 36

which exists at the time of the amendment.²¹⁹ Therefore, the inventor cannot be expressly disclaiming future technologies because he cannot know them to begin with.²²⁰ The DOE, on the other hand, applies at the time of infringement, not the time of amendment.²²¹ Therefore, because of the temporal shift between the occurrence of estoppel and the application of the DOE, there is the potential for after-arising technology that may literally fall within the region of material surrendered at amendment, but not temporally.²²² Since the inventor could not have disclaimed it, he cannot then be estopped from claiming the equivalence of the material.²²³ To cause PHE to be an absolute bar in all situations, however, would not allow the courts to consider the effects of after-arising technology.²²⁴ Therefore, the wooden approach promulgated by the Federal Circuit, in *Festo*, denies the patentee the equitable consideration he deserves.²²⁵

B. *Analysis of a Post-Festo Application: Lockheed Martin Corp. v. Space Systems/Loral, Inc.*²²⁶

The recent *Lockheed Martin* decision is a perfect example of why the *Festo* decision is wrong, and why the Supreme Court should overrule it to re-establish the flexible bar approach to PHE. The decision highlights how the *Festo* rule is too blunt an instrument to use where fine

²¹⁹ See *Festo*, 234 F.3d at 620 (Rader, J., dissenting) (stating that “[b]y definition, applicants could not have surrendered something that did not even exist at the time of the claim amendment, namely after-arising technology”).

²²⁰ See *id.* at 620.

²²¹ See *Warner-Jenkinson*, 520 U.S. at 37 (holding that “the proper time for evaluating equivalency . . . is at the time of infringement, not at the time the patent was issued”).

²²² See, e.g., *infra* notes 277-82 and accompanying text (discussing the after-arising technology paradigm with respect to *Hurlburt v. Schillinger* and *Goodyear DentalVulcanite Co. v. Davis*).

²²³ See, e.g., *Festo*, 234 F.3d at 619-20 (Rader, J., dissenting). The syllogism proceeds as follows: since future technology did not yet exist at the time the patentee made an amendment, he could not yet have known about it. *Id.* If he did not know about it, the patentee could not have knowingly or expressly disclaimed such technology. *Id.* Therefore, because he could not have knowingly or expressly disclaimed it, the patentee should not be estopped from claiming after arising technology as an equivalent to his patented technology. *Id.*

²²⁴ See, e.g., *id.* at 593 (Plager, J., concurring). Judge Plager considered the majority’s strict bar to be the “second best solution.” *Id.* The outcome is to limit all equitable inquiry when PHE applies. *Id.* Instead, Judge Plager proposes that the DOE and PHE should be entirely within the realm of the equitable decisions of the judge. *Id.*

²²⁵ See, e.g., *id.* at 622-23 (Linn, J., dissenting) (discussing the equitable function of the two doctrines).

²²⁶ *Lockheed Martin Corp. v. Space Sys./Loral, Inc.*, 249 F.3d 1314 (Fed. Cir. 2001).

distinctions and nuances need to be considered.²²⁷ Because of the *Festo* rule, the *Lockheed* ruling is contrary to established Supreme Court precedent.²²⁸

At issue in the *Lockheed* case was claim one of U.S. Patent No. 4,084,772 for a gyroscopic satellite attitude controller.²²⁹ The element at issue was element 'b', which was amended twice during prosecution. Originally, element 'b' read: "means for rotating said wheel in accordance with a predetermined sinusoidal variation."²³⁰

The Examiner rejected the original claim on obviousness grounds.²³¹ The Applicant then amended claim one to read: "means for rotating said wheel in accordance with a predetermined [sinusoidal variation] rate schedule which varies sinusoidally over the orbit."²³²

The Examiner again rejected the claim for obviousness, apparently because prior art disclosed sinusoidally varied rate schedules for satellite attitude controllers.²³³ The Applicant amended claim one a second time to read: "means for rotating said wheel in accordance with a predetermined rate schedule which varies sinusoidally over the orbit at the orbital frequency of the satellite"²³⁴ This version was accepted by the Examiner and was the form at issue in the subsequent litigation.²³⁵

The overall question of the litigation was whether the means used by Space Systems/Loral, Inc. ("SSL") to vary the rotation of a similar gyroscopic satellite attitude controller was either literally the same or equivalent to the means claimed by Lockheed.²³⁶ The district court held that, as a matter of law, the SSL device neither used the same literal means nor the equivalent means for controlling the sinusoidal variation

²²⁷ See *infra* notes 244-49 and accompanying text.

²²⁸ See *infra* notes 251-52 and accompanying text.

²²⁹ *Lockheed Martin*, 249 F.3d at 1319-20.

²³⁰ *Id.* at 1326.

²³¹ *Id.*

²³² *Id.* (emphasis added). The bracketing and underlining is the usual method used during prosecution to show what material has been deleted [bracketed] and what material has been added (underlined) from the last form of the language. See 37 C.F.R. § 1.121 (2000). It is used here to similarly point out the differences between the succeeding forms of the claims.

²³³ *Lockheed Martin*, 249 F.3d at 1326.

²³⁴ *Id.* (emphasis added).

²³⁵ *Id.*

²³⁶ *Id.* at 1325.

272 VALPARAISO UNIVERSITY LAW REVIEW [Vol. 36

of the gyroscope's rotation.²³⁷ Lockheed appealed this holding, arguing that the district court improperly decided the question of equivalency, a question of fact, that should have been submitted to the jury.²³⁸

On appeal, the Federal Circuit affirmed the district court's ruling, but for different reasons.²³⁹ Whereas the district court relied on the function-way-result test, the Federal Circuit panel relied on PHE and *Festo* to reach the same result.²⁴⁰ After laying out the basic *Festo* analysis algorithm, the court reiterated that, under *Festo*, a court may not inquire as to what the applicant has surrendered with his amendments, because any limiting amendment made for reasons related to patentability act as an absolute bar to asserting the DOE.²⁴¹ Therefore, the court coldly concluded that, since the element at issue had been limited by a narrowing amendment made to overcome a rejection, there could be no equivalents for that element, whatsoever.²⁴² Because there was no literal infringement as a matter of law, and because there could be no equivalents for that element under *Festo*, the court affirmed the district court's ruling that SSL did not infringe Lockheed's patent.²⁴³

²³⁷ The district court was correct to find that there was no literal infringement. In its *Markinan* hearing, the court found that the sinusoidal variation of the '722 patent was limited to a sinusoidal variation that passed through zero twice during a full period. See *id.* The sinusoidal variation of the SSL device, however, never passed through zero. *Id.* at 1322. Therefore, there could be no literal infringement. Since the claim is a means-plus-function claim, the court was correct to limit the means claimed to the means disclosed in the disclosure. See 35 U.S.C. § 112, para. 6 (1994); see also *Greenberg v. Ethicon Endo Surgery, Inc.*, 91 F.3d 1580, 1584 (Fed. Cir. 1996) (holding that a means-plus-function claim is limited to the means disclosed in the patent and their equivalents). Lockheed did not contest this finding, so it is assumed that the "twice through zero" limitation imposed by the district court was valid. *Lockheed Martin*, 249 F.3d at 1322-23.

The district court also found no equivalence as a matter of law. See *id.* at 1322. The court applied the function-way-result test and found that, although the functions and results were essentially the same, the way was not essentially the same. *Id.* The court reasoned that because the Lockheed gyroscope changed rotational directions twice during its cycle, i.e., the sinusoidal function that controlled the rotational speed passed through zero twice in a full period, and because the SSL gyroscope never changed rotational direction, i.e., the sinusoidal control of the rotational speed never passed through zero, then the two ways of controlling the attitude were materially different. *Id.* Since the issue of equivalency is a question of fact, the court apparently concluded that no reasonable jury could find equivalence between the two sinusoidal variations. *Id.*

²³⁸ *Lockheed Martin*, 249 F.3d at 1323.

²³⁹ *Id.* at 1327.

²⁴⁰ *Id.* at 1326-27.

²⁴¹ *Id.* at 1326.

²⁴² *Id.* at 1327.

²⁴³ *Id.* at 1323.

The panel that decided this case applied the law of *Festo* correctly and, in so doing, identified the problem with *Festo's* absolute bar. Lockheed argued that the amendments to element 'b' were added because the Examiner cited prior art that disclosed satellite attitude controllers that varied sinusoidally with periods of something other than the satellite's orbital frequency, explaining the second amendment, which added the sinusoidal period limitation.²⁴⁴ The first amendment, which substantively only adds the "rate" limitation, was probably made in response to a Section 112, paragraph 2 rejection, because without the word "rate" in the claim, it would have been unclear what was being varied according to the sinusoidal function.²⁴⁵ Neither of the reasons for the two amendments have anything to do with whether the sine function passes through zero.

Focusing on the isolated issue of equivalence between a sinusoidal function that passes through zero and one that does not, the application of the *Festo* absolute bar completely missed the very real and important nuances of the case. The applicant was not surrendering or disclaiming anything in relation to whether the sine function passes through zero.²⁴⁶ Instead, the applicant had surrendered and disclaimed: first, a sinusoidal variation of something other than the rate of rotation of the gyroscopes, and second, a sine function that did not have a geosynchronous period.²⁴⁷ However, based on the *Festo* rule, the court did not even consider what material the applicant was actually surrendering with his limiting amendments.²⁴⁸ Under *Festo*, the court must ignore all of these considerations and blindly apply the absolute PHE bar.²⁴⁹

Under a more sensible legal scheme, this issue should have been remanded to the district court for a factual determination of whether the sinusoidal gyroscopic progression that does not pass through a zero velocity was equivalent to one that does. Such a scheme must take into account what subject matter the applicant actually disclaimed with a

²⁴⁴ Lockheed Martin Corp. v. Space Sys./Loral, Inc., 249 F.3d 1314, 1326-27 (Fed. Cir. 2001). In the case of the preferred embodiment, a satellite in geosynchronous orbit, the period is one day, or roughly 24 hours. *Id.*

²⁴⁵ One of the requirements for a claim is that it "particularly points out" that which is being claimed. 35 U.S.C. § 112, para. 2 (1994).

²⁴⁶ See *supra* notes 237, 244-45 and accompanying text.

²⁴⁷ See *supra* notes 230-35 and accompanying text (showing the amendments made to the claim during prosecution).

²⁴⁸ See *supra* notes 241-42 and accompanying text.

²⁴⁹ See *supra* notes 241-42 and accompanying text.

limiting amendment. Where the prosecution record is not silent, such determinations are well within the power of the courts. Where the record is silent, the court is well-founded to apply a strict bar, as propounded by *Warner-Jenkinson*, because the patentee has not established the reasons for the amendment.²⁵⁰

IV. A PROPOSED SOLUTION

A. *The Supreme Court Should Reverse the Festo Decision in Part and Establish a Specific Analysis using the Flexible Bar Approach*

The Supreme Court should take this opportunity to assert that it has ultimate control over the public policy direction of the patent law. In *Warner-Jenkinson*, the Court strongly reaffirmed the deeply rooted policy that the DOE is necessary to adequately protect the patentee's rights from unscrupulous copyists.²⁵¹ The Federal Circuit's *Festo* decision has essentially created a backdoor to thwart the Supreme Court's public policy pronouncement by defining essentially all limiting amendments as substantially related to patentability and creating a strict bar for all such amendments.²⁵² The Federal Circuit has thus found an alternative method of effectively eviscerating the DOE in order to further a public policy currently in favor with a majority of that court, but not supported by the Supreme Court. Therefore, the Supreme Court should make the most of the opportunity to reclaim its control over the direction of the public policy underlying patent law by not simply affirming or overruling a small portion of the *Festo* holding, but enunciating a well-reasoned decision that overrules part of the Federal Circuit's decision, but affirms other parts.

1. Amendments to Overcome Section 112 Amendments Are Not Substantial Reasons Related to Patentability

The first issue the Supreme Court should address is what types of amendments are "substantial" enough to act as a strict bar to

²⁵⁰ *Warner-Jenkinson Co. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 33 (1997). Under *Warner-Jenkinson*, a court is to apply a strict bar to equivalents where the record is silent regarding the reasons for an amendment. *Id.*; see also *supra* notes 101-04 and accompanying text.

²⁵¹ See, e.g., *Warner-Jenkinson*, 520 U.S. at 26 n.3 (1997) (outlining some of the history of the DOE since 1854). In response to the petitioner's invitation to rule that the DOE should be discarded, the court stated, "[w]e decline that invitation." *Id.* at 21.

²⁵² By defining all Section 101 and Section 112 amendments as substantially related to patentability, the *Festo* ruling makes essentially all limiting amendments a reason to apply the strict bar to equivalents. See, e.g., *supra* notes 179-80 and accompanying text.

equivalents. Where the Federal Circuit and the patent bar, in general, have gone awry is in ignoring a single word in the *Warner-Jenkinson* decision: substantial.²⁵³ It is clear from *Warner-Jenkinson* that where a claim amendment was not made to overcome the prior art, it may completely preclude infringement by equivalents.²⁵⁴ However, it also appears evident that such amendments should only preclude equivalents where the reason related to patentability is substantial.²⁵⁵ The Supreme Court should emphasize the substantiality element of the *Warner-Jenkinson* decision by ruling that amendments made to gain compliance with Section 112 are not substantial reasons related to patentability, but are merely formalistic requirements.²⁵⁶ The reasoning

²⁵³ See, e.g., *Biovail Corp. v. Andrx Pharm., Inc.*, 239 F.3d 1297 (Fed. Cir. 2001) (applying the *Festo* decision without regard to the substantiality of an amendment); *Litton Sys., Inc. v. Honeywell Inc.*, 238 F.3d 1376 (Fed. Cir. 2001) (considering only whether an amendment was made to meet the statutory requirements); *Pioneer Magnetics, Inc. v. Micro Linear Corp.*, 238 F.3d 1341 (Fed. Cir. 2001) (ignoring the substantiality element).

²⁵⁴ See *supra* note 171 and accompanying text.

²⁵⁵ See *supra* note 172 and accompanying text.

²⁵⁶ 35 U.S.C. §112 (1994). The possible Section 112 rejections are generally concerned with the phraseology of a claim:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor of carrying out his invention.

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

A claim may be written in independent or, if the nature of the case admits, in dependent or multiple dependent form.

Subject to the following paragraph, a claim in dependent form shall contain a reference to a claim previously set forth and then specify a further limitation of the subject matter claimed

A claim in multiple dependent form shall contain a reference, in the alternative only, to more than one claim previously set forth and then specify a further limitation of the subject matter claimed. A multiple dependent claim shall not serve as a basis for any other multiple dependent claim

An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure

is that Section 112 rejections are not substantial reasons relating to patentability because they can be generally be overcome, if by no other means, by adding new subject matter via a continuation-in-part application and accepting a later application date.²⁵⁷ Since Section 112 rejections can be overcome without necessarily giving up subject matter, they are not *substantial* reasons related to patentability.²⁵⁸ They are merely formal requirements because their function is compliant with the public notice function of the patent quid pro quo, and they do not go to the substance of what scope of subject matter the inventor is actually allowed to claim.²⁵⁹ Therefore, the Court should hold that only amendments made for reasons that lie at that heart of the patentability of the subject matter are substantial enough to apply a strict bar, not amendments that are made merely for formal requirements to gain a patent.²⁶⁰

2. Prosecution History Estoppel Should Only be a "Strict Bar" Against Expanding the Limitations or Elements Added, Not the Whole Element *Per Se*

When the Supreme Court hears the *Festo* case, it should keep the underlying reasons for PHE in mind when formulating its decision, namely, to prevent patentees from using the courts to recapture subject matter that they were required to abandon in order to receive the patent.²⁶¹ The competing rationale given for the absolute bar, i.e., to promote the public's certainty as to what is covered by the patent, should not be allowed to overshadow the more deeply established reasoning. Although public certainty is an important aspect of the claims, it must be balanced against the inventor's right to protect his

35 U.S.C. §112. The M.P.E.P. includes a non-exhaustive list of twenty-one specific issues for Section 112 rejections, most of which are tied to unacceptable phraseology, not to the substance of what the invention is. See M.P.E.P. § 2173.05(a)-(v) (2000).

²⁵⁷ See generally M.P.E.P. § 2163-63.07 (2000) (discussing the written description requirements of 35 U.S.C. § 112); *id.* at § 201.08 (discussing Continuation-In-Part applications); *id.* at § 201.11 (citing *Hunt Co. v. Mallinckrodt Chem. Works*, 177 F.2d 583, 587 (2d. Cir. 1949)).

²⁵⁸ See 35 U.S.C. § 112 (1994).

²⁵⁹ See, e.g., *Chemcast Corp. v. ARCO Indus. Corp.*, 913 F.2d 923 (Fed. Cir. 1990) (discussing the public notice function of the best mode requirement of Section 112); *Gould v. Hellwarth*, 472 F.2d 1383 (C.C.P.A. 1973) (discussing the public notice function of the enablement requirement of § 112); *Ex parte Fressola*, 27 U.S.P.Q.2d 1608 (Bd. of Patent App. 1993) (discussing the public notice function of the particularity requirement of § 112).

²⁶⁰ 35 U.S.C. §§ 102, 103 (1994); see *supra* note 158 (explaining these sections).

²⁶¹ See *supra* notes 58-60 and accompanying text (discussing the reasoning used for the inception of the estoppel doctrine).

invention and any obvious variations thereon.²⁶² As noted in *Graver Tank*, and approvingly mentioned in *Warner-Jenkinson*, a legal interpretation that limits a patent's protection to the literal meanings of the words on the page renders a patent practically worthless because literal infringement is the rare exception in patent cases that actually go to trial.²⁶³ Instead, the federal government should aggressively uphold its end of the patent bargain.²⁶⁴

Under the law existing prior to the *Festo* decision, the need for public certainty was adequately served by the function-way-result test, the all-elements rule, and a more "flexible" use of PHE.²⁶⁵ Where an accused product does not contain each of the elements of the patented subject matter, the all-elements rule precludes the finding of equivalents as a matter of law.²⁶⁶ Only after satisfying the all-elements rule may equivalents be considered.²⁶⁷ Where the prosecution history shows that the inventor clearly gave up subject matter in order to avoid the prior art, either for anticipation or obviousness, it is only fair to estop the patentee from reclaiming such matter.²⁶⁸ Furthermore, where the prosecution history shows that inventors simply disclaimed subject matter with an unexplained limiting amendment, they should not be allowed to recapture the disclaimed subject matter through the court systems at the expense of the public, who it is assumed relied on the disclaimer.²⁶⁹ However, where inventors have given up subject matter

²⁶² See, e.g., *Warner-Jenkinson Co. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 28-30 (1997) (considering the balance between the DOE and PHE).

²⁶³ See, e.g., *Graver Tank & Mfg. v. Linde Air Prods. Co.*, 339 U.S. 605, 607 (1950). The *Graver Tank* Court stated:

Outright and forthright duplication is a dull and very rare type of infringement. To prohibit no other would place the inventor at the mercy of verbalism and would be subordinating substance to form. It would deprive him of the benefit of his invention and would foster concealment rather than disclosure of inventions, which is one of the primary purposes of the patent system.

Id.

²⁶⁴ See *supra* note 2 and accompanying text (discussing the federal government promises to grant the inventor a limited right to exclude competition for a limited time in exchange for the inventor's public teaching of his newly created knowledge).

²⁶⁵ See, e.g., *Warner-Jenkinson*, 520 U.S. at 39-40 (discussing what linguistic frameworks are allowable for formulation of the equivalency tests).

²⁶⁶ See *id.* at 29.

²⁶⁷ See *id.*

²⁶⁸ See, e.g., *Legget v. Avery*, 101 U.S. 256, 259 (1879). ("The allowance of claims once formally abandoned by the applicant, in order to get his letters patent through, is the occasion of immense frauds against the public.").

²⁶⁹ See, e.g., *Warner-Jenkinson*, 520 U.S. at 33.

278 VALPARAISO UNIVERSITY LAW REVIEW [Vol. 36

for a specifically stated reason and disclaim only a limited aspect of the many possible aspects of an element of their invention, the courts should not punish them by restricting them from claiming equivalency to an aspect that they did not actually disclaim.

Therefore, the Supreme Court should establish an absolute bar, not to equivalents of the modified element, but to equivalents to the modification, or the added limitation itself. With this modification to the Federal Circuit's ruling, an analysis for equivalents and estoppel would proceed as follows. The courts must first determine whether the accused device meets the minimum requirements of the all-elements rule by having all of the claimed elements of the patented invention.²⁷⁰ If so, then the court must next consider any PHE.²⁷¹ In so doing, the first step should be to define as a matter of law exactly what subject matter the applicant relinquished during prosecution and what portions of the claims are affected by the relinquished subject matter.²⁷² Then, PHE should strictly bar the patentee from reclaiming the subject matter that the court has determined that the patentee relinquished, unless the patentee can show that the limiting amendment was not made for substantial reasons of patentability.²⁷³ Only where the record is silent as to why a limitation was added or what subject matter was relinquished should the courts apply a *per se* strict bar to equivalents for the entire element without trying to discern what material the applicant actually surrendered.

3. Prosecution History Estoppel Should Remain a "Strict Bar" to Reclaiming Material that the Patentee Expressly Disclaimed in Order to Obtain the Patent

Finally, the Court should refine the Federal Circuit's definition of the "strict bar" as applied to the DOE, and retain it as a strict bar against

²⁷⁰ See *id.* at 29-30.

²⁷¹ Of course, if the accused device does not have all of the elements of the patented invention, then there can be no infringement as a matter of law, and the inquiry goes no further. See *supra* note 266 and accompanying text.

²⁷² This step is necessary because the primary function of PHE is to prevent a patentee from regaining via the courts what he was forced to relinquish during prosecution in order to obtain the patent. See *supra* notes 58-59 and accompanying text. Therefore, in order to achieve the goal of the estoppel, the court must first define what was relinquished before proceeding. This step is analogous to the *Markman* hearing, which is used to define the terms of a patent before proceeding to consider infringement. See *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 979 (Fed. Cir. 1995) (en banc).

²⁷³ See, e.g., *supra* notes 67-74 and accompanying text (discussing how the Court used a strict bar against disclaimed prior art in *Carrigan*).

reclaiming material that the patentee expressly disclaimed during prosecution. This is necessary because both the majority and dissents in *Festo* have valid points that need conciliation.²⁷⁴ On one hand, the *Festo* majority is correct in stating that the Supreme Court decisions from the golden age of patent jurisprudence often referred to using PHE as a "strict bar" to equivalents.²⁷⁵ On the other hand, the dissent raises a valid point that the Court has also considered equivalency for amended claim limitations in spite of the "strict bar" slogan.²⁷⁶ However, these two apparently divergent observations are reconcilable if one looks one step further.

In the cases where the Supreme Court applied the strict bar without even considering any equivalents to the claim element at issue, the accused technology was clearly part of the prior art that the patentee had disclaimed in order to obtain the patent.²⁷⁷ Therefore, it was unnecessary to consider any after-arising equivalents, and the Court was able to apply PHE as a "strict bar" to the accused technology.²⁷⁸ This analysis, however, does not preclude the finding of equivalence for a narrowed claim where the accused device was not part of the prior art, but instead is an obvious variation of the patented technology at issue. This was exactly the situation the Court faced in *Goodyear Dental*, where the accused cellulose technology was not a part of the prior art, but arose after the patent issued.²⁷⁹ Similarly, in *Hurlbut*, the accused technology was an after-arising obvious variation on the patented technology.²⁸⁰ Although *Hurlbut* involved a disclaimer to the prior art instead of an amendment, this process is equivalent to amending the claim but is just a procedural convenience of creating a claim limitation without having to go into reissue proceedings.²⁸¹ In both of these cases, the Supreme Court

²⁷⁴ See *infra* notes 275-82 and accompanying text (comparing the arguments on either side of the issue).

²⁷⁵ See, e.g. *Exhibit Supply Co. v. Ace Patents Corp.*, 315 U.S. 126 (1942); *Hubbell v. United States*, 179 U.S. 77 (1900); *Shepard v. Carrigan*, 116 U.S. 593 (1886).

²⁷⁶ See, e.g., *supra* notes 65-66, 79-80 and accompanying text.

²⁷⁷ See generally *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., Ltd.*, 234 F.3d 558, 601-10 (Fed. Cir. 2000) (en banc) (Michel, J., dissenting) (presenting an extensive detailed discussion of the Supreme Court precedent).

²⁷⁸ See *id.*

²⁷⁹ See *supra* notes 61-66 and accompanying text.

²⁸⁰ See *supra* notes 77-78 and accompanying text.

²⁸¹ See generally M.P.E.P. § 1490 (8th ed. 2001). This type of disclaimer is now called a Statutory Disclaimer. *Id.* A Statutory Disclaimer may be filed where the patentee has reason to believe the claim is too broad. *Id.* Therefore, the disclaimer produces the same substantive result as narrowing a claim during prosecution or reissue in order to overcome a prior art rejection. *Id.* Although a Statutory Disclaimer under 35 U.S.C. § 253 today only

280 VALPARAISO UNIVERSITY LAW REVIEW [Vol. 36

considered whether the accused technology, which was after-arising technology, was equivalent to the patented technology even though PHE applied to the claim elements at issue.²⁸²

From the above distinction, comes an obvious solution to the apparent conflict. The Supreme Court should define the strict bar that arises from PHE as preventing a court from finding equivalency to material that was expressly disclaimed as part of the prior art in order to obtain or maintain a valid patent.²⁸³ However, the Court should not extend the "strict bar" to either after-arising technology or technology that was not expressly disclaimed in order to obtain or maintain a valid patent.²⁸⁴ Thereby, the "estoppel" to reclaiming what has been expressly disclaimed is strict as to what was actually considered and disclaimed, but the equitable nature of the two doctrines is maintained to allow for inquiry where necessary.²⁸⁵

Under this solution, the Court could maintain the burden on the patentee to produce evidence of why an amendment was made by retaining the *Warner-Jenkinson* presumption.²⁸⁶ At the same time, such a holding would retain some benefits of having a patent by putting some of the onus on the near-copyist to show that his technology is actually part of that which is disclaimed.²⁸⁷ Under the proposed reasoning, if the

allows the patentee to disclaim a whole claim at a time, the idea is the same as in the time of *Hurlbut*, where the patentee only disclaimed a small part of the claim's scope in order to avoid invalidity. *Id.*; see also 35 U.S.C. § 253 (1994).

²⁸² See *supra* notes 61-66, 75-80 and accompanying text (discussing *Goodyear Vulcanite* and *Hurlbut*, respectively).

²⁸³ See generally Chandler, *supra* note 28, at 513-18. Note that this is not quite the same as the well established rule that the patentee cannot claim via the DOE what was already part of the prior art. *Id.* That rule requires the court to determine what technology was in the prior art at the time of issue. *Id.* PHE, on the other hand, acts more like claim estoppel form of *res judicata*, whereby the court is precluded from reopening the PTO examiner's prior decision regarding known prior art. *Id.*

²⁸⁴ By using the phrase "obtain or maintain a valid patent," this note is attempting to clarify that PHE applies equally to all limiting changes made to a claim element, whether by amendment during prosecution, amendment during reissue, statutory disclaimer, or otherwise. Thereby, the substance of PHE is maintained no matter what terminology is used.

²⁸⁵ See, e.g., *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., Ltd.*, 234 F.3d 558, 600 (Fed. Cir. 2000) (en banc) (Michel, J., dissenting) (discussing the estoppel aspect of PHE); *id.* at 619-20 (Rader, J., dissenting) (discussing same).

²⁸⁶ See *Warner-Jenkinson Co. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 33 (1997) (placing the burden on the patentee to show reasons for an amendment).

²⁸⁷ See, e.g., 35 U.S.C. § 202 (1994) (placing the burden of proof on the party trying to show that a patent is invalid). Also, if the technology is truly novel and non-obvious, let the

accused technology is part of the prior art, then the patentee is clearly estopped from asserting equivalents over prior art technology.²⁸⁸ Furthermore, the patentee is also strictly barred from asserting equivalents to subject matter that he disclaimed during prosecution. To completely prevent the patentee from asserting a claim of equivalence to all after-arising technology, however, clearly extends the estoppel doctrine from one of disclaimer, to one of blind preclusion from all obvious variants, which would be unpatentable by the copyist anyway.²⁸⁹ Therefore, a holding that defines the scope of PHE in this manner maintains the balance between the public need for notice and the inventor's right to his invention, while preventing PHE itself from taking on a life of its own.²⁹⁰

competitor obtain his own patent. See *infra* note 289 (discussing an alternative theory of the DOE).

²⁸⁸ This is nothing more than what the Court held in *Sheppard v. Carrigan*. 116 U.S. 593, 598 (1886).

²⁸⁹ See Chandler, *supra* note 28, at 500. "Automatically providing the same relief under the doctrine of equivalents as under literal infringement is as inequitable as treating the prosecution history as an automatic bar to application of the doctrine of equivalents: both actions replace judicial discretion with an inflexible rule." *Id.*

Although not the main subject of this Note, the system described herein also would enable the development of an "obviousness" type rule for equivalents and estoppel. See, e.g., Michel, *supra* note 25, at 143 (calling upon the patent bar to help the judiciary devise a new formulation for the DOE). Under such a rule, if the near-copyist's technology is an obvious variation of the patented technology, then he can not practice it because it is an equivalent of the patentee's technology. See, e.g., Chandler, *supra* note 28, at 488-95 (discussing the obviousness aspects of the doctrine of equivalents). Although the patentee would almost surely not be entitled to all the profits of the near-copyist (since, by definition, only part of the technology is his), he would be able to collect a portion representative of his contribution unlawfully used. See *generally id.* If, on the other hand, the near-copyist's technology is not obvious, then he is allowed to freely practice the invention because it is his own, new invention. *Id.* Although not a clear, black-box type of solution, such weighing of factors and molding of remedies is the everyday job of judges sitting in equity, and should not be feared or ridiculed by the patent bench and bar. *Id.* This would facilitate a more complete ownership of existing technology rights in after-arising technology by eliminating the gaps between ownership rights for successive steps in a particular art: i.e., the technology is either old, which has already been subject to patent rights, or it is new, which is also subject to patent rights. *Id.* Otherwise, there is a whole realm of un-patentable technology called "obvious variations" that no one can really own, but that also is completely dependent upon the patentee's own invention. *Id.* Since the patentee's invention is essential for the territory of "obvious variants," it seems only equitable that he should have some degree of control over that realm during the patent's lifetime. See *generally id.*

²⁹⁰ See, e.g., *Festo*, 234 F.3d at 575-78 (discussing the balance between the public and private interests). There are also several other doctrines which can be used to limit the DOE. See Michel, *supra* note 25, at 140-42 (discussing at least five different limiting rules on the doctrine of equivalents).

B. *Example Application of Proposed Test: Lockheed Martin v. Space Systems/Loral, Inc.*

Although the proposed formulation may seem like mere sophistry with respect to the *Festo* rule, the *Lockheed* case serves as a prime example of the concrete difference between having an absolute bar apply to the modified element and having an absolute bar apply to the added limitation.²⁹¹ In *Lockheed*, the absolute bar of *Festo* led to a holding that is contrary to the established purpose of PHE because the *Festo* rule required the absolute bar to apply to the whole claim element, i.e., the control system that varied the rate of spin of the gyroscopic controllers according to a geosynchronous sinusoidal function.²⁹² If, instead, the court had first defined what was relinquished by the amendments, the result would have been dramatically different. The claim amendments surrendered two things: first, sinusoidal variation of something other than the rate of rotation, and second, sinusoidal variation at a frequency other than the orbital frequency of the satellite.²⁹³ Therefore, the patentee should be estopped from asserting equivalents to these limitations, i.e., first, he is estopped from claiming as equivalent a device that does not sinusoidally vary the *rate* of rotation, and second, he is estopped from claiming as equivalent a device that has a sinusoidal variation *period* other than the orbital frequency of the satellite. With respect to these two limitations, PHE should act as a strict bar, and the limitations must be read literally.

²⁹¹ *Lockheed Martin Corp. v. Space System/Loral, Inc.*, 249 F.3d 1314 (Fed Cir. 2001). It might be argued that what went wrong in this case is not the *Festo* rule itself, but that the panel did not properly distinguish between a claim "element" and a claim "limitation." See, e.g., *ACLARA Biosciences, Inc. v. Caliper Tech. Corp.*, 125 F. Supp. 2d 391 (N.D.Cal. 2000) (distinguishing *Festo* on the difference between an "element" and a "limitation"). Thus, the argument goes, had the court properly identified the elements to be the rate of rotation and the sinusoidal period, then they would not have been barred by the *Festo* rule. See, e.g., *id.* Although this argument is tempting because it nicely distinguishes *Festo* without directly contradicting it, such face-saving tiptoeing around the real issue would merely add to the confusion. Now is the time for the Supreme Court to plainly state that the Federal Circuit missed the mark in *Festo* and overrule the decision before it can beget any further mischief. Adding further legal distinctions and layers of analysis will make the whole issue even less clear, and thereby completely defeat the reason the *Festo* rule was propounded in the first place, i.e., to promote public certainty. See *Festo*, 234 F.3d at 558. Instead, by pointing out the Federal Circuit's error now, the Supreme Court can finally give the lower court the clear rules regarding the DOE and PHE for which they have been desperately begging.

²⁹² See *Lockheed Martin*, 249 F.3d at 1326-27.

²⁹³ *Id.* at 1326.

As explained above, however, the issue in *Lockheed* was not the equivalency of the rate of rotation or the period of the sinusoidal variation.²⁹⁴ Instead, the issue was the equivalency of a sinusoidal function that passes through zero with one that does not.²⁹⁵ Because the two amendments at issue did not have anything to do with whether the sinusoidal function passes through zero, they do not act as any kind of indication that the patentee had dedicated to the public all sinusoidal functions that do not pass through zero. Therefore, under these circumstances, the court should have made a factual finding as to whether the two functions are equivalent. By applying the strict bar to the element itself, however, the *Festo* rule completely missed this nuance and caused the wrong outcome.

V. CONCLUSION

The *Festo* decision dramatically changed patent law by overturning at least eighteen years of Federal Circuit precedent.²⁹⁶ It also effectively eviscerated the spirit of the *Warner-Jenkinson* decision by establishing PHE as a way to completely confine the DOE by “woodenly” applying it in all situations without considering the equities involved by the circumstances of each individual case.²⁹⁷ This Note asserts that the Federal Circuit has gone too far with this holding. Therefore, this Note proposes that the Supreme Court overturn the decision in order to redirect the policy decisions made by the Federal Circuit in a manner more consistent with *Warner-Jenkinson* and earlier Supreme Court precedent.²⁹⁸ More specifically, the Supreme Court should hold that amendments made to overcome Section 112 rejections are not substantial reasons related to patentability that give rise to a strict bar on equivalents.²⁹⁹ Instead, an amendment is substantially related to patentability if it was entered for those issues that go to the heart of the patentability of the subject matter itself, such as novelty and obviousness.³⁰⁰ However, amendments that were made merely for reasons that deal with the statutory formalities, such as particularity and distinctness, are not substantially related to patentability.³⁰¹ Furthermore, this Note suggests that, even where amendments are made

²⁹⁴ See *supra* text accompanying notes 291-93.

²⁹⁵ See *supra* text accompanying notes 291-93.

²⁹⁶ See *supra* note 128 and accompanying text.

²⁹⁷ See *supra* notes 154-62 and accompanying text.

²⁹⁸ See *supra* notes 251-52 and accompanying text.

²⁹⁹ See *supra* notes 253-60 and accompanying text.

³⁰⁰ See *supra* notes 253-60 and accompanying text.

³⁰¹ See *supra* notes 253-60 and accompanying text.

to overcome rejections based on the prior art, a court must still inquire as to what the applicant actually surrendered at the time of the amendment and limit the estoppel to those portions of the art.³⁰² Then, a strict bar may be applied to that subject matter that the court has determined the applicant actually surrendered.³⁰³ A *per se* strict bar to all equivalents of a claim element that has been narrowed by a limiting amendment should only be applied where the patentee cannot point to any reasons in the record for the added limitation.³⁰⁴ If the Supreme Court takes these steps, it will fill the hole identified by the Federal Circuit, in *Festo*, with a conclusive and pro-active reassertion that, in the struggle between the DOE and PHE, the public policy favoring aggressive protection of a patentee's rights cannot be eviscerated by the public policy to give effective notice to the public.

Thomas P. Riley

³⁰² See *supra* notes 261-73 and accompanying text.

³⁰³ See *supra* notes 283-85 and accompanying text.

³⁰⁴ See *supra* note 269 and accompanying text.