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PARADISE LOST BUT RECAPTURED: PROSECUTION
HISTORY ESTOPPEL WEAKENED IN *WARNER-JENKINSON
CO. V. HILTON DAVIS CHEMICAL CO.*

JEREMY E. NOE*

INTRODUCTION

[Competitors] may understand what is the scope of the patent owner's rights by obtaining the patent and prosecution history—the undisputed public record.¹

Less than two years after the United States Court of Appeals for the Federal Circuit ("Federal Circuit") confidently asserted in *Markman v. Westview Instruments, Inc.* that the public record of a patent enabled clear understanding of that patent's scope, the United States Supreme Court endangered that assertion in *Warner-Jenkinson Co. v. Hilton Davis Chemical Co.*² Among its many unsatisfactory statements purporting to clarify patent infringement under the doctrine of equivalents, the Court in *Warner-Jenkinson* announced that patentees could rebut the presumption that prosecution history estoppel applies.³ This announcement heightens the anxieties of the public and the patent bar by making it even more difficult to determine the reach of a patent's scope. By creating a rebuttable prosecution history estoppel presumption, the Court enables claim boundaries already made elastic by the doctrine of equivalents to stretch even further.

Those confronting a charge of patent infringement now face enormous potential liability.⁴ The Supreme Court's creation of a re-

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1. *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 978-79 (Fed. Cir. 1995) (quoting *Senmed, Inc. v. Richard-Allan Med. Indus., Inc.*, 888 F.2d 815, 819 n.8 (Fed. Cir. 1989), *aff'd*, 517 U.S. 370 (1996)).

2. 520 U.S. 17 (1997).

3. *See id.* at 1051.

4. *See, e.g.*, *SRI Int'l, Inc. v. Advanced Tech. Lab., Inc.*, 127 F.3d 1462, 1464 (Fed. Cir. 1997) (affirming a \$35 million damages award); *Fonar Corp. v. General Elec. Co.*, 107 F.3d 1543, 1547, 1556 (Fed. Cir.) (\$103 million damages award), *cert. denied*, 118 S. Ct. 266 (1997); *Verdicts and Settlements: Unocal's Patent Claims Stand Up Against Rivals*, NAT'L L.J., Dec. 1, 1997, at

buttable presumption that prosecution history estoppel applies actually weakens, not strengthens, the ability to successfully defend against patent infringement allegations. This ruling unfairly shifts toward the patentee the balance between protecting a patentee's interests and providing notice to the public.

This comment focuses on the conflict between protecting a patentee's interests and providing the public with clear notice regarding the limits of an invention. Part I frames the issue of patent infringement, briefly discussing patent law statutory provisions and outlining the doctrine of equivalents and its traditional limitations, with focus on the history of prosecution history estoppel. Part I also discusses claim construction, an activity closely linked to determining the scope of prosecution history estoppel.

Part II discusses the Supreme Court's recent *Warner-Jenkinson* decision, centering on the Court's announcement of a rebuttable presumption that prosecution history estoppel applies. Part II also discusses the Federal Circuit's treatment of *Warner-Jenkinson* upon remand.

Finally, Part III discusses the undesirable aspects of the Court's rebuttable presumption rule regarding prosecution history estoppel. This Part argues that the Court's ruling will chill future technology development. It also argues that the doctrine of equivalents as it operates after *Warner-Jenkinson* is too powerful a tool and unfairly shifts the balance of competing interests in the patentee's favor. It concludes that Congress ideally should codify the doctrine of prosecution history estoppel, strictly viewing that doctrine's operation as an absolute bar to expansion of claim limits. Because such congressional action is unlikely, this Part further argues that the Federal Circuit should narrowly confine the manner in which a patentee can rebut the presumption of prosecution history estoppel. To preserve the public's ability to rely on the public record, such rebuttal attempts must be bounded by the public record.

I. PATENTS AND INFRINGEMENT

A. Statutory Provisions

The Constitution empowers Congress "[t]o promote the Progress

A15 (noting jury award of \$69 million, potentially increasing to \$210 million pending motion to apply royalties for longer period in *Union Oil Co. v. Atlantic Richfield Co.*, CV-95-2379 (C.D. Cal. 1997)).

of . . . useful Arts, by securing for limited Times to . . . Inventors the exclusive Right to their . . . Discoveries.”⁵ A valid patent secures its owner the right to exclude others from making, using, or selling the claimed invention within the United States for twenty years from the date the patent application is filed in the Patent and Trademark Office (“PTO”).⁶ To be patentable, the invention must possess utility, novelty, and nonobviousness.⁷ To gain exclusionary patent rights, the applicant must provide a specification describing in detail the best mode of the claimed product or process, disclosing information sufficient to enable one of ordinary skill in the art to practice the invention, and including one or more claims regarding the subject matter of the invention.⁸

The basic policy of the patent system is to grant exclusive rights to serve the national purpose of advancing the useful arts.⁹ The grant of exclusive rights requires disclosing the invention’s details, thereby adding to the store of public knowledge.¹⁰ A patent is thus an inducement to bring forth new knowledge.¹¹

Patent laws seek a careful balance between protecting a patentee’s creative efforts and encouraging further technological advances through disclosure to the public.¹² Unless a patentee’s interests are protected, secrecy and nondisclosure result, which is detrimental to the public.¹³ On the other hand, the statutory claiming requirement serves a notice function, alerting the public to an invention’s boundaries, past which further innovation is invited.¹⁴

5. U.S. CONST. art. I, § 8, cl. 8.

6. See 35 U.S.C. § 154(a)(1) (1994) (securing a grant to the patentee “to exclude others from making, using, offering for sale, or selling the invention throughout the United States”); *id.* § 154(a)(2) (providing that the grant “shall be for a term beginning on the date on which the patent issues and ending 20 years from the date on which the application for the patent was filed”).

7. See *id.* § 101 (providing that a patent may only be secured for one who “invents or discovers any new and useful” product or process); *id.* § 102 (barring a patent if the subject matter is in the public domain); *id.* § 103 (providing that a patent may not be obtained if “the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains”).

8. See *id.* § 112 (providing that specification must detail the invention “in such full, clear, concise, and exact terms as to enable any person skilled in the art . . . to make and use the same,” and must conclude with “claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention”).

9. See *Paulik v. Rizkalla*, 760 F.2d 1270, 1276 (Fed. Cir. 1985).

10. See *id.*

11. See *Graham v. John Deere Co.*, 383 U.S. 1, 9 (1966).

12. See *Bonito Boats, Inc. v. Thunder Craft Boats, Inc.*, 489 U.S. 141, 150-51 (1989).

13. See *Graver Tank & Mfg. Co. v. Linde Air Prods. Co.*, 339 U.S. 605, 607 (1950).

14. See *Warner-Jenkinson Co. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 29 (1997), see also *Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 373 (1996) (“It has long been understood

Patent infringement occurs when one “without authority makes, uses, offers to sell, or sells any patented invention, within the United States or imports into the United States any patented invention during the term of the patent.”¹⁵ The threshold of patent infringement analysis is interpreting the meaning and scope of the claims.¹⁶ Only the court interprets claims.¹⁷ The fact-finder then compares properly construed claims to the accused product or process to yield a determination regarding infringement.¹⁸

In conducting the infringement analysis, the fact-finder determines whether either literal infringement or infringement under the doctrine of equivalents exists.¹⁹ Literal infringement occurs where the accused product or process falls clearly within a claim’s limitations.²⁰ When literal infringement is not established, infringement under the doctrine of equivalents may occur if the accused product or process incorporates only insubstantial changes that evade the literal limits of a claim yet copy the invention’s spirit.²¹

B. The First Step in Infringement Analysis: Claim Construction

The Supreme Court’s recent *Markman v. Westview Instruments, Inc.* decision allocated responsibility for claim construction exclusively to the court.²² In *Markman*, the Petitioner Markman patented an inventory control system “capable of monitoring and reporting upon the status, location and throughput of inventory” in a laundry

that a patent must describe the exact scope of an invention and its manufacture to ‘secure to [the patentee] all to which he is entitled, [and] to apprise the public of what is still open to them.’” (quoting *McClain v. Ortmyer*, 141 U.S. 419, 424 (1891)).

15. 35 U.S.C. § 271(a) (Supp. I 1994).

16. See *Tanabe Seiyaku Co. v. United States Int’l Trade Comm’n*, 109 F.3d 726, 731 (Fed. Cir.), cert. denied, 118 S. Ct. 624 (1997). Interpreting claim meaning and scope is variously described as interpreting claims, see *Desper Prods., Inc. v. Q Sound Labs, Inc.*, 157 F.3d 1325, 1337 (Fed. Cir. 1998), construing claims, see *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 981 (Fed. Cir. 1995), *aff’d*, 517 U.S. 370 (1996), or claim construction, see *Johns Hopkins Univ. v. Cellpro, Inc.*, 152 F.3d 1342, 1353 (Fed. Cir. 1998); the result is properly construed claims. See *Lockwood v. American Airlines*, 107 F.3d 1565, 1573 (Fed. Cir. 1997).

17. See *Markman*, 517 U.S. at 384.

18. See *Tanabe*, 109 F.3d at 731.

19. See *Graver Tank & Mfg. Co. v. Linde Air Prods. Co.*, 339 U.S. 605, 607-08 (1950).

20. See *id.* at 607. The comparison of the interpreted claims and the accused product or process is made by the jury. See, e.g., *Winans v. Denmead*, 56 U.S. 330, 338 (1853) (holding that whether the thing patented has been constructed, used, or sold by the defendant is a question of fact to be submitted to the jury).

21. See *Graver Tank*, 339 U.S. at 607-08. Patentees increasingly invoke the doctrine of equivalents to support infringement allegations. See *infra* note 77 and accompanying text.

22. See *Markman*, 517 U.S. at 388.

and dry-cleaning business.²³ A keyboard and data processor tracked “inventory,” generating written records which included optical scanner bar codes.²⁴ The Respondent, Westview Instruments, operated similar equipment to produce written records of customer charges in bar code format, also read by optical scanner.²⁵

At the district court level, after hearing testimony from the inventor as well as expert witnesses, including a patent lawyer who testified as to the meaning of the claim language, the jury found infringement.²⁶ Nevertheless, in ruling on Westview’s motion for judgment as a matter of law, the court stated that claim construction was a matter of law and held that “inventory” as used in the claims meant “articles of clothing” and not transaction totals or dollars.²⁷ Because status or location of particular articles of clothing could not be determined by scanning Westview’s barcodes, the district court granted Westview’s motion.²⁸ The Federal Circuit held that the district court acted properly in determining the scope of the claims.²⁹

The Supreme Court affirmed, relying on “functional considerations” to justify making claim construction the exclusive province of the judge.³⁰ The Court stated that because judges are trained in and frequently perform construction of written instruments, they are more likely than a jury to provide a proper interpretation.³¹ The Court did not, however, mandate the procedural structure for judges to use when conducting claim construction. Rather, Federal Circuit decisions shaped the so-called “Markman hearing” for patent claim construction, distinguishing between intrinsic evidence—the words of the claims, the specification, and the prosecution history—and extrinsic evidence—which is anything external to the prosecution history, such as expert testimony or dictionaries or treatises.³² Analysis of intrinsic evidence alone is preferred and is usually sufficient.³³ Ideally, the public must be able to rely on the prosecution history itself, with-

23. See *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 971 (Fed. Cir. 1995), *aff’d*, 517 U.S. 370 (1996).

24. See *id.* at 971-72.

25. See *id.* at 972-73.

26. See *id.* at 973.

27. See *id.*

28. See *id.*

29. See *id.* at 971.

30. See *Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 388 (1996).

31. See *id.*

32. See *Vitronics Corp. v. Conceptronc, Inc.*, 90 F.3d 1576, 1583 (Fed. Cir. 1996); *Pall Corp. v. Micron Separations, Inc.*, 66 F.3d 1211, 1216 (Fed. Cir. 1995).

33. See *Vitronics*, 90 F.3d at 1583.

out consideration of expert testimony or other extrinsic evidence, to determine the true meaning of a claim.³⁴ To allow claim meaning to depend on evidence not available to the public is to erode the notice function of claims and accord to the patentee rights more expansive than the PTO intended.³⁵

C. *Comparing Claims to the Accused Product or Process: Infringement Under the Doctrine of Equivalents*

By comparing properly construed claims to the accused product or process, it can be determined whether infringement exists, either literally or under the doctrine of equivalents. Literal infringement seldom occurs.³⁶ The judicially-created doctrine of equivalents seeks to protect a patentee from being subject to “the mercy of verbalism.”³⁷ This doctrine is central to the conflict between protecting a patentee’s interests and providing the public with clear notice regarding the limits of an invention. Under the doctrine of equivalents, the scope of a patent goes beyond the literal terms of its claims,³⁸ which is at odds with the specificity that patent statutes require.³⁹

The doctrine of equivalents poorly defines “equivalent” elements,⁴⁰ and its application engenders controversy.⁴¹ The Supreme Court first addressed the doctrine of equivalents in 1853 in *Winans v.*

34. See *Southwall Techs., Inc. v. Cardinal IG Co.*, 54 F.3d 1570, 1578 (Fed. Cir. 1995).

35. See *infra* note 79 and accompanying text.

36. See *Graver Tank & Mfg. Co. v. Linde Air Prods. Co.*, 339 U.S. 605, 607 (1950) (“Outright and forthright duplication is a dull and very rare type of infringement.”). Today, as opposed to the so-called anti-patent era of the 1930s to 1970s, patents are more likely to be held valid. See Robert P. Merges, *Commercial Success and Patent Standards: Economic Perspectives on Innovation*, 76 CAL. L. REV. 803, 820-21 (1988) (comparing pre- and post-Federal Circuit era statistics). Furthermore, it is now relatively easy to get an injunction against an accused infringer. See ROBERT PATRICK MERGES, *PATENT LAW AND POLICY: CASES AND MATERIALS* 12 (2d ed. 1997).

37. *Graver Tank*, 339 U.S. at 607.

38. See *infra* note 77 and accompanying text (discussing negative aspects of doctrine of equivalents infringement analysis).

39. See *supra* note 8 (setting out the requirements for specification).

40. See *Graver Tank*, 339 U.S. at 609 (“In determining equivalents, things equal to the same thing may not be equal to each other and, by the same token, things for most purposes different may sometimes be equivalents.”).

41. Vigorous dissents have accompanied United States Supreme Court and Court of Appeals for the Federal Circuit decisions shaping the doctrine of equivalents. See, e.g., *Graver Tank*, 339 U.S. at 612 (Black, J., joined by Douglas, J., dissenting); *id.* at 618 (Douglas, J., dissenting); *Winans v. Denmead*, 56 U.S. 330, 344 (1853) (Campbell, J., joined by Taney, C.J., Catron, J., and Daniel, J., dissenting); *Hilton Davis Chem. Co. v. Warner-Jenkinson Co.*, 62 F.3d 1512, 1536, 1545, 1550 (Fed. Cir. 1995) (en banc) (per curiam) (five judges dissenting in three separate opinions), *rev'd*, 520 U.S. 17 (1997).

Denmead.⁴² In *Winans*, the patentee invented a conically-tapered railcar, which simplified coal transportation.⁴³ The patentee alleged that a competitor's use of an octagonally-tapered railcar constituted infringement.⁴⁴ The Court, in a 5-4 decision, held that a patentee gains protection for "not only the precise forms he has described, but all other forms which embody his invention."⁴⁵ The dissent, however, observed that the patentee claimed a design adopting a conical form conferring the advantage that the "weight of the load presse[d] equally in all directions" and that an octagonal profile lacked that key property.⁴⁶ In commenting on the statutory provision requiring a patentee to describe the invention in full, clear, and exact terms, and specify and point out what is claimed, the dissent stated: "Nothing, in the administration of this law, will be more mischievous, more productive of oppressive and costly litigation, of exorbitant and unjust pretensions and vexatious demands, more injurious to labor, than a relaxation of these wise and salutary requisitions of the act of Congress."⁴⁷

Nearly a century later, the Court again sharply disagreed over the doctrine of equivalents in *Graver Tank & Manufacturing Co. v. Linde Air Products Co.*⁴⁸ In *Graver Tank*, a patentee claimed a soldering flux "containing a major proportion of alkaline earth metal silicate."⁴⁹ The accused infringer utilized a metal not classified as alkaline earth in the periodic table of elements.⁵⁰ The Court stated that to "'prevent an infringer from stealing the benefit of an invention' a patentee may invoke [the doctrine of equivalents] to proceed against the producer of a device 'if it performs substantially the same function in substantially the same way to obtain the same result.'"⁵¹ In applying the doctrine, the Court upheld the lower court's finding that the substitution of metals amounted to an "insubstantial difference."⁵² While supporting doctrine of equivalents infringement, however, the

42. 56 U.S. 330 (1853).

43. *See id.* at 331.

44. *See id.* at 332.

45. *Id.* at 342.

46. *See id.* at 344-45 (Campbell, J., dissenting).

47. *Id.* at 347 (Campbell, J., dissenting).

48. 339 U.S. 605 (1950).

49. *Id.* at 613. (Black, J., dissenting).

50. *See id.* at 610.

51. *See id.* at 608 (quoting *Sanitary Refrigerator Co. v. Winters*, 280 U.S. 30, 42 (1929) (footnote omitted)).

52. *Id.* at 611-12.

Court left uncertain the doctrine's operation by articulating the so-called "function-way-result" test but applying the so-called "insubstantial differences" test.⁵³

The dissent objected that the Court's decision ignored the clear statutory policy requiring specificity and certainty in claims, stating that while "'fraud' is bad, 'piracy' is evil, and 'stealing' is reprehensible . . . , these lofty principles do not justify the Court's sterilization of Acts of Congress and prior decisions."⁵⁴ The dissent further noted that:

"The claim is a statutory requirement, prescribed for the very purpose of making the patentee define precisely what his invention is; and it is unjust to the public, as well as an evasion of the law, to construe it in a manner different from the plain import of its terms." Giving this patentee the benefit of a grant that it did not precisely claim is no less "unjust to the public" and no less an evasion of [the statute] merely because done in the name of the "doctrine of equivalents."⁵⁵

Three limitations confine application of the doctrine of equivalents. These limitations comprise the prior art rule, the all-elements rule, and the doctrine of prosecution history estoppel. Though linked in their nature, each limitation operates differently.

First, the prior art rule states that a patentee cannot gain exclusionary rights not otherwise lawfully obtainable from the PTO.⁵⁶ Because prior art always limits what an inventor can claim, prior art limits the range of permissible equivalents of a claim.⁵⁷

Second, the all-elements rule requires that equivalence analysis proceed on an element-by-element basis.⁵⁸ Under this view, since each element is deemed material to defining the scope of the patent, equivalence analysis must be applied to the individual elements of the patent's claims.⁵⁹ It is not enough that the accused product or process is equivalent overall; rather, the accused product or process must possess every claimed element or its equivalent to constitute infringement under the doctrine of equivalents.⁶⁰

53. See *id.* at 608, 610, 611.

54. *Id.* at 612-13 (Black, J., dissenting).

55. *Id.* at 614 (Black, J., dissenting) (quoting *White v. Dunbar*, 119 U.S. 47, 52 (1886)).

56. See *Wilson Sporting Goods Co. v. David Geoffrey & Assocs.*, 904 F.2d 677, 684 (Fed. Cir. 1990).

57. See *id.*

58. See *Warner-Jenkinson Co. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 29-30 (1997); *Pennwalt Corp. v. Durand-Wayland, Inc.*, 833 F.2d 931, 937 (Fed. Cir. 1987).

59. See *Warner-Jenkinson*, 520 U.S. at 29.

60. See *id.*

Third, and perhaps the most important limitation on the doctrine of equivalents, the doctrine of prosecution history estoppel may prevent a patentee from recovering, through equivalence analysis, subject matter surrendered by amendment or argument during prosecution.⁶¹ In this instance, a PTO-demanded claim limitation is “very different” from the same limitation voluntarily included by the applicant;⁶² the former case limits a patent’s scope more conclusively than the latter.⁶³

D. Prosecution History Estoppel

The doctrine of prosecution history estoppel “limits infringement by otherwise equivalent structures, by barring recapture by the patentee of scope that was surrendered in order to obtain allowance of the claims.”⁶⁴ Like the doctrine of equivalents, prosecution history estoppel was judicially-created. This doctrine operates to make binding a patentee’s representations to the PTO during prosecution regarding the scope of invention and is, therefore, a defense to infringement.⁶⁵ Because claims are commonly amended during prosecution,⁶⁶ prosecution history estoppel touches almost every doctrine of equivalents infringement analysis.

In an infringement action, the court inspects the prosecution history to determine whether the patentee, through amendment or argument, surrendered subject matter.⁶⁷ If so, the court determines whether the surrender makes the invention too narrow to support a patentee’s assertion that the accused product or process is substantially the same as the claimed invention.⁶⁸ Amendments may be of

61. See *Pall Corp. v. Micron Separations, Inc.*, 66 F.3d 1211, 1218-20 (Fed. Cir. 1995). The term “prosecution” encompasses all activity required to advance a patent application to a final patentability determination by the PTO. See *Sage Prods. Inc. v. Devon Indus., Inc.*, 126 F.3d 1420, 1425 (Fed. Cir. 1997). Although secrecy regarding such negotiating activity is maintained during prosecution, see 35 U.S.C. § 122 (1994), the public is allowed access to this information once the patent issues, see *id.* § 10.

62. See *Exhibit Supply Co. v. Ace Patents Corp.*, 315 U.S. 126, 136 (1942).

63. See *id.*

64. *Pall*, 66 F.3d at 1218.

65. See *Exhibit Supply*, 315 U.S. at 136 (“[I]t has long been settled that recourse may not be had to [the doctrine of equivalents] to recapture claims which the patentee has surrendered by amendment.”).

66. See *Loctite Corp. v. Ultraseal Ltd.*, 781 F.2d 861, 871 (Fed. Cir. 1985) (“Comparatively few claims [are] allowed exactly as originally filed and never amended.”), *overruled by Nobelpharma AB v. Implant Innovations, Inc.*, 141 F.3d 1059, 1068 (Fed. Cir. 1998).

67. See *Pall*, 66 F.3d at 1218-19.

68. See *id.*

different types and may be required for different reasons.⁶⁹

Seeking uniformity in patent law decisions employing these three limitations and other patent rules, in 1982 Congress created the Federal Circuit and conferred upon that court exclusive appellate jurisdiction over patent cases.⁷⁰ Some cases prior to the Federal Circuit's advent took the strict view that any limiting amendment barred a patentee from recapturing the surrendered subject matter through equivalents analysis.⁷¹ Other courts preferred examining the reasons why a patentee yielded to particular PTO demands on the rationale that a patentee has various motives for amending claims.⁷² The Federal Circuit has embraced the latter approach, instituting a reason-based inquiry to determine whether prosecution history estoppel applies.⁷³

E. Limiting the Reach of the Doctrine of Equivalents Through Prosecution History Estoppel

The imprecision inherent in the "insubstantial differences" and "function-way-result" tests ensures that uncertainty will attach to every equivalence analysis.⁷⁴ While outright imitation or duplication of an invention is forbidden, "designing around" a patent is a valued and encouraged process.⁷⁵ An uncertain doctrine of equivalents can "frustrate[] and chill[]" such design-around efforts by instilling fear of

69. See *id.* at 1219. An "art rejection" results when the PTO relies on prior art in rejecting the application for lack of novelty under 35 U.S.C. §§ 102(a), (b) (1998) or for obviousness under 35 U.S.C. § 103(a). See *In re Harita*, 847 F.2d 801, 808 (Fed. Cir. 1988). A "non-art rejection" results when the PTO rejects the application for some other reason, such as lack of utility under 35 U.S.C. § 101 or lack of enablement under 35 U.S.C. § 112. See Rochelle Cooper Dreyfuss, *The Federal Circuit: A Case Study in Specialized Courts*, 64 N.Y.U. L. REV. 1, 10 n.62 (1989).

70. See Federal Courts Improvement Act of 1982, Pub. L. No. 97-164, § 101, 96 Stat. 25, 25 (codified as amended in scattered sections of 28 U.S.C.).

71. See, e.g., *Nationwide Chem. Corp. v. Wright*, 584 F.2d 714, 718 (5th Cir. 1978).

72. See, e.g., *Coleco Indus., Inc. v. United States Int'l Trade Comm'n*, 573 F.2d 1247, 1257 (C.C.P.A. 1978).

73. See, e.g., *Mannesmann Demag Corp. v. Engineered Metal Prods. Co.*, 793 F.2d 1279, 1285 (Fed. Cir. 1986).

74. See Rudolph P. Hoffman, Jr., *The Doctrine of Equivalents: Twelve Years of Federal Circuit Precedent Still Leaves Practitioners Wondering*, 20 WM. MITCHELL L. REV. 1033, 1040 (1994) ("Through the application of the doctrine of equivalents, the Federal Circuit has introduced ambiguity and uncertainty surrounding the scope of patent claims.").

75. See Joseph F. Haag, Comment, *Hilton Davis Chemical Co. v. Warner-Jenkinson Co.: An Equitable Solution to the Uncertainty Behind the Doctrine of Equivalents*, 80 MINN. L. REV. 1511, 1525 n.63 (1996) (citing cases which support the proposition that designing-around activities stimulate innovation and competition).

infringement allegations resting on the doctrine.⁷⁶

Sharp disagreement persists regarding the fairness of the doctrine of equivalents. Some commentators argue that the doctrine of equivalents has improperly become an automatic second step in infringement analysis.⁷⁷ Other commentators insist that protecting a patentee's interests requires rote application of the doctrine.⁷⁸ Justice Black forecasted that *Graver Tank & Manufacturing Co. v. Linde Air Products Co.* would create public injustice because equivalence analysis would routinely expand patent claims beyond the plain meaning of their words.⁷⁹ Judicial concern continues regarding the doctrine's potential to expand claims⁸⁰ as well as its erosion of the notice function of claims.⁸¹ Amid this debate arrived a case where resolution depended on whether prosecution history estoppel checked the reach of the doctrine of equivalents.

76. See Martin J. Adelman & Gary L. Francione, *The Doctrine of Equivalents in Patent Law: Questions that Pennwalt Did Not Answer*, 137 U. PA. L. REV. 673, 683 (1989).

77. See, e.g., Clarence J. Fleming, *The Doctrine of Equivalents—Should it Be Available in the Absence of Copying?*, 76 J. PAT. & TRADEMARK OFF. SOC'Y 233, 234 (1994) (asserting that the doctrine of equivalents is a "second bite at the apple for the patent owner in attempting to prove infringement"); Andrei Iancu, *A Two-Track Approach to the Doctrine of Equivalents in Patent Law: Responding to Hilton Davis*, 35 JURIMETRICS J. 325, 334 (1995) (asserting that despite its equitable nature, "infringement by equivalence has become an automatic second prong to all infringement suits"); Jean M. Barkley, Note, *The Doctrine of Equivalents Analysis After Wilson Sporting Goods*, 35 ARIZ. L. REV. 765, 783 (1993) (arguing that courts should use the doctrine of equivalents sparingly to prevent it from becoming an automatic second prong in every infringement case); see also *infra* note 80 (noting that unbounded doctrine of equivalents can provide a patentee unwarranted claim scope).

78. See, e.g., Sean T. Moorhead, Note, *The Doctrine of Equivalents: Rarely Actionable Non-Literal Infringement or the Second Prong of Patent Infringement Charges?*, 53 OHIO ST. L.J. 1421, 1449 (1992) ("[T]he definition [of the doctrine of equivalents] is workable and the added protection for patentees, made possible by the flexibility in the definition, is well worth having infringement by equivalents as the second prong of every patent infringement charge.").

79. See *Graver Tank*, 339 U.S. 605, 615 (1950) (Black, J., dissenting) (stating that the doctrine of equivalents does not adequately protect against "retroactive infringement suits and judicial expansion of a monopoly sphere beyond that which a patent authorizes" and will make enlargement of patent claims the rule rather than the exception).

80. See *International Visual Corp. v. Crown Metal Mfg. Co.*, 991 F.2d 768, 774 (Fed. Cir. 1993) (Lourie, J., concurring) ("[T]he doctrine [of equivalents] has its limits, and I believe that a court must ensure that it achieves its intended purpose and does not simply become an automatic means for expanding the scope of a claim beyond that granted by [PTO] examination.").

81. See *Pennwalt Corp. v. Durand-Wayland, Inc.*, 833 F.2d 931, 954 (Fed. Cir. 1987) (Nies, J., dissenting) ("As a matter of due process under the fifth amendment, reasonable notice must be given to the public of what conduct must be avoided. Whether in civil or criminal proceedings, it is unequivocally established that that basic right to notice applies."). The court in *London v. Carson Pirie Scott & Co.*, 946 F.2d 1534, 1538 (Fed. Cir. 1991), stated:

Application of the doctrine of equivalents is the exception, however, not the rule, for if the public comes to believe (or fear) that the language of patent claims can never be relied on, and that the doctrine of equivalents is simply the second prong of every infringement charge, regularly available to extend protection beyond the scope of the claims, then claims will cease to serve their intended purpose.

II. CURRENT STATUS OF THE LAW: *WARNER-JENKINSON CO. V. HILTON DAVIS CHEMICAL CO.*

This Part first discusses the facts of *Warner-Jenkinson Co. v. Hilton Davis Chemical Co.* It then discusses the Federal Circuit majority and dissenting opinions below, and then moves to the Supreme Court opinion. Finally, it discusses the Federal Circuit's decision on remand.

A. Facts

The patentee, Respondent Hilton Davis Chemical Co., alleged that a competitor's process for purifying a food dye infringed its patented process under the doctrine of equivalents.⁸² The patent described an improved purification process utilizing ultrafiltration to remove impurities from a dye solution.⁸³ The patent recited one independent claim in *Jepson*-type format,⁸⁴ describing a process of passing a reaction mixture through a membrane of preferred pore diameter under a defined pressure range and "at a pH from approximately 6.0 to 9.0, to thereby cause separation of said impurities from said dye."⁸⁵ Prior to allowance of the patent by the PTO, the patentee had amended its patent application to include the defined pH range.⁸⁶ This amendment occurred after the examiner cited a prior art patent disclosing an ultrafiltration process operating at a pH above 9.0.⁸⁷ The competitor, Petitioner Warner-Jenkinson Co., operated its ultrafiltration process at a pH of 5.0, yet Hilton Davis argued the competitive process was nevertheless equivalent to its own patented process.⁸⁸

82. See *Hilton Davis Chem. Co. v. Warner-Jenkinson Co.*, 62 F.3d 1512, 1545 n.1 (Fed. Cir. 1995) (Lourie, J., dissenting), *rev'd*, 520 U.S. 17 (1997).

83. See *Warner-Jenkinson Co. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 22 (1997).

84. *Jepson*-type claims describe improvements over existing prior art. See *In re Jepson*, 357 F.2d 406, 410 (C.C.P.A. 1966); 37 C.F.R. § 1.75(e) (1997) (requiring for improvement patents that independent claims be structured to include, in order, a preamble of all known or conventional elements or steps, a transitional phrase such as "wherein the improvement comprises," and the elements or steps considered new or improved); see also ROBERT C. FABER, LANDIS ON MECHANICS OF PATENT CLAIM DRAFTING §§ 34, 57, 59, 63 (1990) (illustrating various uses of *Jepson*-type claims).

85. *Warner-Jenkinson*, 520 U.S. at 22.

86. See *id.*

87. See *id.*

88. See *id.* at 23.

B. *The Federal Circuit Opinion*

1. The Majority Opinion

The jury found infringement under the doctrine of equivalents.⁸⁹ A splintered en banc Federal Circuit narrowly affirmed, holding that whether infringement exists under the doctrine of equivalents is a question for the jury.⁹⁰ The court applied the “insubstantial differences” test, with the differences between the patented and accused product or process assessed from the point of view of one having ordinary skill in the relevant art.⁹¹ The court also held that all evidence material to the determination of substantiality of differences, including that of design-around activity, must be considered.⁹²

The majority held that prosecution estoppel did not preclude the application of the doctrine of equivalents in the case.⁹³ The court relied on the rule that “[w]henever prosecution history estoppel is invoked as a limitation to infringement under the doctrine of equivalents, a close examination must be made as to, not only what was surrendered, but also the reason for such a surrender.”⁹⁴ The court stated that the claim amendment reciting “a pH from approximately 6.0 to 9.0” was made to avoid the prior art, which disclosed an ultrafiltration process “operating at a pH higher than 9[.0].”⁹⁵ The amendment hence “surrendered pHs above 9[.0] but [did] not bar [the patentee] from asserting equivalency to processes such as Warner-Jenkinson’s operating sometimes at a pH below 6[.0].”⁹⁶

2. The Dissenting Opinions

Judge Plager dissented, lamenting that “the doctrine of equivalents is a virtually uncontrolled and unreviewable license to juries to find infringement if they so choose.”⁹⁷ The dissent further observed

89. See *Hilton Davis Chem. Co. v. Warner-Jenkinson Co.*, 62 F.3d 1512, 1516 (Fed. Cir. 1995), *rev'd*, 520 U.S. 17 (1997).

90. See *id.* at 1520. After a panel of the court heard oral argument, the court decided to rehear the appeal en banc to consider the issues raised concerning the doctrine of equivalents. See *id.* at 1516.

91. See *id.* at 1518-19.

92. See *id.* at 1518.

93. See *id.* at 1525.

94. *Id.* (quoting *Insta-Foam Prods., Inc. v. Universal Foam Sys., Inc.*, 906 F.2d 698, 703 (Fed. Cir. 1990) (internal quotations omitted)).

95. *Id.*

96. *Id.*

97. *Id.* at 1538 (Plager, J., dissenting).

that juries exercise such a license “largely without regard to and independent of the express limitations of the patent claims which may have brought about their allowance by the Patent and Trademark Office in the first place.”⁹⁸ Judge Plager noted that the court’s own precedent prohibited “‘eras[ing] a plethora of meaningful structural and functional limitations of the claim on which the public is entitled to rely.’”⁹⁹ Though no discussion in the patent explained why the patentee included a lower-end pH of 6.0, this dissent nevertheless argued that the inventor’s own testimony that processes operating at a pH below 6.0 would cause “tremendous foaming problems in the plant” showed that Hilton Davis intentionally incorporated the lower pH limit.¹⁰⁰

Judge Nies also dissented, agreeing that construction of the claim to cover equivalents is precluded to the extent of a patentee’s manifest intent in its representations made to the PTO when securing the patent grant.¹⁰¹ This dissent stated: “[a] patentee is not entitled, after patent issuance, to have protection from a claim extend to devices or processes or elements therein which during prosecution the inventor treated as a different invention from the one for which the inventor sought and obtained protection.”¹⁰² This dissent pointed not only to the inventor’s testimony regarding undesirable foaming occurring at a pH less than 6.0, but also to the Examiner’s Interview Summary, which recorded: “The Examiner stated that if claim 1 were amended to contain the pH range of 6 to 9, the rejection on prior art would be overcome.”¹⁰³ Judge Nies flatly concluded that “[t]he specific amendment of the pH range by Hilton Davis in response to the Examiner’s rejection precludes capturing the different process step of a pH of 5.0 used by Warner-Jenkinson.”¹⁰⁴ This dissent agreed with Warner-Jenkinson’s contention that it had been held liable without any possibility of notice that its process fell within the patent claims, observing that “[c]laims must tell the public not only what it cannot do but also what it *can* do.”¹⁰⁵

In all, a total of five of twelve judges joined in three separate dis-

98. *Id.* (Plager, J., dissenting).

99. *Id.* (Plager, J., dissenting) (quoting *Perkin-Elmer Corp. v. Westinghouse Elec. Corp.*, 822 F.2d 1528, 1532 (Fed. Cir. 1987)).

100. *See id.* at 1542 (Plager, J., dissenting).

101. *See id.* at 1572 (Nies, J., dissenting).

102. *Id.* (Nies, J., dissenting).

103. *Id.* at 1581-82 (Nies, J., dissenting).

104. *Id.* at 1582 (Nies, J., dissenting).

105. *Id.* (Nies, J., dissenting) (citing *Permutit Co. v. Graver Corp.*, 284 U.S. 52, 60 (1931)).

sents.¹⁰⁶ Faced with such deep discord concerning operation of the doctrine of equivalents, the Supreme Court granted Warner-Jenkinson's petition for a writ of certiorari.¹⁰⁷

C. *The Supreme Court Opinion*

1. The Arguments

Warner-Jenkinson first argued that the doctrine of equivalents as embraced by the Court in *Graver Tank & Manufacturing Co. v. Linde Air Products Co.*¹⁰⁸ was inconsistent with the 1952 Patent Act, which requires patent claims to express clear boundaries.¹⁰⁹ Warner-Jenkinson also advanced several secondary arguments, urging the Court to apply a more restricted doctrine of equivalents.¹¹⁰ Central to one of these secondary arguments was the contention that the doctrine of equivalents is subservient to the doctrine of prosecution history estoppel, thereby barring equivalence analysis from recapturing protection for subject matter surrendered by amendment during patent prosecution.¹¹¹ Accompanying this secondary argument, Warner-Jenkinson also argued that: *Graver Tank* only narrowly established that an absence of substantial differences is a necessary, but not sufficient, element of infringement under the doctrine of equivalents;¹¹² in view of the immediately preceding proposition, a court must conduct an equitable consideration of intent-based elements before permitting equivalents analysis;¹¹³ and "to minimize conflict with the notice function of patent claims, the doctrine of equivalents should be limited to equivalents disclosed within the patent itself."¹¹⁴

2. The Holdings

The Court noted that the issue of whether it was for the judge or jury to apply the doctrine of equivalents was not squarely before it.¹¹⁵

106. See *id.* at 1536 (Plager, J., dissenting); *id.* at 1545 (Lourie, J., dissenting); *id.* at 1550 (Nies, J., dissenting).

107. See *Warner-Jenkinson Co. v. Hilton Davis Chem. Co.*, 516 U.S. 1145 (1996); see also *Warner-Jenkinson Co. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 21 (1997) (noting the significant disagreement within the Federal Circuit as one justification for granting certiorari).

108. 339 U.S. 605 (1950).

109. See *Warner-Jenkinson*, 520 U.S. at 25 (citing *Graver Tank*, 339 U.S. 605).

110. See *id.* at 29, 34, 37.

111. See *id.* at 29.

112. See *id.* at 34 (citing *Graver Tank*, 339 U.S. 605).

113. See *id.* (citing *Graver Tank*, 339 U.S. at 607).

114. *Id.* at 37.

115. See *id.*

Nevertheless, the Court accepted the Federal Circuit's ruling that it was for the jury to decide whether the accused process was equivalent to the claimed process.¹¹⁶ Furthermore, the Court refused to require any "particular linguistic framework" for conducting equivalence analysis, noting that neither the "function-way-result" test nor the "insubstantial differences" test had universal utility.¹¹⁷ More substantively, the Court held that the 1952 Patent Act did not reject the doctrine of equivalents and that there is a rebuttable presumption that prosecution history estoppel applies.¹¹⁸

a. The Doctrine of Equivalents Survived the 1952 Patent Act

The Court refused to hold that the 1952 Patent Act rejected the doctrine of equivalents.¹¹⁹ Warner-Jenkinson contended that the doctrine of equivalents was inconsistent with and did not survive the 1952 Patent Act, arguing that: (1) the doctrine of equivalents cannot be reconciled with the statutory requirement that an invention be claimed with specificity; (2) the doctrine of equivalents can improperly extend the statutory period within which a patentee can invoke the patent reissue process to seek an expansion of claims scope; (3) a court applying the doctrine of equivalents usurps the patent scope determination role reserved for the PTO; and (4) Congress implicitly rejected general application of the doctrine of equivalents by making specific mention of a limited form of the doctrine in a statutory "means-plus-function" claiming provision.¹²⁰ The Court rejected the first three alleged inconsistencies as simply echoes of the arguments advanced and rejected in *Graver Tank & Manufacturing Co. v. Linde Air Products Co.*¹²¹ The Court also concluded that the 1952 Patent Act was not materially different from the 1870 Act regarding claiming, reissue, and the role of the PTO.¹²²

116. *See id.* at 38.

117. *See id.* at 40.

118. *See id.*

119. *See id.* at 27-28.

120. *See id.* at 25-26. "Means-plus-function" claiming is allowed under 35 U.S.C. § 112, which states:

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, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification *and equivalents thereof*.

35 U.S.C. § 112 (1998) (emphasis added).

121. *See Warner-Jenkinson*, 520 U.S. at 26-27 (citing *Graver Tank*, 339 U.S. 605).

122. *See id.* at 26 (comparing 35 U.S.C. § 112 with The Consolidation Patent Act of 1870, ch. 230, § 26, 16 Stat. 198, 201 (1870) (current version at 35 U.S.C. § 112)).

The Court more carefully evaluated the petitioner's fourth argument, noting that the 1870 Act did not contain the "means-plus-function" claiming provision contained in the 1952 Act.¹²³ This provision allows a patentee to describe a claim element by the function served or result accomplished rather than explicitly identifying items encompassed by the element.¹²⁴ Thus, an adhesive for affixing two surfaces, for example, becomes "a means for affixing the column to the base," as opposed to "a hot-melt adhesive." The Court, however, concluded that Congress enacted this provision specifically to overturn one of the Court's earlier decisions rejecting claims that "do not describe the invention but use conveniently functional language at the exact point of novelty."¹²⁵ Observing that this provision was a "targeted cure to a specific problem," and that Congress could easily have addressed *Graver Tank* in this same manner, yet did not, the Court ultimately rejected the notion that Congress implicitly rejected the doctrine of equivalents through the "means-plus-function" claiming provision.¹²⁶

b. There is a Rebuttable Presumption of Prosecution History Estoppel

The Court held that there is a rebuttable presumption that prosecution history estoppel applies.¹²⁷ Warner-Jenkinson argued that the doctrine of equivalents can operate only within the limits defined by the doctrine of prosecution history estoppel.¹²⁸ In this view, because Hilton Davis amended its application to include a claim limiting element of a pH ranging from 6.0 to 9.0, it would be estopped from later recapturing any of the subject matter surrendered (pH below 6.0 and above 9.0), even if the surrendered matter was equivalent to the explicitly claimed matter.¹²⁹ Because the public has no aid beyond a patent's prosecution record in determining the scope of an invention, Warner-Jenkinson maintained that the public's right to notice demanded such a rigid application of the doctrine of prosecution history estoppel.¹³⁰

123. See *id.* at 27 (citing 35 U.S.C. § 112).

124. See 35 U.S.C. § 112. . The same portion of the 1952 Act that is quoted by the Court, see *Warner-Jenkinson*, 520 U.S. at 27, is set out *supra* in note 120.

125. *Warner-Jenkinson*, 520 U.S. at 27 (quoting *Halliburton Oil Well Cementing Co. v. Walker*, 329 U.S. 1, 8 (1946) (internal quotations and citation omitted)).

126. See *id.* at 28.

127. See *id.* at 34.

128. See *id.* at 29.

129. See *id.*

130. See *id.*

While agreeing that prosecution history estoppel could indeed limit the reach of the doctrine of equivalents, the Court disagreed that an applicant's reason for making an amendment is irrelevant.¹³¹ The Court distinguished between amendments made to overcome prior art and amendments requested by the PTO for "a variety of other reasons."¹³² In the case where an amendment is not made to overcome prior art, "the change may introduce a new element, but it does not necessarily preclude infringement by equivalents of that element."¹³³ The Court, therefore, held that on a case-by-case basis courts must first probe the reasoning behind an amendment to know whether prosecution history estoppel bars the application of the doctrine of equivalents as to the amended elements.¹³⁴

Nevertheless, this conclusion created a problem for the Court concerning the patent in dispute: nothing in the record documented the reason for including a lower-bound pH of 6.0.¹³⁵ Stating that a holding that "certain reasons for a claim amendment may avoid the application of prosecution history estoppel" did not necessarily mean that a patentee offering no reason could avoid such an estoppel, the Court placed on the patentee the burden of establishing the reason for a required amendment.¹³⁶ Courts must presume that any required amendment affected patentability until and unless the patentee offers an "appropriate reason" for the amendment to rebut this presumption.¹³⁷ Here, the Court remanded so that the Federal Circuit could consider whether the patentee already did, or could, establish that the reason for the amendment could avoid prosecution history estoppel.¹³⁸ However, the Court did not specify any procedural structure for enabling a patentee to do so.

c. Other Holdings

Tracing the reasoning and support behind *Graver Tank & Manufacturing Co. v. Linde Air Products Co.*,¹³⁹ the Court concluded that application of the doctrine of equivalents is "akin to determining lit-

131. *See id.* at 31-32.

132. *Id.* at 31.

133. *Id.* at 33.

134. *See id.*

135. *See id.*

136. *See id.*

137. *See id.*

138. *See id.* at 34.

139. 339 U.S. 605 (1950).

eral infringement, and neither requires proof of intent.”¹⁴⁰ The Court thus rejected the Federal Circuit’s view that an alleged infringer’s activity, be it copying a patent or conducting independent investigation, is reflective of the substantiality of differences between an accused and a patented product or process.¹⁴¹ The Court also rejected the notion that the doctrine of equivalents should be limited to equivalents known at the time of patent issuance.¹⁴²

D. The Federal Circuit’s Decision on Remand

Warner-Jenkinson argued that the Federal Circuit could resolve the case outright due to Hilton Davis’s statements made at the various oral arguments asserting that there was no reason for that portion of the claim amendment establishing a lower bound pH.¹⁴³ The Federal Circuit declined to view these statements as binding admissions, concerned that such statements might “merely characterize the state of the record, not the state of the facts.”¹⁴⁴

The Federal Circuit tersely framed the real issue as whether the patentee could establish a reason for the amendment unrelated to patentability, and if so, whether that reason was sufficient to overcome prosecution history estoppel as a bar to application of the doctrine of equivalents.¹⁴⁵ The court noted that future disputes over prosecution history estoppel will benefit from the newly recognized need to include express recitations of the reasons for requiring or making claim amendments during patent prosecution.¹⁴⁶ The court, however, acknowledged Justice Ginsburg’s concern that patentees prosecuting applications prior to *Warner-Jenkinson Co. v. Hilton Davis Chemical Co.* might find it difficult to establish an evidentiary basis for overcoming the new presumption.¹⁴⁷ The court thus concluded that “where the prosecution history is silent or unclear the district court should give a patentee the opportunity to establish the reason, if any, for a claim change.”¹⁴⁸ The court, like the Supreme Court,

140. *Warner-Jenkinson*, 520 U.S. at 35.

141. *See id.* at 36.

142. *See id.* at 37.

143. *See Hilton Davis Chem. Co. v. Warner-Jenkinson Co.*, 114 F.3d 1161, 1164 (Fed. Cir. 1997).

144. *Id.* at 1164.

145. *See id.* at 1163.

146. *See id.*

147. *See id.* (quoting *Warner-Jenkinson Co. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 41 (1997) (Ginsburg, J., concurring)).

148. *Id.*

did not specify any procedural structure for enabling a patentee to do so.¹⁴⁹ The Federal Circuit remanded to the district court, giving that court discretion to decide “whether hearings are necessary or whether the issue can adequately be determined on a written record.”¹⁵⁰

III. ANALYSIS

The Supreme Court’s creation of a rebuttable presumption that prosecution history estoppel applies actually weakens, not strengthens, the limitations on the doctrine of equivalents. At least three reasons illustrate how the public and the patent bar will find the Court’s ruling unfavorable. First, the outcome of such an inquiry arrives too late to aid the accused. Second, such an inquiry would increase already mounting caseload pressures. Third, evidentiary concerns make questionable the efficacy of such an inquiry. The Court’s rule leaves the balance between protecting a patentee’s interests and providing notice to the public unfairly shifted in the patentee’s favor. Ideally, Congress should modify the statutes governing patent law by codifying the doctrine of prosecution history estoppel and strictly interpreting that doctrine’s operation as an absolute bar to expansion of claim limits. Because such congressional action is unlikely, the Federal Circuit should narrowly confine the manner in which a patentee can rebut the presumption of prosecution history estoppel. To preserve the public’s ability to rely on the public record, such rebuttal attempts must be bounded by the public record.

A. Flaws in the Rebuttable Presumption Rule Regarding Prosecution History Estoppel

Three practical issues expose the flawed reasoning behind the Court’s ruling that there is a rebuttable presumption that prosecution history estoppel applies. The first and most important issue is that because the triggering event requiring such a rebuttal will be an infringement suit, its outcome will be valueless to the accused infringer with respect to aiding his ability to guide pre-litigation conduct. In *Warner-Jenkinson Co. v. Hilton Davis Chemical Co.*, the Court refused to accept the view that the doctrine of equivalents can never be invoked past the boundaries of prosecution history estoppel, distin-

149. *See id.* (“We hesitate to specify the procedures that the district court can employ to answer the question posed by the newly created presumption of prosecution history estoppel.”).

150. *Id.* At the time this article was written, the district court had not yet spoken on the matter.

guishing between the case of an amendment made because “the claim as otherwise written [is] viewed as not describing a patentable invention at all” and the case of an amendment made for one of “a variety of other reasons why the PTO may request a change in claim language.”¹⁵¹ Since the patentee had not offered a reason for adding a lower pH limit, the Court presumed prosecution history estoppel applied but remanded for a determination of whether the patentee could establish a reason for amendment sufficient to rebut the presumption.¹⁵² The ambiguous record of the case, however, left the Federal Circuit unable to determine whether the patentee established any such reason, prompting remand to the district court.¹⁵³

The Federal Circuit’s difficulties mirror those the public will face in trying to determine whether a patentee can rebut the presumption of prosecution history estoppel. A record of litigation constitutes more than the public will have at its disposal in evaluating patent scope, yet can nevertheless prove insufficient, as here. Thus, the public will not be able to make a determination as to whether prosecution history estoppel will apply in many cases. The only route to “sure” knowledge will be an infringement suit. This operates unfairly because the public’s conservative course to avoid an infringement charge, ironically, will be to presume that prosecution history estoppel *does not* apply, exactly opposite of the Court’s rule, and thus to accord the patentee exclusive rights potentially greater than those intended by the PTO.

The underlying patent policy of furthering technological advance suffers when the public is driven by uncertainty and fear to accord a patentee unintended exclusionary rights. The PTO carefully circumscribes a patent’s claims, granting coverage only for that which is new. Policy dictates that such exclusionary rights be granted hesitantly, and then only because society benefits when the patentee’s technology advance enters the public domain following patent expiration. Old knowledge outside a patent’s claims is already in the public domain, hence the public need not wait to harness it. According a patentee exclusionary rights wider than those to which he is entitled removes publicly available knowledge, harmfully curtailing public rights.

151. *Warner-Jenkinson*, 520 U.S. at 31. This division essentially distinguishes between art and non-art rejections. To support this point, the Court referenced the United States’ Amicus Brief, which argued different treatment should be given to an enablement rejection as opposed to a prior art rejection. *See id.*

152. *See id.* at 34.

153. *See Hilton Davis*, 114 F.3d at 1163.

The second troubling issue is that the Court's rule will adversely impact litigation at the district court level. Many district courts already have an allergy to patent cases.¹⁵⁴ Unfamiliarity with patent law, combined with highly technical and often lengthy litigation, can serve to frustrate district court judges faced with mounting caseload pressures.

The *Warner-Jenkinson* decision allowing rebuttal of prosecution history estoppel increases the burden on district court judges by favoring a "*Hilton Davis* hearing" whenever prosecution history estoppel is an issue. Such a burden, on the coattails of the creation of the "Markman hearing" on claim construction,¹⁵⁵ further adds to the already complex course of patent litigation. As at least one commentator notes, "[t]he 'Markman hearing' approach has the drawback of adding a mini-trial on claim construction to a litigation procedure in complex cases that is already time-consuming and expensive for the litigants and already burdensome for busy district courts with crowded dockets."¹⁵⁶ In part due to the complexity generated by the "Markman hearing" mini-trial, on July 1, 1997, California federal courts adopted detailed rules governing claim construction proceedings and hearings in patent cases.¹⁵⁷

If, on remand, the Ohio district court chooses to conduct an analogous "*Hilton Davis* hearing" to determine the scope of prosecution history estoppel, a further mini-trial will be added on top of the "Markman hearing" mini-trial, itself a recent and potentially unwelcome addition to trial on the merits.¹⁵⁸ Such compounding of litigation would not be welcomed by judges or the parties who must bear the financial burden of trial. Litigation costs would soar even higher, motivating many already fearful of the time and expense involved in defending a charge of infringement to simply assume that prosecution history estoppel does not apply, thereby avoiding incremental litigation costs. Once again, the Court's rule produces unfair results by allowing a patentee to enjoy protection potentially greater than that

154. See Janice M. Mueller, *Crafting Patents for the Twenty-First Century: Maximize Patent Strength and Avoid Prosecution History Estoppel in a Post-Markman/Hilton Davis World*, 79 J. PAT. & TRADEMARK OFF. SOC'Y 499, 503 (1997).

155. See *Cybor Corp. v. FAS Techs., Inc.*, 138 F.3d 1448, 1475 (Fed. Cir. 1998) (Rader, J., dissenting).

156. George E. Badenoch, *Proceeding in the Gray Area After Markman*, INTELL. PROP. STRATEGIST, June 1996 at 1, 4.

157. See N.D. CAL. CIV. L.R. 16-10 (titled "Claim Construction Proceedings in Patent Cases"); N.D. CAL. CIV. L.R. 16-11 (titled "Claim Construction Hearings in Patent Cases").

158. See *Cybor Corp.*, 138 F.3d at 1476 n.4 (Rader, J., dissenting).

intended by the PTO.

The third issue is that a "*Hilton Davis* hearing" would present complex logistical and evidentiary issues for courts to resolve. Logistically, since prosecution history is highly relevant to claims construction,¹⁵⁹ a "*Hilton Davis* hearing" must precede a "Markman hearing" because only armed with a properly interpreted prosecution history can a court conduct a proper determination of claims scope.

But the need to conduct a "*Hilton Davis* hearing" means that the prosecution history was ambiguous, allowing (indeed, assuring) presentation of extrinsic evidence.¹⁶⁰ The kind of extrinsic evidence relevant to a prosecution history hearing is likely to be just the kind of evidence offered at a claim construction hearing, tempting courts in the interests of judicial economy to conduct both hearings concurrently. As a further complication, extrinsic evidence presented at a "*Hilton Davis* hearing" might well aid the jury in determining equivalents, a factor arguing in favor of jury attendance of at least a portion of such a hearing. Absent some specific expression of guidelines, and faced with the variables of sequential or concurrent hearings and jury presence or absence, district courts are likely to evolve nonuniform policies both for conducting "*Hilton Davis* hearings" and for integrating the same into the already complex course of litigation.

Uncertainty also arises when contemplating the kinds of evidence potentially admissible in a "*Hilton Davis* hearing." Certainly, all extrinsic evidence admissible in a "Markman hearing" could prove useful in a "*Hilton Davis* hearing" as well; however, the parties may attempt to offer even more extrinsic evidence at a "*Hilton Davis* hearing."

Discussing some of these evidentiary possibilities, however, demonstrates the minimal efficacy of a "*Hilton Davis* hearing." For example, since an amendment that affected patentability would not allow the patentee to escape prosecution history estoppel, could the patent examiner be called to testify whether the amendment in question affected his or her decision to grant the patent? No. An inquiry regarding the subjective intent of either the PTO or the applicant is

159. See, e.g., N.D. CAL. CIV. L.R. 16-10 (a)(3), (b)(3) (requiring for claim construction proceedings that each party point out material contained in the prosecution history it believes supports its construction of the claim).

160. See *Warner-Jenkinson Co. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 33-34 (1997). *But cf. supra* note 34 and accompanying text (arguing that the public should be able to rely upon intrinsic evidence).

not appropriate or even possible in a patent infringement suit.¹⁶¹ The views of the PTO are not obtainable except as reflected in the prosecution history.¹⁶² Here, the written record's only indication of the PTO's views is the ambiguous statement that "if claim 1 were amended to contain the pH range of 6 to 9, the rejection on prior art would be overcome."¹⁶³ It is plausible that the applicant's selection of the lower pH limit satisfied an enablement rejection articulated but not recorded by the examiner during the interview. Nevertheless, it now is impossible to explore the issue with the PTO because case law directs a district court to properly reject any effort to call PTO personnel to testify.

Since the examiner could never testify, could the other party to a PTO interview—the applicant's patent attorney or patent agent responsible for prosecuting the application—testify regarding his or her recollection of the proceedings? Although a court has discretion to allow such testimony in a "Markman hearing" on claim construction, testimony directed to how the patent should be construed is entitled to no deference.¹⁶⁴ If a court accords little weight to testimony regarding the meaning of a claim, even when an existing written record may support a witness' contention, it is difficult to see how a court could accept testimony regarding the meaning of an amendment in the absence of a written record.

Since neither the examiner nor the attorney or agent could be called, could an inventor offer testimony in a "*Hilton Davis* hearing"? An inventor's subjective intent as to claim scope, when unexpressed in the patent documents, cannot have any effect in a "Markman hearing."¹⁶⁵ For the same reasons that inventor testimony is rejected at a "Markman hearing," courts should reject inventor testimony at a "*Hilton Davis* hearing." To hold otherwise is unfair to accused infringers "who must be able to rely on the patent documents themselves, without consideration of expert opinion that then does not even exist, in ascertaining the scope of a patentee's right to ex-

161. See *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 985 (Fed. Cir. 1995), *aff'd*, 517 U.S. 370 (1996).

162. See *Western Elec. Co. v. Piezo Tech., Inc.*, 860 F.2d 428, 432-33 (Fed. Cir. 1988); see also *MANUAL OF PATENT EXAMINING PROCEDURE* § 1701.01 (6th ed. rev. 1997) (titled "Office Personnel Not to Testify").

163. *Hilton Davis Chem. Co. v. Warner-Jenkinson Co.*, 62 F.3d 1512, 1581-82 (Fed. Cir. 1995) (Nies, J., dissenting) (emphasis added).

164. See *Markman*, 52 F.3d at 983.

165. See *Vitronics Corp. v. Conception, Inc.*, 90 F.3d 1576, 1584 (Fed. Cir. 1996).

clude.”¹⁶⁶ Here, the inventor testified at trial as to his findings, outside the PTO’s written record, that the purification process functioned down to a pH of 2.¹⁶⁷ Even this testimony should have been disallowed because enablement is determined as of the application filing date.¹⁶⁸ Declarations dating after an applicant’s filing date can only be used to substantiate doubts pertaining to the accuracy of statements already in the specification.¹⁶⁹ Here, the specification is silent on experimentation below a pH of 6.0, and so any assertions on this issue made after the filing date are inadmissible.

Considering now the party defending against an infringement charge, an accused infringer can offer evidence at a “Markman hearing”; typically the accused infringer will advance prior art to show that the product or process obtainable by operating outside the amended claim limits would not have been patentable.¹⁷⁰ Similarly, an accused may seek the opportunity to offer evidence at a “*Hilton Davis* hearing.” But in a case like this, where the written record is ambiguous and no unexamined prior art apparently exists, what would the accused have to offer? If neither the examiner, attorney, nor inventor can testify, the accused has no need to offer impeachment evidence. With the particular facts of this case, the patentee’s testimony regarding experimentation below a pH of 6 might actually aid the accused: if experiments post-dating the amendment were the first point in time the patentee discovered the process would work at a pH below 6, the accused could argue the inference that there was no reason prompting the earlier selection of the lower pH limit. In most instances, however, the accused will not possess such information. The very ambiguity triggering the need for a “*Hilton Davis* hearing” leaves the accused with little or no useful evidence to offer on its behalf.

This discussion illustrates the difficulties courts, the patent bar, the parties, and the public may experience with the “*Hilton Davis* hearing” that may arise from the Court’s creation of a rebuttable presumption of prosecution history estoppel. Evidence at such a hearing would be extremely limited, rendering questionable whether a “*Hil-*

166. *Id.*

167. See Oral Argument of David E. Schmidt on Behalf of the Respondent, Warner-Jenkinson Co. v. Hilton Davis Chem. Co., 520 U.S. 17 (1997) (No. 95-728), available in 1996 WL 593639, at *31 (Oct. 15, 1996).

168. See *In re Glass*, 492 F.2d 1228, 1232 (C.C.P.A. 1974).

169. See *In re Marzocchi*, 439 F.2d 220, 223 n.4 (C.C.P.A. 1971).

170. See *Vitronics*, 90 F.3d at 1584.

ton Davis hearing” would have any utility whatsoever.

Though a ruling placing on the patentee the burden of rebutting a presumption of prosecution history estoppel seems to operate against the patentee, the public, driven by uncertainty and a desire to minimize potential litigation costs, will presume in the many ambiguous cases that prosecution history estoppel does not apply. This likely result essentially eliminates one of the few defenses to a charge of infringement under the doctrine of equivalents, leaving the balance between protecting a patentee’s interests and providing notice to the public unfairly shifted in the patentee’s favor. The additional troubling issues of nonuniform litigation procedures, logistics, and admissibility of evidence further demonstrate the negative implications of the Court’s ruling.

B. Prosecution History Estoppel Should be Strictly Applied

Despite the Court’s confident assertion that a rebuttable presumption of prosecution history estoppel “places reasonable limits on the doctrine of equivalents” and “gives proper deference to the role of claims in defining an invention and providing public notice,”¹⁷¹ such a rule creates more confusion for the public than ever before. Just as the Petitioner in *Warner-Jenkinson Co. v. Hilton Davis Chemical Co.* argued, the better rule is to strictly apply the doctrine of prosecution history estoppel to any subject matter an amendment surrenders during patent prosecution because inquiry into the reasons for such a surrender undermines public notice.¹⁷² The Court rejected this position, collecting cases in which prosecution history estoppel was not invoked until after judicial scrutiny of the reason a required amendment was made.¹⁷³ But the Court simply documented a history of such scrutinization and never addressed the real issue that such an inquiry conflicts with the public’s right to notice of the boundaries of an invention.

Clear notice demands strict application of the doctrine of prosecution history estoppel. As the American Intellectual Property Law Association noted, “To the extent the clear literal boundaries of the claims are made fluid and subject to a broadening interpretation in litigation, it becomes commensurately more difficult for the public to

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

172. *See id.* at 30.

173. *See id.* at 31 n.5.

know what infringes and what does not."¹⁷⁴ The doctrine of equivalents has already eroded notice, and the Court's rebuttable presumption of prosecution history estoppel risks etching notice further.

Judicially created doctrines must be subservient to the clear and unambiguous language of relevant statutes. Here, the patent statutes state absolutely that specificity is required.¹⁷⁵ Specificity gives public notice. The Court's rule should have been that an irrebuttable presumption of prosecution history estoppel exists whenever amendments are made, providing clear notice to the public as to what can and cannot be practiced.

The Court's ruling will likely chill future technology growth in areas such as microelectronics, biotechnology, telecommunications, and computers due to greater unpredictability of liability for patent infringement. Companies are already being advised to raise insurance coverage due to the uncertainties accompanying jury determinations of infringement.¹⁷⁶

Examining, for example, the new and highly competitive field of biotechnology, enormous investments are presently being made seeking technological innovation.¹⁷⁷ The benefits to society of such spending are manifest in the creation of patented drugs treating diseases such as AIDS, cancer, diabetes, multiple sclerosis, cystic fibrosis, and many others.¹⁷⁸ However, new competitors will find it difficult to attract start-up capital from investors leery of both the inability to predict outcomes in patent infringement cases and the possibility that one adverse infringement judgment could bankrupt the fledgling company. Technology improvements will slow, not only due to a lack of new players in the industry but also because existing companies will be reluctant to invest in competitors' research areas due to uncertainty regarding patent scope. Society thus risks technological stagnation, precisely opposite the patent statutes' intent.

A robust doctrine of prosecution history estoppel that can effec-

174. Brief of Amicus Curiae American Intellectual Property Law Association in Support of Neither Party, *Warner-Jenkinson Co. v. Hilton Davis Chem. Co.*, 520 U.S. 17 (1997) (No. 95-728), available in 1996 WL 170149, at *7 (Apr. 11, 1996).

175. See *supra* note 8 and accompanying text.

176. See Timothy L. Swabb, *Federal Circuit Cannot Stop Runaway Jury Awards in Patent Suits*, 3 Mealey's Litig. Rep.: Pat. (Mealey Publications, Inc.) 11, 13-14 (Sept. 1995).

177. See, e.g., Brief of Biotechnology Industry Organization as Amicus Curiae in Support of Respondent, *Warner-Jenkinson Co. v. Hilton Davis Chem. Co.*, 520 U.S. 17 (1997) (No. 95-728), available in 1996 WL 249509, at *2 (May, 13, 1996) (noting that biotechnology industry as a whole invested \$7.7 billion on research and development and production facilities in 1995).

178. See *id.*

tively brake the largely unchecked doctrine of equivalents can reduce this risk. The Supreme Court has refused to interpret prosecution history estoppel strictly. Ideally, Congress should modify the statutes governing patent law by codifying the doctrine of prosecution history estoppel and strictly interpreting that doctrine's operation as an absolute bar to expansion of claim limits.

Because such congressional action is unlikely, the Federal Circuit should narrowly confine the manner in which a patentee can rebut the presumption of prosecution history estoppel. To preserve the public's ability to rely on the public record, such rebuttal attempts must be bounded by the public record. In disputes involving patents prosecuted before *Warner-Jenkinson*, where the need for explicit memorialization was not yet identified, the Federal Circuit should strictly limit the types of extrinsic evidence admissible in rebutting the presumption of prosecution history estoppel. To ensure proper notice, courts should consider only evidence publicly available prior to an infringement suit. In disputes involving patents prosecuted after *Warner-Jenkinson*, where patentees are aware of the need to rigorously document in the record the reasons for any amendment, the court should not allow extrinsic evidence to have any bearing on such a rebuttal attempt.

CONCLUSION

Many hoped *Warner-Jenkinson Co. v. Hilton Davis Chemical Co.* would resolve the debate about the doctrine of equivalents' potential to expand patent scope, thereby eroding the notice function of claims. Prior to the Supreme Court's decision, operation of the doctrine seemed increasingly uncontrollable. The Supreme Court's decision creating a rebuttable presumption of prosecution history estoppel weakens one of the few defenses to a charge of infringement under the doctrine of equivalents and assures confusion will continue to reign in patent litigation. Conducting a "*Hilton Davis* hearing" to interpret an ambiguous prosecution history is a complex, expensive, and ultimately unavailing activity. The Court's rule regarding prosecution history estoppel unfairly shifts toward the patentee the balance between protecting a patentee's interests and providing notice to the public. To correct this, and to prevent chilling of future technology growth, Congress ideally should modify the statutes governing patent law to reflect a strict interpretation that prosecution history estoppel is an absolute bar to expansion of claim limits. Because such congres-

sional action is unlikely, the Federal Circuit should narrowly confine the manner in which a patentee can rebut the presumption of prosecution history estoppel. To preserve the public's ability to rely on the public record, such rebuttal attempts must be bounded by the public record.

