

# Equity for Whom? Defining the Reach of Non-Literal Patent Infringement

Peter K. Schalestock\*

*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. . . .*

*The doctrine of equivalents evolved in response to this experience.<sup>1</sup>*

*One need not be a prophet to suggest that today's [decision] will . . . make enlargement of patent claims the "rule" rather than the "exception."<sup>2</sup>*

*Under modern case law, the doctrine of equivalents is thought of by practitioners and the courts as simply a second bite at the apple for the patent owner in attempting to prove infringement.<sup>3</sup>*

*[W]hatever role the doctrine of equivalents may have played in earlier times . . . today the doctrine is regularly used by patentees to seek greater coverage for their patents than the patent statute grants.<sup>4</sup>*

The holder of a patent has a twenty-year monopoly on the manufacture, sale, or purchase of the device or process described in the patent.<sup>5</sup> The doctrine of equivalents allows a patent holder to bring an infringement claim against a person whose device is similar to the patent holder's, but is not literally described by the language of the patent. The doctrine originated as an equitable action to prevent fraud

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\* B.A. 1992, University of Washington; J.D. Candidate 1996, Seattle University School of Law. I would like to thank the editorial staff of the *Seattle University Law Review* for helping me refine this article. I am particularly grateful for the incisive comments of Catherine Romero Wright, my partner on the winning team at the western regional round of the 1995 Giles S. Rich Moot Court competition.

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

2. *Id.* at 616 (Black, J., dissenting).

3. 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).

4. *Hilton Davis Chem. Co. v. Warner-Jenkinson Co.*, 62 F.3d 1512, 1537 (Fed. Cir. 1995) (Plager, J., dissenting), cert. granted, 64 U.S.L.W. 3574 (U.S. Feb. 26, 1996) (No. 95-728).

5. 35 U.S.C.A. § 154 (West Supp. 1995).

on patents by minor variation; it continues to develop through case law and is not included in the Patent Act.<sup>6</sup>

After a series of divergent opinions, the Court of Appeals for the Federal Circuit (CAFC)<sup>7</sup> has clarified the mode of analysis to be used in equivalents cases, requiring an element-by-element approach.<sup>8</sup> Additionally, in a bitterly divided en banc decision, *Hilton Davis Chemical Co. v. Warner-Jenkinson Co. (Hilton Davis)*,<sup>9</sup> the CAFC recently held that equivalents analysis is available in all cases; a finding of equitable factors in the particular case is not required.<sup>10</sup> The Supreme Court has agreed to review the *Hilton Davis* case, marking the first time in nearly fifty years it will speak on the doctrine of equivalents. The CAFC is also examining the roles of judge and jury in equivalents cases. Its recent decision in *Markman v. Westview Instruments*<sup>11</sup> suggests that the court is quite willing to limit the participation of juries in patent actions,<sup>12</sup> and the Supreme Court has agreed to review the case. If upheld, *Markman* could presage a return of the doctrine of equivalents to its equitable roots by giving judges complete authority to decide claims arising under it.

The doctrine of equivalents began as a tool creating judicial flexibility to shield patent holders from piracy through minor variations on their inventions.<sup>13</sup> Over time, two trends have transformed it from shield to sword. First, plaintiffs have persuaded courts to allow claims of infringement by equivalents even where there is no evidence of copying or other fraud.<sup>14</sup> Second, as juries have decided more and more infringement cases, their sympathy for patent holders has had a greater impact on equivalents cases.<sup>15</sup>

Together, these trends have worked a gross distortion on the doctrine of equivalents. The doctrine should not be used to extend patent coverage, leaving the public unable to determine the exact scope

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6. See, e.g., ROBERT L. HARMON, PATENTS AND THE FEDERAL CIRCUIT 215 (3d ed. 1994); *Hilton Davis Chem. Co.*, 62 F.3d at 1560-61 (Nies, J., dissenting).

7. The Court of Appeals for the Federal Circuit, created in 1982, has jurisdiction over appeals from all district courts in certain subject matter, including patent cases. 28 U.S.C.A. § 1295 (West 1993).

8. See *infra* text accompanying note 52.

9. 62 F.3d 1512 (Fed. Cir. 1995), *cert. granted*, 64 U.S.L.W. 3574 (U.S. Feb. 26, 1996) (No. 95-728).

10. *Id.* at 1521.

11. 52 F.3d 967 (Fed. Cir. 1995) (holding that construction of patent claims is a matter of law for the judge), *cert. granted*, 116 S. Ct. 40 (U.S. Sept. 27, 1995) (No. 95-26).

12. See *infra* text accompanying note 126.

13. *Graver Tank*, 339 U.S. at 608.

14. *Hilton Davis* is an example of such a case.

15. See *infra* text accompanying note 157.

of a patent's claims. Instead, application of the doctrine should be limited to cases where fraud or other equitable factors justify departure from the patent's terms. Further, decisions on infringement by equivalence should be made by judges in their equitable capacity, not by juries.

Part I of this Comment provides a brief summary of the history and present state of the doctrine of equivalents. It describes the contents of a patent and the difference between literal infringement and infringement by equivalents. This part then discusses the creation of the CAFC and the uncertain course of that court's early decisions in equivalents cases. Finally, this part presents the three issues at the forefront of equivalents analysis.

Part II discusses the recent resolution of the debate over the mode of analysis courts should employ in equivalents cases. It then describes the debate among the judges on the CAFC and that court's ultimate selection of a mode that circumscribes, at least slightly, the reach of equivalents claims.

Part III explores whether there should be a threshold equitable finding required to present an equivalents claim. This part describes the arguments on both sides of the question, tracing the increasingly strident debate among the judges of the CAFC. The discussion concludes with a critical look at the recent *Hilton Davis* decision.

Part IV examines the relative roles of judge and jury in deciding equivalents cases. This part describes the practical difficulties of separating issues between judge and jury and the reasons for having judges decide equivalents claims. Part IV concludes by discussing the impact of *Markman* and *Hilton Davis* on juries in equivalents cases.

## I. INTRODUCTION

A patent includes claims that delineate the specific aspects of the device or process (such as shape, strength, temperature, or acidity), aspects that set the boundaries of the invention to be protected.<sup>16</sup> The legal rights of the patentee are defined by the claims, rather than the specification, which is a technical description of the patented device or process.<sup>17</sup> Literal infringement of a patent occurs when a person makes something that falls within the scope of the patent claims.<sup>18</sup> Because it is conceivable that a copyist could use the essence of the patented invention while making minor changes to escape the literal

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16. 35 U.S.C.A. § 112 (West 1984).

17. ROBERT P. MERGES, *PATENT LAW AND POLICY* 516 (1992).

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

language of the patent, the doctrine of equivalents provides that infringement may be found if the accused device performs substantially the same function, in substantially the same way, to achieve substantially the same result as the patented device.<sup>19</sup>

The CAFC, created to provide uniformity and certainty in patent law, has struggled to provide a clear application of the doctrine of equivalents. After several years of debate, the court settled on a requirement that to infringe under the doctrine, an accused device must contain an equivalent for each element of a claim, rather than being equivalent as a whole.<sup>20</sup> Last year, the court issued en banc decisions affecting two other major areas of uncertainty in equivalents interpretation: (1) whether the doctrine is available in any infringement case or only upon a showing of equitable factors,<sup>21</sup> and (2) whether equivalents claims are triable to a jury.<sup>22</sup>

### A. *Summary of the Doctrine of Equivalents*

By granting a patent, the government gives an inventor the legal right to exclude others from making, using, or selling the patented invention for a limited period of time.<sup>23</sup> The invention is described in the patent by means of claims and the specification.<sup>24</sup> The specification describes the device or process invented,<sup>25</sup> while the claims describe the scope of invention.<sup>26</sup> The claims define the legal rights of the patentee.<sup>27</sup>

For example, a hypothetical claim for a simple stool might read: "An object for sitting comprising a square seat of 3/4 inch plywood measuring 15 inches on each side supported by four legs, wherein each leg measures one inch by one inch and eighteen inches in length and is attached at a corner of the seat."<sup>28</sup>

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19. Known as the *Graver Tank* function/way/result test, after *Graver Tank & Mfg. Co. v. Linde Air Prods. Co.*, 339 U.S. 605 (1950).

20. *Pennwalt Corp. v. Durand-Wayland, Inc.*, 833 F.2d 931 (Fed. Cir. 1987).

21. *Hilton Davis Chem. Co. v. Warner-Jenkinson Co.*, 62 F.3d 1512 (Fed. Cir. 1995), *cert. granted*, 64 U.S.L.W. 3574 (Feb. 26, 1996) (No. 95-728).

22. *Markman v. Westview Instruments*, 52 F.3d 967 (Fed. Cir. 1995), *cert. granted*, 116 S. Ct. 40 (U.S. Sept. 27, 1995) (No. 95-26).

23. 35 U.S.C.A. § 154 (West 1984 & Supp. 1995).

24. 35 U.S.C.A. § 112 (West 1984).

25. The Patent Act, 35 U.S.C. § 112, calls for the specification to describe the invention and the manner and process of making and using it in clear, concise, and exact terms. *Id.*

26. *Id.*

27. See *supra* note 17 and accompanying text.

28. Those with patent expertise will recognize this as a gross oversimplification. It is intended to be conceptually illustrative, not technically precise.

A patentee who believes his patent has been infringed ordinarily must show that the alleged infringing product or process falls within the literal language of one or more patent claims.<sup>29</sup> However, strict application of this rule would allow infringers to escape liability by making minor, insignificant changes to avoid the literal language of the claims. In the example above, a functionally identical stool with the legs offset one inch from each corner would fall outside the claim language and not literally infringe. The doctrine of equivalents evolved to prevent this unjust result.

The most recent Supreme Court case to apply the doctrine of equivalents was *Graver Tank & Manufacturing Co. v. Linde Air Products* (*Graver Tank*).<sup>30</sup> The Court in *Graver Tank* set out a three-part test requiring an alleged infringing item (1) to perform substantially the same function, (2) in substantially the same way, (3) to achieve substantially the same result as the patented item.<sup>31</sup> If each part of the *Graver Tank* test is met, the infringer may be held liable even though the infringing device is not literally described by the patent claims.<sup>32</sup>

The doctrine of equivalents attempts to balance two competing policies of the patent system. The first policy is the "notice function" of patents, which gives the public clear notice of the metes and bounds of the patent so that inventors may design around existing patents and avoid infringement.<sup>33</sup> The second policy protects the interests of the

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29. Very specific claims make it relatively easy to obtain patent approval because they are less likely to encompass prior inventions. While it is harder to obtain approval for broad claims, their breadth makes it more likely that an alleged infringing invention will fall within their scope. See MERGES, *supra* note 17, at 563 (vague claims increase de facto scope of patent); RICHARD L. GAUSEWITZ, PATENT PENDING 11 (1983) (claim language must be broad enough to provide adequate protection, without being so broad as to describe earlier inventions).

30. 339 U.S. 605 (1950).

31. *Id.* at 608. The doctrine of equivalents first appeared in its modern form in *Winans v. Denmead*, 56 U.S. (15 How.) 330 (1853).

32. *Graver Tank*, 339 U.S. at 607. The doctrine of equivalents has no direct statutory basis. Section 112, paragraph 6 of the Patent Act (35 U.S.C.) refers to "equivalents thereof" in describing the means-plus-function form of claim drafting. However, "equivalents" under section 112(6) deals only with equivalent structures, materials, and acts disclosed in the specifications and is not related to the doctrine of equivalents. William W. Cochran II, *Review of Selected Cases From the CAFC Relating to Infringement Under the Doctrine of Equivalents and Literal Infringement Under Paragraph 6*, 35 USC 112, 29 IDEA: J.L. & TECH. 253, 273-74 (1989); see also *Valmont Indus. v. Rienke Mfg. Co.*, 983 F.2d 1039, 1043-44 (Fed. Cir. 1993) ("Section 112, ¶ 6, limits the broad language of means-plus-function limitations in combination claims to equivalents of the structures, materials, or acts in the specification. The doctrine of equivalents equitably expands exclusive patent rights.").

33. *London v. Carson Pirie Scott & Co.*, 946 F.2d 1534, 1538 (Fed. Cir. 1991); see also Paul N. Katz, Note, *The Federal Circuit, In Determining Whether Patent Infringement Exists, Is Divided Over Whether To Utilize "As-A-Whole" Or "Element-By-Element" Analysis When Applying the*

patentee, preventing deprivation of patent benefits by unscrupulous competitors "who appropriate the essence of an invention while barely avoiding the literal language of the claims."<sup>34</sup>

The CAFC is currently struggling to balance those competing interests as it re-evaluates several important aspects of the doctrine of equivalents. One commentator observed that "while the Federal Circuit was created to favor certainty for the public and business interests, the doctrine of equivalents was created to favor the interests of the patentee. When those two forces—the doctrine of equivalents and the Federal Circuit—collided, there was bound to be some excitement."<sup>35</sup> There are indications that the CAFC is shifting its emphasis to protection of the public over protection for patentees in balancing these policy interests.<sup>36</sup>

### B. Confusion in CAFC Decisions

In 1982, Congress created the CAFC to bring uniformity—and hence predictability—to patent law.<sup>37</sup> However, the CAFC's early doctrine of equivalents cases generated considerable confusion. Lamenting the varying results achieved by different panels, one critic of the CAFC noted that "[r]eplacing the many appellate courts by one court wherein each case is heard by one of 220 different panels of that court, each panel applying its own version of an expansive doctrine of equivalents, cannot be the certainty that Congress had in mind."<sup>38</sup> One of the CAFC's judges also showed concern over the different outcomes produced by different panels, worrying that "interpretation of the doctrine of equivalents . . . will continue to depend on the selection of the panel."<sup>39</sup>

Commentators have often called for greater consistency in the CAFC's decisions, with one urging, "Until the guidelines are unified either by the judiciary or the legislature, the equitable efficacy of the

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*Doctrine Of Equivalents*, 30 S. TEX. L. REV. 441 (1989); *Patents: En Banc Federal Circuit Hears Argument On Doctrine of Equivalents and Equity*, 47 PAT., TRADEMARK & COPYRIGHT J. 442 (Mar. 17, 1994) [hereinafter *Argument*] (remarks of Michel, J.).

34. *London*, 946 F.2d at 1538.

35. Paul C. Craane, Comment, *At the Boundaries of Law and Equity: The Court of Appeals for the Federal Circuit and the Doctrine of Equivalents*, 13 N. ILL. U. L. REV. 105, 111-12 (1992).

36. See Jean M. Barkley, Note, *The Doctrine of Equivalents Analysis After Wilson Sporting Goods*, 35 ARIZ. L. REV. 765, 781 (1993).

37. HARMON, *supra* note 6, at 617.

38. Ronald D. Hantman, *Doctrine of Equivalents*, 70 J. PAT. & TRADEMARK OFF. SOC'Y 511, 554 (1988).

39. *Malta v. Schulmerich Carillons*, 959 F.2d 923, 923 (Fed. Cir. 1992) (Newman, J., dissenting to denial of rehearing en banc).

doctrine [of equivalents] will be lost upon those who most depend upon its clarity: the innovative community."<sup>40</sup>

Confusion in the doctrine of equivalents revolves around three primary questions: (1) What mode of analysis should be applied in equivalents cases?,<sup>41</sup> (2) Should there be equitable restrictions on the availability of the doctrine of equivalents?,<sup>42</sup> and (3) What are the respective roles of judge and jury in applying the doctrine of equivalents?<sup>43</sup> The first issue has largely been resolved by the CAFC's decisions in *Pennwalt Corp. v. Durand-Wayland, Inc.*<sup>44</sup> and *Wilson Sporting Goods Co. v. David Geoffrey & Associates*.<sup>45</sup> The remaining two questions were at issue in *Hilton Davis*.

## II. MODE OF ANALYSIS FOR EQUIVALENTS CASES

An early indication of the philosophical split in the CAFC came in its struggle to define the mode of analysis for equivalents cases. If the doctrine of equivalents is applicable in a particular case, the manner in which it is applied can have a considerable effect on the range of equivalents it will ensnare. Though couched in terms of technical legal analysis, the debate had much to do with how broadly judges wished to extend the doctrine.

The dispute over the mode of analysis in equivalents cases centered on two questions: (1) Should allegedly infringing products be compared to patent claims element by element, or should they be compared as wholes?,<sup>46</sup> and (2) To assert the doctrine of equivalents, must a plaintiff show a hypothetical patent claim<sup>47</sup> that would both (a) meet the requirements for issuance as if it were included in the original patent application, and (b) encompass the allegedly infringing product within its literal language?<sup>48</sup>

In opting for the more restrictive element-by-element analysis, the court effectively slowed the expansion of the doctrine of equivalents. However, the court has declined to require plaintiffs to present a hypothetical claim as part of their *prima facie* case.

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40. Roy Collins, III, *The Doctrine of Equivalents: Rethinking the Balance Between Equity and Predictability*, 22 GOLDEN GATE U. L. REV. 285, 308 (1992).

41. See *infra* part II.

42. See *infra* part III.

43. See *infra* part IV.

44. 833 F.2d 931 (Fed. Cir. 1987), *cert. denied*, 485 U.S. 961 (1988).

45. 904 F.2d 677 (Fed. Cir. 1990).

46. See *infra* part II.A.

47. A claim the patentee could have pursued during patent prosecution, but did not.

48. See *infra* part II.B.

### A. As-A-Whole vs. Element-By-Element

In an early CAFC case, *Hughes Aircraft Co. v. United States* (*Hughes*),<sup>49</sup> the court used a comparison of products as-a-whole to decide whether an equivalent existed. Several judges continue to hold the view that this is the correct analysis.<sup>50</sup> Returning to the stool example, this approach would require a determination of whether an accused item meets the general description of being a level sitting surface with vertical support. Conceivably, a cylinder eighteen inches high and fifteen inches around would be an infringing equivalent under this formulation.

Four years after *Hughes*, in *Pennwalt Corp. v. Durand-Wayland, Inc.* (*Pennwalt*),<sup>51</sup> the court, en banc (by a 7-4 majority), stated that the alleged infringing product must be compared to each of the patent claims limitations.<sup>52</sup> This element-by-element approach examines an accused stool to see if it has the equivalents of a sitting surface fifteen inches square and 3/4 inch thick, with a leg mounted at each of the four corners. At a minimum, an infringing stool would have to have distinct legs and a sitting surface. The *Pennwalt* decision established element-by-element analysis as the law of the Federal Circuit, effectively narrowing the doctrine of equivalents.<sup>53</sup>

Despite the widespread perception of disarray at the CAFC, and occasional disagreements between the judges themselves, several commentators have suggested that the cases using the as-a-whole and element-by-element approaches can be harmonized based on their particular facts and procedural postures. Some analysts suggest that *Hughes* and *Pennwalt* can be reconciled because (1) the as-a-whole analysis applied in *Hughes* may have been consistent with the element-by-element analysis required by *Pennwalt*, and (2) in *Hughes*, the court found the trial judge's equivalents analysis inadequate and performed

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49. 717 F.2d 1351 (Fed. Cir. 1983).

50. For details regarding the dispute among the judges of the CAFC, see Katz, *supra* note 33; Jo Anne Rosenblum, Note, *Patent Law—Doctrine of Equivalents—Has the Federal Circuit Dealt a Mortal Blow to the Doctrine of Equivalents?*, 12 SUFFOLK TRANSNAT'L L.J. 671 (1989); Craane, *supra* note 35. Judge Newman has been a leading and consistent advocate of the as-a-whole approach. See Gregory J. Smith, *The Federal Circuit's Modern Doctrine of Equivalents In Patent Infringement*, 29 SANTA CLARA L. REV. 901 (1989); Arthur R. Whale, *Doctrine of Equivalents Undergoes Scrutiny*, NAT'L L.J., Jan. 24, 1994, at S24.

51. 833 F.2d 931 (Fed. Cir. 1987), *cert. denied*, 485 U.S. 961 (1988).

52. *Id.* at 936. A limitation in a patent claim represents a boundary of the invention. In the stool example, having four legs is a limitation; so is having a square seat. The protection of the patent monopoly is "limited" to square stools with four legs.

53. See Hantman, *supra* note 38, at 550.

its own, so different legal standards applied.<sup>54</sup> Others argue that the court is really analyzing the "functional cooperation"<sup>55</sup> among parts of the claim and comparing it to the "functional cooperation" among parts of the accused product.<sup>56</sup> Framed this way, the results of the various cases are consistent.<sup>57</sup>

Indeed, the CAFC itself has taken some steps to harmonize the as-a-whole and element-by-element approaches by indicating that the term "element" means not only a single limitation in a claim, but also a group of limitations making up a component of the invention.<sup>58</sup> So, while there must be an equivalent in the accused device for every limitation in the claim, the equivalent does not have to be in a corresponding component. This approach is more flexible than a strict element-by-element standard. If enough elements are combined, the comparison is effectively between wholes.

*Pennwalt* is now the guiding precedent for the CAFC,<sup>59</sup> which "has repeatedly stated, infringement requires that every limitation of a claim be met literally or by a substantial equivalent."<sup>60</sup>

### B. Hypothetical Claim Analysis

Pennwalt's requirement of equivalence in each element rather than in the whole invention places a higher burden on plaintiffs. In *Wilson Sporting Goods Co. v. David Geoffrey & Associates (Wilson)*,<sup>61</sup> the CAFC introduced a novel analytical tool for evaluating equivalents cases which, if mandatory, would place an even greater burden on plaintiffs.

Traditionally, plaintiffs have been required to show that an allegedly infringing device is an equivalent. Defendants were then permitted to raise two affirmative defenses: (1) that a patent covering the defendant's device encompasses prior art<sup>62</sup> and therefore is

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54. Smith, *supra* note 50, at 912-13 (*Pennwalt* did not overrule *Hughes* sub silentio); see also Cochran, *supra* note 32, at 263 (*Hughes* consistent with element-by-element analysis).

55. "Functional cooperation" is the interaction between different parts of the claim. It takes on the role of the "way" prong in the function/way/result test. Ronald E. Larson, *Balancing the Competing Policies Underlying the Doctrine of Equivalents In Patent Law*, 21 AM. INTELL. PROP. L. ASS'N Q. J. 1, 16 (1993) (analyzing 37 CAFC cases from 1983 to 1992).

56. *Id.* at 17-18.

57. *Id.* at 4.

58. Barkley, *supra* note 36, at 773-74.

59. "The court has emphatically reaffirmed the vitality of *Pennwalt*." HARMON, *supra* note 6, at 227.

60. *Intellical, Inc. v. Phonometrics, Inc.*, 952 F.2d 1384, 1389 (Fed. Cir. 1992).

61. 904 F.2d 677 (Fed. Cir. 1990).

62. Prior art is the term for the previous state of invention in the field.

invalid,<sup>63</sup> or (2) that the plaintiff is estopped by prosecution history from claiming the accused device is an equivalent.<sup>64</sup>

In *Wilson*, Judge Rich<sup>65</sup> combined all of these steps into the plaintiff's prima facie case. He required the plaintiff to posit a hypothetical claim that would encompass the defendant's device, but not encompass prior art or be subject to prosecution history estoppel.<sup>66</sup> The most dramatic effect of this framework is that it shifts the burden of proof on the prior art issue by requiring the plaintiff to incorporate it into her prima facie case as part of the hypothetical claim.<sup>67</sup> Because it raises the plaintiff's pleading burden, the *Wilson* hypothetical framework has generated strong opposition from advocates for patent plaintiffs.<sup>68</sup> Subsequent cases, while approving of the *Wilson* framework, have not mandated its use.<sup>69</sup>

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63. In effect, the patentee would be seeking protection for a patent that was so broad that it would not have been granted if sought. See HARMON, *supra* note 6, at 222-23 n.224 ("In order to support a preliminary injunction the required finding of likelihood of success on infringement under the doctrine of equivalents should include . . . whether the range of equivalents ensnares the prior art.").

64. During prosecution of a patent application, applicants may narrow the language of a claim in order to avoid encompassing prior art. A plaintiff who did this cannot claim as an equivalent something that would have been within the language of the originally proposed claim. However, not every remark made during prosecution may create an estoppel; there is a distinction between amendments to claims and remarks made to the examiner. HARMON, *supra* note 6, at 237. For a discussion of prosecution history and prior art in *Hughes and Pennwalt*, see Smith, *supra* note 50, at 920-27. (Prosecution history estoppel also is referred to as "file wrapper estoppel.").

65. Judge Giles Sutherland Rich was an author of the 1952 Patent Act, where he introduced section 103's requirement that a patentable device be "nonobvious," replacing the previous "invention" standard. He was appointed to the CAFC's predecessor, the Court of Customs and Patent Appeals, in 1956. He has been called "a national treasure" and "the preeminent patent law expert in the world." See Charley Roberts, At 89, *He Still Is a Superstar*, LOS ANGELES DAILY J., Aug. 9, 1993, at A1, A9.

66. *Wilson*, 904 F.2d at 684-85. One commentator noted that this framework is remarkably similar to that for patent reissue under 35 U.S.C. § 251 and suggested that the availability of a statutory substitute for the equitable doctrine of equivalents had strong appeal, although the practical difficulties involved make abandonment of the doctrine in favor of reissue undesirable. Craane, *supra* note 35, at 35.

67. Barkley, *supra* note 36, at 781 ("The reallocation of the burden of proof in *Wilson* is a strong indication that the Federal Circuit would prefer the balance to shift in favor of the public as against the patentee.").

68. See, e.g., Presentation of John F. Witherspoon in The Ninth Annual Judicial Conference of the United States Court of Appeals for the Federal Circuit, 140 F.R.D. 57, 127 (1991).

69. *Conroy v. Reebok Int'l*, 14 F.3d 1570, 1577 (Fed. Cir. 1994) ("[T]he district court's decision not to conduct a hypothetical claim analysis was not itself improper."); *International Visual Corp. v. Crown Metal Mfg. Co.*, 991 F.2d 768, 772 (Fed. Cir. 1993) ("Hypothetical claim analysis is an optional way of evaluating whether prior art limits the application of the doctrine of equivalents.").

### III. THE EQUITABLE THRESHOLD

#### A. Development of the Debate

With the analytical guidelines largely settled, the role of equitable factors in the doctrine of equivalents is now the major topic of contention. Until recently, it was common for judges to consider equivalents as a second step in any infringement analysis—a “second bite at the apple” for plaintiffs who fail to prove literal infringement.<sup>70</sup> The trend was described by one commentator as a suggestion by the CAFC that district courts use the doctrine of equivalents “as a common-sense tool to expand the literal scope of claims in any case, regardless of the equities.”<sup>71</sup>

In recent years, however, the CAFC has hinted that it may use equitable factors to limit the availability of equivalents analysis.<sup>72</sup> According to one analyst, the foremost issue for the decade in the doctrine of equivalents is whether the CAFC will “require a patent owner to make a threshold showing that ‘the equities’ are in its favor before [the court] will permit the patentee to attempt to prove infringement by equivalents.”<sup>73</sup>

The CAFC indicated that it was considering such a change when it instructed the parties in *Hilton Davis* to brief the issue of whether a finding of infringement by equivalents requires anything in addition to the *Graver Tank* three-part test.<sup>74</sup> An example of “anything in

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70. Fleming, *supra* note 3, at 234.

71. Smith, *supra* note 50, at 903.

72. See *infra* notes 84-85 and accompanying text.

73. John E. Gartman, *Infringement Under the Doctrine of Equivalents: Gazing Into the Crystal Ball*, 3 FED. CIR. B.J. 299, 301 (1993).

74. Faced with increasing inconsistency in its panel decisions on equivalents cases, the CAFC sua sponte ordered rehearing en banc for the *Hilton Davis* case. The court instructed the parties to present arguments on three questions:

- (1) Does a finding of patent infringement under the doctrine of equivalents require anything in addition to the three-part *Graver Tank* test, and, if so, what?
- (2) Should courts apply the doctrine of equivalents in every infringement analysis, or is it discretionary in accordance with the circumstances of the case?
- (3) Is the issue of infringement under the doctrine of equivalents an equitable remedy to be decided by the court, or, is it, like literal infringement, an issue of fact to be submitted to a jury?

62 F.3d 1512 (Fed. Cir. 1995), *cert. granted*, 64 U.S.L.W. 3574 (U.S. Feb. 26, 1996) (No. 95-728). The closely divided court in the *Hilton Davis* rehearing illuminates the disagreement over answers to these questions. The potential impact of the decision is especially significant because of *Markman v. Westview Instruments*, a recent case in which the CAFC was strongly inclined to limit the jury's role in patent cases. 52 F.3d 967 (Fed. Cir. 1995), *cert. granted*, 116 S. Ct. 40 (U.S. Sept. 27, 1995) (No. 95-26).

addition to the *Graver Tank* three-part test" would be a determination of equitable factors.

Judge Lourie launched the debate over an equitable threshold test in *London v. Carson Pirie Scott & Co.*<sup>75</sup> by calling application of the doctrine of equivalents the exception rather than the rule.<sup>76</sup> His rationale was that the public must be able to rely on the language of patent claims as a guide to the scope of protection, and making the doctrine of equivalents a second prong of every infringement analysis would destroy that reliance because an inventor could not determine when he might be liable for infringement by equivalents.<sup>77</sup>

This statement, albeit dicta, was the first indication by the CAFC that the doctrine of equivalents might not be regularly available to all who assert it.<sup>78</sup> Since the *London* decision, the CAFC has suggested in numerous other cases that equities should play a role in the availability of the doctrine of equivalents.<sup>79</sup> At least five CAFC judges have cited Judge Lourie's statement with approval.<sup>80</sup>

The second issue in *Hilton Davis* was whether judges must apply the doctrine of equivalents at the plaintiff's request, or whether they may use their discretion based on the circumstances of the case.<sup>81</sup> Some CAFC judges clearly believe that the doctrine of equivalents

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75. 946 F.2d 1534 (Fed. Cir. 1991).

76. *Id.* at 1538. The debate culminated in the inclusion of this issue among those to be briefed in *Hilton Davis*. See *supra* note 74. Judge Lourie emphatically affirmed a summary judgment for the defendant where certain claims limitations in the patented system for securing hanging clothes in garment bags were found to be entirely absent in the accused device. *London*, 946 F.2d at 1540.

77. *London*, 946 F.2d at 1538.

78. Gartman, *supra* note 73, at 302.

79. See, e.g., *Valmont Indus. v. Rienke Mfg.*, 983 F.2d 1039 (Fed. Cir. 1993); *American Home Prods. Corp. v. Johnson & Johnson*, 25 U.S.P.Q.2d 1954 (Fed. Cir. 1992) (non-precedential); *Illinois Tool Works v. Rawlplug Co.*, 975 F.2d 868 (Fed. Cir. 1992) (table, text at 1992 U.S. App. LEXIS 17190) (non-precedential); *Shat-R-Shield v. Trojan, Inc.*, 968 F.2d 1226 (Fed. Cir. 1992) (table, text at 1992 U.S. App. LEXIS 23616) (non-precedential); *Charles Greiner & Co. v. Mari-Med Mfg. Co.*, 962 F.2d 1031 (Fed. Cir. 1992); *Extrel FTMS v. Bruker Instr.*, 22 U.S.P.Q.2d 1945 (Fed. Cir. 1992) (non-precedential); *Slimfold Mfg. v. Kinkead Indus.*, 932 F.2d 1453 (Fed. Cir. 1991).

80. *International Visual Corp. v. Crown Metal Mfg. Co.*, 991 F.2d 768, 774 (Fed. Cir. 1993) (Lourie, J., concurring); *Charles Greiner & Co. v. Mari-Med Mfg., Inc.*, 962 F.2d 1031, 1036 (Fed. Cir. 1992) (Rader, J.); *Extrel FTMS, Inc. v. Bruker Instr., Inc.*, 22 U.S.P.Q.2d 1945, 1948 (Fed. Cir. 1992) (non-precedential) (Rich, J.); *American Home Prods. Corp. v. Johnson & Johnson*, 25 U.S.P.Q.2d 1954, 1956 (Fed. Cir. 1992) (non-precedential) (Plager, J.); and *Shat-R-Shield, Inc. v. Trojan, Inc.*, Nos. 91-1388, 91-1389, 1992 U.S. App. LEXIS 9860, at \*4 (Fed. Cir. May 1, 1992) (Nies, J.); see also Gartman, *supra* note 73, at 305 (indicating additional approval by Judge Michel).

81. See questions posed on rehearing, *supra* note 74.

should be available only when warranted by equitable considerations.<sup>82</sup> Judge Plager summarized this position, stating, "[T]he doctrine of equivalents is not an automatic second prong to every infringement charge. It is an equitable remedy available only upon a suitable showing."<sup>83</sup> Other judges have also sought to establish that *Graver Tank* provides authority for equitable limitations on the doctrine of equivalents. In *Valmont Industries v. Rienke Manufacturing*,<sup>84</sup> Judge Rader referred to the Supreme Court's desire to prevent an "unscrupulous copyist" from escaping infringement by minor variations as "elucidat[ing] both the purpose of the doctrine and the type of conduct which triggers its application."<sup>85</sup> In *International Visual Corp. v. Crown Metal Manufacturing Co.*,<sup>86</sup> the panel stated that the Supreme Court in *Graver Tank* had accounted for "instances in which the function/way/result tests may be satisfied, but the facts may not justify the application of the doctrine of equivalents."<sup>87</sup> Strenuous arguments have been raised on both sides of this question, with the argument often depending on whether the person making it represents patent plaintiffs or defendants.

### 1. Arguments for Equitable Threshold

Encouraging inventors to design around patents is one of patent law's most important goals, a goal that is fully supported by the Federal Circuit.<sup>88</sup> By identifying slight improvements in patents that only just escape the language of the claims, inventors make small, incremental advances in technology that are critical to long-term progress. These smaller improvements are far more attainable than

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82. See *supra* note 80 for list of cases.

83. *American Home Prods.*, 25 U.S.P.Q.2d at 1956.

84. 983 F.2d 1039 (Fed. Cir. 1993).

85. *Id.* at 1043.

86. 991 F.2d 768 (Fed. Cir. 1993).

87. *Id.* at 774. Judges Nies, Lourie, and Clevenger issued the opinion *per curiam*. See also Donald R. Dunner & J. Michael Jakes, *The Equitable Doctrine of Equivalents*, 75 J. PAT. & TRADEMARK OFF. SOC'Y 857, 861 (1993) (*Graver Tank* involved copying rather than independent invention and supports application of equitable considerations.).

88. *Slimfold Mfg.*, 932 F.2d at 1457 ("Designing around patents is, in fact, one of the ways in which the patent system works to the advantage of the public in promoting progress in the useful arts, its constitutional purpose."); *Atlanta Motor Accessories v. Saratoga Techs.*, 33 F.3d 1362, 1364 (Fed. Cir. 1994) ("This is a clear case of an effort to design around plaintiff's patent and the realistic issue is whether the effort succeeds," arguing by implication that successfully designing around a patent's claims should not invoke infringement by equivalents); *Dolly, Inc. v. Spalding & Evenflo Cos.*, 16 F.3d 394, 400 (Fed. Cir. 1994) ("Moreover, Evenflo appropriately designed around the claimed invention. The propriety of Evenflo's conduct lies in its creation of a chair substantially outside the metes and bounds of the invention as expressed in the claims and relied upon by the public.").

major leaps that vastly outstrip existing technology. Making equivalents universally available to infringement plaintiffs discourages designing around patents. If inventors cannot be certain that staying outside the language of claims protects them from infringement actions, they will not risk modest advances. Technological progress is thwarted as a result. This result would directly contravene the constitutional purpose of the patent system, which is to "promote the progress of . . . the useful arts."<sup>89</sup>

Additionally, the Patent Act clearly sets out the protection given to patentees, and absent compelling equities, plaintiffs should be confined to the statutory protections. Judge Lourie echoed these sentiments in *London*.<sup>90</sup> Another commentator agreed: "The bottom line is that unless there are other factors which justify the intervention of equity, patent owners, like other litigants, should be forced to rely on remedies set forth in the statutes."<sup>91</sup>

## 2. Arguments Against Equitable Threshold

An equitable threshold for the doctrine of equivalents could result in different treatment for creators of identical ostensibly infringing devices, depending on whether they arrived at the creation independently or by copying the patent. "If a court is allowed to take into account the morality of the defendant . . . two purported infringers may have different fates for making identical gadgets."<sup>92</sup> Proponents of this view worry that an imitator might avoid having conduct deemed inequitable merely by obtaining a good faith opinion of counsel, and by using the opinion as evidence that he believed he was not infringing.<sup>93</sup>

The other arguments advanced in favor of keeping the doctrine of equivalents open to all plaintiffs amount to little more than statements of preference for patentees' interests over the public's. These arguments include claims that the doctrine is only "equitable" if it is available to all patentees, not just those with the equities on their side.<sup>94</sup> It is also argued that satisfaction of the *Graver Tank* function/result test should create a rebuttable presumption that the doctrine of equivalents applies, forcing the defendant to show

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89. U.S. CONST. art. I, § 8, cl. 8.

90. 946 F.2d at 1538.

91. Gartman, *supra* note 73, at 306.

92. Peter Blackman, *Doctrine of Equivalents*, N.Y. L.J., July 21, 1994, at 5; see also Smith, *supra* note 50.

93. Blackman, *supra* note 92, at 5.

94. Smith, *supra* note 50, at 916.

independent creation or the absence of copying.<sup>95</sup> Both approaches represent a choice to favor plaintiffs in infringement actions at the cost of injecting uncertainty as to what conduct would constitute infringement.

### B. *The Possible Form of an Equitable Threshold*

Any equitable threshold should clearly define the equitable factors to be considered. Judge Lourie identified four possible factors in *International Visual Corp.*:

- (1) whether the accused infringer was an unscrupulous copyist or, alternatively, someone who developed her product through independent research;
- (2) the closeness of the accused product to the claim language;
- (3) whether the patented invention was pioneering; and
- (4) whether the allegedly equivalent subject matter had been disclosed but not claimed in the patent application.<sup>96</sup>

The first factor distinguishes between an inventor who seeks to profit from another's patent by making minor changes to escape patent liability, and one who seeks to advance technology through his own efforts. Of the four factors, only this one considers the state of mind of the alleged infringer. As such, this is the only factor that would depend upon credibility of witnesses; the others could be decided with reference to the patent itself and the state of the art in the field.

The second factor measures the qualitative degree of equivalence. It is a check on uncontrolled expansion of the doctrine of equivalents, and forces courts to consider whether the new invention is a significant departure from the patented one.

The third factor grants a higher degree of protection to a "pioneering"<sup>97</sup> invention than to one that was derivative of existing technology. This factor rewards inventors who pursue major advances in technology by broadening their protection on the basis that near-equivalents of such advances are unlikely to be created by entirely independent effort.

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95. Cary W. Brooks, *Equitable Triggers for Invoking the Doctrine of Equivalents*, 76 J. PAT. & TRADEMARK OFF. SOC'Y 220, 224 (1994).

96. 991 F.2d at 774-75.

97. A "pioneering" invention covers "a function never before performed, a wholly novel device, or one of such novelty and importance as to mark a distinct step in the progress of the art, as distinguished from a mere improvement or perfection of what had gone before." *Boyden Power-Brake Co. v. Westinghouse*, 170 U.S. 537, 561-62 (1898). Examples of pioneering inventions include the sewing machine, the electrical telegraph, and the telephone. *Id.* at 562.

The fourth factor prevents a patentee from gaining protection for broad subject matter that is not included in the material submitted to the Patent Office for examination. Thus, this factor weighs against a patentee who disclosed the technology used in the accused invention in his patent application, but did not include it in the claims for that invention. This consideration of technology that is disclosed but not claimed is more appropriate to the application of the doctrine of equivalents than to its availability. The fact that the accused invention was disclosed, but not claimed, should not render equivalents analysis unavailable, nor should the absence of disclosure strengthen availability. Instead, courts should decline to grant any weight to the disclosure of the accused invention in the patent application when considering if the accused invention is an equivalent.

As an alternative to determining if the alleged equivalent was disclosed, courts should consider whether the technology was foreseeable at the time the patent was issued. Disclosure alone reflects merely the quality of patent drafting. It does not differentiate between a patentee who inadvertently failed to claim something and one who was unable to foresee the future technology in question. Put simply, "future advances cannot be known at the time a patent application is filed, [so] it would be impossible to describe and claim them."<sup>98</sup> The inclusion of this factor would cause courts to consider the foreseeability of the alleged infringing invention at the time the patent was issued. Nondisclosure of foreseeable applications would weigh against application of the doctrine of equivalents. Conversely, the fact that an invention became possible only through subsequent technological advances would weigh in favor of equivalents analysis.

The fair use doctrine of copyright law is an example of an equitable doctrine evolving into statutory law. Fair use began as an equitable doctrine, and ultimately was codified in the 1976 revisions to the Copyright Act.<sup>99</sup> The statute specifies four non-exclusive factors courts should examine in deciding a fair use question.<sup>100</sup> The fair

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98. Larson, *supra* note 55, at 27; see also Craane, *supra* note 35, at 142.

99. 17 U.S.C.A. § 107 (West 1996).

100. The factors include:

- (1) the purpose and character of the use, including whether such use is of a commercial nature or is for nonprofit educational purposes;
- (2) the nature of the copyrighted work;
- (3) the amount and substantiality of the portion used in relation to the copyrighted work as a whole; and
- (4) the effect of the use upon the potential market for or value of the copyrighted work.

use factors could serve as a model for the development of a statutory doctrine of equivalents that would establish a test based on equitable factors for whether infringement by equivalents analysis is available in a particular case.

### C. *The Hilton Davis Opinions*

A narrow majority of the CAFC rejected an equitable threshold requirement in *Hilton Davis*.<sup>101</sup> The court split 7-5, with a per curiam opinion supported by a concurrence from Judge Newman. The dissenting judges—Archer, Rich, Nies, Plager, and Lourie—included four of the five who supported the assertion in *London* that there should be limitations on the application of the doctrine of equivalents.<sup>102</sup>

The patent at issue in *Hilton Davis* described a process for ultrafiltration, a system of purifying food dyes through osmosis.<sup>103</sup> In Claim 1 of the patent, two of the stated parameters of the process were that it would operate at pressures of between 200 and 400 p.s.i., and that it would occur at a pH of "from approximately 6.0 to 9.0."<sup>104</sup> Warner-Jenkinson's process occurred at pressures in the range of 200 to 500 p.s.i. and a pH of approximately 5.0.<sup>105</sup>

At trial, the jury found infringement based on the doctrine of equivalents.<sup>106</sup> The CAFC affirmed the jury's findings. According to the court, "[A] finding of infringement under the doctrine of equivalents requires proof of *insubstantial differences* between the claimed and accused products or processes."<sup>107</sup> The court found substantial evidence to support the finding that the differences in pressure and pH (among others) were insubstantial.<sup>108</sup>

According to the CAFC, a finding of infringement under the doctrine of equivalents requires "insubstantial differences" in addition to the *Graver Tank* function/way/result test.<sup>109</sup> The function/way/result test, according to the court, is part of the process of

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A use that is "fair" based on these factors is not an infringement of copyright. *Id.* For a discussion regarding the equitable origins of fair use, see *Harper & Row, Publishers v. Nation Enterprises*, 471 U.S. 539 (1985).

101. 62 F.3d at 1522.

102. See *supra* note 80 and accompanying text.

103. *Hilton Davis Chem. Co.*, 62 F.3d at 1515.

104. *Id.* at 1515.

105. *Id.*

106. *Id.*

107. *Id.* at 1521-22 (emphasis added).

108. *Id.* at 1524-25.

109. *Id.* at 1521; see questions posed on rehearing, *supra* note 74.

finding insubstantial differences; often, but not always, it is sufficient.<sup>110</sup> In the CAFC's framework, evidence of copying or designing around would be used to create inferences regarding the substantiality of differences between claimed and accused products, not to evaluate the availability of the doctrine.

The CAFC undermined its own position by attempting to relegate the question of whether the defendant was a pirate to an evidentiary question. "When an attempt to copy occurs, the fact-finder may infer that the copyist, presumably one of some skill in the art, has made a fair copy, with only insubstantial changes."<sup>111</sup> The court continued, however, stating that when "a competitor becomes aware of a patent, and attempts to design around its claims, the fact-finder may infer that the competitor, presumably one of some skill in the art, has designed substantial changes into the new product in order to avoid infringement."<sup>112</sup> These statements make intent part of the analysis, but for the wrong reason. According to the majority, intent matters only because it can be used to determine how close the accused device is to the patented one. The majority leaps past intent as an equitable matter, which is significant standing alone, and makes it substantive evidence of infringement.<sup>113</sup>

One reason for rejecting the equitable threshold is that "intent is not an element of infringement."<sup>114</sup> Yet, the court would use intent itself as evidence of whether two products are so similar that their differences become insubstantial. In essence, the majority used the same equitable factors some judges would use as a threshold to determine the merits of the case. Conflating these equitable considerations into the question of infringement itself muddies the distinction between actual similarity of products—the existence of equivalency—and the need for relief to produce equitable results. The loss of this distinction increases the number of cases in which courts must consider infringement by equivalents because there is no mechanism to exclude the claim if raised by plaintiffs, regardless of the factual circumstances. Simultaneously, the loss deprives courts of a clear means to analyze whether an infringement by equivalents has occurred.

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110. *Id.* at 1518.

111. *Id.* at 1519.

112. *Id.* at 1520.

113. Intent to copy indicates infringement; intent to design around indicates non-infringement; and independent development (absence of intent relative to the patent) has no probative effect. See Ronald S. Laurie & Peter P. Tong, *Federal Circuit Revises 'Equivalents' Principle*, NAT'L L. J., Oct. 23, 1995, at C42.

114. *Hilton Davis Chem. Co.*, 62 F.3d at 1520.

The majority and dissent also engaged in a vigorous debate over whether or not the doctrine of equivalents finds a basis in the Patent Act. Both agreed that the historical practice was for courts to examine whether the accused device was the same as,<sup>115</sup> or equivalent to,<sup>116</sup> the device described in the patent specification.<sup>117</sup> The majority focused on the current statutory definition of infringement,<sup>118</sup> observing that the statute does not refer to claims as the basis for infringement analysis.<sup>119</sup> Consequently, the majority asserted that the law of infringement has not changed.<sup>120</sup> However, the case it cited for this proposition dealt only with direct infringement.<sup>121</sup> The dissenters made the stronger argument that, by introducing as a requirement claims that circumscribe the scope of the patent, Congress suggested that infringement outside the claims must be based on judicial powers of equity rather than the statute itself.<sup>122</sup> Congress must have meant the claims requirement to mean something. If courts continue to allow infringement actions against devices that are outside the claims on the same terms as actions for infringement within the claims, the claims requirement is significantly undermined.

Both the courts and the inventive community would benefit if Congress made the statute explicit. This could be done either by defining infringement to include making, using, or selling the invention or its equivalent,<sup>123</sup> or by following the model of the fair use doctrine of copyright law by codifying a series of equitable factors that may be applied to determine whether courts may consider infringement by equivalents.<sup>124</sup>

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115. For direct infringement.

116. For infringement under the doctrine of equivalents.

117. *Hilton Davis Chem. Co.*, 62 F.3d at 1526. Prior to 1870, claims were not included in the patent, so the specification was the only way to determine the scope of the protected invention. *Id.* at 1526; *id.* at 1537 (Plager, J., dissenting).

118. 35 U.S.C.A. § 271 (West 1984 & Supp. 1995).

119. *Hilton Davis Chem. Co.*, 62 F.3d at 1526.

120. *Id.*

121. *Aro Mfg. Co. v. Convertible Top Replacement Co.*, 365 U.S. 336 (1961).

122. *Hilton Davis Chem. Co.*, 62 F.3d at 1560 (Nies, J., dissenting).

123. Thus validating the majority's view that the doctrine of equivalents is rooted in the statute.

124. Thus validating the dissenters' view that the doctrine of equivalents is rooted in the court's inherent power to do equity.

#### IV. THE ROLE OF JURIES IN EQUIVALENTS CASES

*Hilton Davis* also raised the issue of what the relative roles of judge and jury should be in deciding infringement by equivalents.<sup>125</sup> This issue affects several aspects at trial, including the determination of whether the equitable threshold has been met and how the function/way/result equivalents analysis is conducted.

##### A. *Interpreting Claims As a Matter For the Judge*

The CAFC recently decided that interpretation of claim language in cases alleging literal infringement is solely a legal question for the judge.<sup>126</sup> The decision in *Markman* showed that the CAFC is willing to severely limit the role of juries in infringement cases. In her dissent, Judge Newman said the decision "eliminated" the jury.<sup>127</sup> In his concurrence, Judge Mayer said the case was about "ejecting juries from infringement cases."<sup>128</sup>

The patent at issue in *Markman* was for a system that tracks articles through the dry-cleaning process, thereby improving financial record keeping and customer service.<sup>129</sup> The patented system could identify the location of any article at any point in the process; the allegedly infringing system only tracked aggregate transaction totals.<sup>130</sup> The patentee argued that the term "inventory" in the patent specification included not only articles of clothing but also cash amounts of inventory.<sup>131</sup> Under this construction, the defendant's device might infringe, although it was undisputed that if inventory meant only articles of clothing there would be no infringement.<sup>132</sup>

The jury accepted the testimony of the patentee and his patent attorney as to the meaning of inventory, and returned a finding of infringement.<sup>133</sup> The judge granted the defendant's motion for judgment as a matter of law, dismissing the jury's finding.<sup>134</sup> On appeal, the CAFC, en banc, held that the judge was correct to treat

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125. See questions posed on rehearing, *supra* note 74. Most of the oral argument in *Hilton Davis* was devoted to this issue. *Argument, supra* note 33.

126. *Markman v. Westview Instruments*, 52 F.3d 967, 979 (Fed. Cir. 1995), *cert. granted*, 116 S. Ct. 40 (U.S. Sept. 27, 1995) (No. 95-26).

127. *Id.* at 1000.

128. *Id.* at 989.

129. *Id.* at 971.

130. *Id.* at 973.

131. *Id.* at 973-74.

132. *Id.* at 974.

133. *Id.* at 973.

134. *Id.*

patent construction as a matter of law, and affirmed the judge's construction of the particular claim.<sup>135</sup>

The holding that patent claims are fully integrated written instruments to be constructed by the court had a solid majority behind it, with eight judges joining the majority opinion and only two judges disputing the holding.<sup>136</sup> The CAFC rejected the comparison of patent claims to contracts, preferring to treat them like statutes.<sup>137</sup> The CAFC gave several rationales for its choice of analogy. First, in interpreting patents, courts are defining the federal legal rights created by the patent document.<sup>138</sup> Second, a patent is unlike a contract in that it does not derive its meaning from the intent of the parties. Hence, there can be no inquiry into the subjective intent behind a patent.<sup>139</sup> Third, patents are interpreted based on the public record—the patent and prosecution history, analogous to the statute and legislative history. Patent examiners, like legislators and their staffs, do not testify at trial as to their intended meanings.<sup>140</sup>

The contract/statute distinction becomes critical when determining the admissibility of extrinsic evidence for patent interpretation. Treating a patent like a statute means that the only appropriate use of evidence outside the public record is to assist a court unfamiliar with the terminology used. No inquiry into intent is undertaken, leaving a jury with no evidence to weigh.

In the context of patent infringement, the power to interpret claims constitutes virtually absolute power over the case. As Judge Mayer said in his *Markman* concurrence, "to decide what the claims mean is nearly always to decide the case."<sup>141</sup> The CAFC has unequivocally granted that power to judges in literal infringement cases.

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135. *Id.* at 970-71.

136. The majority consisted of Chief Judge Archer and Judges Rich, Nies, Michel, Plager, Lourie, Clevenger, and Schall. Judge Rader concurred in the result but argued that it was not necessary to reach the issue of who properly would construct claims. *Id.* at 998. Judge Mayer concurred in the result but argued vigorously against the holding on claim construction, *id.* at 989-98, and Judge Newman dissented. Judge Bryson did not participate in the case.

137. *Id.* at 987.

138. *Id.* at 970.

139. *Id.* at 985.

140. *Id.* at 986.

141. *Id.* at 989.

### B. *The Impact of Markman On Equivalents Cases*

The strong statement of *Markman* suggests that judges might receive similar authority in equivalents cases. The question of whether a device accused of infringement performs the same function, in the same way, for the same result as the patented device appears factual, but it relies upon construction of the original patent to determine whether the two are the "same." As a practical matter, once a judge decides what the patent means for purposes of comparison, a jury's power to decide the ultimate issue means little.

One analyst has suggested that the right to jury trial in equivalents cases would survive based on overlapping factual issues between the function/way/result analysis and "issues which must be sent to the jury on literal infringement."<sup>142</sup> Now that the latter category has been severely curtailed, however, the right to a jury in equivalents cases is in doubt.

There are two stages in an equivalents case where the roles of judge and jury become problematic. The first stage is the equitable threshold (if one applies). Some of the possible equitable factors, including intent to copy, are factual questions of a nature that might be triable to a jury.<sup>143</sup> Nevertheless, a right to jury trial on these factors is not guaranteed. Because there are no overlapping factual issues between the equitable threshold analysis and the ultimate question of infringement, there might not be a Seventh Amendment right to jury trial on the threshold issue.<sup>144</sup>

However, if there is no jury trial available on the equitable threshold, a mechanism must be designed to clearly separate the threshold issues from those issues that a jury will decide in later stages of the trial. Otherwise, issues will be tried twice. Equitable issues that are triable to a jury must be insulated from subsequent issues that may be prejudiced by the jury's consideration of them, as hearing evidence on some equitable factors might prejudice later findings on infringement issues.<sup>145</sup> It is conceivable that two juries could be required, one to try the equitable threshold issues, and another to try the infringement issues.

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142. Gartman, *supra* note 73, at 306.

143. See, e.g., *Argument*, *supra* note 33.

144. *Id.* To the extent that questions of claim interpretation are relevant in deciding equitable factors (for example, the closeness of the accused product to the claim language), the CAFC's decision in *Markman* dictates that there is no right to jury trial on those factors.

145. For example, a jury asked to consider whether there was intentional copying might be prejudiced in favor of a later finding of infringement, even if it finds there was no intent.

While one commentator suggested a "gate-keeping" role for the judge, his system would maintain a right to jury trial on the equitable question of infringement by equivalents.<sup>146</sup> The factors that would allow the judge to keep the trial from the jury are all substantive questions relating to patent validity and infringement,<sup>147</sup> not equitable issues bearing on the availability of equivalents analysis. Thus, under this system, questions of equity, were they to be decided, would still go to the jury. In effect, the proposal begs the question.

In the oral argument of *Hilton Davis*, the defendant's attorney made a suggestion that Judge Michel characterized as a two-part trial: a bench trial on the availability of the doctrine of equivalents followed by a jury trial on infringement.<sup>148</sup> Judge Michel noted the potential Seventh Amendment problems arising from overlapping issues of fact.<sup>149</sup> If one issue related to the equitable threshold and infringement, it could not be decided once by a judge, and again later by a jury.<sup>150</sup> Because *Markman* limits the issues that must go to the jury, Judge Michel's concern seems less important. The potentially overlapping issues of claim interpretation are squarely within the province of the judge to decide. As a result, the solution may be to limit the jury's role in the infringement stage of the trial, rather than limiting the judge's role in the threshold stage.

### C. The Role of Juries Should Be Limited Further

The CAFC, in *Markman*, showed a willingness to limit the role of juries in infringement cases.<sup>151</sup> Lamentably, it failed to push further along that path in *Hilton Davis*. The majority in *Hilton Davis* attempted to close the door on removing equivalents decisions from juries by emphasizing the statement in *Graver Tank* that infringement under the doctrine of equivalents is a question of fact.<sup>152</sup> However, the Court in *Graver Tank* was concerned with the standard of review, not the locus of decision-making. In fact, the trial in *Graver Tank* was to a judge, not a jury.

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146. Blackman, *supra* note 92, at 5. The proposed system is similar to the hypothetical claims analysis discussed *supra* part II.B.

147. Prior art, prosecution history, estoppel, and enablement.

148. *Argument*, *supra* note 33, at 443.

149. *Id.*

150. *Id.*

151. See *supra* part IV.A.

152. *Hilton Davis Chem. Co. v. Warner Jenkinson Co.*, 62 F.3d 1512, 1543 (Fed. Cir. 1995) (Plager, J., dissenting), *cert. granted*, 64 U.S.L.W. 3574 (U.S. Feb. 26, 1996) (No. 95-728).

In his dissent in *Hilton Davis*, Judge Plager pointed out that the characterization of a question as one of fact does not necessarily mean that it is triable to a jury.<sup>153</sup> He noted several types of equitable actions in which judges decide factual issues.<sup>154</sup> The majority did not address the significance of the *Markman* decision for equivalents analysis. However, *Markman* severely limited the scope of the constitutional right to jury trial in patent cases. If *Hilton Davis* is seen as protecting the right to jury trial in equivalents cases, it could have the effect of making patent plaintiffs even more likely to seek a remedy through equivalents because their cases will be heard by juries, whereas under *Markman*, a literal infringement claim might not be.<sup>155</sup> If the Supreme Court affirms *Markman*,<sup>156</sup> it will bolster the argument that infringement by equivalents under modern claiming practice is different from the infringement cases for which a right to jury trial existed when the Seventh Amendment was adopted.

As a matter of policy, the need to rein in juries in equivalents cases is manifest. In his dissent in *Hilton Davis*, Judge Plager pointed out that "the reality is that the doctrine of equivalents is a virtually uncontrolled and unreviewable license to juries to find infringement if they so choose."<sup>157</sup> Given the freedom to do so, and unfettered by clear guidelines, jurors—who surveys show strongly favor patentees<sup>158</sup>—are prone to finding infringement given any opportunity. The failure to impose even a judicial threshold—or preferably to make equitable determinations of infringement by equivalents solely a matter for judges—allows jurors to make equitable decisions properly left to the judiciary.

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153. *Id.* at 1543.

154. *Id.* Included were the rights of trust beneficiaries, mistake and fraud in contract disputes, and domestic relations matters.

155. See also Laurie & Tong, *supra* note 113, at C42 (If a judge reaches a narrow claim interpretation under *Markman*, a plaintiff will seek a jury trial for a finding of infringement by equivalents under *Hilton Davis*.); William C. Rooklidge, *Federal Circuit Unsettles Doctrine of Equivalents*, NAT'L L. J., Oct. 23, 1995, at C43, C45 (*Hilton Davis* "virtually ensures [plaintiffs] can get patent infringement claims before a jury.").

156. Certiorari was granted on the question, "In a patent infringement action for damages, is there a right to a jury trial under the Seventh Amendment of the United States Constitution of genuine factual disputes about the meaning of a patent?" 64 U.S.L.W. 3201; see also *Court Will Consider Right to Jury Trial on Patent Claim Construction*, 50 PAT., TRADEMARK & COPYRIGHT J. 607 (Sept. 28, 1995).

157. 62 F.3d at 1538.

158. Stephen B. Judlowe & Lee A. Goldberg, *Jury Trials* (PLI Patents, Copyrights, Trademarks, and Literary Property Course Handbook Series No. G4-3929, Nov.-Dec. 1994), available in Westlaw, 397 PLI/Pat 173, at \*3.

Allowing lay juries to decide patent cases also raises significant concerns about a court's ability to correctly analyze and decide highly complex technical issues. Nonetheless, the Seventh Amendment guarantees the right to a jury in ordinary infringement actions.<sup>159</sup> Equivalents actions, however, are equitable in nature, and may not fall within the range of the Seventh Amendment's guarantees. Because infringement by equivalents is an equitable cause of action created by the courts, courts arguably have the right to structure the action as they see fit—including deciding cases without a jury.

Allowing untrained juries to decide infringement without even the relatively clear boundaries of patent claims to guide them invites erratic and unpredictable outcomes based on emotion rather than reason.<sup>160</sup> Findings of infringement by equivalents should be limited to those cases where the equities clearly demand them, and courts should make those decisions.

## V. CONCLUSION

The doctrine of equivalents is at the end of a transitional phase in substantive content, with the mode of analysis used to determine infringement by equivalents well established. The CAFC has set a clear direction by affirming the element-by-element comparison of devices and encouraging plaintiffs to hypothesize claims they could have made validly at the time of prosecution, which are now infringed by the defendant's device.

At the same time, the doctrine of equivalents is undergoing a fundamental re-evaluation of its role in the patent system. *Hilton Davis* purported to end the CAFC's internal debate over whether to continue favoring plaintiffs by making the doctrine of equivalents available in all cases without regard to equitable factors, but the bare plurality of the holding and pointed dissents suggest that the debate is not over. Indeed, it has now moved to the Supreme Court.

Perhaps even more important, the decisions in *Markman* and *Hilton Davis* present conflicting views of the role of juries in equiva-

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159. In the two centuries since the adoption of the Seventh Amendment, the amount of scientific information potentially at issue in patent cases has exploded. Even many highly educated and technically trained persons do not understand the issues involved in areas like bio-engineering, where much of the current patent practice lies. The ability of an untrained jury to provide justice in these circumstances is questionable. It might be appropriate to consider impaneling juries of technically qualified persons in patent actions, but the constitutional ramifications of such a step are beyond the scope of this Comment.

160. For a debate on whether jury trials in complex patent cases implicate constitutional due process concerns, see Judicial Conference - Federal Circuit, 104 F.R.D. 207, 370 (1984).

lents cases. Judge Newman said the *Markman* decision "not only raises a constitutional issue of grave consequence, but the court creates a litigation system that is unique to patent cases."<sup>161</sup> That may be its intent—to remove juries from the highly technical aspects of patent cases. Such a step invites Supreme Court review for its vast implications for the patent system—and indeed, review has been granted.

At the same time *Markman* limited the jury's role, though, *Hilton Davis* appeared to preserve it for equivalents cases. The combined effect of the two cases is to turn the system on its head by giving juries a greater role in an equitable cause of action than in one created by statute.

It has been more than forty years since the Supreme Court last spoke on the doctrine of equivalents in *Graver Tank*. It agreed to review the closely divided *Hilton Davis* decision, and its guidance now could do much to bring equanimity to the turbulent area of equivalents.

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161. *Markman v. Westview Instruments*, 52 F.3d 967, 999 (Fed. Cir. 1995) (Newman, J., dissenting), *cert. granted*, 116 S. Ct. 40 (U.S. Sept. 27, 1995) (No. 95-26).