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# JUDGE VERSUS JURY ON THE SCALES OF JUSTICE: 35 U.S.C. § 112, ¶ 6 “EQUIVALENTS” IN THE BALANCE

ROBERT N. YOUNG\*

*“Certainly,” said Alice.*

*“And only ONE for birthday presents, you know. There’s glory for you!”*

*“I don’t know what you mean by ‘glory,’” Alice said.*

*Humpty Dumpty smiled contemptuously. “Of course you don’t—till I tell you. I meant ‘there’s a nice knock-down argument for you!’”*

*“But ‘glory’ doesn’t mean ‘a nice knock-down argument,’” Alice objected.*

*“When I use a word,” Humpty Dumpty said in rather a scornful tone, “it means just what I choose it to mean—neither more nor less.”*

*“The question is,” said Alice, “whether you can make words mean so many different things.”*

*“The question is,” said Humpty Dumpty, “which is to be master—that’s all.”<sup>1</sup>*

## INTRODUCTION

Although Alice and Humpty Dumpty certainly were not talking about patent law,<sup>2</sup> Humpty Dumpty’s sentiment rings true in many of the recent watershed cases discussing fundamental patent doctrines: “which is to be master—that’s all.” This very question has been a pivotal issue in recent patent cases before the United States Supreme Court (Supreme Court or Court).<sup>3</sup>

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\* J.D. Candidate, June 2000.

1. LEWIS CARROLL, *THROUGH THE LOOKING GLASS AND WHAT ALICE FOUND THERE* 190 (R.L. Green ed., 1971).

2. *Id.* In fact, Alice and Humpty-Dumpty were discussing Humpty Dumpty’s contention that un-birthdays were better because they occur 364 times a year as opposed to birthdays occurring once per year. *Id.*

3. See, e.g., William R. Zimmerman, *Unifying Markman and Warner-Jenkinson: A Revised Approach To The Doctrine Of Equivalents*, 11 HARV. J.L. & TECH. 185, 186 (1997) (noting the importance of recent Supreme Court decisions on the future of patent practice); Kenneth R. Adamo, *Reconciling Section 112, ¶ 6 Literal Equivalents With The Doctrine Of Equivalents In The*

Whether a given issue should be a court-determined question of law or a jury-determined question of fact has also been a central theme in the recent jurisprudence of the Court of Appeals for the Federal Circuit (Federal Circuit).<sup>4</sup>

First, in perhaps the most critical patent case in recent memory, the Federal Circuit in *Markman v. Westview Instruments, Inc.*,<sup>5</sup> held, and the Supreme Court affirmed,<sup>6</sup> that the construction of a patent claim is an issue of law solely for the province of the court.<sup>7</sup> Shortly thereafter, the Supreme Court in *Hilton Davis*<sup>8</sup> deferred to an earlier decision of the Federal Circuit<sup>9</sup> that the determination of equivalence under the doctrine of equivalents is a question of fact.<sup>10</sup>

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*Wake Of Hilton Davis*, 489 PRACTISING L. INST.: PAT., COPYRIGHTS, TRADEMARKS, AND LITERARY PROP. COURSE HANDBOOK SERIES (PLI/PAT) 291, 297 (1997) (pointing out that the Supreme Court failed to decide the issue of whether application of the doctrine of equivalents is a judge or jury question); Robert P. Taylor & Celine T. Callahan, *The Doctrine Of Equivalents After Hilton Davis: Many Unanswered Questions*, 489 PLI/PAT 7, 11 (1997) (making note of the Supreme Court's refusal to address the issue of who determines equivalence under the doctrine of equivalents).

4. Victoria Slind-Flor, *Federal Circuit Judged Flawed*, NAT'L L.J., Aug. 3, 1998, at A16 (noting that the current "hot" issue before the Federal Circuit is what issues should be left for the jury to decide). See Barry S. Wilson, *Patent Invalidity And The Seventh Amendment: Is The Jury Out?* 34 SAN DIEGO L. REV. 1787, 1787 (1997) (noting the debate in patent law surrounding the propriety of juries in patent cases); Charles W. Bradley, *The Changing Role Of Juries In Patent Litigation*, 416 PLI/PAT 113, 121 (1995) (pointing out that the Federal Circuit has addressed the role of juries in most aspects of patent law including, construction of patent claims, patent validity, obviousness, and infringement under the doctrine of equivalents).

5. 52 F.3d 967 (Fed. Cir. 1995) (en banc); *aff'd* 517 U.S. 370 (1996).

6. 517 U.S. 370 (1996), *aff'g* 52 F.3d 967 (Fed. Cir. 1995) (en banc).

7. 52 F.3d at 977.

8. 62 F.3d 1512, 1512 (Fed. Cir. 1995). The Federal Circuit would need to revisit the decision en banc to reverse its holding. See *Texas American Oil Corp. v. United States Dep't of Energy*, 44 F.3d 1557, 1561 (Fed. Cir. 1995) (adopting precedent from the Temporary Emergency Court of Appeals and requiring hearing en banc for reversal); *Capital Elec. Co. v. United States*, 729 F.2d 743, 746 (Fed. Cir. 1984) (en banc) (adopting prior case law from the Court of Claims as precedent and holding that reversal of this precedent may only occur en banc). En banc review by the Federal Circuit is uncommon. Bruce Rubenstein, *Appeals Court Makes Precedent-Setting Patent Ruling*, CORP. LEGAL TIMES, Sept. 1998, at 26; Slind-Flor, *supra* note 4, at A16. En banc reversal by the Federal Circuit would require "special justification" to overcome the rule of *stare decisis*. *Patterson v. McLean Credit Union*, 491 U.S. 164, 164 (1989). Finally, the Supreme Court rarely reviews the substantive decisions of the Federal Circuit concerning patent matters. Slind-Flor, *supra* note 4, at A16; *CTS Corp. v. Piher Int'l Corp.*, 727 F.2d 1550, 1557 (Fed. Cir. 1984). These requirements pose a significant hurdle to reversal.

9. 62 F.3d at 1528.

10. 117 S. Ct. at 1043 (noting, in dicta, that the Federal Circuit's rationale for allowing the finder of fact to decide infringement under the doctrine of equivalents is supported by prior Supreme Court precedent).

While the *Markman* and *Hilton Davis* decisions have helped to settle many long-standing disputes in patent law,<sup>11</sup> these holdings have had the opposite effect on related patent doctrines. Particularly, the Federal Circuit and Supreme Court holdings in the *Markman* and *Hilton Davis* cases have completely unsettled the issue of whether an "equivalent" under 35 U.S.C. § 112, ¶ 6, is a question of law or one of fact.<sup>12</sup> This problem and its proposed resolution will be the focus of this Comment.

The Federal Circuit set the stage for the struggle over the determination of "equivalents" under 35 U.S.C. § 112, ¶ 6 with its now infamous footnote 8 in *Markman*:

*Palumbo v. Don-Joy Co.*, 762 F.2d 969, 974-975, 226 USPQ2d 5, 8 (Fed. Cir. 1985) also presented the issue of means-plus-function claim limitations under 35 U.S.C. § 112, ¶ 6. As that issue is not before us today, we express no opinion on the issue whether a determination of equivalents under § 112, ¶ 6 is a question of law or fact.<sup>13</sup>

Despite the Federal Circuit's express reservation in *Markman* whether the determination of § 112, ¶ 6 "equivalents" is a question of fact or law, the reasoning and holding in that case have engendered confusion surrounding the determination of "equivalents."<sup>14</sup> Further heightening the tension surrounding this issue<sup>15</sup> is the Federal Circuit's holding in *Hilton Davis* that the

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11. See Sutton et al., *Don't Miss The Mark, Man!: Recent Trends And Evidentiary Considerations In Markman Hearings*, 507 PLI/PAT 867, 871 (1998) (describing *Markman*'s effect of clarifying the rules surrounding claim interpretation); but see Margaret Cronin Fisk, *Confusion Follows '96 Landmark Patent Case*, NAT'L L.J., June 15, 1998, at A1 (criticizing the Supreme Court's decision in *Markman* as prolonging litigation and "creating chaos rather than certainty") (internal quotations omitted).

12. See, e.g., Sutton et al., *supra* note 11, at 890 (contending that the Supreme Court's language in *Hilton Davis* suggests that determination of § 112, ¶ 6, "equivalents" is a question of fact); Kenneth R. Adamo, *The Waiting At The Patent Bar Is Over—The Supreme Court Decides Hilton Davis*, 79 J. PAT. & TRADEMARK OFF. SOC'Y 431, 442 (1997) (suggesting that the Supreme Court's decision in *Hilton Davis* sanctioned the interpretation of equivalence under § 112, ¶ 6 as a question of fact for the jury to decide); Kevin R. Casey, *Means Plus Function Claims After Markman: Is Claim Construction Under 35 U.S.C. § 112, ¶ 6 A Question Of Fact Or An Issue Of Law?*, 79 J. PAT. & TRADEMARK OFF. SOC'Y 841, 847 (1997) (advocating the position that the Supreme Court's decision in *Markman* is controlling and that the determination of "equivalents" under § 112, ¶ 6 is a question of law).

13. *Markman*, 52 F.3d at 977.

14. See Casey, *supra* note 12, at 865 (stating that the determination of "equivalents" as a matter of law follows logically from the Supreme Court's *Markman* analysis).

15. See Adamo, *supra* note 12, at 434 (analogizing the Federal Circuit's decision in *Hilton Davis* to the interpretation of "equivalents" under § 112, ¶ 6); Sutton et al., *supra* note 11, at 889 (recognizing that the Supreme Court in *Hilton Davis* may view "equivalents" as a question of fact).

related determination of equivalence under the doctrine of equivalents is a question of fact.<sup>16</sup> After *Hilton Davis*, the Federal Circuit, en banc, revisited claim construction in the context of § 112, ¶ 6,<sup>17</sup> and once again reserved judgement on the issue of who determines “equivalents.”<sup>18</sup>

The definitive resolution of this issue is of paramount importance because it directly affects the right to a jury trial and concerns important Constitutional principles.<sup>19</sup> The issue of whether a judge or a jury decides what are § 112, ¶ 6 “equivalents” is becoming ever more important as the U.S. Patent and Trademark Office (USPTO) issues an increasing number of U.S. patents with claims which facially trigger § 112, ¶ 6.<sup>20</sup> Much of

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16. 62 F.3d 1512, 1525 (Fed. Cir. 1995) (citing to long-standing Supreme Court precedent which holds that infringement, either literal or under the doctrine of equivalents, is a question of fact).

17. *Cybor Corp. v. FAS Technologies, Inc.*, 138 F.3d 1448, 1456 (Fed. Cir. 1998) (en banc).

18. *Id.* at 1457 n.5 (reserving, in a footnote reminiscent of the Federal Circuit's footnote eight in *Markman*, the issue of whether equivalence under § 112, ¶ 6 is a question of law or fact).

19. Brian D. Coggio & Sandra A. Bresnick, *The Diminishing Role Of Juries Intellectual Property Litigation*, 2/97 METRO. CORP. COUNS. 15, 15 (1997) (noting increased usage of juries in patent trials and discussing the limitations on jury and Seventh Amendment rights in determining infringement after *Markman*); Kenneth R. Adamo, *Reforming Jury Practice In Patent Cases: Suggestions Towards Learning To Love Using An Eighteenth Century System While Approaching The Twenty-First Century*, 78 J. PAT. & TRADEMARK OFF. SOC'Y 345, 345-46 (1996) (discussing Seventh Amendment right to a jury trial in patent cases and how *Markman* has affected that right).

20. The following table demonstrates the trend of increasing number of patents issued which facially trigger § 112, ¶ 6.

this increase may be attributed to *In re Donaldson*,<sup>21</sup> which required the USPTO to follow the mandates of § 112, ¶ 6.<sup>22</sup> The Federal Circuit's directive limited the prior art which can be read on a § 112, ¶ 6 claim limitation and increased the likelihood of

Year	Total Number of Patents Issued <sup>o</sup>	Number of Patents Issued with at Least One Claim Facially Triggering 35 U.S.C. § 112, ¶ 6*			
		USPTO Web Site <sup>+</sup>	IBM Patent Server <sup>#</sup>	Westlaw (Dialog)	Lexis
1998	150,958	1809	2232	63,417	64,071
1997	113,641	1352	1768	50,995	50,481
1996	110,671	1306	1677	56,511	104,713
1995	102,298	1230	1600	57,111	53,210
1994	102,512	1488	1892	59,931	56,059
1993	98,959	1603	2022	58,422	55,734
1992	98,049	1502	1904	59,282	55,870
1991	96,908	1445	1823	58,972	56,564
1990	90,591	1248	1636	56,801	53,735
1989	95,682	1318	1673	57,716	57,321
1988	78,057	991	1273	48,159	47,248
1987	83,068	955	1259	53,601	52,128
1986	70,929	728	996	45,994	44,088
1985	71,740	714	983	45,230	43,649
1984	67,331	590	857	42,332	41,003
1983	56,943	494	719	35,190	33,963
1982	57,956	438	688	36,533	35,039
1981	65,864	530	876	40,523	39,171
1980	61,889	440	727	38,688	37,541

\* search string was "mean" or "means."

<sup>o</sup>U.S. PATENT & TRADEMARK OFFICE, TAF REPORT ISSUE DATES AND PATENT NUMBERS SINCE 1836 (1998).

<sup>+</sup>*U.S. Patent & Trademark Web Patent Database* (visited Mar. 28, 1999) <<http://www.uspto.gov/patft/index.html>>. The results presented in this graph were obtained on March 28, 1999 by means of Boolean string searches, using the search engine at <<http://www.uspto.gov>>. A copy of the string search text is on file with the author.

<sup>#</sup>*IBM Intellectual Property Network* (visited Mar.28, 1999) <<http://www.patents.ibm.com>>. The results presented in this graph were obtained on March 28, 1999 by means of Boolean string searches, using the search engine at <<http://www.patents.ibm.com/boolquery>>. A copy of the string search text is on file with the author.

Note that not all of these claims will trigger § 112, ¶ 6. See *infra* notes 51-57 and accompanying text for an overview of case law interpreting whether a given patent claim triggers 35 U.S.C. 112, ¶ 6.

21. 16 F.3d 1189 (Fed. Cir. 1994).

22. *Id.* at 1193. The Federal Circuit rejected the USPTO Commissioner's argument and pointed out that nowhere does § 112, ¶ 6 exempt the USPTO from statutory mandate in making a patentability determination. *Id.* The prior practice of the Patent and Trademark Office did not apply 35 U.S.C. § 112, ¶ 6 during examination of patent applications. *Id.* at 1194. Instead, the Patent and Trademark Office gave means-plus-function elements their broadest reasonable interpretation consistent with the specification. *Id.*

patent allowance on § 112, ¶ 6 claims.<sup>23</sup> This increase is reflected in the rising number of patent cases litigated, both before the District Courts and the Federal Circuit, involving the interpretation of "equivalents."<sup>24</sup> This trend is likely to continue as § 112, ¶ 6 claim limitations are becoming increasingly common in patents directed to the fields of electronic technology and applications involving computers and computer software.<sup>25</sup>

23. See William F. Lee & Eugene M. Paige, *Means Plus And Step Plus Function Claims: Do We Only Know Them When We See Them?*, 80 J. PAT. & TRADEMARK OFF. SOC'Y 251, 255 (1998) (pinpointing *In re Donaldson* as the start of a timeline showing increased usage of § 112, ¶ 6 claim limitations).

24. Lee & Paige, *supra* note 23, at 251.

Number of Cases Reported Involving the Litigation of Claims Interpreted Under § 112, ¶ 6 * Since the Inception of the Federal Circuit				
Year	District Courts (Lexis)	District Courts (Westlaw)	Federal Circuit (Lexis)	Federal Circuit (Westlaw)
1998	41	38	24	25
1997	37	35	19	20
1996	22	21	10	10
1995	15	15	9	8
1994	23	24	10	11
1993	16	17	7	7
1992	9	12	7	6
1991	7	7	6	7
1990	6	7	2	2
1989	8	6	3	5
1988	8	6	8	10
1987	3	3	8	7
1986	6	5	4	4
1985	2	3	5	5
1984	2	1	1	1
1983	1	1	2	2

\* search string was "means-plus-function" or "means plus function."

25. Casey, *supra* note 12, at 842; see, e.g., Gregory J. Maier & Bradley D. Lytle, *The Strategic Use Of Means-Plus-Function Claims*, 80 J. PAT. TRADEMARK OFF. SOC'Y 241, 244 (1998) (discussing using "means-plus-function" claims in an overall claim drafting strategy for advanced technology); Ronald S. Laurie, *Materials on Question 133: Patenting of Computer Software*, 489 PLI/PAT 253, 278 (1997) (discussing utilization of "means-plus-function" claims in software patents); R. Lewis Gable & Morey B. Wildes, *How to Prepare a Patent Protecting A Computer Implemented Invention: A Balancing Act Created By 35 U.S.C § 112, ¶ 6*, 489 PLI/PAT 183, 211 (1997) (emphasizing use of "means-plus-function" claims in patents claiming software to achieve expanded coverage); Garner et al., *Advanced Claim Drafting and Amendment Writing Workshop For Electronics and Computer-Related Subject Matter*, 501 PLI/PAT 229, 308-09 (1997) (discussing the importance of means-plus-function coverage for electronics claims); Robert C. Faber, *The Winning Mechanical Claim*, 464 PLI/PAT 19, 58 (1996) (discussing "means-plus-function" claims as the most efficient way to claim certain limitations); Lawrence Kass, *Computer Software Patentability and the Role of Means-Plus-Function Format In Computer Software Claims*, 15 PACE

The determination of § 112, ¶ 6 "equivalents" is related to both the pure legal issue of claim construction and the factual determination of equivalence under the doctrine of equivalents and thus falls somewhere between their divergent ideologies. Accordingly, this Comment will examine where the determination of "equivalents" falls within the framework set forth in the *Markman* and *Hilton Davis* decisions.

First, this Comment examines the analysis and history surrounding litigation of § 112, ¶ 6 claim limitations. Next, this Comment follows the Supreme Court's analysis in *Markman*, utilizing the familiar Seventh Amendment analysis, case precedent, relative interpretive skills of judges versus juries, and statutory policies to examine where determination of § 112, ¶ 6 "equivalents" falls on the legal issue/factual question spectrum. After weighing all of these factors, this Comment proposes that the determination of "equivalents" be resolved as a question of fact. Taking further note of a significant policy supporting the consistent application of patent laws, this Comment goes on to propose that the Federal Circuit set a clear precedent by endorsing the use of special verdicts or interrogatories to facilitate a jury's factual findings surrounding "equivalents."

## I. BACKGROUND OF PATENT LAW AND DEVELOPMENT OF FUNCTIONAL LIMITATIONS IN PATENTS

### A. *Foundation and Background of Patent Law*

Among Congress' enumerated powers under the Constitution is the power to "promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries."<sup>26</sup> Congress exercised this power to create patent legislation<sup>27</sup> which fosters innovation by granting inventors the "right to exclude others from making, using, offering for sale, or selling the invention"<sup>28</sup> for a period of 20 years from the date of the patent filing.<sup>29</sup>

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L. REV. 787, 791 (1995) (discussing Federal Circuit interpretation of "means-plus-function" limitations in computer software patents).

26. U.S. CONST. art. I, § 8, cl. 8. This section of the Constitution is commonly referred to as the "Patents Clause," but it also sanctions the creation of copyright protection.

27. 35 U.S.C. §§ 1-376 (1998).

28. 35 U.S.C. § 154(a)(1) (1998). Note that the patent owner is given the right to exclude others from making the claimed invention, not the right to make the claimed invention himself. *Id.*

29. 35 U.S.C. § 154(a)(2) (1995), which reads:

(2) Term.—Subject to the payment of fees under this title, such 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



In exchange for this limited period of exclusivity, Congress has required that an inventor describe the invention "in such full, clear, concise, and exact terms as to enable any person skilled in the art . . . to make and use" the invention.<sup>30</sup> A patent must also include one or more claims<sup>31</sup> which "particularly points out and distinctly claims the subject matter which the applicant regards as his invention."<sup>32</sup> The claims of a patent serve three independent purposes.<sup>33</sup> First, patent claims define an invention for purposes of determining whether the invention meets the statutory requirements for patentability.<sup>34</sup> Second, patent claims give notice to the public of the rights afforded to the inventor by defining the boundaries of the invention.<sup>35</sup> Third, patent claims define the scope of the invention in order to make possible the determination of whether a given accused infringer has in fact infringed a patent owner's rights.<sup>36</sup>

Patent claims consist of limitations<sup>37</sup> which define distinct parts of an invention.<sup>38</sup> Typically, claim limitations describe the material or structure which perform an intended function. However, 35 U.S.C. § 112, ¶ 6 sanctions the drafting of claim limitations using purely functional language.<sup>39</sup> Section 112, ¶ 6

patent was filed in the United States or, if the application contains a specific reference to an earlier filed application or applications under section 120, 121, or 365(c) of this title, from the date on which the earliest such application was filed.

*Id.*

30. 35 U.S.C. § 112, ¶ 1 (1998).

31. "In patent law, a claim is an assertion of what the invention purports to accomplish, and claims of a patent define the invention and extent of the grant; any feature of an invention not stated in the claim is beyond the scope of the patent protection." BLACK'S LAW DICTIONARY 247 (6th ed. 1990).

32. 35 U.S.C. § 112, ¶ 2 (1998).

33. See *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 978-79 (Fed. Cir. 1995) (discussing the notice purpose of patent claims); Rick D. Nydegger, *Traversing The Section 112, ¶ Six Field Of Land Mines: Does In Re Donaldson Adequately Defuse The Problems? (Part I)*, 76 J. PAT. & TRADEMARK OFF. SOC'Y 947, 948 (1994) (discussing the patentability and infringement determination aspects of patent claims).

34. See generally DONALD S. CHISUM, CHISUM ON PATENTS (Matthew Bender ed., 1998) § 8.01 and footnotes contained therein.

35. "It seems to us that nothing can be more just and fair, both to the patentee and to the public, than that the former should understand, and correctly describe, just what he has invented, and for what he claims a patent." *Merrill v. Yeomans*, 94 U.S. 568, 573-74 (1908).

36. *Perkin-Elmer Corp. v. Westinghouse Elec. Corp.*, 822 F.2d 1528, 1533 n.9 (Fed. Cir. 1987).

37. Claim limitations are also referred to as elements. *Panduit Corp. v. Dennison Mfg Co.*, 774 F.2d 1082, 1087 n.3 (Fed. Cir. 1985).

38. CHISUM, *supra* note 34, §8.06 (noting that patent claims are made up of three sections: the preamble, the transition and the body, which contain the limitations).

39. *Maier & Lytle*, *supra* note 25, at 247. The classical illustration of a

states:

[a]n 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.<sup>40</sup>

Claim limitations drafted under this section are commonly referred to as "means-plus-function" limitations.<sup>41</sup>

Lawsuits alleging violation of an inventor's patent rights charge that the patent has been infringed.<sup>42</sup> An infringement determination is a two-step process.<sup>43</sup> First, the court interprets the language, or scope, of a claim as a matter of law.<sup>44</sup> Second, the construed claims are applied to the accused infringing device by the finder of fact to determine whether infringement, either literal or under the doctrine of equivalents, exists.<sup>45</sup> Literal infringement occurs when the accused device contains every limitation of a patent claim.<sup>46</sup> Conversely, the doctrine of equivalents expands a patent owner's rights beyond the literal claim language by forbidding others from avoiding infringement through making only insubstantial changes to a patented invention.<sup>47</sup> Although labeled

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means-plus-function element uses the phrase "means for fastening" in the claim language. *Baltimore Therapeutic Equip. Co. v. Loredan Biomedical Inc.*, 30 U.S.P.Q.2d 1672, 1677 (Fed. Cir. 1994) (Rich, J., concurring). The specification discloses the use of a nail as the "means for fastening." *Id.* Because 35 U.S.C. § 112, ¶ 6 limits patent coverage to what is disclosed in the specification and its "equivalents," the inventor can rest assured that a would-be infringer could not change the nail to a screw and thereby avoid the scope of the patent claim. *Id.* However, the accused infringer could likely replace the nail with some adhesive, as they are not structurally equivalent. *Id.*

40. 35 U.S.C. § 112, ¶ 6 (1998).

41. Claims containing "means-plus-function" limitations are also referred to as "means-plus-function" claims when referring to the claims as a whole.

42. H. SCHWARTZ, *PATENT LAW AND PRACTICE* 1, 33 (2d ed. 1995).

43. *Cybor Corp. v. FAS Technologies, Inc.*, 138 F.3d 1448, 1454 (Fed. Cir. 1998) (en banc); *Texas Instruments, Inc. v. Cypress Semiconductor Corp.*, 90 F.3d 1558, 1563 (Fed. Cir. 1992).

44. *Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 388-91 (1996); *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 977 (Fed. Cir. 1995).

45. *Read Corp. v. Portec, Inc.*, 970 F.2d 816, 821 (Fed. Cir. 1992); David R. Todd, *How Modern Treatment Of 35 U.S.C. § 112(6) Has Caused Confusion: Hilton Davis v. Warner Jenkinson And The Right To A Jury On The Issue Of Patent Infringement Under The "Equitable" Doctrine Of Equivalents*, 1996 BYU L. REV. 141, 141 (1996).

46. *CVI/Beta Ventures, Inc. v. Tura LP*, 112 F.3d 1146, 1161 (Fed. Cir. 1997); *Wright Med. Tech., Inc. v. Osteonics Corp.*, 122 F.3d 1440, 1443 (Fed. Cir. 1996); *Baxter Healthcare Corp. v. Spectramed, Inc.*, 49 F.3d 1575, 1583 (Fed. Cir. 1995), *cert. denied*, 516 U.S. 906 (1995); *Lantech, Inc. v. Keip Mach. Co.*, 32 F.3d 542, 547, (Fed. Cir. 1994); *Read Corp.*, 970 F.2d at 821; *Mannesmann Demag Corp. v. Engineered Metal Prods. Co.*, 793 F.2d 1279 (Fed. Cir. 1986).

47. Laurence H. Pretty & Janene Bassett, *Reconciling Section 112, ¶ 6 With*

"literal,"<sup>48</sup> infringement of a claim invoking § 112, ¶ 6 requires the trier of fact to look beyond the four corners of the patent in order to determine infringement.<sup>49</sup>

In order for a claim limitation to trigger interpretation under § 112, ¶ 6, the court must first determine, as a matter of law,<sup>50</sup> that the limitation meets the § 112, ¶ 6 statutory requirements.<sup>51</sup> In order to invoke § 112, ¶ 6 protection, a claim limitation must recite primarily functional, as opposed to structural, language.<sup>52</sup>

Although there is no "magical" language required to bring a limitation within the province of § 112, ¶ 6, the terms "... means" or "means for ..." are typically employed.<sup>53</sup> Despite this mantra, use of the term "means" will not trigger the § 112, ¶ 6 analysis if sufficient structural language is set forth in the limitation.<sup>54</sup> Conversely, § 112, ¶ 6 may be triggered without the recitation of "means" in a patent limitation.<sup>55</sup> It is not clear exactly where the line invoking interpretation under § 112, ¶ 6 is drawn, as claim limitations containing both functional and structural language have triggered § 112, ¶ 6.<sup>56</sup>

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*The Doctrine Of Equivalents In The Wake Of Warner-Jenkinson Co. v. Hilton Davis Chemical Co.*, 489 PLI/PAT 359, 363 (1997) (discussing the Supreme Court's reaffirmance of the doctrine of equivalents and the two most used test for infringement under the doctrine).

48. See *Unidynamics Corp. v. Automatic Products Int'l, Ltd.*, 157 F.3d 1311, 1317 (Fed. Cir. 1998) (discussing the infringement of means-plus-function claims under the heading of Literal Infringement); *MAS-Hamilton Group v. LaGard Inc.*, 156 F.3d 1206, 1211 (Fed. Cir. 1998) (citing elements necessary to find literal infringement of a means-plus-function claim).

49. See *Casey*, *supra* note 12, at 853 (conceding that in an infringement analysis under § 112, ¶ 6 the court must look beyond the patent to the accused infringing device itself).

50. *Personalized Media Comm., LLC v. Int'l Trade Comm'n*, 161 F.3d 696, 702 (Fed. Cir. 1998) (noting that invocation of § 112, ¶ 6 is part of claim construction reviewed under the *de novo* standard).

51. *Unidynamics*, 157 F.3d at 1318; see *Cole v. Kimberly-Clark Corp.*, 102 F.3d 524, 530-31 (Fed. Cir. 1998) (first examining whether a claim limitation invoked § 112, ¶ 6 before continuing on to an infringement analysis).

52. *Cole*, 102 F.3d at 530-31.

53. See *Greenberg v. Ethicon Endo-Surgery, Inc.*, 91 F.3d 1580, 1583 (Fed. Cir. 1996) (noting that patent drafters typically use the expression "means for" and noting that the question of whether a limitation falls under § 112, ¶ 6 is usually not confusing).

54. *Cole*, 102 F.3d at 531. The claim limitation in question was "perforation means ... for tearing." *Id.* The court found that the recitation of "perforation" was sufficiently structural to preclude interpretation of the limitation under § 112, ¶ 6. *Id.*

55. *Raytheon Co. v. Roper Corp.*, 724 F.2d 951, 957 (Fed. Cir. 1983) (holding that the recitation of "so that" was sufficient to invoke § 112, ¶ 6).

56. *Laitram Corp. v. Rexnord, Inc.*, 939 F.2d 1533, 1538 (Fed. Cir. 1991) (noting that structural language may help to further define the function but not the structure); *but cf.* *Data Line Corp. v. Micro Techs., Inc.*, 813 F.2d 1196, 1201 (Fed. Cir. 1987) (stating that proper means-plus-function claims do not recite any structural components).

Claim construction of a means-plus-function claim limitation is further broken down into a determination of the claimed function<sup>57</sup> and identification of the corresponding structure in the specification which performs the function.<sup>58</sup> The court determines both the claimed function and the corresponding structures as a matter of law.<sup>59</sup>

Finally, the identified structure is compared against the accused infringing device to determine whether the accused device is an "equivalent" and thus infringes.<sup>60</sup> In order for the accused device to be "equivalent," it must perform the identical function as the means-plus-function claim limitation with a structure equivalent to that limitation.<sup>61</sup> It is this final determination with which the Federal Circuit was concerned about in footnote 8 of *Markman*.<sup>62</sup>

### B. Historical Development of "Mean-Plus-Function" Limitation in Patent Claims

The interpretation of functional elements in patent claims got off to a shaky start in the seminal case of *O'Reilly v. Morse*.<sup>63</sup> The Court in *O'Reilly* held that clauses containing only single limitations employing functional language were invalid as claiming functions or effects which impermissibly broadened the scope of the patent coverage beyond what the inventor actually invented.<sup>64</sup> However, until 1946, subsequent Supreme Court cases

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57. *Intellicall, Inc. v. Phonometrics, Inc.*, 952 F.2d 1384, 1388 (Fed. Cir. 1992).

58. *B. Braun Med., Inc. v. Abbott Lab.*, 124 F.3d 1419, 1424 (Fed. Cir. 1997) (reciting, as the test for "corresponding structure," that the specification and the functional language must be clearly linked); *In re Iwahashi*, 888 F.2d 1370, 1375 (Fed. Cir. 1989).

59. *Chiuminatta Concrete Concepts, Inc. v. Cardinal Indus., Inc.*, 145 F.3d 1303, 1308 (Fed. Cir. 1998).

60. *Pennwalt Corp. v. Durand-Wayland, Inc.*, 833 F.2d 931, 934 (Fed. Cir. 1987) (en banc).

61. *Kegel Comp., Inc. v. AMF Bowling, Inc.*, 127 F.3d 1420, 1428 (Fed. Cir. 1997).

62. See *supra* notes 14-15 and accompanying text for a discussion of the controversy raised by footnote eight in *Markman*.

63. 56 U.S. (15 How.) 62 (1853). The issue decided in *O'Reilly* concerned functional language in a patent claim containing only a single means limitation. This is still the current patent law today. *Id.* See 35 U.S.C. § 112, ¶ 6, which states that "[a]n element in a claim for a combination may be expressed as a means or step . . ." (emphasis added); *In re Hyatt*, 708 F.2d 712, 714 (Fed. Cir. 1983).

64. *O'Reilly*, 56 U.S. (15 How.) at 112. Claim eight of the patent in question read:

Eighth. I do not propose to limit myself to the specific machinery or parts of machinery described in the foregoing specification and claims; the essence of my invention being the use of the motive power of the electric or galvanic current, which I call electro-magnetism, however

held that functional limitations in combination claims were valid.<sup>65</sup>

In 1946, the Supreme Court in *Halliburton Oil Well Cementing Co. v. Walker*<sup>66</sup> reversed the line of cases resulting from *O'Reilly* and rejected patent claims that used functional language to describe the invention.<sup>67</sup>

Congress responded to the Supreme Court's decision in *Halliburton* by enacting the third paragraph of Section 112, Title 35 of the Patent Act of 1952.<sup>68</sup> The new statutory provision restored the use of broad, functional language in combination claims as was practiced prior to *Halliburton*.<sup>69</sup> This enactment is

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developed for marking or printing intelligible characters, signs, or letters, at any distances, being a new application of that power of which I claim to be the first inventor or discoverer.

*Id.* The court held that the inventor's intention in attempting to claim every scientific advance utilizing galvanic current to produce letters, numbers or intelligible characters at a distance invalid. *Id.* The Supreme Court found the claims invalid because the functional language described what the limitations would do and not their physical arrangement or characteristics. *Id.* Thus, the inventor could not claim the underlying scientific principles by which the invention worked, but rather had to claim the machinery which utilized the principles to achieve a useful effect. *Id.* The Court reasoned that utilizing functional language defied the notice purpose of patent claims by introducing impermissible ambiguity and expansion of the scope of patent claims. *Id.*

65. See, e.g., *Seymour v. Osborne*, 78 U.S. (11 Wall.) 516, 547 (1870) (setting the foundation for § 112, ¶ 6 by requiring the functional language used in claim to be read on the structure set forth in the specification); *Boyden Power-Brake Co. v. Westinghouse*, 170 U.S. 537, 556-60 (1898) (setting the foundation for § 112, ¶ 6 by requiring the functional language used in claim to be read on the structure set forth in the specification); accord *In re Fuetterer*, 319 F.2d 259, 264 n.11, (C.C.P.A. 1963). "We feel, however, that a considerable body of case law, if not the preponderance thereof, before the *Halliburton* case interpreted broad statements of structure, e.g., 'means,' plus a statement of function in the manner now sanctioned by the statute." *In re Fuetterer*, 319 F.2d at 264 n.11.

66. 329 U.S. 1 (1946).

67. *Id.* at 8 (holding that the claims violated statute by using "conveniently functional language at the exact point of novelty").

68. *In re Donaldson*, 16 F.3d 1189, 1194 (Fed. Cir. 1994) (noting that it is clear that Congress enacted § 112, ¶ 6 to overturn the *Halliburton* decision); *Valmont Indus., Inc. v. Reinke Mfg. Co.*, 983 F.2d 1039, 1042 (Fed. Cir. 1993) (finding § 112, ¶ 6 was passed to restore the use of functional language in patent claims); *Application of Lundsberg*, 244 F.2d 543, 547 (C.C.P.A. 1957) (*overruled on other grounds by In re Donaldson Co., Inc.*, 16 F.3d 1189, 1193-94 (Fed. Cir. 1994)) (stating correctness of appellant's argument that § 112, ¶ 6 was passed to modify or overturn decisions like *Halliburton*).

69. The Hon. Joseph R. Bryson stated before the Philadelphia Patent Law Association in January 24, 1952 that "[t]his provision in reality will give statutory sanction to combination claiming as it was understood prior to the *Halliburton* decision. All the elements of a combination now will be able to be claimed in terms of what they do as well as in the terms of what they are." *Fuetterer*, 319 F.2d at 264, n.11; accord *Valmont*, 983 F.2d 1039 at 1042 (noting that § 112, ¶ 6 rendered *Halliburton* obsolete).

embodied in current 35 U.S.C. § 112, ¶ 6.<sup>70</sup>

## II. APPLICATION OF THE SUPREME COURT'S *MARKMAN* LAW/FACT ANALYSIS TO § 112, ¶ 6 "EQUIVALENTS"

The Supreme Court has provided an outline of the analysis used in determining whether an issue is a legal issue or a factual question.<sup>71</sup> First, the Court looks to the familiar Seventh Amendment analysis to determine whether a common law right to a jury trial existed over the issue in 1791.<sup>72</sup> If the Seventh Amendment analysis is inconclusive, the Court further utilizes three factors in deciding if an issue is a legal or factual question: legal precedent, the interpretive skills of judges and juries, and statutory policies.<sup>73</sup> Accordingly, this Comment will utilize the analysis set forth by the Supreme Court to interpret the law/fact dichotomy surrounding § 112, ¶ 6 "equivalents."

### A. *Seventh Amendment Analysis*

In light of the Supreme Court's decision in *Markman* and the fact that valid patent claims containing functional language first occurred in the nineteenth century,<sup>74</sup> a Seventh Amendment analysis will not adequately resolve this issue.<sup>75</sup> Accordingly, a

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70. Cf. Patent Act of 1952, 35 U.S.C. 112, ¶ 3 (1952).

71. *Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 375, 387-88 (1996).

72. *Id.* at 376. Under this "historical test," the Court first looks to whether a cause of action, or a historically analogous cause of action, was tried at law when our Constitution was adopted in 1791. *Id.* If the cause of action was tried at law, the Court next looks to whether the ultimate decision of the issue is required to be tried by jury to preserve the common-law right to a jury trial. *Id.* Under this second question, where historical precedent does not provide a clear reservation of the right to a jury trial, the analysis is less than foolproof. *Id.* at 378.

73. *Id.* at 384.

74. *O'Reilly*, 56 U.S. (15 How.) 62 (1853), the first case discussing functional language, was decided in 1853. See *supra* note 64.

75. See, e.g., *Markman*, 517 U.S. at 376-88. Because the Supreme Court's Seventh Amendment analysis in *Markman* is analogous to the determination of "equivalents" under § 112, ¶ 6, the Court's analysis is examined below. First, the Supreme Court looked to patent infringement suits as they existed in the eighteenth century and concluded that the issue of determining infringement of a patent was clearly the role of the jury. *Id.* at 377. The Court then examined whether the specific issue of claim construction was so essential to the determination of infringement that it should be preserved as a jury issue. *Id.* There, the Court found that no clear historical precedent relegated claim construction to either the court or the jury because early patent practice did not require the use of patent claims. *Id.* at 378. The Court then looked for an "appropriate analogy" under English common law for guidance. *Id.* at 379. The Supreme Court found the issue of interpretation of the patent specification most like the current practice of claim construction. *Id.* However, the Court found only a "smattering" of cases construing patent

Seventh Amendment analysis will not be undertaken.

## B. Judicial Precedent

### 1. Judicial Precedent Pre-Markman

Prior to the Supreme Court's *Markman* decision, judicial precedent fostered under the Federal Circuit consistently held that the determination of an "equivalent" under § 112, ¶ 6 was a question of fact.<sup>76</sup> However, the value of this earlier precedent is unclear as the seminal Federal Circuit case, *D.M.I., Inc. v. Deere & Co.*,<sup>77</sup> merely stated this proposition without citing any authority or offering supporting reasoning.<sup>78</sup> However, other statements of the court in *D.M.I.* are in accord with current case law. *D.M.I.* stated not only the pure *Markman* proposition, that claim construction is a matter of law,<sup>79</sup> it also made clear that "equivalents" under § 112, ¶ 6 should not be confused with the doctrine of equivalents.<sup>80</sup>

The next opinion addressing the factual determination of "equivalents," *Palumbo v. Don-Joy, Co.*,<sup>81</sup> offered two lines of reasoning to support the holding that the determination of "equivalents" is a question of fact.<sup>82</sup> First, the court looked to the Supreme Court's reasoning in *Graver Tank v. Linde Air Products Co.*,<sup>83</sup> which set forth the widely-used "Function-Way-Result" test for infringement under the doctrine of equivalents and held that application of this test is a question of fact.<sup>84</sup> However, the Federal Circuit has criticized reliance on the doctrine of equivalents when

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specifications, which cumulatively led the Court to conclude that there was no established interpretation of specifications by juries. *Id.* at 383. The appellant, not to be deterred, produced case law from the mid-nineteenth century where interpretation of "words of art" was left to the jury. *Id.* Ultimately, the Court found this precedent unpersuasive and held that the "historical test" was not determinative of the issue. *Id.*

76. *In re Bond*, 910 F.2d 831, 833 (Fed. Cir. 1990); *Durango Assoc., Inc. v. Reflange, Inc.*, 843 F.2d 1349, 1357 (Fed. Cir. 1988); *Hartness Int'l, Inc. v. Simplimatic Eng'g Co.*, 819 F.2d 1100, 1110 (Fed. Cir. 1987); *King Instrument Corp. v. Otari Corp.*, 767 F.2d 853, 862 (Fed. Cir. 1985); *Palumbo v. Don-Joy Co.*, 762 F.2d 969, 974 (Fed. Cir. 1985); *D.M.I., Inc. v. Deere & Co.*, 755 F.2d 1570, 1574 (Fed. Cir. 1985).

77. 755 F.2d at 1570.

78. *Id.* at 1574.

79. *Id.* at 1573; cf. *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 967 (Fed. Cir. 1995).

80. 755 F.2d at 1575.

81. 762 F.2d 969.

82. *Id.* at 975.

83. 339 U.S. 605 (1950).

84. *Id.* at 609 (noting that, like any factual question, the final outcome should depend upon a balancing of credibility, effectiveness, and the strength of the evidence).

analyzing "equivalents" under § 112, ¶ 6.<sup>85</sup> Despite this criticism, *Palumbo* is in line with current case law in holding that a distinction exists between "equivalents" under § 112, ¶ 6 and the doctrine of equivalents.<sup>86</sup> Alternatively, the court reasoned that ambiguity surrounding the prosecution history and interpretation of a patent claim gave rise to a factual question.<sup>87</sup> This last line of reasoning has been expressly overruled in the *Markman*<sup>88</sup> cases and in *Cybor v. FAS Technologies*.<sup>89</sup> Thus, it is not clear how much weight pre-*Markman* precedent carries in determining the issue.<sup>90</sup>

## 2. *The Doctrine of Equivalents and Hilton Davis' Impact on § 112, ¶ 6 "Equivalents"*

The Federal Circuit has almost dogmatically denounced the intermingling of the concept of "equivalents" under § 112, ¶ 6 with the doctrine of equivalents.<sup>91</sup> In supporting this distinction, the Federal Circuit has noted that the two concepts have differing origins, purposes, and applications.<sup>92</sup> However, the Federal Circuit has never fully addressed whether there is ultimately any tangible difference between equivalence under § 112, ¶ 6, and the doctrine of equivalents.<sup>93</sup> Several commentators, including one Federal Circuit judge, have espoused the theory that equivalence under

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85. See *infra* note 91 and accompanying text for a discussion of the error in confusing the doctrine of equivalents and § 112, ¶ 6.

86. 762 F.2d at 975.

87. *Id.* at 976 (accepting the inventor's apparently self-serving argument as creating a disputed question of fact which defeats a motion for summary judgment).

88. 52 F.3d at 977.

89. 138 F.3d at 1454.

90. *Id.*

91. See generally *Intel Corp. v. United States Int'l Trade Comm'n*, 946 F.2d 821, 842 (Fed. Cir. 1991) (discussing the parties' confusion between the two concepts); *Sun Studs, Inc. v. ATA Equip. Leasing, Inc.*, 872 F.2d 978, 989 (Fed. Cir. 1989) (*overruled on other grounds by A. C. Aukerman Co. v. R. L. Chiades Constr. Co.*, 960 F.2d 1020, 1038-39 (Fed. Cir. 1992)) (noting possible error of the district court in applying the doctrine of equivalents in the more limited literal infringement analysis under § 112, ¶ 6); *Pennwalt Corp. v. Durand-Wayland, Inc.*, 833 F.2d 931, 934 (Fed. Cir. 1987) (en banc) (stating that § 112, ¶ 6 has no role in the application of the doctrine of equivalents); *D.M.I., Inc. v. Deere & Co.*, 755 F.2d 1570, 1575 (Fed. Cir. 1985) (stating that "equivalent" under § 112, ¶ 6 and the doctrine of equivalents should not be confused).

92. *Dawn Equip. Co. v. Kentucky Farms Inc.*, 140 F.3d 1109, 1022 (Fed. Cir. 1998) (Newman, J., additional views) (contending that lay people may be confused between § 112, ¶ 6 and the doctrine of equivalents, but that patent practitioners understand the distinction); *Valmont Indus., Inc. v. Reinke Mfg. Co.*, 983 F.2d 1039, 1043 (Fed. Cir. 1993).

93. *Dawn Equip. Co.*, 140 F.3d at 1021 (Plager, J., additional views) (noting the two formulations of equivalents have not been tackled side by side); Mark D. Janis, *Unmasking Structural Equivalency: The Intersection Of § 112, ¶ 6 Equivalents And The Doctrine Of Equivalents*, 4 ALB. L.J. SCI. & TECH 205, 206-07 (1994).



the doctrine of equivalents and § 112, ¶ 6 converge in application.<sup>94</sup> Accordingly, a close examination of both concepts is required in order to determine the relevance of the doctrine of equivalents to § 112, ¶ 6 “equivalents.”

Historically, the concept embodied in the doctrine of equivalents was first introduced in the Supreme Court's *Evans v. Eaton*<sup>95</sup> decision.<sup>96</sup> Throughout the evolution of infringement under the doctrine of equivalents, the ultimate test has always revolved around the concept of substantiality.<sup>97</sup> Ultimately, these decisions led to the current “Function-Way-Result” test for infringement under the doctrine of equivalents.<sup>98</sup> The purpose of expanding patent coverage under the doctrine of equivalents is to prevent an infringer from perpetrating fraud on the patent.<sup>99</sup>

Conversely, § 112, ¶ 6 was enacted to reverse the Supreme Court's decision *Halliburton* and restore the use of functional language in patent claims.<sup>100</sup> However, using the enactment of § 112, ¶ 6 as a starting point overlooks the earlier development of functional language in patent claims.<sup>101</sup> A more thorough analysis

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94. *Dawn Equip. Co.*, 140 F.3d at 1021 (Plager, J., additional views); Janis, *supra* note 93, at 207; Pretty & Bassett, *supra* note 47, at 363 (suggesting the Supreme Court's *Hilton Davis* decision resulted in conformity between the doctrine of equivalents and § 112, ¶ 6); Adamo, *supra* note 12, at 433 (speculating whether the two concepts will collapse into a single analysis after *Hilton Davis*); Taylor & Callahan, *supra* note 3, at 29 (discussing the Supreme Court's concern for the issue in *Hilton Davis*).

95. 20 U.S. (7 Wheat.) 356 (1822).

96. *Id.* at 361. “[I]f the two machines be substantially the same, and operate in the same manner, to produce the same result, though they may differ in form, proportions, and utility, they are the same in principle[.]” *Id.* The doctrine of equivalents was not referred to by name until 35 years later. *McCormick v. Talcott*, 61 U.S. 402, 405, 407 (1857).

97. *See Evans*, 20 U.S. at 364 (stating that the test examines whether a possible equivalent is “substantially the same . . . in principle”); *Winans v. Denmead*, 56 U.S. 330, 332 (1853) (stating that the test examines whether a possible equivalent is “substantially the same in principle and mode of operation”); *Burr v. Duryee*, 68 U.S. 531, 572-73 (1863) (“performs . . . or produces . . . in . . . substantially the same way”).

98. *Graver Tank*, 339 U.S. 605, 608 (1950) (setting out infringement under the doctrine of equivalents if the accused infringing device “performs substantially the same function in substantially the same way to obtain the same result”).

99. *Id.*

100. *See supra* notes 66-68 and accompanying text (interpreting § 112, ¶ 6 as overturning *Halliburton*).

101. Rudolph P. Hofmann, Jr. & Edward P. Heller, III, *The Rosetta Stone For The Doctrines Of Means-Plus-Function Patent Claims*, 23 RUTGERS COMPUTER & TECH. L.J. 227, 243 (1997) (noting that only looking to the enactment of § 112, ¶ 6 to distinguish “equivalents” from the doctrine of equivalents is overly simplistic in that it only addresses the effect, and not the cause, of the statute).

reveals that the two concepts share a similar historical origin.<sup>102</sup>

This common origin is reflected in the language of *Winans v. Denmead*.<sup>103</sup> In *Winans*, the Supreme Court, in applying the predecessor to the doctrine of equivalents, refused to limit a patent claim's interpretation to the literal claim language and instead looked to the patent specification to determine infringement.<sup>104</sup> This interpretation of the patent claims in light of the specification mirrors the language, and infringement analysis, of § 112, ¶ 6.<sup>105</sup> Comments surrounding the enactment of § 112, ¶ 6 further suggest that the statute was passed to specifically enact the doctrine of equivalents in a limited role surrounding functional language.<sup>106</sup> Thus, § 112, ¶ 6 "equivalents" and the doctrine of equivalents share similar, although not identical, historical and purposeful grounds.<sup>107</sup>

Perhaps a stronger ground for distinguishing the doctrine of equivalents from § 112, ¶ 6 "equivalents" lies in their respective applications.<sup>108</sup> Clear differences in the analyses of the two concepts do exist. First, equivalence under both the doctrine of equivalents and § 112, ¶ 6 are applied at the time of infringement.<sup>109</sup> However, application of the doctrine is limited

102. Janis, *supra* note 93, at 212; Pretty & Bassett, *supra* note 47, at 370.

103. 56 U.S. (15 How.) 330 (1853).

104. *Id.* at 340, 342.

105. *Cf. supra* notes 52-64 and accompanying text (setting out the road map for infringement of a means-plus-function limitation).

106. "This provision also gives recognition to the existence of the doctrine of equivalents." Addressing the Philadelphia Patent Law Association (Jan. 24, 1952), in 98 CONG. REC. A415, A416 (1952) (comments of Congressman Joseph R. Bryson, Chairman of the House Committee that oversaw the drafting of the Patent Act of 1952); "This section . . . introduces into the statute for the first time the controversial doctrine of equivalents." *Patent Law Codification and Revision: Hearings on H.R. 3760 Before Subcomm. No. 3 of the House Comm. On the Judiciary*, 82d Cong., 1st Sess. 95 (1951) (statement of the Chief T. Hayward Brown of the Patent Litigation Unit, Claims Division, Department of Justice); "The language of 35 U.S.C. § 112 [¶ 6] and its application . . . is clearly a restrictive application of the doctrine of equivalents. It is the . . . 'doctrine of equivalents' codified for the first time in the patent statute." Ronald D. Hantman, *Doctrine of Equivalents*, 70 J. PAT. & TRADEMARK OFF. SOC'Y 511, 546 (1988).

107. *See supra* notes 102-05 and accompanying text (discussing the purpose and origin of § 112, ¶ 6).

108. *See* David O'Dell, *The Emerging Definition of Equivalency*, 22 J. CONTEMP. L. 335, 357-60 (1996) (discussing differences in the application of the doctrine of equivalents and § 112, ¶ 6).

109. *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, 506 (1997) (noting that under the current rule technology not existing at the time the patent was granted "may still infringe it under the doctrine of equivalents"); *Snellman v. Ricoh Co., Ltd.*, 862 F.2d 283, 288 (Fed. Cir. 1988) (applying § 112, ¶ 6 during the infringement analysis).

solely to the infringement analysis,<sup>110</sup> while § 112, ¶ 6 is also applied during the patentability determination.<sup>111</sup>

Next, under the doctrine of equivalents the accused infringing device need only perform a function equivalent to that found in the patent.<sup>112</sup> Conversely, a § 112, ¶ 6 "equivalent" must perform the identical function identified in the patent specification.<sup>113</sup> Thus, if identity of function is not found in the accused infringing device, the device will fail the more limited § 112, ¶ 6 test but may infringe under the doctrine of equivalents.<sup>114</sup> In reality, however, the Federal Circuit has been consistently unwilling to find infringement under the doctrine of equivalents when literal infringement of a means-plus-function claim is absent.<sup>115</sup>

Although there are distinctions between § 112, ¶ 6 and the doctrine of equivalents, these differences support the observation that application of § 112, ¶ 6, is simply a more restricted version of the doctrine of equivalents.<sup>116</sup> Indeed, the Supreme Court adopted this position in *Hilton Davis*.<sup>117</sup>

Semantic differences between the doctrine of equivalents and § 112, ¶ 6 also suggest a non-conformity between the two concepts. Infringement under the doctrine of equivalents is termed

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110. *Pall Corp. v. Micron Separations*, 66 F.3d 1211, 1220 (Fed. Cir. 1995), *cert. denied*, 520 U.S. 1115 (1997); *Atlas Powder Co. v. E.I. du Pont de Nemours & Co.*, 750 F.2d 1569, 1581 (Fed. Cir. 1984).

111. *In re Bond*, 910 F.2d 831, 833 (Fed. Cir. 1990) (applying § 112, ¶ 6 in anticipation of patent claims); *In re Donaldson*, 16 F.3d 1189, 1994 (Fed. Cir. 1994) (mandating the USPTO apply § 112, ¶ 6 during patent prosecution).

112. *Insituform Techs., Inc. v. CAT Contracting, Inc.*, 161 F.3d 688, 692 (Fed. Cir. 1998); *Comark Comms., Inc. v. Harris Corp.*, 156 F.3d 1182, 1188 (Fed. Cir. 1998); *Alpex Computer Corp. v. Nintendo Co., Ltd.*, 102 F.3d 1214, 1222 (Fed. Cir. 1996); *Slimfold Mfg. Co., Inc. v. Kinkead Indus., Inc.*, 932 F.2d 1453, 1457 (Fed. Cir. 1991); *Perkin-Elmer Corp. v. Westinghouse Elec. Corp.*, 822 F.2d 1528, 1533 (Fed. Cir. 1987).

113. *Unidynamics Corp. v. Automatic Products Int'l, Ltd.*, 157 F.3d 1311, 1317 (Fed. Cir. 1998); *Desper Prods., Inc. v. QSound Labs, Inc.*, 157 F.3d 1325, 1337 (Fed. Cir. 1998); *Lockwood v. American Airlines, Inc.*, 107 F.3d 1565, 1567 (Fed. Cir. 1997); *King Instruments Corp. v. Perego*, 65 F.3d 941, 945-46 (Fed. Cir. 1995).

114. *Pretty & Bassett*, *supra* note 47, at 363 (noting, however, that this distinction may be illusory because of the difficulty of determining where identical ends and substantial begins).

115. *See, e.g., Dawn Equip. Co. v. Kentucky Farms Inc.*, 140 F.3d 1009, 1017 (Fed. Cir. 1998) (reversing finding of infringement of means-plus-function claim for lack of substantial evidence); *Desper Products*, 157 F.3d at 1340 (affirming non-infringement under § 112, ¶ 6 and the doctrine of equivalents).

116. *Janis*, *supra* note 93, at 214-15 (stating the lack of support for distinguishing the doctrine of equivalents from § 112, ¶ 6 on the basis of their respective scope).

117. *Werner-Jenkins Co., Inc. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 28 (1997). "[§ 112, ¶ 6] is an application of the doctrine of equivalents in a restrictive role . . . ." *Id.*

"equitable"<sup>118</sup> while infringement of a means-plus-function claim is "literal."<sup>119</sup> However, the Supreme Court has found no purposeful difference between infringement under the doctrine and literal infringement.<sup>120</sup> Moreover, there are no underlying equitable considerations in infringement under the doctrine of equivalents.<sup>121</sup> Thus, the "equitable" versus "literal" distinction is without merit.

Others argue that because the doctrine of equivalents looks to the claim for the relevant structure, while § 112, ¶ 6 looks to the specification, these are sufficient grounds to distinguish the two.<sup>122</sup> However, this argument fails to acknowledge that the claims are part of the specification.<sup>123</sup> This argument is also internally inconsistent because if the doctrine of equivalents was limited to identifying the structure in the claims, then the doctrine could never be applied to means-plus-function claims.<sup>124</sup> Although the Federal Circuit rarely, if ever, finds infringement under the doctrine of equivalents where a means-plus-function claim is not literally infringed, they consistently apply the doctrine of equivalents infringement analysis.<sup>125</sup>

The Federal Circuit, in rhetorical fashion, often distinguishes the two concepts by referring to the doctrine of equivalents as "expanding"<sup>126</sup> and § 112, ¶ 6 as "restricting"<sup>127</sup> the scope of patent coverage. However, this observation is consistent with the idea

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118. See *Charles Greiner & Co. v. Mari-Med Mfg., Inc.*, 962 F.2d 1031, 1036, (Fed. Cir. 1992) (stating that "confinement of the doctrine of equivalents to its proper equitable role"); *London v. Carson Pirie Scott & Co.*, 946 F.2d 1534, 1538 (Fed. Cir. 1991) (calling it an "equitable doctrine"); *Loctite Corp. v. Ultraseal, Ltd.*, 781 F.2d 861, 870 (Fed. Cir. 1985) (stating that the doctrine is "judicially devised to do equity").

119. *Dawn Equip.*, 140 F.3d at 1020; *Texas Instruments, Inc. v. United States Int'l Trade Comm'n*, 846 F.2d 1369, 1372 (Fed. Cir. 1988).

120. *Hilton Davis*, 520 U.S. at 35. "[T]here is no basis for treating an infringing equivalent any differently than a device that infringes the express terms of the patent. Application of the doctrine of equivalents, therefore, is akin to determining literal infringement . . ." *Id.*

121. *Hilton Davis*, 62 F.3d at 1521 (noting that infringement under the doctrine is a question of fact and no "clean hands" limitation is placed on the doctrine).

122. *Alpex Computer Corp. v. Nintendo Co., Ltd.*, 102 F.3d 1214, 1222 (Fed. Cir. 1996).

123. 35 U.S.C. 112, ¶ 2. "The specification shall conclude with one or more claims . . ." *Id.*

124. See *supra* note 57 and accompanying text (noting that means-plus-function claims refer back to the specification for the relevant structure).

125. See, e.g., *Dawn Equip.*, 140 F.3d at 1015-18 (applying the doctrine of equivalents); *Laitram Corp. v. Rexnord, Inc.*, 939 F.2d 1533, 1539 (Fed. Cir. 1993) (examining infringement of a means-plus-function claim under the doctrine of equivalents).

126. *Valmont Indus., Inc. v. Reinke Mfg. Co.*, 983 F.2d 1039, 1044 (Fed. Cir. 1993); *Intervet America, Inc. v. Kee-Vet Lab., Inc.*, 887 F.2d 1050, 1054 (Fed. Cir. 1989).

127. *Personalized Media*, 161 F.3d 696, 703 (Fed. Cir. 1998)

that § 112, ¶ 6 is simply a more limited application of the doctrine of equivalents.<sup>128</sup>

Although there are differences between the doctrine of equivalents and § 112, ¶ 6, these differences are not so consequential as to preclude looking to the doctrine of equivalents for guidance in interpreting § 112, ¶ 6 "equivalents."<sup>129</sup>

Reliance only on these specious dissimilarities also overlooks the corresponding aspects of the two concepts. Although the doctrine of equivalents and § 112, ¶ 6 share similar historical foundations, the two ideas have diverged over time.<sup>130</sup> However, the Federal Circuit, in *Alpex Computer Corp. v. Nintendo*,<sup>131</sup> took the first step of bringing the two concepts back into congruence by introducing prosecution history estoppel,<sup>132</sup> a long-standing limitation on the doctrine of equivalents,<sup>133</sup> into the interpretation of means-plus-function claims.<sup>134</sup> Next, the Supreme Court in *Hilton Davis* brought the doctrine of equivalents and § 112, ¶ 6 further into conformity by requiring that the doctrine be applied on an element-by-element basis,<sup>135</sup> a familiar practice in interpreting § 112, ¶ 6.<sup>136</sup> Thus, the doctrine of equivalents and § 112, ¶ 6 are gradually blending into harmony with one another.<sup>137</sup>

Strengthening the argument for reliance on the doctrine of equivalents in interpreting § 112, ¶ 6 "equivalents" involves the underlying test used to determine infringement for both concepts. The preferred test for the doctrine of equivalents is the *Graver Tank* "Function-Way-Result" test.<sup>138</sup> Although using the "Function-Way-Result" test in interpreting § 112, ¶ 6 "equivalents" has been held to be error,<sup>139</sup> a modified form of the test has been

128. See *supra* notes 106 and 117 and accompanying text (discussing "means-plus-function" equivalency as a limited application of the doctrine of equivalents).

129. See *supra* notes 93-94 and accompanying text (discussing whether there is any meaningful difference between § 112, ¶ 6 "equivalents" and infringement under the doctrine of equivalents).

130. See *supra* notes 108-15 and accompanying text (chronicling the differences between the doctrine of equivalents and § 112, ¶ 6).

131. 102 F.3d 1214 (Fed. Cir. 1996).

132. Prosecution history estoppel prevents a patent owner from claiming subject matter that was forfeited in the prosecution phase of the patent. *Alpex*, 102 F.3d at 1220.

133. *Adamo*, *supra* note 12, at 434-35.

134. *Alpex*, 102 F.3d at 1220.

135. *Werner-Jenkins Co., Inc. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 18 (1997).

136. *Pretty & Bassett*, *supra* note 47, at 373-74.

137. See *supra* notes 131-35 and accompanying text (discussing the convergence of equivalency under § 112, ¶ 6 and the doctrine of equivalents).

138. See *supra* note 98 and accompanying text.

139. *D.M.I., Inc. v. Deere & Co.*, 755 F.2d 1570, 1575 (Fed. Cir. 1985) (reversing and remanding due to confusion between doctrine of equivalents and § 112, ¶ 6 "equivalents").

explicitly allowed.<sup>140</sup> Moreover, the Supreme Court retained the notion of "insubstantial change" under the doctrine by expressly rejecting the "Function-Way-Result" test as the only applicable test under the doctrine of equivalents.<sup>141</sup> Accordingly, the tests used to determine infringement under both the doctrine of equivalents and § 112, ¶ 6 remain centered around the concept of "insubstantial change."<sup>142</sup>

This comparison is not exhaustive and does not answer the underlying question whether equivalence under the doctrine of equivalents and § 112, ¶ 6 are ultimately the same concept. It does, however, provide sufficiently persuasive grounds for reliance on the doctrine of equivalents in interpreting § 112, ¶ 6 "equivalents." Therefore, the Federal Circuit's holding that infringement under the doctrine is a question of fact supports the determination of "equivalents" as a factual question.<sup>143</sup>

### 3. *Markman and Cybor v. FAS Technologies*

Despite the Supreme Court's unequivocal holding in *Markman*, the Court's characterization of claim construction as a "mongrel practice"<sup>144</sup> and "somewhere between a pristine legal standard and a simple historical fact"<sup>145</sup> left open the question of whether there were underlying factual questions in claim construction.<sup>146</sup> This discrepancy has led some panels of the Federal Circuit to defer to a district court's ostensibly factual conclusions underlying claim construction.<sup>147</sup>

Expressly reversing these decisions, the Federal Circuit in *Cybor v. FAS Technologies*<sup>148</sup> unanimously laid to rest the notion that there are any underlying factual findings in claim construction.<sup>149</sup> *Cybor* reiterated that claim construction is a

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140. *Texas Instruments v. United States Int'l Trade Comm'n*, 805 F.2d 1558, 1571 (Fed. Cir. 1996).

141. *Hilton Davis*, 520 U.S. at 18 (refusing to limit the doctrine of equivalents to any linguistic framework).

142. See *supra* notes 108-14 and accompanying text (discussing the standard for determining infringement under § 112, ¶ 6).

143. See *Sutton et al.*, *supra* note 11, at 890; *Adamo*, *supra* note 12 at 442.

144. *Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 378 (1996).

145. *Id.* at 388.

146. See *Cybor Corp. v. FAS Technologies, Inc.*, 138 F.3d 1448, 1455 (Fed. Cir. 1998) (en banc) (explaining that these comments were only "prefatory" to the Supreme Court's ultimate determination of the issue).

147. *Eastman Kodak Co. v. Goodyear Tire & Rubber Co.*, 114 F.3d 1547, 1556 (Fed. Cir. 1997); *Wiener v. NEC Elecs. Inc.*, 102 F.3d 534, 539 (Fed. Cir. 1996); *Metaullics Sys. Co. v. Cooper*, 100 F.3d 938, 939 (Fed. Cir. 1996) (*overruled on other grounds by Cybor Corp. v. FAS Tech., Inc.*, 138 F.3d 1448 (Fed. Cir. 1998)).

148. 138 F.3d 1448.

149. *Id.* at 1455 (noting in footnote 4 that the Supreme Court would surely have discussed if any underlying factual determinations were to be made in

purely legal issue and further held that no deference should be granted to a district court's apparently factual determinations in construing a disputed claim.<sup>150</sup>

Despite this unanimity of opinion, five justices wrote or joined separate concurring opinions stating that the trial judge's conclusions concerning factual matters should be accorded some weight.<sup>151</sup> Thus, even the purely legal status of claim construction, while not currently in doubt, may have an uncertain future.<sup>152</sup>

#### 4. *Post-Markman* Voices on the Determination of "Equivalents"

Three post-*Markman* decisions do cite the proposition that the determination of "equivalents" under § 112, ¶ 6 is a question of fact.<sup>153</sup> The precedential value of these opinions is suspect. The most recent of these opinions, *C.R. Bard, Inc. v. M3 Systems, Inc.*, cites to two pre-*Markman* decisions supporting the proposition that the determination of "equivalents" is a factual question.<sup>154</sup> In stating the proposition that determination of "equivalents" is a factual question, *MAS-Hamilton Group v. LaGard, Inc.*, cites one pre-*Markman* and one post-*Markman* case as authority. As previously discussed, the value of pre-*Markman* authority concerning this issue is dubious.<sup>155</sup> Moreover, *MAS Hamilton's* post-*Markman* citation<sup>156</sup> to a concurrence in *Cybor*<sup>157</sup> is

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construing patent claims).

150. *Id.* (noting that the "standard of review remains intact").

151. *Id.* at 1462 (Plager, J., concurring) (noting that where the district court has put forth the effort some weight would be afforded to the judge's determination although there would be no new formal standard of review); *Id.* at 1463 (Bryson, J., concurring) (noting his intent not to disregard the work of the district court in claim construction); *Id.* at 1463-64 (Mayer, C.J., concurring) (noting that if claim construction was purely a question of law the Supreme Court would not have undertaken such a thorough Seventh Amendment analysis and that the Supreme Court did not adopt the Federal Circuit's reasoning in *Markman*); *Cybor*, 138 F.3d at 1473-74 (Rader, J., concurring) (pointing out that the Supreme Court nowhere discussed the standard of appellate court review in *Markman*); *Cybor*, 138 F.3d at 1478-79 (Newman, J., concurring) (discussing the unbalancing effect of the holding on appellate review).

152. Gary M. Hoffman & Herbert V. Kerner, *The Federal Circuit's Majority Set A Strict De Novo Standard, But Vocal Minority May Win Yet*, NAT'L L.J., June 22, 1998, at C19; *C.R. Bard, Inc. v. M3 Sys, Inc.*, 157 F.3d 1340, 1362 (Fed. Cir. 1998).

153. *MAS-Hamilton Group v. LaGard Inc.*, 156 F.3d 1206, 1211 (citing authority for the proposition that the final two-step determination of equivalence under § 112, ¶ 6 is a question of fact); *C.R. Bard, Inc. v. M3 Sys., Inc.*, 157 F.3d 1340, 1362 (Fed. Cir. 1998); *In re Burke*, 82 F.3d 435 (Fed. Cir. 1996) (unpublished table disposition).

154. *C.R. Bard, Inc.*, 157 F.3d at 1362.

155. 156 F.3d at 1211.

156. See *supra* part II.B.i (analyzing pre-*Markman* judicial precedent).

157. *Cybor Corp. v. FAS Technologies, Inc.*, 138 F.3d 1448, 1466 (Fed. Cir. 1998) (en banc) (Mayer, J., concurring).

disingenuous, as the majority opinion in *Cybor* specifically reserved judgement on the issue of who should decide "equivalents."<sup>158</sup>

*In re Burke*,<sup>159</sup> the other post-*Markman* decision stating the proposition that the fact finder should determine § 112, ¶ 6 "equivalents," has absolutely no precedential value because it is an unpublished disposition.<sup>160</sup> All of these opinions also omit any reference to the controversy surrounding the determination of "equivalents" raised by the Federal Circuit in *Markman*. Therefore, none of the post-*Markman* opinions that support the proposition that finders of fact should determine "equivalents" command much authority.<sup>161</sup>

### 5. Other Precedent

Three lines of precedent distinct from either the doctrine of equivalents or § 112, ¶ 6 support the proposition that the determination of "equivalents" be relegated to the jury. Under the first of these lines of precedent, the Federal Circuit has made it clear that the district court cannot interpret claim language in light of an accused device.<sup>162</sup> However, comparing the identified structure against the accused device is exactly how equivalence is determined.<sup>163</sup> Secondly, as this comparison to determine equivalence is also the last step in the infringement analysis, judicial determination of "equivalents" would completely remove the jury's role from the infringement picture. Clearly this would run afoul of the right to a determination of infringement by a jury, which is protected under the Seventh Amendment.<sup>164</sup>

Another line of cases, emphasized since the *Markman* finding that a patent is a fully integrated instrument,<sup>165</sup> have strongly

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158. *Id.* at 1457 n.5. "[W]e need not consider whether equivalence under § 112, ¶ 6 is a question of law or fact." *Id.*

159. 82 F.3d at 435 (unpublished table disposition).

160. Federal Circuit Local Rule 47.6(b) (stating that cases not intended to be used as precedent are not to be cited or used as precedent).

161. It is interesting to note that two Federal Circuit panels, and five separate judges (Archer, Michel, Rader, Plager, Gajarsa, Mayer & Schell), subscribe to the notion that the determination of "equivalents" under § 112, ¶ 6 is a question of fact. See *MAS-Hamilton Group v. LaGard Inc.*, 156 F.3d 1206, 1208 (Fed. Cir. 1998); *In re Burke*, 82 F.3d at 435 (unpublished table disposition).

162. *SRI Int'l v. Matsushita Elec. Corp.*, 775 F.2d 1107, 1118 (pointing out that claims are clearly not interpreted to cover or not cover an accused infringing device).

163. See *supra* notes 58-61 and accompanying text (discussing the infringement analysis of "means-plus-function" claims).

164. See *Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 370 (1996) (noting that there is no dispute that infringement is a question for the jury due to long-standing historical precedent).

165. 52 F.3d 967, 978 (Fed. Cir. 1995).



cautioned against the use of extrinsic evidence<sup>166</sup> in claim interpretation.<sup>167</sup> Because the accused device is by its very nature extrinsic,<sup>168</sup> the district court should not properly be able to consider the accused device in interpreting the patent claims.<sup>169</sup> This limitation effectively prevents a judge from undertaking the last step of the § 112, ¶ 6 analysis which ultimately determines "equivalents."<sup>170</sup> By preventing the judge from undertaking the final step in the § 112, ¶ 6 analysis, these lines of precedent construct a significant barrier to judicial determination of "equivalents."

## 6. Putting It All Together

In sum, judicial precedent, when viewed as a whole, clearly indicates that the determination of § 112, ¶ 6 "equivalents" is more properly a function for the jury.

### C. Relative Interpretive Skills of Judges Versus Juries

Another major factor that shifted claim construction to the judicial province was the judges' perceived superiority in interpreting patent claims.<sup>171</sup> The question becomes whether, "as a matter of the sound administration of justice," a judge or jury is better suited to determine "equivalents" under 35 U.S.C. § 112, ¶ 6.<sup>172</sup>

In the similarly situated issue of claim construction, both the

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166. Intrinsic evidence consists of the patent claims, specification, and the prosecution history of the patent. *Phillips Petroleum Co. v. Huntsman Polymers Corp.*, 157 F.3d 866, 870 (Fed. Cir. 1998). Extrinsic evidence includes: technical journals, treatises, dictionaries, and expert testimony. *Digital Biometrics, Inc. v. Identix, Inc.*, 149 F.3d 1335, 1344 (Fed. Cir. 1998).

167. *See Personalized Media Comm., LLC v. Int'l Trade Comm'n*, 161 F.3d 696, 706 (Fed. Cir. 1998) (disallowing any extrinsic evidence where the claim in question is clear); *Bell & Howell Document Mgmt. Prods. Co. v. Altek Sys.*, 132 F.3d 701, 706 (Fed. Cir. 1997); *Vitronics Corp. v. Conception, Inc.*, 90 F.3d 1576, 1583 (Fed. Cir. 1996); *cf. Key Pharm. v. Hercon Lab. Corp.*, 161 F.3d 709, 716 (Fed. Cir. 1998) (disclaiming any absolute bar on extrinsic evidence); *Mantech Envtl. Corp. v. Hudson Envtl. Servs., Inc.*, 152 F.3d 1368, 1373 (Fed. Cir. 1998) (allowing extrinsic evidence to understand the technology involved in the patent but disproving of extrinsic evidence if it contradicts the claim language).

168. *Casey*, *supra* note 12, at 853 (noting that an "equivalent" under § 112, ¶ 6, is, by its very nature, extrinsic evidence).

169. *See supra* note 161.

170. *See supra* notes 60-61 and accompanying text.

171. *Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 388 (1996); *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 978 (Fed. Cir. 1995). "The construction of written instruments is one of those things that judges often do and are likely to do better than jurors . . ." *Markman*, 517 U.S. at 388 (emphasis added).

172. *Markman*, 517 U.S. at 388 (emphasis added).

Federal Circuit<sup>173</sup> and the Supreme Court<sup>174</sup> came down on the side of the judge. Their reasoning was clear: due to the inherent difficulty of patent construction, judges are better trained and disciplined to properly construe the scope of a patent claim.<sup>175</sup> However, the latest numbers from the Federal Circuit show that approximately forty percent of the claim constructions reviewed by the Federal Circuit have been reversed and remanded to the district court.<sup>176</sup> Observers attribute this high rate of error both to district court judges' unfamiliarity with complex technical issues and their apparent unwillingness to properly construe patent claims.<sup>177</sup> These factors cast a shadow of doubt as to whether a judge is inherently more capable of claim construction than a jury.

Additionally, the Federal Circuit noted the "fundamental principle of American law that 'the construction of a written evidence is exclusively with the court.'"<sup>178</sup> Unfortunately, this principle is of little help in the determination of equivalence between the patent claim and the accused device under § 112, ¶ 6. Because a patent is a fully integrated instrument,<sup>179</sup> no dispute exists that the judge must: 1) determine whether a limitation is drafted in means-plus-function format; 2) ascertain the function which the limitation performs; and 3) identify the corresponding

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173. *Markman*, 52 F.3d at 977.

174. *Markman*, 517 U.S. at 388. "So it turns out here, for judges, not juries are the better suited to find the acquired meaning of patent terms." *Id.*

175. *Id.* at 388-89. It is important to note that this was an assumption of the Court that has not been born out in practice. *Id.*

176. *Cybor Corp. v. FAS Technologies, Inc.*, 138 F.3d 1448, 1476 n.4 (Fed. Cir. 1998) (en banc) (Rader, J., concurring) (noting that 47 of 126 or 37.3% of Federal Circuit decisions reviewing the issue of claim construction were reversed between the date *Markman* was decided (April 5, 1995) and November 24, 1997).

177. See Fisk, *supra* note 11, at A20 (noting that some district court judges construe patent claims narrowly to make summary judgment proper, effectively dumping the problem of claim construction on the Federal Circuit through appellate review); see also Philip J. McCabe & P. McCoy Smith, *Courts Order 'Markman' Hearings Early In Cases Such Hearings Often Precipitate A Party's Request For Summary Judgment or a Settlement Order*, NAT'L L.J., Oct. 19, 1998, at C42 (citing that judges are pushing claim construction to an earlier time in the case to achieve quicker disposition).

178. *Markman*, 52 F.3d at 978, partially quoting Chief Justice Marshall in *Levy v. Gadsby*, 7 U.S. (3 Cranch) 180, 186, 2L.Ed. 404 (1805); accord *Eddy v. Prudence Bonds Corp.*, 165 F.2d 157, 163 (2d Cir. 1947) (Learned Hand, J.) ("[A]ppellate courts have untrammelled power to interpret written documents . . ."); 4 SAMUEL WILLISTON, WILLISTON ON CONTRACTS § 601, at 303 (3d ed. 1961) ("Upon countless occasions, the courts have declared it to be the responsibility of the judge to interpret and construe written instruments, whatever their nature.")

179. *Markman*, 52 F.3d at 978 (noting that the patentability requirements of the statutes provide a description of the invention must be disclosed such that one of ordinary skill in the art can make and use the invention).

structure performing the function.<sup>180</sup> Accordingly, a judge's superior interpretive skills do not come into play in an equivalence determination because the accused *device*, as opposed to a written instrument, is compared against the means-plus-function limitation.<sup>181</sup> Thus, the Federal Circuit's belief that judges are better situated to interpret written instruments does not indicate that judges should determine § 112, ¶ 6 "equivalents." Therefore, no superior weight can be afforded to the judicial determination of "equivalents" in a means-plus-function claim.

#### D. Statutory Policies Concerning Determination of "Equivalents"

Two legislative policies must be taken into account in the ultimate answer in deciding whether a judge or jury determines "equivalents."<sup>182</sup> First, the intent of Congress in passing the current § 112, ¶ 6 must be examined.<sup>183</sup> Second, Congress' desire to promote uniform application of the patent laws through the creation of the Federal Circuit must also be considered.<sup>184</sup>

On its face, the recitation in § 112, ¶ 6 that "such claim shall be construed to cover the corresponding structure . . . and equivalents thereof" places the determination of "equivalents" under the purely legal issue of claim construction.<sup>185</sup> However, the Supreme Court has insisted that statutory language is not to be interpreted in isolation.<sup>186</sup> Unfortunately, the legislative history of § 112, ¶ 6 provides virtually no guidance.<sup>187</sup> Congress' use of "construed" should also be viewed with suspicion as interpreting "equivalents" under claim construction because, at the time the original language was drafted, claim construction was not accorded the same emphasis and scrutiny as today.<sup>188</sup> Accordingly,

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180. See *Cybor*, 138 F.3d at 1457 n.5 (reserving the issue of whether a judge or jury decides "equivalents"); see also *Markman*, 52 F.3d at 977 n.8 (reserving only the issue of who determines "equivalents").

181. See *supra* notes 59-61 and accompanying text (discussing the elements of an infringement analysis under § 112, ¶ 6).

182. See *Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 390 (1996) (discussing Congress' creation of the Federal Circuit in large part to promote uniformity in application of patent laws).

183. See *id.*

184. *Id.*

185. See *id.* at 390 (allocating all aspects of claim construction as a matter of law).

186. *United Sav. Assn. of Tex. v. Timbers of Inwood Forest Assn., Ltd.*, 484 U.S. 365, 371, (1988) (noting that statutory interpretation is a "holistic endeavor").

187. See Reviser's Notes, 35 U.S.C. § 112, H.R. REP. NO. 82-1923, 82d Cong., 2d Sess. 19 (1952) (stating only "[a] new ¶ relating to functional claims is added . . ."); see also Pub. L. No. 89-93, § 9, 79 Stat. 261 (1965) (recodifying section without any commentary); Pub. L. No. 94-431, § 7, 89 Stat. 690-91 (1975) (recodifying section without any commentary).

188. See *Markman* 52 F.3d at 977 (holding occurring only in 1995).

the analysis of Congressional intent surrounding § 112, ¶ 6 is inconclusive.<sup>189</sup>

Another important policy to be considered is the Congressional emphasis on the uniform application of the patent statutes.<sup>190</sup> Indeed, this want of uniformity was one of the major motivating factors in the creation of the Federal Circuit.<sup>191</sup> The Supreme Court further emphasized this goal in *Markman*.<sup>192</sup> One of the Court's main reasons for holding that claim construction is a matter of law was to promote the consistent interpretation of the scope of patent coverage.<sup>193</sup> Thus, courts should carefully consider Congress' policy of uniformity in applying patent statute and doctrines.<sup>194</sup>

Reviewing the § 112, ¶ 6 infringement analysis reveals that the uniform application of that statute is commensurately protected. Every step until the final determination that an accused device is "equivalent" is a matter of law reserved for the court.<sup>195</sup> The final determination of whether an accused device is "equivalent" under § 112, ¶ 6 is unequivocally different in every case.<sup>196</sup> Thus, no single court could properly set forth, or enforce, the entire scope of "equivalents" of a means-plus-function limitation.<sup>197</sup> Hence, leaving only the actual question of infringement to the jury in no way impairs the uniform application of patent law.

Therefore, allowing a jury to determine "equivalents" under § 112, ¶ 6 violates neither Congressional intent in enacting § 112, ¶ 6 nor the uniform application of the patent statutes.

### III. "EQUIVALENCE" SHOULD BE A QUESTION OF FACT TEMPERED BY RULE 49—SPECIAL VERDICTS AND INTERROGATORIES

Congress and the Federal Judiciary have both recognized the need for uniformity in application of the patent laws.<sup>198</sup> A major

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189. See Casey, *supra* note 12, at 847 (noting that the legislative history is limited in scope and applicability).

190. *Markman*, 517 U.S. at 390 (citing to H.R. REP. NO. 97-312, at 20-23 (1981)).

191. *Id.* at 390 (noting Congress' purpose in creating the Federal Circuit was to promote uniformity in patent law).

192. *Id.* at 390-91.

193. *Id.* (noting that this purpose would be "ill served" should claim construction vary dependent upon different juries).

194. *Id.*

195. See *supra* notes 52-61 and accompanying text (discussing analysis of infringement claims under § 112, ¶ 6).

196. Casey, *supra* note 12, at 852.

197. See Sutton et al., *supra* note 11, at 888 (noting no court will likely make a "laundry list" of "equivalents")

198. See *supra* notes 191-93 and accompanying text (discussing the intent of Congress in creating the Federal Circuit).

consideration that has arisen in the uniform application of patent laws is the amount of power that juries wield in determining patent issues.<sup>199</sup> In the *Markman* cases, the pendulum swung in favor of judicial power.<sup>200</sup> The Federal Circuit's decision in *Hilton Davis* swung the pendulum back in favor of the jury. Lying between these two shifts is the subtle, yet important, question of where the pendulum will ultimately come to rest in the determination of "equivalents" under § 112, ¶ 6.

Examining the reasoning of the Supreme Court in *Markman* in balancing questions of law versus questions of fact, this Comment proposes that the Federal Circuit adopt the position that the determination of § 112, ¶ 6 "equivalents" is a factual determination. In order to provide a more workable standard for the courts, and in light of the highly complex nature of patent cases, this Comment also proposes that the courts adopt the procedures codified in Federal Rule of Civil Procedure 49<sup>201</sup> (Rule 49) when determining § 112, ¶ 6 "equivalents."

Rule 49 special verdicts and interrogatories have already found widespread district court use<sup>202</sup> and approval in Federal Circuit patent litigation.<sup>203</sup> The Supreme Court has similarly endorsed the use of Rule 49 in patent litigation.<sup>204</sup> Thus the

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199. See *supra* notes 3-4 and accompanying text (discussing the significance of whether the determination of a particular issue is a question of law or of fact in recent cases before the Federal Circuit and the Supreme Court).

200. *Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 370 (1996); *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 967 (Fed. Cir. 1995).

201. Rule 49(a) provides for the submission of separate special verdicts as written findings on each factual question capable of a categorical answer. FED. R. CIV. P. 49(a). Rule 49(b) provides for the submission of interrogatories concerning factual questions underlying a general verdict. *Id.* at 49(b). Rule 49(b) has also been described as a middle ground between the general verdict and special verdict under Rule 49(a). *Allen Organ Co. v. Kimball Int'l, Inc.*, 839 F.2d 1556, 1562 (Fed. Cir. 1988). Confusion exists as to the real differences between the two formats. *Arachnid, Inc. v. Medalist Mktg. Corp.*, 972 F.2d 1300, 1303 (Fed. Cir. 1992). Accordingly, the general and special verdicts will be discussed as a single concept.

202. See, e.g., *Baxter Healthcare Corp. v. Spectramed, Inc.*, 49 F.3d 1575, 1579 (Fed. Cir. 1995) (discussing Rule 49(a) special interrogatories in enforceability and infringement); *Mendenhall v. Cedarapids, Inc.*, 5 F.3d 1557, 1562 (Fed. Cir. 1993) (noting use of special verdicts for validity and obviousness); *Randomex, Inc. v. Scopos Corp.*, 849 F.2d 585, 586 (Fed. Cir. 1988) (setting out district court's Rule 49(a) special verdict questions for patentability requirements).

203. *In re Lockwood*, 50 F.3d 966, 988 (Fed. Cir. 1995) (Nies, J., dissenting) (noting approval of special interrogatories on issue of validity and factual questions underlying obviousness); *Structural Rubber Prods. Co. v. Park Rubber Comp.*, 749 F.2d 707, 723 (Fed. Cir. 1984) (noting the focus which Rule 49 gives to an issue).

204. *Werner-Jenkins Co., Inc. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 39 (1997) (noting Rule 49 could be a helpful device to simplify litigation in patent cases).

extension of Rule 49 practice into the determination of § 112, ¶ 6 "equivalents" seems a natural development.

The greatest impact of the determination of "equivalents" as a factual question will fall on appellate review of the fact finder's determination.<sup>205</sup> As a factual question, the Federal Circuit must review the determination of "equivalents" for clear error.<sup>206</sup> This necessitates that the Federal Circuit give substantial deference to the trier of fact's determinations.<sup>207</sup> Such a deferential standard of review has raised the concern that judgements will be virtually unassailable.<sup>208</sup>

However, Rule 49 practice will effectively dispel this concern.<sup>209</sup> Skillfully crafted Rule 49 special verdicts and interrogatories can help simplify the judge's role and guide the jury in their consideration of the evidence.<sup>210</sup> This direction will also help to protect the jury's role in patent infringement verdicts upon appellate review.<sup>211</sup>

Use of Rule 49 special verdicts and interrogatories will further promote review by exposing a jury's verdict to more thorough consideration.<sup>212</sup> This thorough examination will also increase judicial economy by preserving correctly decided aspects of a case and reversing only erroneous findings.<sup>213</sup>

The Federal Circuit, in encouraging the use of Rule 49, should be careful not to overstep their authority. The Federal Circuit may not mandate the use of special verdicts and interrogatories as it is left to the discretion of the trial court how a verdict is rendered.<sup>214</sup> Because a district court exerts substantial influence

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205. See *Casey*, *supra* note 12, at 858 (discussing appellate review).

206. *Bruning v. Hirose*, 161 F.3d 681, 686 (Fed. Cir. 1998); *Marubeni America Corp. v. United States*, 35 F.3d 530, 533 (Fed. Cir. 1994).

207. See *Stryker Corp. v. Intermedics Orthopedics, Inc.*, 96 F.3d 1409, 1415 (Fed. Cir. 1996) (noting deferential standard of review under clear error).

208. See *Hilton Davis*, 520 U.S. at 37-38 (discussing unreviewability of "black-box" verdicts); *The Jury's Capacity To Decide Complex Civil Cases*, 110 HARV. L. REV. 1489, 1492 (1997) (noting critics concern over general verdicts).

209. See *Richardson-Vicks, Inc. v. Upjohn Co.*, 122 F.3d 1476, 1485 (Fed. Cir. 1997) (noting that Rule 49(a) special verdicts allow for more complete review of verdicts).

210. *Id.* "The special verdict compels detailed consideration." *Id.*

211. *Lough v. Brunswick Corp.*, 103 F.3d 1517, 1528 (Fed. Cir. 1997) (Michel, J., dissenting).

212. See *Richardson-Vicks*, 122 F.3d at 1485; *Mainland Indus., Inc. v. Standal's Patents Ltd.*, 799 F.2d 746, 747 (Fed. Cir. 1986) (noting the verdict was not "naked"); *American Hoist & Derrick Co. v. Sowa & Sons, Inc.*, 725 F.2d 1350, 1361 (Fed. Cir. 1984) (noting that Rule 49 helps appellate and district court review).

213. *Wahpeton Canvas Co. v. Frontier, Inc.*, 870 F.2d 1546, 1551 (Fed. Cir. 1989).

214. *Newell Co. v. Kenney Mfg.*, 864 F.2d 757, 772 (Fed. Cir. 1989) (Newman, J., dissenting).

over a trial through the use of Rule 49,<sup>215</sup> the court must act prudently to avoid prejudicial emphasis resulting from Rule 49 misuse.<sup>216</sup> Moreover, the courts should not use Rule 49 as an excuse to subject a verdict to a higher level of scrutiny.<sup>217</sup>

Thus, use of Rule 49 in patent infringement suits will help the jury reach better verdicts, protect their proper role in patent suits, and facilitate review of patent verdicts. This, in turn, will promote Congress' goal of promoting the consistent application of patent laws.<sup>218</sup>

### CONCLUSION

Recent decisions of the Federal Circuit and the Supreme Court have placed interpretation of § 112, ¶ 6 "equivalents" in a state of turmoil. The Federal Circuit should recognize the imbalance that this ambiguity has caused and stop dodging the question of its interpretation. Although there is no clear Seventh Amendment right to a jury trial on the issue of "equivalents," prevailing precedent indicates the determination of "equivalents" is a question for the trier of fact. Neither judicial interpretation nor statutory policy mitigate against this conclusion. Accordingly, the Federal Circuit should fulfill its statutory purpose and establish a clear precedent holding that determination of "equivalents" is a proper role for the jury. To further promote consistency and facilitate review of patent judgments, the Federal Circuit should establish a policy encouraging the use of Rule 49 special verdicts and interrogatories for infringement determinations of claims invoking § 112, ¶ 6.

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215. *SRI Int'l v. Matsushita Elec. Co.*, 775 F.2d 1107, 1131 (Fed. Cir. 1985).

216. *Newell*, 864 F.2d at 772-73.

217. *See id.* at 774 (warning against reversing jury verdict upon subsequent findings by the court); *id.* at 782 (noting "Rule 49 is not a vehicle for defeating a constitutionally protected right to jury trial").

218. *Structural Rubber Prod. v. Park Rubber Co.*, 749 F.2d 707, 724 (Fed. Cir. 1984).