WILSON SPORTING GOODS & THE HYPOTHETICAL PATENT CLAIM: A SORELY NEEDED GUIDELINE THAT SHOULD BE APPLIED WITH DISCRETION

I. INTRODUCTION

A United States patent represents a limited monopoly over an invention,[1] to the extent that it prevents others from making, using, or selling the invention in the United States for the patent's term.[2] A patent document[3] consists generally of a description of the inventor's preferred mode of making or using the invention and a set of one or more claims setting forth the invention with a sufficient degree of particularity.[4] When the holder of the patent rights, the patentee, makes a claim of patent infringement, a court will center its infringement determination on the language of the claim.[5]

Patent infringement today takes one of two forms. First, when an accused device includes each and every element of a patent

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1. The monopoly granted under United States patent law is a reverse monopoly, in that a patent grant does not give the patentee the exclusive right to affirmatively make, use, or sell his patented invention. Rather, it gives the patentee the right to exclude others from making, using, or selling the invention. 35 U.S.C. § 271 (1988). This effectively means that the United States Patent and Trademark Office does not guarantee the validity of its patent grants. For instance, a prior patent may surface well after a patent has been granted and invalidate or limit the subsequent patent. 35 U.S.C. §§ 301-307 (1988).

2. The patent monopoly is explicitly sanctioned by the Constitution, which provides in part: "Congress shall have the power . . . [t]o promote the Progress of Science and Useful Arts, by securing for limited times to Authors and Inventors the exclusive right to their respective Writings and Discoveries." U.S. CONST. art. I, § 8, cl. 8.

3. The requirement of a writing goes back to the first patent act, which generally required a description of the invention with sufficient particularity to allow a person skilled in the art to distinguish the patented invention from related matter. Patent Act of 1790, ch. 7, § 2, 1 Stat. 109-12.

4. 37 C.F.R. § 1.51 (1991).

5. 35 U.S.C. § 271 (1988).

claim, a case for literal infringement is made out.[6] Second, if the literal infringement test fails, a claimant may assert infringement under the judicially created Doctrine of Equivalents. Under the Doctrine of Equivalents, a party is entitled to prevent others from making, using, or selling the invention as claimed in the patent at issue *and equivalents thereof.*[7] A point of difficulty in the application of the Doctrine of Equivalents is the extent that it allows a patentee to expand the scope of his patent. The extent of this expansion, often called the "range of equivalents," must be determined "against the context of the patent, the prior art, and the particular circumstances of the case."[8]

Recently, in *Wilson Sporting Goods Co. v. David Geoffrey & Associates*,[9] a three judge panel of the Court of Appeals for the Federal Circuit[10] set forth new guidelines for the application of the infringement test under the Doctrine of Equivalents. In general, the court provided a guideline to aid in determining the range of equivalents under the Doctrine, vis-a-vis the prior art.[11] Furthermore, the court placed the burden of proof on the patentee to show that its desired range of equivalents would not cover any

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6. This is infringement under 35 U.S.C. § 271, which is the only explicit statutory basis for infringement. The accused device may have more elements, or "limitations," than those set forth in the patent and still infringe. This is reflected in the use of the open-ended expression "comprising" or its equivalent in patent claims. For example, the typical patent is described as *comprising* a number of limitations, which means it includes every one of those limitations, and possibly more. Despite this open-ended terminology, literal infringement of the claims is the exception. More often, if infringement is found, it is under the Doctrine of Equivalents. For a recent decision by the Court of Appeals for the Federal Circuit in which a claim for literal infringement was affirmed, see SRI Int'l v. Matsushita Elec. Corp. of Am., 775 F.2d 1107 (Fed. Cir. 1985) (*en banc*).

7. Graver Tank & Mfg. Co. v. Linde Air Prods. Co., 339 U.S. 605, 608 (1950).

8. *Id.* at 609.

9. 904 F.2d 677 (Fed. Cir. 1990), *cert. denied*, 111 S. Ct. 537 (1990).

10. The Federal Circuit was created under the Federal Courts Improvement Act of 1982, Pub. L. No. 97-164, 96 Stat. 25 (codified as amended 28 U.S.C. § 41 (1988)), in large part to centrally oversee the federal district courts in patent matters. This special charter of the Federal Circuit, along with the technical nature of most patent cases, substantially discourages United States Supreme Court review of Federal Circuit patent holdings. Accordingly, the Federal Circuit is generally recognized as a central authority over, among other things, the development of the equitable Doctrine of Equivalents. Judge Avern Cohn, Remarks at the Wayne State Univ. Patent Seminar (Jan. 28, 1990).

11. 904 F.2d at 684-85.

prior art.[12] After providing the context for the *Wilson* decision, this Note will describe the court's new approach and show that, if applied judiciously, the analysis can provide valuable insight into a difficult area of patent infringement litigation.

II. BACKGROUND

The Doctrine of Equivalents finds its roots in early patent case law. Although today the Doctrine is centered on the equivalency of patent claims, the general concept of equivalency between accused and patented matter existed well before the United States Patent and Trademark Office (PTO) even required claims in patents.[13] The term "Doctrine of Equivalents" was coined in the early case *McCormick v. Talcott*,[14] in which the Court stated that "[the original inventor] will have [the] right to treat as infringers all who make [the machine] operating on the same principle, and performing the same function by analogous means or equivalent combinations, even though the infringing machine may be an improvement of the original . . . ."[15]

The Doctrine of Equivalents thus enabled a patent monopoly to effectively extend beyond the literal structure disclosed in the patent. Under the Doctrine of Equivalents today, the accused device must, as a whole, perform substantially the same function to obtain the same result.[16] These two requirements are, however,

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12. *Id.* at 685.

13. *See* Evans v. Eaton, 20 U.S. 161, 7 Wheat. 356 (1822). In *Evans*, the Court for the first time looked into the substantive issues behind the patent laws, the Patent Act of 1790, ch. 7, 1 Stat. 109-12, and the Patent Act of 1793, ch. 11, 1 Stat. 318-23. In that case, the charge to the jury described the test for equivalency between machines as "if the two machines [are] substantially the same, and operate in the same manner, to produce the same result, though they may differ in form, proportions, or utility, they are the same in principle." 20 U.S. at 164, 7 Wheat. at 361. The Supreme Court reaffirmed the principles of the *Evans* jury charge in Winans v. Denmead, 56 U.S. 349, 15 How. 330 (1853). It was not until the Patent Act of 1836, ch. 357, § 6, 5 Stat. 117, that the principle of "claiming an invention" was introduced into U.S. patent law. Moreover, not until the Patent Act of 1870, ch. 230, 16 Stat. 198-217, and its progeny in the Supreme Court, were claims truly recognized as the principle source for the definition of a Patent's scope. *See, e.g.*, Burns v. Meyer, 100 U.S. 671 (1879); Mahn v. Hardwood, 112 U.S. 354 (1884).

14. 61 U.S. (20 How.) 402 (1857).

15. *Id.* at 405.

16. Pennwalt Corp. v. Durand-Wayland, 833 F.2d 931, 934 (Fed. Cir. 1987).

not usually at issue in patent infringement litigation.[17] Typically, a third requirement is the key issue and is most heavily challenged in patent infringement litigation. This requirement is that the accused device perform the function in the *same way*. The United States Supreme Court clarified this test in the landmark case of *Graver Tank & Mfg. Co. v. Linde Air Products Co.*[18]

An issue of recent controversy under the tripartite test is the precise level on which to apply the test. To resolve this issue, the Federal Court of Appeals sat en banc in *Pennwalt Corp. v. Durand-Wayland.*[19] The court implied that the "same way" part of the test should fail if, for *each claimed element* in the patentee's invention, there was not a tripartite test "equivalent" element in the accused device.[20] However, more recent decisions by the Federal Circuit show a retreat from this rule of strict correspondence, stating that individual elements of an accused device may be aggregated so as to be covered by the claimed invention without loss of equivalency.[21]

A central, yet historically controversial, issue underlying the Doctrine of Equivalents is the breadth or range of allowable equivalents.[22] A popular means for establishing the range of equi-

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17. The proximity of the patented and accused devices usually is so close that it would be very difficult to contest that they perform substantially the same function to achieve the same result. For instance, a cursory review of adversaries in infringement litigation shows that a substantial majority of the disputes are between commercial competitors, who make products and processes that perform similar functions to obtain common results.

18. 339 U.S. at 608.

19. 833 F.2d 931 (Fed. Cir. 1987).

20. *Id.* at 934-35.

21. As the Federal Circuit stated in Corning Glass Works v. Sumitomo Elec. U.S.A., 868 F.2d 1251 (Fed. Cir. 1989), "[an] '[e]lement' may be used to mean a single limitation, but it has also been used to mean a series of limitations which, when taken together, make up a component of the claimed invention." *Id.* at 1259. The court in *Corning* found support for this as far back as Winans v. Denmead, 56 U.S. 349, 15 How. 330 (1853). *See also* Perkin-Elmer Corp. v. Westinghouse Elec. Corp., 822 F.2d 1528, 1533 n.9 (Fed. Cir. 1987). More recently, in Sun Studs v. ATA Equip. Leasing, Inc., 872 F.2d 978 (Fed. Cir. 1989), *vacated, in part, on reh'g*, 11 U.S.P.Q.2d (BNA) 1479 (Fed. Cir. 1989), the court went further, stating "[a]n apparatus claim describing a combination of components does not require that the function of each be performed by a separate structure in the accused device. The claimed and accused devices must be viewed and evaluated as a whole." *Id.* at 989.

22. A fundamental, and likewise unresolved issue is the precise definition of an "equivalent." Little guidance is available on this issue. Recently, the Federal Circuit discussed the issue in Perkin-Elmer Corp. v. Computervision

valents is to determine the pioneering status of the invention as against the prior art in the area.[23] If the claimed invention is merely a minor improvement in a crowded art, the court will most likely apply the Doctrine of Equivalents restrictively. In other words, the metes and bounds of the patent protection afforded by the Doctrine would not extend far beyond that provided by the literal reading of the claims. Alternatively, if the invention is of "pioneering" status, such as a major breakthrough in the area, courts typically expand the scope of the patent claims to a greater degree.[24]

At the root of the range of equivalents controversy are two competing policies. The first is the universal desire to prevent fraud

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Corp., 732 F.2d 888 (Fed. Cir. 1984). The court stated that only substantial equivalence is required, not equivalence in each purpose and respect. *Id.* at 901. None of the tests recently provided by the Federal Circuit have been explicitly adopted as a single standard. As Judge Nies made clear in Texas Instruments v. United States Int'l Trade Comm'n, 846 F.2d 1369 (Fed. Cir. 1988), "[the Federal Circuit] has not, in its case law, set out general guidelines with respect to what constitutes an equivalent element . . . ." *Id.* at 1373. A discussion of the wide variety of attempts at defining "equivalents" is outside the scope of this Note.

23. According to applicable sections of the patent statute, 35 U.S.C. § 102-103 (1988), the term "prior art" can include prior use or knowledge by others in the United States, or patents and printed publications in the U.S. or abroad, before the applicant's invention. Prior art also includes patents and printed publications available over one year before the applicant submitted a qualifying patent application, which is a patent application including at least the minimum elements as set forth in 35 U.S.C. § 112 (1988), or a public use or offer for sale of the invention over one year before the submission of the qualifying patent application. Additionally, prior art includes that which a person with ordinary skill in the general art area would consider to be an obvious extension of the prior art.

24. In the early case of Morley Sewing Mach. Co. v. Lancaster, 129 U.S. 263 (1889), the court described how the pioneering status affects the allowable range of equivalents. It provided that if the patented invention is new and of primary character, any later work using substantially similar means to reach the same result is an infringement. *Id.* at 273. However, when the patented invention is simply an improvement by a simple change in form to part of a prior work, one who makes a different change in form to the prior work for the same function as the patented invention does not infringe. *Id.* at 273-74; *see also* Westinghouse v. Boyden Power Brake Co., 170 U.S. 537 (1898) (range of equivalents depends on whether the invention is a pioneer). The Supreme Court treated the matter as well settled in Continental Paper Bag Co. v. Eastern Paper Bag Co., 210 U.S. 405 (1908), in which the Court stated, "[A] wider range of equivalents are permitted where the patent is of a pioneer character than when the invention is simply an improvement . . . . [T]he range of equivalents varies with the degree of invention." *Id.* at 415.

on patents.[25] The second is the desire to provide the inventive world with notice as to the scope of patent claims. Lack of notice as to the metes and bounds of a patented invention chills development in the field, as the public is not certain how far beyond the literal reading of the claims a patentee may enforce his patent.[26] The tension between these policies seems to have, at least in part, stunted the development of a clear rule.[27] Although the nonexist-

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25. *See, e.g.*, Graver Tank & Mfg. Co. v. Linde Air Prod. Co., 339 U.S. 605 (1950).

> [To] permit imitation of a patented invention which does not copy every literal detail would be to convert the protection of the patent grant into a hollow and useless thing. Such a limitation would . . . encourage the unscrupulous copyist to make . . . insubstantial changes in the patent which, though adding nothing, would be enough to take the copied matter outside the claim . . . .

Id. at 607.

Graver Tank is consistently cited as setting forth the modern policy underlying the Doctrine of Equivalents. In that case, the Supreme Court interpreted a claim involving an alkaline earth metal silicate limitation to include the accused device, which did not contain an earth metal silicate, but rather contained silicates of manganese. The Court stated that "[t]he essence of the doctrine is that one may not practice fraud on a patent." *Id.* at 608. The Court then articulated the well-known tripartite test for infringement under the doctrine: "[A] patentee may invoke this doctrine to proceed against the producer of a device if 'it performs substantially the same function in substantially the same way, to obtain the same result.'" *Id.* (quoting Sanitary Refrigerator Co., v. Winters, 280 U.S. 30, 42 (1929)).

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

27. As the Federal Circuit itself stated in *Corning*, "[t]his court has not set out in its precedent a definitive formula for determining equivalency between a required limitation or combination of limitations and what has been allegedly substituted therefor in the accused device. Nor do we propose to adopt one here." 868 F.2d at 1260. Such a clear denial of the existence of a unified rule is unfortunate, to say the least. Inventors and their competitors are entitled to more guidance in this area, especially due to the substantial risks involved in making improper determinations of one's rights with respect to a competitor's patents. For instance, in Polaroid Corp. v. Eastman Kodak Co., 16 U.S.P.Q.2d (BNA) 1481 (D. Mass. 1990) *amended, on recons.*, 17 U.S.P.Q.2d (BNA) 1711 (D. Mass. 1991), infringement damages of over $909 million were awarded, and an injunction was ordered, closing a sizable Kodak plant. Kodak produced the infringing cameras only after its patent counsel opined that there were no infringement concerns with the Polaroid patents. This inaccurate opinion could have resulted in treble damages against Kodak. Polaroid Corp. v. Eastman Kodak Co. 789 F.2d 1556 (Fed. Cir.) *cert. denied*, 479 U.S. 850 (1986). The Federal Circuit, sitting en banc, should attempt to resolve this vagueness by setting forth a clear rule to provide patent counsel with every tool necessary to make confident opinions on the scope of existing patents.

ence of a bright line rule has to some extent frustrated the intentions of would-be patent defrauders, it undermines the need for notice to competitors and also irritates the courts.[28]

To best understand the scope of the Doctrine of Equivalents, it may be most helpful to set forth the constraints on its scope. Historically, an inventor was limited to a range of equivalents defined by the art that the inventor knew of, or could have known of, at the time of his invention. This limitation is well illustrated in *O'Reilly v. Morse*.[29] In *O'Reilly*, the inventor held broad patent protection on the telegraph. The Court invalidated the broad patent on the ground that the patentee had attempted to unreasonably expand the scope of his protection.[30] The Court reasoned that the inventor should be limited to the means for carrying out his invention that were within his grasp at the time the invention was made, as he could not possibly have intended to include means he was unaware of.[31] Recent Federal Circuit decisions, however, allow such "unforeseen" technology to be included in the determination of the range of equivalents.[32]

Currently, there are two major limitations on the range of equivalents. First, courts will analyze the prosecution history of the patent, which is the history of interaction between the inventor or his patent attorney and the PTO. This analysis is intended to determine if the patentee, to survive the examination of his patent application at the PTO, had acquiesced to a limited interpretation of his claim language. For example, the PTO examiner may cite prior art against the applicant for the patent and, in response, the applicant may assert that the art is improperly cited against his application because the applicant did not intend to extend the scope of his patent protection that far. If the examiner then allows the patent in response to the applicant's assertion, it would be improper for the applicant, in a later infringement action, to

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28. Indeed, as stated by Judge Learned Hand in Claude Neon Lights, Inc. v. Machlett & Son, 36 F.2d 574 (2d Cir. 1929), "[t]he doctrine of equivalents . . . means no more than that the language of claims shall be generously construed. Such a limitation is however irreconcilable with those numerous decisions which have extended a claim to structures which by no possibility it could cover, judged by any tenable canons of documentary interpretation." *Id.* at 575 (citation omitted).

29. 56 U.S. 65, 15 How. 62 (1853).

30. *Id.* at 119-20, 15 How. at 113.

31. *Id.*

32. *See, e.g.*, Texas Instruments Inc. v. United States Int'l Trade Comm'n, 846 F.2d 1369 (Fed. Cir. 1988).

reassert the previously surrendered claim scope so as to cover an accused device.[33] Courts today are less likely to allow expansion via the Doctrine of Equivalents when the patentee narrows his claims to avoid prior art as opposed to narrowing his claims for other reasons.[34]

The second major limitation on the range of equivalents is the prior art.[35] The general rule is that a patentee, seeking to broaden the scope of his claims under the Doctrine of Equivalents, should not be granted a range of equivalents that would invade upon the prior art.[36] This is consistent with the PTO policy that patents are intended only to protect original work. It would be contradictory to ignore this limitation in the Doctrine of Equivalents analysis by allowing the patent protection to extend into areas covered by prior art.

As illustrated recently by the Federal Circuit in *Wilson Sporting Goods Co. v. David Geoffrey & Associates*,[37] it can be difficult

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33. This limitation has strong historical support. For example, the Supreme Court, in Roemer v. Peddie, 132 U.S. 313 (1889), stated;

> when a patentee, on the rejection of his application, inserts in his specification, in consequence, limitations and restrictions for the purpose of obtaining his patent, he cannot, after he has obtained it, claim that it shall be construed as it would have been construed if such limitations and restrictions were not contained in it.

Id. at 317.

34. For example, the Federal Circuit has indicated that, especially in cases of complex inventions, a patentee may be able to reassert claim scope he surrendered by mistake. *See, e.g.*, Hughes Aircraft Co. v. United States, 717 F.2d 1351 (Fed. Cir. 1983). *But see* Martin J. Adelman, *The New World of Patents Created by the Court of Appeals for the Federal Circuit*, 20 U. MICH. J.L. REF. 979, 997-1000 (1987).

35. *See supra* note 23.

36. Accordingly, an alleged infringer may respond to a claim of infringement by coming forward with prior art that predates the date of the patentee's invention. The alleged infringer could assert that the patented invention if expanded under the judicially created Doctrine of Equivalents, will encompass that prior art. This is not a new limitation, because the Federal Circuit expressed in Senmed, Inc. v. Richard-Allan Medical Indus., Inc., 888 F.2d 815 (Fed. Cir. 1989), that "it is well established that limitations in a claim cannot be given a range of equivalents so wide as to cause the claim to encompass anything in the prior art." *Id.* at 821. It should be noted that the courts seem to expect the accused to affirmatively come forward with prior art which is within the claims as expanded under the Doctrine of Equivalents. *See* Thomas & Betts Corp. v. Litton Sys., Inc., 720 F.2d 1572 (Fed. Cir. 1983). Moreover, a defendant in an infringement suit should seek out and come forward with any prior art closely related to his accused device. Such prior art will most strongly support the proposition that the scope of allowable equivalents cannot cover his device, because it cannot cover the closely related prior art.

37. 904 F.2d 677 (Fed. Cir. 1990), *cert. denied* 111 S. Ct. 537 (1990).

to determine the extent that prior art limits the range of equivalents.[38] Accordingly, the court proposed a guideline that it thought might, in appropriate cases, clarify that determination.[39]

III. The Wilson Sporting Goods Case

The *Wilson* case is in many ways a typical infringement suit involving a Doctrine of Equivalents analysis. *Wilson* provided an excellent context for the court to submit its new approach to the Doctrine of Equivalents. The facts of *Wilson* are as follows. Four golf ball models manufactured by Dunlop, one of the plaintiff Wilson's major competitors, were alleged to have infringed Wilson's patented golf ball dimple configuration under the Doctrine of Equivalents.[40] Wilson's invention consisted of configuring the dimples so that no dimple would intersect any of six great circles formed on the ball's surface.[41] The great circles are formed by joining the midpoints of the three sides of each of the twenty primary triangles, formed by dividing the ball into an icosahedron.[42] The layout of the golf ball dimples contributes significantly to travel distance, and the goal of the Wilson arrangement was to increase the distance by a more symmetrical distribution of the dimples.[43]

The relevant prior art consisted of an old British patent, several Uniroyal patents, and a Uniroyal golf ball sold in the United States during the 1970s.[44] The British patent taught dividing a golf ball into an icosahedron and subdividing the twenty primary triangles of the icosahedron into subtriangles (as was claimed in the Wilson patent).[45] The Uniroyal ball was icosahedral, having six great circles with thirty or more dimples intersecting five of the great circles by about 0.012 to 0.015 inches.[46]

The accused Dunlop balls were also arranged in an icosahedral pattern having six great circles. Each great circle intersected 60 dimples, each of which was 0.06 to 0.08 inches in radius.[47] Al-

38. *Id.* at 684.
39. *Id.*
40. *Id.* at 678-79.
41. *Id.* at 679. United States Patent No. 4,560,168. *Id.* at 678.
42. *Id.* at 679.
43. *Id.* at 678-79.
44. *Id.* at 680.
45. *Id.*
46. *Id.* at 680-81.
47. *Id.* at 681.

though Wilson's patent required that no great circle be intersected by any dimples, the jury found that all four of Dunlop's balls infringed the patent.[48] The infringement was under the Doctrine of Equivalents where, as described, the literal description in the Wilson patent could be expanded to include equivalents. At trial, Dunlop unsuccessfully asserted that the above-described prior art limited the range of equivalents.[49]

On appeal, the Federal Circuit reviewed the effect of that prior art. The court stated that such a review is often difficult and might be clarified by "visualizing a *hypothetical* patent claim, sufficient in scope to *literally* cover the accused product."[50] The next question is whether the PTO would have allowed such a claim over the prior art. If the PTO would not have allowed it, then under the prior art test, courts should not allow a claim of that scope to be enforced against the defendant's device.[51] If the PTO would have allowed it, then the prior art should not shield the defendant from the claim of infringement.[52]

The Federal Circuit believed that allowing courts to visualize and interpret claims as they normally do in many infringement cases is preferable to introducing an analysis foreign to the courts. The hypothetical claim approach had aided courts in the past by providing a familiar framework for resolving an often difficult step in infringement litigation. However, the court clarified that the hypothetical claim is merely a guideline and not a mandatory step in the analysis.[53]

Armed with the hypothetical claim approach, the Federal Circuit then found that the prior art restricted the range of equivalents to those that did not cover the accused golf balls.[54] The court applied the hypothetical claim approach in two general steps. First, it imagined an expanded claim just broad enough to cover the accused Dunlop golf balls.[55] Such a claim needed to include all golf balls having sixty or less dimples to intersect its six great circles by at least 0.009 inches.[56]

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48. *Id.*
49. *Id.* at 683.
50. *Id.* at 684.
51. *Id.*
52. *Id.*
53. *Id.* at 684-85.
54. *Id.* at 686.
55. *Id.*
56. *Id.*

Next, the court compared the expanded claim to the prior art. The prior art Uniroyal ball had thirty dimples intersecting the great circles by between 0.012 and 0.015 inches. As this fell within the periphery of the hypothetical claim, Dunlop's golf balls could not be covered without violating the prior art. Accordingly, the hypothetical claim was "invalid" in the sense that it could not support a claim for infringement under the Doctrine of Equivalents.[57]

The Federal Circuit then showed that the dependent claims under the main or independent claim,[58] from which the preceding hypothetical claim was developed, also could not be extended to support a finding of infringement. The court stated that none of Wilson's dependent claims could be extended to the extent necessary to cover the Dunlop golf balls.[59] Such an extension, the court stated, would contradict well-established PTO rules on claim validity.[60] The court did, however, acknowledge the possibility that an accused device may infringe hypotheticals of dependent claims without infringing the associated independent claim.[61]

Next, the court discussed the subsidiary issue of which party carries the burden of proving the validity of the hypothetical claim. The court stated that "the burden is on [the patentee] to prove

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57. *Id.*

58. A dependent claim is a claim that depends on and further limits an independent claim in a patent. Currently, the PTO requires that each patent application have at least one independent claim. A patent applicant may further include a number of additional independent claims, as well as a number of dependent claims that add restrictions to, and thereby narrow, the independent claims. For instance, an independent claim may be drawn to "a toothbrush having bristles." Such a claim would cover all toothbrushes having bristles. A dependent claim may state "the independent claim, wherein the bristles are blue." The restriction of color further limits the scope of the invention as set forth by the dependent claim to one specific type of toothbrush, namely those with blue bristles. By including both the independent and dependent claims in a patent application, the applicant provides himself with a hierarchy of patent protection. If his broad claim does not survive prosecution at the PTO, or is invalidated during litigation, some lesser degree patent protection may still survive via the narrower dependent claim. Mainly for this reason, applicants include claims of varying scope in patent applications.

59. 904 F.2d at 686.

60. *Id.*

61. *Id.* For instance, an independent claim may be so broad that, even without hypothetical claim expansion, it is invalidated in view of prior art. It is quite conceivable, however, that the more specific dependent claim could be expanded under the hypothetical claim approach to cover the defendant's device without invading the prior art.

that the range of equivalents which it seeks would not ensnare the prior art [products or processes]."[62] The patentee has traditionally held such a burden.[63] To shift the burden to the accused would not be consistent with well-established patent law policy and could not be logically justified.[64] The court related this burden to that imposed on a patent applicant during the application process with the PTO.[65] Finally, the court reaffirmed that there is a strong presumption of validity on issued patents that is not affected by the promulgation of the hypothetical claim.[66]

In *Wilson*, the court set forth an old limitation in new terms, and proposed a new test under that limitation. Nevertheless, further clarification is needed in this troublesome and unguided area of patent law. Although the degree of usefulness of the *Wilson* hypothetical claim still remains to be seen, early response suggests that the trial courts have not embraced an approach consistent with the desires of the Federal Circuit. The next section will detail the response to the hypothetical claim to date and will set forth a context in which the analysis can be practically and meaningfully applied.

IV. Discussion

The Federal Circuit in *Wilson* provided some guidance in a difficult and controversial area of patent law by further defining the range of equivalents vis-a-vis the prior art. The controversy in applying *Wilson* is over whether the hypothetical claim analysis is a *mandatory step* in the equivalency determination, in particular when the accused infringer argues that the prior art restricts the allowable range of equivalents. Furthermore, there is confusion as to the manner in which this analysis should be carried out.

The hypothetical claim, whether understood or not, will to some extent find its way into infringement litigation to aid in determining the range of equivalents. A few recent cases indicate that at least some courts are willing to attempt the hypothetical claim approach as a means of defining the allowable range of

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62. *Id.* at 685.
63. *Id.*
64. *Id.*
65. *Id.* In prosecution at the PTO, the patent applicant has always had the burden of supporting the patentability requirements of eligible subject matter, originality, utility, novelty, and non-obviousness. *See* Donald S. Chisum, Patents § 1.01 (1987).
66. 904 F.2d at 685.

equivalents.[67] Unfortunately, the manner in which these courts approach the analysis is not always consistent with the intentions of the Federal Circuit.

For example, in *Key Manufacturing Group, Inc. v. Microdot*,[68] the Federal Circuit reversed a finding of infringement under the Doctrine of Equivalents because the trial court failed to properly interpret a conceptualized hypothetical claim under the prior art.[69] In a related case, the Federal Circuit in *Becton Dickinson & Co. v. C.R. Bard, Inc.*[70] reaffirmed a limitation on the use of the hypothetical claim. In this post-*Wilson* case, the court stated that trial courts have no authority to *formally* rewrite claims to determine their validity.[71] Accordingly, the Federal Circuit implied in *Becton Dickinson* that the hypothetical claim analysis should only involve an informal rewriting of claims to the extent necessary to verify that the prior art is not violated.

As discussed earlier, courts frequently have difficulty gauging the restrictive effect of prior art on the range of equivalents.[72] The court's background is often devoid of any formal technical training, and is therefore not well-suited to making distinctions between very closely related devices, methods, or processes. The infringement process they are bound to follow includes difficult steps, such as the determination of the range of allowable equivalents.

Accordingly, any means of clarifying this determination would likely be welcome, especially one that allows the courts to, at least conceptually, redraft the confusing and unfamiliar vernacular of patent claims into more understandable language. This is an advantage provided by the hypothetical claim approach. The hypothetical claim was, in the words of the *Wilson* court, intended to "simplify analysis, and bring the issue onto familiar turf."[73] Courts

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67. *See* Jurgens v. McKasy, No. 89-1645 (D. Minn. July 5, 1989); Becton Dickinson & Co. v. C.R. Bard, Inc., 719 F. Supp. 1228 (D.N.J. 1989), *aff'd*, 922 F.2d 792 (Fed. Cir. 1990); Insta-Foam Prod. v. Universal Foam Sys., No. 83-C-1952, 1988 U.S. Dist. LEXIS 17582 (E.D. Wis. Aug. 19, 1988); Key Mfg. Group, Inc. v. Microdot, Inc., 679 F. Supp. 648 (E.D. Mich. 1987), *vacated in part*, 854 F.2d 1328 (Fed. Cir. 1988). *See generally* Hernick D. Parker, *Doctrine of Equivalents Analysis After Wilson Sporting Goods: The Hypothetical Claim Hydra*, 18 AM. INTELL. PROP. L. ASS'N Q.J. 262 (1990).

68. 925 F.2d 1444 (Fed. Cir. 1991).

69. *Id.* at 1449.

70. 922 F.2d 792 (Fed. Cir. 1990).

71. *Id.* at 799 n.6.

72. *See supra* note 38 and accompanying text.

73. 904 F.2d at 684.

should welcome this opportunity but should understand that the usefulness of the approach is limited to situations in which clear lines of distinction between the prior art and the accused device can be highlighted by a hypothetical claim.

The *Wilson* case itself is a good example of such a situation. The court conceived of a claim just broad enough to cover the defendant's golf balls.[74] As discussed previously, this hypothetical claim described a golf ball with sixty or less dimples intersecting its six great circles by at least 0.009 inches.[75] This step of claim expansion to cover the accused device, method, or process is rarely difficult. Next, the court was easily able to conduct an empirical comparison of the hypothetical claim and the prior art golf balls, which had thirty dimples intersecting the great circles by at least 0.012 to 0.015 inches. The minimally expanded hypothetical claim was found to "read on" the prior art, and therefore was not valid.[76]

The lines drawn in *Wilson* were so clear that if the defendant's golf balls had just thirty-one fewer dimples intersecting the great circles, the prior art would *not* have precluded potentially substantial infringement damages. Cases like *Wilson*, with clear lines of demarcation between the prior art and the defendant's device are well-suited to the use of the hypothetical claim approach. The approach is easy to apply and can provide clear and dispositive results.

However, there are cases in which the lines between the accused device and the prior art are blurred. For example, unlike the *Wilson* distinction based solely on the number of dimples intersecting the great circles by an amount,[77] there may be a number of limitations in the plaintiff's claims that are very similar to the defendant's device. In such a case, the hypothetical claim approach would require the trier of fact to make a multiple point comparison between the prior art and the newly drafted hypothetical claim, as expanded beyond the plaintiff's claims. When considered along with the plethora of other analyses the trier of fact must make in such cases, the potential for confusion and delay in using the hypothetical claim approach may outweigh its value.

In these cases, rather than struggling to apply the hypothetical claim analysis, courts should abandon it. The Federal Circuit in

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74. *See supra* note 55 and accompanying text.
75. 904 F.2d at 686.
76. *Id.*
77. *See supra* note 55 and accompanying text.

Wilson clearly intended the hypothetical claim to be an optional approach.[78] In each applicable case, before applying the approach, courts should weigh the potential for confusion, delay, and the risk of misapplication of the hypothetical claim against any potential value it may provide.

Once a court decides to use the hypothetical claim, it should refrain from opening up a full-blown analysis of the patentability of the hypothetical claim. The process should be as simple as possible: merely expand the plaintiff's claim to the extent necessary to cover the defendant's device, then make a comparison between that claim and the offered prior art. Does the prior art overlap with the claim? Would the claim have been obvious in view of the prior art? If the answer to these questions is clearly yes, then there is no infringement under the Doctrine of Equivalents. If the answer is unclear, will further litigation on the point be justified? If not, break off the analysis. If so, the burden is on the plaintiff to support the validity of the claim.

Even when useful in the Doctrine of Equivalents analysis, the hypothetical claim approach only addresses one difficulty. No sister guideline is available for such troublesome analyses as the practical application of the tripartite test, the definition of an "equivalent," or the determination of when to apply the Doctrine of Equivalents. The Federal Circuit should address these fundamental analyses in an en banc decision to clarify and prioritize the underlying policies, such as the need for notice of the scope of a patent and the desire to prevent fraud on patents.[79]

As a further note, the plaintiff's burden of proving the validity of the hypothetical claim, as provided for in *Wilson*,[80] is consistent with the traditional onus in infringement litigation. Despite a strong presumption of validity attached to patented claims, the patentee still holds the burden he held in prosecution before the PTO of proving claim validity. As the hypothetical claim is not a formal new claim but merely a new concept to clarify an old limitation, it is not surprising that the burden lies where it always has, with the patentee.

V. CONCLUSION

The long-felt need for guidance in the application of the Doctrine of Equivalents is apparent. Patent practitioners continue

78. The court stated that to clarify matters, "it *may be helpful* to . . . visualiz[e] a hypothetical patent claim . . . ." 904 F.2d at 684 (emphasis added).

79. *See supra* note 25.

80. *See supra* note 61 and accompanying text.

to anxiously watch judges and juries grapple with the technical rigors often associated with many aspects of the Doctrine of Equivalents. Meanwhile, the credibility of the newly created Federal Circuit is at risk in delaying the promulgation of a comprehensive and practical approach to the Doctrine that is consistent with its underlying policies. Additionally, the viability of competing companies, especially in those areas highly dependent on new technologies, is threatened as their patent attorneys attempt to determine the posture of their technology in the context of the range of equivalents of competing patented art.

Accordingly, as a way to clarify the doctrine, the hypothetical claim approach should at least be considered by courts in all cases in which the prior art is asserted as a limitation on the range of equivalents. As described, if the degree of potential clarification provided by the approach weighs favorably against the likelihood of confusion and delay in using it, the court should proceed with the hypothetical claim. Otherwise, the approach should be abandoned in that particular case.

The reaction by the courts and the patent community to the hypothetical claim guideline exaggerated the intended reach of the test.[81] The guideline, as illustrated in the *Wilson* case itself, can be a useful tool with which to clarify the historically vague range of allowable equivalents determination, in view of the prior art. It is hoped that the federal district courts can likewise apply it judiciously, when clarification is necessary and when the hypothetical claim provides insight. What is truly needed, however, is an en banc decision from the Federal Circuit on the range of allowable equivalents, replete with the underlying policies and any useful guidelines that may be available from prior cases.

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81. *See, e.g.*, Parker, *supra* note 67 at 264; Key Mfg. Group, Inc. v. Microdot, Inc., 678 F. Supp. 648 (E.D. Mich. 1987).