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## **Narrowing Claim Amendment or Just Redefining the Invention: Prosecution History Estoppel and the Doctrine of Equivalents under *TurboCare v. General Electric* \***

*Paul C. Onderick*\*\*

### INTRODUCTION

The Federal Circuit has made many decisions in the last decade that have limited the application of the doctrine of equivalents. Even before the Supreme Court weighed in on *Festo Corp. v. Skoketsu Kinzoku Kogyo Kabushiki (Festo)* (2000),<sup>1</sup> there was evidence that the Federal Circuit had gone too far. In several recent pre-Supreme Court decisions, the judges of the Federal Circuit stretched to make decisions that nibbled at the edges of the Federal Circuit's own absolute bar to the doctrine of equivalents. This comment looks at an example of the Federal Circuit working very hard to avoid applying the rule of *Festo* (2000) even though the facts of the case seemed to demand it.

The TurboCare Division of Demag Delaval Turbomachinery Corp. (TurboCare) originally filed suit against General Electric Co. (GE) in the United States District Court for the District of Massachusetts asserting infringement of U.S. Patent No. 4,436,311 (the '311 patent) issued to Ronald E. Brandon.<sup>2</sup> The district court granted summary judgment in favor of GE.<sup>3</sup> TurboCare appealed to the Court of Appeals for the Federal Circuit.<sup>4</sup> The Federal Circuit held, *inter alia*, that an amendment made to a patent claim in response to a

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\* This article is available in its original format at <http://mipr.umn.edu>.

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1. 234 F.3d 558 (Fed. Cir. 2000).
2. TurboCare Div. of Demag Delaval Turbomachinery Corp. v. General Elec. Co., 264 F.3d 1111, 1113-15 (Fed. Cir. 2001).
3. *Id.* at 1113.
4. *Id.*

rejection based on prior art could make the claim patentable over the prior art without narrowing the scope of the claim, and thus retain the benefit of the doctrine of equivalents for that claim element.<sup>5</sup>

This case raises a number of issues. First, why was the Federal Circuit backing away from its decision in *Festo* (2000)? Second, is it possible to amend a patent claim to make it patentable over prior art while at the same time not narrowing its scope?

Two years later, in 2002, the Supreme Court vacated the Federal Circuit's *Festo* (2000) decision but did not return the law to the same state it was in prior to the Federal Circuit's action in that case. The Supreme Court's decision relieved the Federal Circuit of the need to stretch for grounds to allow patentees the benefit of the doctrine of equivalents after they have amended claims. However, the Supreme Court decision still left an unexplained and inexplicable variation between the treatment of amendment-based and argument-based prosecution history estoppel.

This comment suggests a manner of dealing with the relationship between the several types of prosecution history estoppel and the doctrine of equivalents that is better than the current contrary standards used by the Court of Appeals for the Federal Circuit. Part I describes the state of the law related to prosecution history estoppel and the doctrine of equivalents. Part II describes the *TurboCare v. GE* decision and considers how the decision demonstrates the difficulty inherent in the *Festo* (2000) approach. Part III suggests an alternative approach that would create consistency and predictability in patent infringement cases. The proposed rule attempts to reconcile and conform the current varying treatments of the doctrine of equivalents under the theories of argument-based versus amendment-based estoppel. This comment concludes that the *Festo* (2000) doctrine as applied in *TurboCare* demonstrates the substantial flaws in that doctrine. The *TurboCare* decision shows that *Festo* (2000) did not create a significant increase in predictability of outcome, but instead limited the value of patents, and in the end does not effectively promote progress in science and the useful arts. Further, this comment concludes that the Supreme Court has restored the substantial benefit of the doctrine of equivalents to patentees

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5. *Id.* at 1126.

who have amended claims. Still, the Supreme Court has not gone as far as it could have or should have to make the application of prosecution history estoppel to the doctrine of equivalents rational, consistent and predictable.

#### I. THE STATE OF THE LAW AT THE TIME *TURBOCARE* WAS DECIDED

The Constitution of the United States grants Congress 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.”<sup>6</sup> Utilizing this power Congress has passed a series of Patent Acts, the most recent in 1952.<sup>7</sup> The Patent Act defines, among other things, the circumstances under which the United States Patent and Trademark Office may grant a patent to an inventor.<sup>8</sup>

A patent grants a right to the inventor to exclude others from making, using or selling the patented invention<sup>9</sup> for a finite period of time.<sup>10</sup> In return the government requires the inventor to disclose how to make and use the invention in sufficient detail so that a person skilled in the art to which the invention pertains can practice the invention without undue experimentation.<sup>11</sup> This disclosure puts the invention into the public domain so the public can make use of the invention after the inventor’s period of exclusive right ends. The disclosure also makes the inventor’s knowledge available to the public so that others may improve upon the invention even while the inventor retains the patent right.<sup>12</sup>

The patent disclosure serves several other purposes. First, the patent defines the limits of the patentee’s right to exclude

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6. U.S. CONST. art. I, § 8, cl. 8.

7. Patent Act of 1952, 35 U.S.C. §§ 1-188 (2000).

8. 35 U.S.C. §§ 100-105 (2000).

9. 35 U.S.C. § 271(2000).

10. Presently, the term of a utility patent is twenty years from the date of filing of the application. 35 U.S.C. § 154 (2000).

11. The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor of carrying out his invention. 35 U.S.C. § 112 (2000).

12. *See id.*

others from practicing the invention.<sup>13</sup> This public notice function advises others of the boundaries of the property right granted to the patentee.<sup>14</sup> Ideally, others can examine the patent and avoid making, using, or selling the patented invention and avoid liability to the inventor for patent infringement.<sup>15</sup>

According to 35 U.S.C. § 112, “[t]he specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.”<sup>16</sup> Patent claims are intended to clearly and specifically define the invention. In practice, the patent applicant prepares a patent disclosure including a specification and drawings (if the invention can be better understood by their inclusion).<sup>17</sup> In addition to the claims, the specification includes a detailed written description of how to make and use the invention.<sup>18</sup> The specification must provide sufficient detail so that “any person skilled in the art” can make and use the invention without undue experimentation.<sup>19</sup>

Once the applicant has submitted the written description to the patent office she is precluded from adding any new matter to the specification.<sup>20</sup> The written description requirement of § 112 along with the “new matter prohibition” serve to assure that the applicant actually has possession of the invention at the time that the patent application is filed.<sup>21</sup> The Patent Office, upon receiving the application, examines the claims for compliance with required form and structure, and also searches prior art for similar patents and non-patent information in an effort to determine whether the disclosed invention is novel and unobvious.<sup>22</sup> Patent examiners are trained to construe the claims broadly for the purposes of examination in order to find as much related prior art as

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13. See KAYTON, PATENT PRACTICE 3.1 (Patent Resources Institute, Inc. 6th ed. 1998).

14. See *id.*

15. 35 U.S.C. § 271 (2000).

16. 35 U.S.C. § 112.

17. 35 U.S.C. § 111 (2000).

18. 35 U.S.C. § 112.

19. See *Ralston Purina Co. v. Far-Mar-Co, Inc.*, 772 F.2d 1570, 1576 (Fed. Cir. 1985). The “person of ordinary skill” is not specifically defined but is somewhat analogous to the “reasonable person” of tort law.

20. 35 U.S.C. § 132 (2000).

21. 35 U.S.C. §§ 112, 132.

22. 35 U.S.C. §§ 102, 103, 131 (2000).

possible.<sup>23</sup>

The novelty requirement is based on the belief that in order to advance the sciences and useful arts, inventors need an incentive to produce that which is new and not previously known.<sup>24</sup> A corollary belief is that there is no need to grant an incentive to produce that which society already possesses.<sup>25</sup> An obvious invention is one that society would acquire even without the patent incentive.<sup>26</sup> Society need not provide a reward for creation of an obvious invention, because an obvious invention would become available without a providing a reward.<sup>27</sup>

During the examination process, the examiner compares the scope of the claimed invention to the prior art and rejects those claims that define an invention already in the public domain (novelty) or that do not differ substantially from what is already in the public domain (obviousness).<sup>28</sup> The examiner responds to the applicant in the form of an office action.<sup>29</sup> The office action memorializes the examiner's rejections and reasoning in writing.<sup>30</sup>

Upon receiving the office action, the applicant may respond in a variety of ways. The applicant may amend the claims to narrow them in order to avoid the prior art that the examiner has cited.<sup>31</sup> The applicant may argue that the examiner is misinterpreting the meaning of the claims in light of the description in the specification.<sup>32</sup> In addition, the applicant may point out errors in reasoning or application of the prior art to the examiner without amending the claims.<sup>33</sup> This is often

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23. MANUAL OF PATENT EXAMINING PROCEDURE § 2111 (United States Patent and Trademark Office, 8th ed., 2001).

24. Joseph S. Cianfrani, *An Economic Analysis of the Doctrine of Equivalents*, 1 VA. J.L. & TECH. 1, para. 35 (Spring 1997) at [http://vjolt.student.virginia.edu/graphics/vol1/vol1\\_art1.html](http://vjolt.student.virginia.edu/graphics/vol1/vol1_art1.html).

25. *See id.*

26. *See id.*

27. *See id.*

28. 35 U.S.C. § 132 (2000).

29. MANUAL OF PATENT EXAMINING PROCEDURE, *supra* note 23, at § 707; 37 C.F.R. § 1.104 (2000).

30. *See* 37 C.F.R. § 1.2 (2000).

31. Richard L. Schwaab, *Applicant's Reply to Patent Office Action*, in 4 PATENT PRACTICE 15.2 (Irving Kayton & Karyl S. Kayton eds., 6th ed. 1998).

32. *Id.* at 15.13.

33. Cianfrani, *supra* note 24, para. 36.

referred to as narrowing by argument.<sup>34</sup> Through this process of negotiation, referred to as prosecution of the patent application, the United States Patent and Trademark Office (USPTO) and the applicant usually reach an agreement as to the scope of the claimed invention and the patent issues.<sup>35</sup>

Alternatively, the applicant may choose to abandon the application.<sup>36</sup> This generally occurs if the invention disclosed is clearly anticipated by the prior art. The applicant may choose abandonment if the invention turns out to be commercially unsuccessful or if the expense or burden of pursuing the application is too great compared to the potential reward.

The patent applicant's motivation throughout the application procedure is to acquire the broadest possible exclusionary right.<sup>37</sup> To this end, patent applications have historically been filed with broad claims that would be narrowed during prosecution as required to meet the examiner's rejections.<sup>38</sup> Recent dramatic changes in patent case law have made reliance on this conventional approach to prosecuting the claims of the patent application inadvisable.

#### A. THE DOCTRINE OF EQUIVALENTS

In the mid 1800s, courts in the United States began using the doctrine of equivalents in order to hold patents infringed.<sup>39</sup> Courts employed this tactic in cases where the infringing party had not practiced the invention literally as claimed in the patent.<sup>40</sup> In *Gould v. Rees*,<sup>41</sup> the Supreme Court held that an accused infringer, who was using well-known substitutes of elements claimed in a patent, still infringed the patent.<sup>42</sup> The Court explained that "if the substitute performs the same function and was well known at the date of the patent as a proper substitute for the omitted ingredient" it is an

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34. Interviews with Bradley D. Pedersen, Patent Attorney, Partner, Patterson, Thuente, Skaar & Christensen, in Minneapolis, Minn. (Mar.-Aug., 2001).

35. Cianfrani, *supra* note 24, para. 9.

36. MANUAL OF PATENT EXAMINING PROCEDURE, *supra* note 23, at § 711; 37 C.F.R. §§ 1.135, 1.138 (2000).

37. Cianfrani, *supra* note 24, para. 9.

38. See KAYTON, *supra* note 13, at 3.1.

39. Cianfrani, *supra* note 24, para. 9.

40. *Id.* para. 9-16.

41. 82 U.S. 187 (1872).

42. *Id.* at 194.

“alteration” and still infringes the patent.<sup>43</sup>

The Supreme Court defined the modern doctrine of equivalents in *Graver Tank v. Linde Air Products*.<sup>44</sup> In *Graver Tank*, the patentee claimed a process and flux for high speed, single pass arc welding of thick metal plates.<sup>45</sup> The flux, as claimed, was comprised of an alkaline earth metal silicate and calcium fluoride.<sup>46</sup> The specification revealed that the preferred metal silicate was magnesium silicate, but evidence showed that manganese silicate would work just as well.<sup>47</sup> However, manganese is not an alkaline earth metal.<sup>48</sup> Graver Tank Co. and other alleged infringers used a flux based on manganese silicate,<sup>49</sup> and avoided literal infringement of the claim.<sup>50</sup> The patentee argued that the manganese silicate flux was equivalent to the patented flux and therefore infringed the patent.<sup>51</sup>

In *Graver Tank*, the Supreme Court defined what has come to be known as the triple identity or “function, way, result” test for the doctrine of equivalents.<sup>52</sup> If a product performs the same function, in substantially the same way, achieving substantially the same result as the claimed invention, it infringes the patent claim despite being outside the claim’s literal language.<sup>53</sup> The Court observed that, “[o]utright and forthright duplication is a dull and very rare type of infringement.”<sup>54</sup> Emphasizing the inventor protection function of patents the Court continued, “[t]o prohibit no other would place the inventor at the mercy of verbalism and would be subordinating substance to form.”<sup>55</sup> The court also recognized the public benefit of the patent system by explaining that the absence of a patent system “would deprive [the inventor] of the benefit of his invention and would foster concealment rather

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43. *Id.*

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

45. Cianfrani, *supra* note 24, para. 18 (giving additional history about *Graver Tank*).

46. 339 U.S. at 610.

47. *Id.*

48. *Id.*

49. *Id.*

50. *Id.* at 612.

51. *Id.*

52. *Id.* at 608.

53. *Id.*

54. *Id.* at 607.

55. *See id.*



than disclosure of inventions, which is one of the primary purposes of the patent system.”<sup>56</sup> The *Graver Tank* Court also sought to guide the lower courts:

In determining whether an accused device or composition infringes a valid patent, resort must be had in the first instance to the words of the claim. If accused matter falls clearly within the claim, infringement is made out and that is the end of it.

But courts have also recognized that 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 leave room for—indeed encourage—the unscrupulous copyist to make unimportant and insubstantial changes and substitutions in the patent which, though adding nothing, would be enough to take the copied matter outside the claim, and hence outside the reach of law. One who seeks to pirate an invention, like one who seeks to pirate a copyrighted book or play, may be expected to introduce minor variations to conceal and shelter the piracy.<sup>57</sup>

Later, in *Warner-Jenkinson Co. Inc., v. Hilton Davis Chemical Co.*,<sup>58</sup> the Court clarified that the triple identity test for the doctrine of equivalents must be applied to each element of a claim individually, not to the invention as a whole.<sup>59</sup> The Court also expressed concern that the application of the doctrine of equivalents not “vitiates the central functions of the patent claims themselves.”<sup>60</sup> In other words, the doctrine of equivalents must not be applied to an element in such a way as to “eliminate that element in its entirety.”<sup>61</sup>

## B. PROSECUTION HISTORY ESTOPPEL

The prosecution history, or file wrapper, of a patent is the written record of correspondence between the patent applicant and the USPTO, generated during patent prosecution.<sup>62</sup> The doctrine of prosecution history estoppel is related to, but distinct from, equitable estoppel.<sup>63</sup> The main difference

56. *Id.*

57. *Id.*

58. 520 U.S. 17 (1997).

59. *See id.* at 29.

60. *Id.* at 30.

61. *Id.* at 29.

62. DONALD S. CHISUM, CHISUM ON PATENTS § 18.05 (2001).

63. *See* BLACK’S LAW DICTIONARY 509-10 (Pocket Ed. 1996). The definition of prosecution history estoppel is the following: “[I]n patent law, the doctrine preventing a patent holder from invoking the doctrine of equivalents if the holder, during the application process, surrendered certain claims or interpretations of the invention.” *Id.*

between the two doctrines is that prosecution history estoppel does not require reliance.<sup>64</sup> Prosecution history estoppel precludes a patentee from using the doctrine of equivalents in an infringement suit to regain claim coverage that was given up in order to obtain the patent.<sup>65</sup> During the give and take of patent prosecution, the patent applicant may surrender claimed subject matter for a variety of reasons in order to obtain the patent.<sup>66</sup> The courts apply prosecution history estoppel to prevent the patentee from later claiming infringement under the doctrine of equivalents for previously surrendered subject matter.<sup>67</sup> Therefore, prosecution history estoppel limits the doctrine of equivalents by preventing the use of the doctrine from vitiating the public notice and scope-defining functions of patent claims.<sup>68</sup>

### 1. Writing the Patent Claim

When writing a patent claim, a practitioner lays out a certain number of claim elements and their interrelation.<sup>69</sup> Traditionally, a practitioner can amend a claim to narrow it in several ways.<sup>70</sup> The claim drafter may add one or more elements to the existing claim.<sup>71</sup> The addition of an element narrows the claim because of the open-ended nature of most patent claims.<sup>72</sup>

Most patent claims use the open-ended transitional term “comprising.”<sup>73</sup> The use of the term “comprising” creates an

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64. *See id.*

65. *See Graver Tank & Mfg. Co. v. Linde Air Prods. Co.*, 339 U.S. 605, 614 (1950) (arguing that a patent claim is “not like a nose of wax, which may be turned and twisted in any direction, by merely referring to the specification, so as to make it include something more than or something different from, what its words express” (internal quotation marks omitted) (quoting *White v. Dunbar*, 119 U.S. 47, 51 (1886))).

66. It is sometimes more efficient to surrender some patentable subject matter in return for an early allowance of a patent application than to expend the time, effort and expense necessary to receive broader claim coverage at a later date. Further, the patent office allows continuing applications to be filed to allow later pursuit of the broader claims, if that is appropriate and desired.

67. *See supra* text accompanying note 65.

68. *See Warner-Jenkinson Co., Inc., v. Hilton Davis Chem. Co.*, 520 U.S. 17, 29 (1997).

69. *See generally* KAYTON, *supra* note 13, at 3.1.

70. *See id.* at 3.2-3.11.

71. *Id.* at 3.3.

72. *See id.* at 3.2-3.3.

73. *Id.* at 3.2.

open-ended claim that will be read onto anything that includes all the elements listed, no matter what additional elements may be present.<sup>74</sup> Adding an element, therefore, removes all items that do not contain that element from the universe of objects that might infringe that claim.<sup>75</sup>

The practitioner may also add a limitation to the claim.<sup>76</sup> Adding a limitation modifies or qualifies an element already set forth in the previous claim.<sup>77</sup> Finally, the Federal Circuit has held that a claim that is subject to two possible constructions, and that has an enabling disclosure indicating the applicant is at least entitled to a claim having the narrower of the two constructions, should always adopt that narrower construction.<sup>78</sup>

## 2. Amendment-Based Estoppel

In *Warner-Jenkinson Co. v. Hilton Davis Chemical Co.*, the Supreme Court considered arguments claiming that the 1952 Patent Act had negated the doctrine of equivalents as presented in *Graver Tank*.<sup>79</sup> The Court held that the doctrine had survived the 1952 Act,<sup>80</sup> but also held that *Graver Tank* “did not dispose of prosecution history estoppel as a legal limitation on the doctrine of equivalents.”<sup>81</sup> In addition, the Court held that the doctrine of equivalents must be applied to individual claim elements, and not to the invention as a whole.<sup>82</sup> The Court also held that the inquiry into equivalents is properly based on the state of knowledge at the time of infringement.<sup>83</sup>

Further, the Court highlighted the legal concept that the reason for amending a claim plays a role in the application of prosecution history estoppel.<sup>84</sup> The Court chastised the “petitioner [for] reach[ing] too far in arguing that the reason for

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74. *Id.* at 3.3.

75. *See id.*

76. *Id.* at 3.8-3.11B.

77. *Id.* at 3.8.

78. *See, e.g., Athletic Alternatives, Inc. v. Prince Mfg., Inc.*, 73 F.3d 1573, 1581 (Fed. Cir. 1996).

79. *Warner-Jenkinson Co., Inc. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 25 (1997).

80. *Id.* at 28.

81. *Id.* at 30.

82. *Id.* at 29.

83. *Id.* at 37.

84. *Id.* at 32-33.

an amendment during patent prosecution is irrelevant to any subsequent estoppel.”<sup>85</sup> The Court held that a presumption of prosecution history estoppel would apply unless the patentee proved that the amendment was made for a purpose unrelated to patentability.<sup>86</sup> The Court also suggested that “reasons related to patentability” meant amendments made to avoid prior art or to address concerns of obviousness over the prior art.<sup>87</sup> If a claim element was amended to avoid the prior art, the patentee would be estopped from expanding that element to include the prior art in order to prove infringement. Beyond these definitions, the Court failed to explain how to determine what reasons for amendment are related to patentability.<sup>88</sup>

The Court of Appeals for the Federal Circuit (Federal Circuit) considered this question en banc in 2000.<sup>89</sup> The answer dramatically narrowed the application of the doctrine of equivalents.<sup>90</sup> Apparently, the Federal Circuit felt a guarantee of certainty in the public notice function of patent claims, created by a bright-line rule, was more important than protecting the rights of patentees.<sup>91</sup>

In *Festo* (2000), the Federal Circuit answered several questions. First, the court held that “a ‘substantial reason related to patentability’ is not limited to overcoming or avoiding prior art, but instead includes *any* reason which relates to the statutory requirements for a patent.”<sup>92</sup> “Therefore, a narrowing amendment made for any reason related to the statutory

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85. *Id.* at 30.

86. *Id.* at 33.

87. *Id.* at 30-31.

88. *See id.*

89. *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., Ltd.*, 234 F.3d 558 (Fed. Cir. 2000).

90. *See id.* The Federal Circuit was careful to state that it used the term “element” throughout its opinion even though the terms “element” and “limitation” are used interchangeably to refer to words in a claim. *Id.* at 563 n.1. Footnote 1 of the decision indicates that “[i]t is preferable to use the term ‘limitation’ when referring to claim language and the term ‘element’ when referring to the accused device.” To the contrary, Irving Kayton states that “[e]very practitioner knows that a claim ‘limitation’ is *not* an element. A limitation is a modification, characteristic or qualification of an element or a recitation of some form of cooperation between elements.” PAUL L GARDNER ET AL., *CRAFTING & DRAFTING WINNING PATENTS* 1-27 (Patent Resources Group 2000). This appears to be the more common understanding and utilization of the terms amongst the attorneys and agents that prosecute patent applications before the Patent and Trademark Office.

91. *See* 234 F.3d at 567.

92. *Id.* at 566.

requirements for a patent will give rise to prosecution history estoppel with respect to the amended claim element.”<sup>93</sup> The court further held that whether the claim amendment was voluntary, or in response to an office action, made no difference in the treatment of the claim for purposes of prosecution history estoppel relating to the amended claim element.<sup>94</sup> The court continued, holding that when the above criteria were met, the range of equivalents available for the amended claim element is zero.<sup>95</sup> The court stated, “[a]pplication of the doctrine of equivalents to the claim element is completely barred.”<sup>96</sup> The court held, “[w]hen no explanation for a claim amendment is established, no range of equivalents is available for the claim element so amended.”<sup>97</sup>

### 3. Argument-Based Estoppel

Another way to narrow a claim is by advocating for a different interpretation than that of the patent examiner.<sup>98</sup> Because a patent applicant can be his own lexicographer and is often seeking protection for something for which words do not yet exist; the patentee may define words as terms of art, which have meanings different from their common meaning.<sup>99</sup> Therefore, in the context of the patent, the applicant may argue to the examiner that the claim’s words have a particular meaning in light of the specification.<sup>100</sup> The applicant may not, however, later try to reclaim what was surrendered in a later infringement action.<sup>101</sup> In addition, the applicant may argue to distinguish her invention from the prior art.<sup>102</sup> This may narrow the definition of the claimed invention without amending the claims.<sup>103</sup>

The standard which the Federal Circuit applies to argument-based prosecution history estoppel is quite different

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93. *Id.*

94. *Id.* at 568.

95. *Id.* at 569.

96. *Id.*

97. *Id.* at 578; *See also* Sextant Avionique, S.A. v. Analog Devices, Inc., 172 F.3d 817, 832 (Fed. Cir. 1999).

98. *See, e.g.,* Sextant Avionique, S.A., 172 F.3d at 822-823.

99. *See id.* at 825.

100. *See, e.g., id.* at 825-826.

101. *See, e.g., id.* at 826.

102. *See, e.g., id.*

103. *See, e.g., id.*

from that promulgated in the *Festo* (2000) decision. “For an estoppel to apply, such assertions in favor of patentability must ‘evince a clear and unmistakable surrender of subject matter,’<sup>104</sup> not an ‘equivocal’ one.”<sup>105</sup> Further, to determine what subject matter has been relinquished, an objective test is applied, inquiring, “whether a competitor would reasonably believe that the applicant had surrendered the relevant subject matter.”<sup>106</sup>

Thus, to be subject to argument-based estoppel, the applicant must unmistakably surrender subject matter.<sup>107</sup> The applicant is then only estopped from reclaiming what he clearly disclaimed in prosecution.<sup>108</sup> Further, the disclaimer is judged by an objective standard.<sup>109</sup> In contrast, if the applicant amends a claim element to narrow it, the applicant becomes subject to amendment-based estoppel, thereby invoking the severe consequence of a total bar on equivalents.<sup>110</sup> The Federal Circuit has not indicated any justification for this extreme variation in treatment between amendment-based estoppel and argument-based estoppel.<sup>111</sup>

The Federal Circuit reaffirmed the argument-based estoppel standard after *Festo* (2000) in *Dow Chemical Co. v. Sumitomo Chemical Co.*, by holding that prosecution history statements made by Dow did “not evince the ‘clear and unmistakable surrender of subject matter’ necessary to invoke argument-based prosecution history estoppel.”<sup>112</sup>

The Federal Circuit further defined the rule it created in *Festo* (2000) in *Mycogen Plant Science, Inc. v. Monsanto Co.*<sup>113</sup>

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104. *Pharmacia & Upjohn Co. v. Mylan Pharms., Inc.*, 170 F.3d 1373, 1377 (Fed. Cir. 1999) (citing *Litton Sys., Inc. v. Honeywell, Inc.*, 140 F.3d 1449, 1458 (Fed. Cir. 1998)).

105. *Id.* (citing *Athletic Alternatives, Inc. v. Prince Mfg., Inc.*, 73 F.3d 1573, 1582 (Fed. Cir. 1996)).

106. *Id.* (citing *Cybor Corp. v. FAS Techs., Inc.*, 138 F.3d 1448, 1457 (Fed. Cir. 1998) (en banc)).

107. Brief of Amicus Curiae American Intellectual Property Law Assn. at 5, *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., Ltd.*, 234 F.3d 558 (Fed. Cir. 2000) (No. 00-1543), available at <http://www.aipla.org/html/briefs/festo2.pdf>.

108. *See id.* at 5-6.

109. *See id.* at 6.

110. *See id.* at 5-7.

111. *See id.*

112. *Dow Chem. Co. v. Sumitomo Chem. Co.*, 257 F.3d 1364, 1382 (Fed. Cir. 2001) (quoting *Pharmacia & Upjohn Co.* 140 F.3d 1373, 1337 (Fed. Cir. 1999)).

113. *See* 252 F.3d 1306 (Fed. Cir. 2001).

In *Mycogen*, claims were not amended during the patent prosecution process but, instead, were cancelled and replaced with more narrowly defined claims.<sup>114</sup> The court could not see “any legally significant difference between canceling a claim having a broad limitation and replacing it with a claim having a narrower limitation, and amending a claim to narrow a limitation.”<sup>115</sup>

Interestingly, the Federal Circuit decision in *Festo* (2000) has been widely criticized as placing form over substance just as it criticized the appellant for doing in *Mycogen*.<sup>116</sup> It is common in patent prosecution to combine the elements and limitations present in a dependent claim with those present in the independent claim from which the dependent claim depends.<sup>117</sup> If the dependent claim is cancelled and merged into the independent claim the resulting claim is narrowed in scope and subject to the *Festo* (2000) doctrine.<sup>118</sup> In contrast, if the independent claim is cancelled and all of its limitations and elements combined into the former dependent claim, the resulting claim has identical scope to its predecessor and is not deprived of the doctrine of equivalents under the *Festo* (2000) test.<sup>119</sup> This is true even though the two amended claims are identical word for word.<sup>120</sup>

### C. THE SUPREME COURT RULES

In May 2002, about a year after the *TurboCare* decision, the United States Supreme Court vacated the Federal Circuit’s *Festo* (2000) decision.<sup>121</sup> The Court remonstrated the Federal Circuit that such a dramatic change in patent law as creating a complete bar to equivalents was the province of Congress and

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114. *Id.* at 1319.

115. *Id.* at 1319-20. (explaining that “[t]o do so would place form over substance and would undermine the rules governing prosecution history estoppel laid out in *Festo* by allowing patent applicants simply to cancel and replace claims for reasons of patentability rather than to amend them”).

116. Interviews with Bradley D. Pedersen, Patent Attorney, Partner, Patterson, Thuente, Skaar & Christensen, in Minneapolis, Minn. (Mar.-Aug., 2001).

117. *Id.*

118. *Id.*

119. *Id.*

120. *Id.*

121. *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., Ltd.*, 535 U.S. 722, 122 S.Ct. 1831 (2002).

not within the power of the appellate courts.<sup>122</sup> The Supreme Court scolded the Federal Circuit for ignoring the guidance it gave in *Warner-Jenkinson* “which instructed that courts must be cautious before adopting changes that disrupt the settled expectations of the inventing community.”<sup>123</sup>

The Court agreed that prosecution history estoppel can bar many equivalents but instructed that what equivalents are barred “requires an examination of the subject matter surrendered by the narrowing amendment.”<sup>124</sup> The Court also reinforced that the purpose of prosecution history is “to hold the inventor to the representations made during the application process and to the inferences that may reasonably be drawn from the amendment.”<sup>125</sup> The claim resulting from amendment is not “so perfect in its description [of the claimed subject matter] that no one could devise an equivalent.”<sup>126</sup> Further, the Court reinforced the secondary function of the doctrine of equivalents of allowing the patentee to exclude others from practicing equivalents of the invention that arise from “unforeseeable” later-developed technology.<sup>127</sup>

The Court did, however, hold that “the patentee should bear the burden of showing that the amendment does not surrender the particular equivalent in question.”<sup>128</sup> The Court emphasized that the holding is not “just the complete bar by another name.”<sup>129</sup> If the patentee can show that one skilled in the art could not reasonably be expected to draft a claim literally encompassing the alleged equivalent, the patentee can rebut the presumption that the equivalent has been barred.<sup>130</sup> The Supreme Court has created a rebuttable presumption that the patentee has given up “all subject matter between the broader and the narrower language.”<sup>131</sup> Implicitly, equivalents outside the range between the amended and the unamended claim are still available to the patentee.<sup>132</sup>

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122. *Id.* at 1841.

123. *Id.*

124. *Id.* at 1840.

125. *Id.*

126. *Id.* at 1840-41.

127. *Id.* at 1842.

128. *Id.*

129. *Id.*

130. *Id.*

131. *Id.*

132. *See id.*



## II. *TURBOCARE*: HOW TO SUCCEED AT CLAIM DRAFTING WITHOUT REALLY TRYING

### A. CASE DESCRIPTION

TurboCare originally filed suit against GE in the United States District Court for the District of Massachusetts, asserting infringement of U.S. Patent No. 4,436,311 (the ‘311 patent) issued to Ronald E. Brandon.<sup>133</sup> The district court granted a summary judgment motion in favor of GE, holding that claims one, five, six, and seven were not infringed and that claim two was invalid.<sup>134</sup> TurboCare appealed to the Federal Circuit.<sup>135</sup>

The Federal Circuit affirmed the invalidity of claim two for failure to satisfy the written description requirement of 35 U.S.C. § 112 paragraph one.<sup>136</sup> When Brandon amended claim two during the prosecution of the ‘311 patent he also amended the patent specification.<sup>137</sup> The court found that the amendment added new matter to the specification in violation of 35 U.S.C. § 132.<sup>138</sup> Thus, the specification, as originally filed, did not support claim two as amended, and amended claim two was invalid.<sup>139</sup>

Next, the court considered TurboCare’s challenge to the district court’s conclusion of non-infringement of claims one, five, six, and seven.<sup>140</sup> The first step in this analysis was to “determine the meaning and scope” of the claims.<sup>141</sup> First, the court considered and rejected that the use of the word “means” in the claims invoked 35 U.S.C. § 112 paragraph six and should be treated as a means-plus-function claim.<sup>142</sup> The court ruled that the claims in question defined a sufficient amount of structure to not be considered a means-plus-function claim.<sup>143</sup>

GE argued that Brandon had disclaimed all equivalents

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133. TurboCare Div. Of Demag Delavel Turbomachinery Corp., v. Gen. Elec. Co., 264 F.3d 1111, 1113 (Fed. Cir. 2001).

134. *Id.* at 1113.

135. *Id.*

136. *Id.* at 1120.

137. *Id.* at 1118-19.

138. *Id.*

139. *Id.* at 1120.

140. *Id.* at 1120-26.

141. *Id.* at 1120.

142. *Id.* at 1120-21.

143. *Id.*

that utilized flat or leaf springs when he argued to distinguish his invention from prior art disclosed in a British patent issued to Warth.<sup>144</sup> The court rejected the contention that argument based estoppel prevented TurboCare from alleging infringement of the '311 patent claims.<sup>145</sup> In the same amendment and response, Brandon added a claim specifically directed to flat springs.<sup>146</sup> Therefore, the court reasoned, he had not disclaimed the use of flat springs.<sup>147</sup>

Next, GE argued that Brandon's use of the term "compressed spring" means to include a particular location.<sup>148</sup> Because dependent claims two and four added this restriction the court relied on the doctrine of claim differentiation to reject GE's argument.<sup>149</sup>

The court proceeded to construe the claims with regard to the disputed terms "large clearance position," "small clearance position," and "contact."<sup>150</sup> The court defined the term "large clearance position" more broadly than the district court's had.<sup>151</sup> The Federal Circuit agreed with the district court that the "small clearance position" was one in which the seal ring segment touched the casing shoulders and that "contact" should be read as having its ordinary meaning.<sup>152</sup> The court construed "contact" to mean the seal ring segment directly touching the casing shoulder as opposed to allowing another material to be interposed between the seal ring segment and the casing shoulder.<sup>153</sup>

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144. *Id.* at 1122.

145. *See id.*

146. *Id.*

147. *Id.*

148. *Id.*

149. *See id.*

150. *Id.* at 1123-24.

151. *Id.* at 1123. The details of that construction are not material to the discussion here. The district court defined the large clearance position as requiring that the outer surface of the inner portion of the seal assembly touch the inner surface of the casing shoulders. *Id.* The Federal Circuit indicated that reading the claim in this fashion imported limitations that were in the preferred embodiment of the invention into the claims. *Id.* The Federal Circuit found no basis for this limitation in the claim itself. *Id.* Thus the court construed the claim to include the preferred embodiment as described but also to include an "arrangement in which there is contact between the outward facing surface of the outer ring portion of the seal ring segment . . . and the inward facing surface of the casing groove." *Id.*

152. *Id.* at 1124.

153. *Id.*

Next, the court compared the claims as construed to the devices accused of infringement.<sup>154</sup> After determining that none of the accused devices literally infringed the claims as the court had construed them, the court considered whether the 1992 Diaphragm Version or the 1995 Version of GE turbine seal infringed under the doctrine of equivalents.<sup>155</sup> The court held that the devices met all the limitations of the claims except for the “small clearance limitation.”<sup>156</sup> *TurboCare* argued that GE infringed under the doctrine of equivalents.<sup>157</sup> GE countered that the doctrine of equivalents was unavailable to *TurboCare* due to prosecution history estoppel.<sup>158</sup>

GE based its contention on the *Festo* (2000) decision.<sup>159</sup> Brandon’s claim one as originally filed did not include a “contact” limitation.<sup>160</sup> It described a “small diameter position corresponding to . . . small clearance of the seal ring with regard to the rotating shaft or rotor.”<sup>161</sup> During the prosecution of the ‘311 patent, claim one, as originally submitted, was cancelled and replaced with a claim<sup>162</sup> that “defined the ‘small diameter’ or ‘small clearance’ position with reference to contact between certain surfaces.”<sup>163</sup> This amendment was made in response to a claim rejection over the Warth patent.<sup>164</sup> GE argued that this was a narrowing claim amendment for a reason related to patentability, and therefore, under *Festo* (2000), no range of equivalents was available for that claim element.<sup>165</sup>

The court agreed that this analysis was correct, but only if

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154. *Id.* The court considered four accused GE products. *Id.* They were: the original version, the 1992 N-2 Version, the 1992 and 1995 Diaphragm Versions. *Id.* The court held that the first two devices did not infringe literally and that Brandon had disclaimed the limitations that would have caused them to infringe under the doctrine of equivalents. *Id.* The remaining two devices did not infringe literally under the court’s analysis. *Id.* at 1124-25.

155. *Id.* at 1125.

156. *Id.*

157. *Id.*

158. *Id.*

159. *Id.*

160. *Id.*

161. *Id.*

162. *Id.*

163. *Id.*

164. *Id.*

165. *Id.*

the amendment was in fact a narrowing amendment.<sup>166</sup> The court, surprisingly, indicated that the amendment was not a narrowing one.<sup>167</sup> The Federal Circuit panel found the limitation of the small clearance position to be present in the original cancelled claim.<sup>168</sup> The original filed claim did not specifically state that the small clearance position involved contact between the seal and the shaft of the turbine, but the court ruled that was the meaning that the applicant gave to the term “small diameter position” in the original specification.<sup>169</sup> The court also pointed out that Figure One of the drawings was described as depicting the “small clearance condition” and that Figure One showed the seal touching the shaft.<sup>170</sup> The court concluded “[h]ere, the newly added claim only redefined the small clearance position limitation without narrowing the claim. Therefore, *Festo* [(2000)] is not applicable.”<sup>171</sup>

The court then affirmed the district court ruling aside from the district court’s judgment that there was no infringement under the doctrine of equivalents for claims one, five, six and seven.<sup>172</sup> Finally, the Federal Circuit panel remanded the case to the district court for reconsideration under its *de novo* claim construction.<sup>173</sup>

#### B. THE FEDERAL CIRCUIT’S *DE NOVO* REVIEW

If the Federal Circuit’s *Festo* (2000) decision had stood after being considered by the Supreme Court,<sup>174</sup> the question of what it means to narrow a patent claim by amendment would have been of enormous importance to those who are in dispute over whether a claim element is entitled to the doctrine of equivalents. Between the *Festo* (2000) opinion and the Supreme Court’s 2002 decision, the Federal Circuit repeatedly used the rule it established in *Festo* (2000) to invalidate the application of the doctrine of equivalents for claims construed

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166. *Id.*

167. *Id.* at 1125-26.

168. *Id.* at 1125.

169. *Id.* at 1125-26.

170. *Id.* at 1126.

171. *Id.*

172. *Id.*

173. *Id.*

174. The Supreme Court granted certiorari, and oral arguments were heard on January 8, 2002. The Court rendered its decision May 28, 2002. The Court remanded to the Federal Circuit with *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., Ltd.*, 122 S.Ct. 1831 (2002).

*de novo* upon appeal.<sup>175</sup> Indeed, the Federal Circuit had been taking a path that seemed bent on eliminating the doctrine of equivalents, despite the Supreme Court's ruling in *Warner-Jenkinson* affirming the validity of the doctrine.<sup>176</sup> Yet, in *TurboCare* the court reached for a holding that a claim element is entitled to the doctrine of equivalents despite a relatively available textual argument that the amendment in question could have been considered a narrowing amendment that would invoke the complete bar of *Festo* (2000).

### 1. Textual Narrowing

In order to consider textual narrowing, it is necessary to look at the grammatical structure of a patent claim more thoroughly. The Federal Circuit defined the terms "element" and "limitation" in dicta in the *Festo* (2000) decision as being used interchangeably, but also suggested that "limitation" should be used to refer to claim language and that "element" be used to refer to parts of the actual invention.<sup>177</sup> Results of studies show that hardly any lawyer within the patent bar follows the Federal Circuit's suggested convention.<sup>178</sup> Indeed, according to Irving Kayton "[e]very practitioner knows that a claim 'limitation' is *not* an element. A limitation is a modification, characteristic or qualification of an element or a recitation of some form of cooperation between elements."<sup>179</sup>

Using the Kayton view as a starting point, one can consider that elements are generally nouns for apparatus claims.<sup>180</sup> Limitations are generally adjectives or parts of speech that act like adjectives.<sup>181</sup> For example, if a patent claim defines a "magnetic sleeve," the noun "sleeve" is a claim element and the adjective "magnetic" is a limitation.<sup>182</sup> "Magnetic" is a limitation because it modifies and narrows the

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175. See, e.g., *Pioneer Magnetics, Inc. v. Micro Linear Corp.*, 238 F.3d 1341, 1344-47 (Fed. Cir. 2001).

176. See *supra* notes 89-120 and accompanying text.

177. *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., Ltd.*, 234 F.3d 558, 563 n.1 (Fed. Cir. 2000).

178. The author questioned over twenty patent attorneys and found none that followed this convention.

179. See GARDNER, *supra* note 90, at 1-27.

180. Interviews with Bradley D. Pedersen, Patent Attorney, Partner, Patterson, Thuente, Skaar & Christensen, in Minneapolis, Minn. (Mar.- Aug., 2001).

181. *Id.*

182. *Id.*

meaning of the noun “sleeve.”<sup>183</sup> A “sleeve presenting two holes therein” consists of the element “sleeve” and the limitation “presenting two holes therein.”<sup>184</sup> Once again the limitation modifies, limits or further defines the meaning of “sleeve.”<sup>185</sup> Such a limitation can be called an adjectival phrase.

Likewise, a magnetic, cylindrical sleeve can be viewed as one element modified by two limitations.<sup>186</sup> If an originally-filed patent claim defined a cylindrical sleeve, and in response to a prior art rejection the applicant amended the claim to read “a magnetic, cylindrical sleeve,” clearly the applicant should be unable to later argue that under the doctrine of equivalents the claims should read on a sleeve of a non-magnetic material.<sup>187</sup> However, what if an accused infringer should produce a device that has a magnetic, octagonal sleeve, that otherwise functions in an identical fashion to the cylindrical sleeve?<sup>188</sup> Under the *Festo* (2000) rule, no literal infringement exists; and the doctrine of equivalents is not available. Thus, a copyist is free to duplicate the patented device save for changing the cylindrical sleeve to an octagonal sleeve.<sup>189</sup>

For method claims, elements are represented by verbs.<sup>190</sup> As a practical matter, method claims are written in a series of steps.<sup>191</sup> Each step is a phrase beginning with a verb in present participle form. For example, a method for baking a cake comprises the steps of breaking eggs into a bowl, mixing flour and sugar with the eggs, etc. In this case, the claim element would be the verbs “breaking” and “mixing.”<sup>192</sup> The limitations include the nouns that the verbs are acting on, and any adverbs or adverbial phrases that modify or constrain the verbs.<sup>193</sup>

Turning to the *TurboCare* claims, while the original claim included references to the small and large clearance positions, the claim said nothing about how these two states were to be achieved. After amendment, the claim included the additional

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183. *Id.*

184. *Id.*

185. *Id.*

186. *Id.*

187. *Id.*

188. *Id.*

189. *Id.*

190. *Id.*

191. *Id.*

192. *Id.*

193. *Id.*

limitation that the small clearance position was limited (or controlled) by contact between certain surfaces in the seal assembly.<sup>194</sup> The adjectival phrase defines that the small clearance position occurs when the seal is in contact with the shaft, constituting an additional claim limitation.<sup>195</sup> Prior to amendment, the claim would have read on any seal assembly having a large clearance position and a small clearance position. After amendment, the claims would read on only those seal assemblies that control the limit of the small clearance position by contact between two surfaces defined in the claim.

Therefore, under this analysis, when the claim was amended to refer to “contact” rather than “small clearance,” the claim reduced the scope of the claim coverage. This amendment can only be described as a narrowing amendment. Under *Festo* (2000) this claim element would not have any benefit of the doctrine of equivalents.<sup>196</sup>

#### 1. Textual reading in light of the specification

The *TurboCare* court followed this approach closely when it argued that the “contact” limitation was implied in the “small clearance limitation.”<sup>197</sup> The claims must, of course, be read in light of the specification.<sup>198</sup> But a tension exists between reading the claims in light of the specification, and not importing limitations from the preferred embodiment into the claims at the same time.<sup>199</sup>

It appears here that the Federal Circuit did not follow its own jurisprudence when the *TurboCare* court read a limitation from the specification into the claim language. While the specification defined the small clearance position as limited by the contact between two surfaces, the original claim language did not. Understanding of the claim language is based on the specification as a “dictionary for the claims,” but limitations in the specification should not be read into the claims themselves. Perhaps the court should reconsider the “nose of wax”

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194. See *supra* note 151 and accompanying text.

195. See *supra* note 151 and accompanying text.

196. See *supra* notes 92-97 and accompanying text.

197. See *supra* note 169 and accompanying text.

198. See *supra* note 32 and accompanying text.

199. See *Cybor Corp. v. FAS Tech. Inc.*, 138 F.3d 1448, 1471 (Fed. Cir. 1998).

admonition in *White v. Dunbar*.<sup>200</sup> Thus, the court seems to have erred in deciding that the contact limitation was present in the original claim.

The numerous dissents in *Festo* (2000) cried out to the Supreme Court to offer some clarification on the confusing decision written by Justice Clarence Thomas in *Warner-Jenkinson*.<sup>201</sup> Perhaps, in this light, the Federal Circuit in the *TurboCare* decision was trying to carve itself a back door escape clause. This escape clause might have allowed the Federal Circuit to limit the doctrine of equivalents to cases where such an approach seemed equitable, and to loosen this doctrine for some cases where a broader scope of claim interpretation seemed to be the fairer outcome.

Another tension that exists in this area is the presumption of examiners to construe claims broadly during patent prosecution while the courts tend to construe claims narrowly to uphold validity during litigation.<sup>202</sup> A further question is whether the Federal Circuit should have considered the specification at all at this point in the claim construction process. If there is no ambiguity to a claim element in view of a plain reading of the claim and an understanding of the prior art, there is no need to refer to the specification. Here it appears that the court may have utilized the specification only for the purpose of avoiding the application of *Festo* (2000).

### III. WHY DID THE *TURBOCARE* COURT TAKE THE ROUTE THAT IT DID?

It appears that *TurboCare* was ripe for a decision following the *Festo* (2000) approach; yet the court did not take that route. The application of the *TurboCare* strategy by the Federal Circuit suggests several possibilities. First, at least some justices on the Federal Circuit may have begun to shift their approach away from *Festo* (2000). Some members of the patent bar have argued vigorously that the benefits that the *Festo* (2000) majority predicted would accrue after the decision did not appear.<sup>203</sup> Perhaps some members of the *Festo* (2000) majority had second thoughts. Second, many believed that the

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200. See *supra* note 65 and accompanying text.

201. *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., Ltd.*, 234 F.3d 558, 598-642 (Fed. Cir. 2000).

202. See *supra* notes 23 and 78 and accompanying text.

203. See *supra* notes 116-120 and accompanying text.



*Festo* (2000) decision stifled innovation because it reduced the value of patent protection.<sup>204</sup> A rational innovator would not pursue an expensive and protracted process to obtain patent protection if the inventor knew of a ready-made roadmap for competitors to defeat the patent. By consulting the patent's file history and making insignificant changes to elements of the invention that were amended in the prosecution process competitors could easily circumvent the innovator's patent claims.

In *TurboCare*, a larger player in the market was, at least potentially, free-riding on an innovation made by a smaller competitor. Perhaps the court felt that total loss of the benefit of the doctrine of equivalents was too strict a punishment for amending claims during the prosecution of a patent filed almost two decades before the *Festo* (2000) decision.

A. HOW THE SUPREME COURT'S REBUTTABLE PRESUMPTION STANDARD WOULD HAVE AFFECTED THE DECISION IN *TURBOCARE*

In the *TurboCare* decision the Federal Circuit employed strained reasoning to reach what seems an equitable decision protecting the patent rights of TurboCare against infringement by General Electric. If the TurboCare court had had the benefit of the Supreme Court's 2002 *Festo* decision for guidance would the result have been different?

Under the Supreme Court's standard, the Federal Circuit would not have had to stretch for grounds to maintain the doctrine of equivalents for *TurboCare*. The claim amendment that created the problem in *TurboCare* was only a problem at all because of the absolute bar to the doctrine of equivalents that the Federal Circuit promulgated in *Festo* (2000).

The Supreme Court's *Festo* (2002) indicates that the patentee only relinquishes subject matter falling between that described in the cited prior art and the claim scope as it is amended. The amendment TurboCare made during patent prosecution did not relinquish the subject matter TurboCare claimed General Electric had infringed under the doctrine of equivalents. Since the subject matter in question was not disclosed in the prior art Warth reference, it was not given up by the act of amending the claim. Therefore, there was no reason for it not to be viewed as infringed under the doctrine of

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204. See *supra* text accompanying notes 180-193.

equivalents.

So, the Federal Circuit could have held that General Electric infringed the claims of the '311 patent without stretching for a reason why the absolute bar of the doctrine of equivalents should not apply. Therefore, under the Supreme Court's *Festo* (2002) decision the outcome would have been clear to the *TurboCare* court from the outset.

B. THE SAME STANDARD SHOULD BE APPLIED TO ARGUMENT-BASED AND AMENDMENT-BASED ESTOPPEL FOR DECIDING WHAT IS DISCLAIMED UNDER THE DOCTRINE OF EQUIVALENTS

The Courts should apply the same standard to amendment-based prosecution history estoppel that applies to argument-based estoppel.<sup>205</sup> The petitioner in *Warner-Jenkinson* argued for complete elimination of the doctrine of equivalents.<sup>206</sup> The Supreme Court declined to do so, and instead somewhat narrowed the doctrine of equivalents.<sup>207</sup> The Court ruled that the doctrine of equivalents should be applied to each element of the invention, not to the invention as a whole.<sup>208</sup> Yet in *Festo* (2000) the Federal Circuit severely limited the application of the doctrine of equivalents and went far beyond the action that the Supreme Court took in *Warner-Jenkinson*. The Federal Circuit thus stepped outside of binding precedent and made almost any claim amended suffer a bar from the doctrine of equivalents.<sup>209</sup> In *TurboCare* and the cases preceding it back to *Festo* (2000), the Federal Circuit continued to press for a narrow application of the doctrine of equivalents while, on a few occasions, bending over backwards to avoid applying the *Festo* (2000) rule.<sup>210</sup> The Supreme Court restored some of the benefit of the doctrine of equivalents to patentees in its *Festo* (2002) decision but the question remains: why should a patent applicant who amends a claim in response to a prior art-based rejection suffer a greater loss of claim coverage under amendment-based estoppel than one who gives up claim coverage by argument? In other words, why should a patentee who amends a claim have to overcome a presumption that he does not benefit from the doctrine of equivalents while a

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205. See *supra* note 107-111 and accompanying text.

206. See *supra* notes 79 and 85 and accompanying text.

207. See *supra* notes 81-88 and accompanying text.

208. See *supra* note 82 and accompanying text.

209. See *supra* note 122 and accompanying text.

210. See *supra* notes 112, 113, and 172 and accompanying text.

patentee who narrows by argument enjoys a standard that he must have clearly relinquished the subject matter to lose the benefit of the doctrine of equivalents?

The standard applied to argument-based estoppel is an objective test of a “clear and unmistakable surrender of subject matter.”<sup>211</sup> Under this standard, the *TurboCare* petitioner would clearly have had the benefit of the doctrine of equivalents. The Federal Circuit promulgated the *Festo* (2000) bar in part because the majority found the “flexible bar” approach to the doctrine of equivalents unworkable.<sup>212</sup> It is apparent from the court’s use of the “clear and unmistakable surrender” standard in the context of argument-based estoppel that it finds the guideline usable and sufficiently predictable.<sup>213</sup> With regard to the “clear and unmistakable surrender” standard the Federal Circuit stated, “[t]his principle presupposes that the applicant has made the surrender unmistakable enough that the public may reasonably rely on it.”<sup>214</sup> Thus, even the Federal Circuit agrees that the “unmistakable surrender” standard would create the certainty and predictability that it so earnestly desires.<sup>215</sup> In the arena of infringement litigation, it would also lead to predictability at least equal to the *Festo* (2000) rule.

Next, the “unmistakable surrender” standard would fulfill the constitutionally desirable duty to promote the “progress of science” by allowing innovators to avoid the “fraud on [their] patent” warned of in *Graver Tank*.<sup>216</sup> Broader exercise of the doctrine of equivalents will increase the value of patents currently in force and fulfill patentee’s expectations of coverage at the time their applications were filed.<sup>217</sup> Applicants prosecuting applications before the *Festo* (2000) decision had no way of knowing that a claim amendment made to advance the prosecution process would lead to severe restriction in the scope of the patent’s protection years later. The Supreme Court has eased that burden, but the patentee still must rebut a

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211. See *supra* note 104-106 and accompanying text.

212. See *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., Ltd.*, 234 F.3d 558, 575 (Fed. Cir. 2000).

213. See *supra* notes 107-111 and accompanying text.

214. *Sextant Avionique, S.A. v. Analog Devices, Inc.*, 172 F.3d 817, 828 n.3 (Fed. Cir. 1999) (citing *Litton Sys. Inc. v. Honeywell Inc.*, 140 F.3d 1449, 1458 (Fed. Cir. 1998)).

215. See *supra* note 112 and accompanying text.

216. See *supra* notes 6 and 56 and accompanying text.

217. See *supra* note 107-111 and accompanying text.

presumption that a particular equivalent was not given up.

An unmistakable surrender standard for the amendment-based estoppel rule also would encourage investment in innovation by providing greater assurance to investors that the innovator would have the benefit of the temporary right to exclude others from making, using and selling the invention.<sup>218</sup> This short-term market advantage gives the small innovator time to become established in order to compete with larger players. In essence, it gives the startup innovator a fighting chance to compete with larger, more established companies without being crushed at the outset by the larger competitor's advantages in capital and human resources.

#### IV. CONCLUSION

The Federal Circuit in *TurboCare* backed away slightly from the *Festo* (2000) doctrine in order to allow the patentee a chance to argue infringement under the doctrine of equivalents in the district court. The Federal Circuit was forced into this position because of the fact that the *Festo* (2000) majority went too far in limiting the application of the doctrine of equivalents to be equitable. A better approach to limiting the doctrine of equivalents in cases of amendment based estoppel is to conform the rule in order to determine what is barred by prosecution history estoppel to the "unmistakable surrender" endorsed by the Federal Circuit for argument based estoppel. The Federal Circuit approach of setting a draconian bright line standard and then manufacturing exclusions on a case-by-case basis did not increase certainty or predictability and seemed only to create further confusion for patentees and those who seek to compete with them by attempting to design around valid patents. The *TurboCare* decision illustrates the lack of predictability that *Festo* (2000) engendered.

The Supreme Court has since vacated the Federal Circuit's *Festo* (2000) decision. In doing so, the Court has shifted the balance between prosecution history estoppel and the doctrine of equivalents in the same direction, though not as far, as recommended above. The Supreme Court's rebuttable presumption approach does not support the doctrine of equivalents as clearly as conforming the standard for amendment-based estoppel to the standard for argument-based estoppel. The rebuttable presumption standard does not serve

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218. See *supra* note 107-111 and accompanying text.

the public notice function of patent claims. It is still difficult for competitors to know where a patentee's exclusive right ends and permissible noninfringing, design-around competition begins. But, the Court's decision does provide an opportunity for patentees to demonstrate that a particular equivalent should not be barred from falling under the ambit of the doctrine of equivalents. This opportunity restores substantial value to existing patents that was removed under the *Festo* (2000) complete bar standard. The Supreme Court's creation of a rebuttable presumption that the patentee has given up "all subject matter between the broader and the narrower language" seems to strike an acceptable balance between protecting the patentee and notifying the public.

There is still, however, no rational justification for the two different standards. The rebuttable presumption approach gives patentees a fighting chance to preserve much of the value of the uncounted patents in force that contain amended claims while still providing the public with opportunity to legitimately design around them. The line between infringing and designing around is still unnecessarily murky. The burden of a rebuttable presumption that equivalents are barred still leaves the patentee in the unenviable position of having to demonstrate that a particular equivalent was not relinquished while working from a record created while the applicant had no idea that he would have to do so.