

# PROSECUTION HISTORY ESTOPPEL IN THE POST-*FESTO* ERA: THE INCREASED IMPORTANCE OF DETERMINING WHAT CONSTITUTES A RELEVANT NARROWING CLAIM AMENDMENT

By Derek Walter

The *Festo* line of cases<sup>1</sup> has served as a battleground for the Federal Circuit and the Supreme Court to settle the matter of how the doctrine of equivalents should be applied when patent applicants narrow their claims during prosecution. In line with recent Federal Circuit guidance on claim construction,<sup>2</sup> the Federal Circuit's holding in *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*<sup>3</sup> represented a strong tendency for a strict straightforward rule in which patentees are held to the literal meaning of their claims and claim amendments. Although this approach is perhaps inconsistent with Supreme Court guidance on prosecution history estoppel,<sup>4</sup> it has the apparent advantage of strengthening a patent's ability to more clearly demarcate the intellectual property it claims. Recent Federal Circuit cases decided in the wake of *Festo X* represent a zealous continuation of this approach, and they have perhaps seen the Federal Circuit decline to make a "fair interpretation"<sup>5</sup> of what a patentee has surrendered through claim amendments. The recent cases further suggest that evidentiary restrictions the Federal Circuit has placed on patentees trying to rebut prosecution history estoppel are too harsh. As a result of this situation, the

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1. This Note shall adopt the notion used by Sharp to label the various *Festo* cases. See Marc. D. Sharp, Note, *Festo X: The Complete Bar by Another Name?*, 19 BERKELEY TECH L.J. 111 (2004).
2. See Tex. Digital Sys. v. Telegenix, Inc., 308 F.3d 1193, 1201-05 (Fed. Cir. 2002).

3. 344 F.3d 1359 (Fed. Cir. 2003) [hereinafter *Festo X*].

4. See Lewis R. Clayton, *The Latest 'Festo' Ruling*, NAT'L L. J., Dec. 22, 2003, at 19 (noting that the Federal Circuit viewed the three approaches given by the Supreme Court for rebutting the *Festo* presumption not as "mere examples" but as the sole and exclusive ways of rebutting the presumption). See generally Sharp, *supra* note 1 (noting that the Supreme Court rejected an inflexible prosecution history estoppel doctrine and suggesting that the Federal Circuit implemented a bar to rebutting the *Festo* presumption that will be difficult and costly to overcome).

5. *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 535 U.S. 722, 738 (2002) [hereinafter *Festo VIII*] ("There is no reason why a narrowing amendment should be deemed to relinquish equivalents . . . beyond a fair interpretation of what was surrendered.").

determination of whether a claim amendment has narrowed the scope of a patent claim has become paramount. Unfortunately, recent Federal Circuit cases have not provided clear guidance on this crucial matter.

Part I of this Note briefly summarizes the doctrine of equivalents and prosecution history estoppel. In addition, Part I summarizes the litigation leading up to *Festo X*. With this background in place, this Note details a comprehensive line of inquiry that the Federal Circuit has outlined for dealing with amended claims, including a description of the judicial presumptions that connect the doctrine of equivalents and prosecution history estoppel. This Note then highlights the most significant aspects of this inquiry in light of *Festo X*. Part II of this Note discusses recent Federal Circuit guidance on prosecution history estoppel and the doctrine of equivalents, paying particular attention to the potential problems that can arise from too loose or too strict a focus on the literal terms of a patent claim.

## I. BACKGROUND

The doctrine of equivalents and prosecution history estoppel are bedrock patent law concepts and a great deal has been written on these subjects.<sup>6</sup> Accordingly, the coverage here shall be relatively brief.

### A. The Doctrine of Equivalents

The doctrine of equivalents first appeared in *Winans v. Denmead*,<sup>7</sup> and its modern application has been outlined in *Graver Tank & Manufacturing Co., Inc. v. Linde Air Products Co.*<sup>8</sup> Although the doctrine of equivalents has existed for over a century, it still generates controversy.<sup>9</sup> The doctrine of equivalents evolved to correct for perceived limitations in the ability of language to fully and precisely describe the claimed subject matter.<sup>10</sup> In other words, there was a concern that “unscrupulous copyists” could pirate patented subject matter by making minimal modifications to the patented

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6. See, e.g., John R. Thomas, *On Preparatory Texts and Proprietary Technologies: The Place of Prosecution Histories in Patent Claim Interpretation*, 47 UCLA L. REV. 183 (1999); C. Alan Fu, Note, *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 18 BERKELEY TECH. L.J. 117 (2003).

7. 56 U.S. 330 (1854).

8. 339 U.S. 605 (1950) (holding that a welding flux that was otherwise identical to a patented flux except for a substitution of manganese silicates for magnesium silicates infringed under the doctrine of equivalents).

9. See, e.g., Joshua D. Sarnoff, *Abolishing the Doctrine of Equivalents and Claiming the Future After Festo*, 19 BERKELEY TECH. L.J. 1157 (2004) (arguing that the doctrine of equivalents is costly, unjustified, and complicated, and thus should be abolished).

10. *Festo VIII*, 535 U.S. at 734 (“The doctrine of equivalents is premised on language’s inability to capture the essence of innovation . . . ”).

product so that it no longer was encompassed by the literal terms of the patent.<sup>11</sup> Indeed, the Court in *Graver Tank* concluded that such piracy would convert a patent into a “hollow and useless thing.”<sup>12</sup> Accordingly, the Court held that a patent covered more than what the literal terms claimed: patentees could, in fact, argue that a product or process infringes their patents “if it performs substantially the same function in substantially the same way to obtain the same result.”<sup>13</sup> This test, commonly referred to as the “function-way-result” test, has become the standard manner of applying the doctrine of equivalents, although the Federal Circuit has occasionally applied a more general “insubstantial differences” test.<sup>14</sup> This latter test views claim elements as being “equivalently present in an accused device if only ‘insubstantial differences’ distinguish the missing claim element from the corresponding aspects of the accused device.”<sup>15</sup> Whatever test is applied, the doctrine of equivalents is perhaps best viewed as a limited protective measure that stretches the scope of a patent’s literal claim terms just enough to prevent “fraud on the patent.”<sup>16</sup>

Although the doctrine of equivalents is inherently limited in scope and applicability, two additional doctrines place even further constraints on its operation. The “all elements” rule requires the accused device to contain “every claimed element of the invention or the equivalent of every claimed element.”<sup>17</sup> This approach limits the doctrine of equivalents in two ways.<sup>18</sup> First, it leads to disciplined and structured infringement analyses by requiring courts to focus on the individual elements of claims rather than the invention as a whole. Second, it helps potential infringers by allowing them to escape infringement if even a single claimed element is absent from their accused device. A more important constraint on the doctrine of equivalents is the doctrine of prosecution history estoppel, discussed in detail next.

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

12. *Id.*

13. *Id.* at 608 (quoting *Sanitary Refrigerator Co. v. Winters*, 280 U.S. 30, 42 (1929)).

14. See, e.g., *Dawn Equip. Co. v. Ky. Farms*, 140 F.3d 1009, 1015-16 (Fed. Cir. 1998).

15. *Sage Prods. v. Devon Indus.*, 126 F.3d 1420, 1423 (Fed. Cir. 1997).

16. See *Graver Tank*, 339 U.S. at 608 (“The essence of the doctrine is that one may not practice a fraud on a patent.”).

17. *Kustom Signals, Inc. v. Applied Concepts, Inc.*, 264 F.3d 1326, 1333 (Fed. Cir. 2001).

18. Philip M. Nelson, Note, *Definition for “Limitation” in the Context of Prosecution History Estoppel and the All Elements Rule: A Proposed Solution to the Troubling Dictum in Kustom Signals v. Applied Concepts*, 2003 B.Y.U. L. REV. 353, 360-61.

## B. Prosecution History Estoppel

Simply put, prosecution history estoppel bars a patentee from relying on the doctrine of equivalents in an infringement lawsuit when, during prosecution, she has narrowed the scope of patent claims relating to the accused equivalent.<sup>19</sup> The logic of this doctrine is straightforward: if a patentee, in response to an examiner's objection, willingly narrows a claim to secure a patent, then she is presumably sending a clear signal to the public that she is surrendering the territory beyond the literal terms of the narrowed claim. Since the patentee "knew the words for both the broader and narrower claim, and affirmatively chose the latter," any concerns over the inability of language to adequately describe the claimed subject matter, which motivate the doctrine of equivalents, are inapplicable.<sup>20</sup> Thus, prosecution history estoppel is rooted in a desire to reinforce the public notice function of patents.<sup>21</sup>

Of course, if a patentee amends her claims for a reason unrelated to patentability, prosecution history estoppel will not apply.<sup>22</sup> However, the term "patentability" has been construed broadly. Indeed, in addition to amendments made to overcome prior art, prosecution history estoppel applies to amendments that were made to overcome rejections related to 35 U.S.C. § 101 and 35 U.S.C. § 112.<sup>23</sup> Also, if there is no explanation in the prosecution history for why a claim has been amended, the *Warner-Jenkinson* presumption takes effect and courts must assume that the claim was amended for reasons relating to patentability.<sup>24</sup> Given the minimal amount of documentation claim amendments receive<sup>25</sup> and the fact that the

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19. *Schriber-Schroth Co. v. Cleveland Trust Co.*, 311 U.S. 211, 220-21 (1940) ("It is a rule of patent construction consistently observed that a claim in a patent as allowed must be read and interpreted with reference to claims that have been cancelled or rejected, and the claims allowed cannot by construction be read to cover what was thus eliminated from the patent.")

20. *Festo VIII*, 535 U.S. 722, 734-35 (2002).

21. See *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 234 F.3d 558, 567 (Fed. Cir. 2000) [hereinafter *Festo VII*] (noting that one purpose of prosecution history estoppel is "preserving the notice function of the claims").

22. See *Warner-Jenkinson Co. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 32-33 (1997) ("Our prior cases have consistently applied prosecution history estoppel only where claims have been amended for a limited set of reasons, and we see no substantial cause for requiring a more rigid rule invoking an estoppel regardless of the reasons for a change."); *Festo VII*, 234 F.3d at 567-68 ("[I]f a patent holder can show from the prosecution history that a claim amendment was not motivated by patentability concerns, the amendment will not give rise to prosecution history estoppel.").

23. *Festo VII*, 234 F.3d at 567.

24. *Warner-Jenkinson*, 520 U.S. at 33.

25. See Thomas, *supra* note 6, at 188-91, 203.

initial burden is placed on the patentee, the *Warner-Jenkinson* presumption is generally quite difficult to overcome.<sup>26</sup> Finally, if a patentee feels that an examiner incorrectly rejected a claim on prior art grounds, a reviewing court may not look into the correctness of that objection.<sup>27</sup> Rather, the court may only review the “reason (right or wrong) for the objection and the manner in which the amendment addressed and avoided the objection.”<sup>28</sup> Thus, prosecution history estoppel can be a formidable barrier for a patentee to overcome.

### C. Overview of the *Festo* Litigation

At dispute in the *Festo* cases was the validity and infringement of two patents pertaining to “magnetically coupled rodless cylinders.”<sup>29</sup> For the purposes of this Note, the details of the technology involved in the *Festo* cases are irrelevant. The only matter of importance is that during prosecution plaintiff narrowed the scope of both patents by amending them to require a “pair of resilient sealing rings.”<sup>30</sup> One of the patents was further amended to include a “magnetizable sleeve” limitation.<sup>31</sup> The *Festo* litigation focused exclusively on these two limitations.<sup>32</sup>

In the district court, the judge granted plaintiff summary judgment on the issue of whether defendant’s cylinder, which included either a single sealing ring or more than two sealing rings, infringed plaintiff’s patents on cylinders having exactly two sealing rings under the doctrine of equivalents.<sup>33</sup> The jury determined that the magnetizable sleeve limitation was infringed under the doctrine of equivalents.<sup>34</sup> On appeal, defendant asserted prosecution history estoppel,<sup>35</sup> noting that plaintiff had added the

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26. See generally Douglas Lichtman, *Rethinking Prosecution History Estoppel*, 71 U. CHI. L. REV. 151, 153-54 (2004).

27. *Warner-Jenkinson*, 520 U.S. at 33 n.7.

28. *Id.*

29. Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., No. 88-1814-MA, 1993 U.S. Dist. LEXIS 21434, at \*3 (D. Mass. Apr. 27, 1993) [hereinafter *Festo I*].

30. *Festo VII*, 234 F.3d 558, 583-84 (Fed. Cir. 2000).

31. *Id.* at 584-85.

32. See, e.g., Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., 72 F.3d 857, 862 (Fed. Cir. 1995) [hereinafter *Festo II*] (“The issue of infringement focused on the claim clauses relating to the guide rings and sealing rings, for some of the accused devices contained four rings and some contained only three rings; and to the magnetizable material in the sleeve of the follower. The presence of all other claim elements and limitations in the accused devices was conceded.”).

33. See *Festo II*, 72 F.3d at 860-61; *Festo I*, 1993 U.S. Dist LEXIS 21434, at \*28-\*29.

34. See *Festo II*, 72 F.3d at 862-64.

35. See *supra* Part I.B.

sealing ring limitation during prosecution. The Federal Circuit rejected this argument and affirmed the decision of the trial court.<sup>36</sup> However, the Supreme Court vacated this result and remanded it to the Federal Circuit for further consideration in light of the Supreme Court's *Warner-Jenkinson* opinion.<sup>37</sup> In response, the Federal Circuit boldly held that prosecution history estoppel would be triggered by any narrowing amendment related to patentability and that it would absolutely bar the patentee from applying the doctrine of equivalents to the narrowed claim language.<sup>38</sup> Refusing to accept such an inflexible bar, the Supreme Court granted certiorari again and remanded to the Federal Circuit with guidance on how to implement a less rigid brand of prosecution history estoppel.<sup>39</sup>

Finally, at long last, the Federal Circuit handed down what will likely be the final word on the scope of prosecution history estoppel when a patentee amends claims during prosecution.<sup>40</sup> The Federal Circuit promulgated a fairly strict prosecution history estoppel doctrine, but held that patentees could still avail themselves of a few limited methods of regaining the equivalents they surrendered during patent prosecution.<sup>41</sup> More specifically, patentees may rebut the application of prosecution history estoppel by showing that an alleged equivalent was either unforeseeable at the time of filing or only tangentially related to the narrowed claim limitation.<sup>42</sup> Alternatively, the patentee may argue that there was "some other reason" the equivalent could not be described in the patent.<sup>43</sup>

In *Festo X*, The Federal Circuit outlined a step-by-step inquiry for handling cases where prosecution history estoppel arises.<sup>44</sup> Figure 1 summarizes the *Festo X* line of inquiry. Of particular interest here is the interplay between the *Warner-Jenkinson* and *Festo* presumptions. Briefly, failure to rebut the *Warner-Jenkinson* presumption triggers the *Festo* presumption,<sup>45</sup> which requires courts to assume that the patentee has surrendered all the

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36. See *Festo II*, 72 F.3d at 863-64.

37. See *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 520 U.S. 1111 (1997) [hereinafter *Festo IV*] (citing *Hilton Davis Chem. Co. v. Warner-Jenkinson Co.*, 62 F.3d 1512 (Fed. Cir. 1995)); *supra* Part I.B.

38. See *Festo VII*, 234 F.3d 558, 574-75 (Fed. Cir. 2002).

39. *Festo VIII*, 535 U.S. 722, 740-41 (2002) (describing the circumstances when an amendment cannot be reasonably viewed as surrendering equivalents); see also *infra* note 58.

40. *Festo X*, 344 F.3d 1359 (Fed. Cir. 2003).

41. See generally *id.* at 1369-70.

42. *Id.* at 1369.

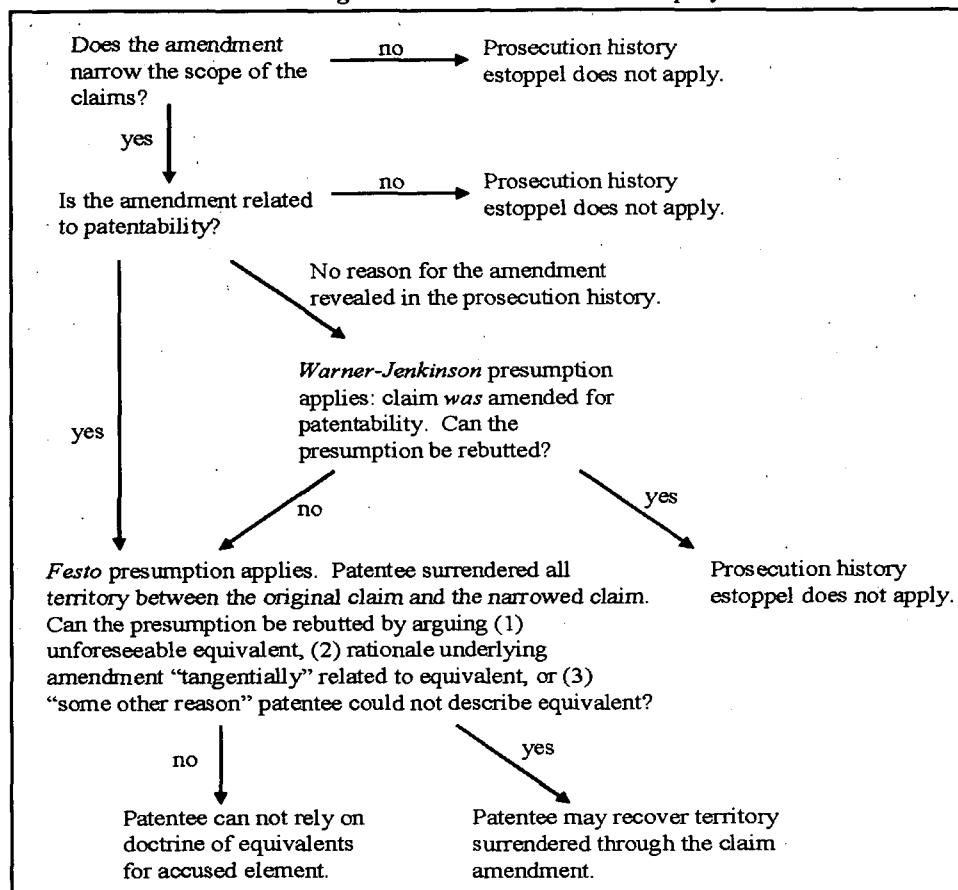
43. *Id.* at 1370.

44. *Id.* at 1366-67.

45. *Id.* at 1365-67.

territory between the original and amended claims.<sup>46</sup> This, in the Federal Circuit's view, precludes application of the doctrine of equivalents to any of the narrowed claim limitations.<sup>47</sup> However, the Federal Circuit has ruled that patentees may rebut the *Festo* presumption by any one of three means.<sup>48</sup> Patentees may argue (1) that the accused equivalent was unforeseeable at the time of drafting; (2) that the amendment was made for reasons only tangentially related to the equivalent in question; or (3) that there was "some other reason" the patentee could not describe the equivalent at the time of drafting.<sup>49</sup>

**Figure 1.** The *Festo X* Line of Inquiry



46. See *Festo VIII*, 535 U.S. 722, 733-34 (2002).

47. *Festo X*, 344 F.3d at 1367 ("[I]f the patentee fails to rebut the *Festo* presumption, then prosecution history estoppel bars the patentee from relying on the doctrine of equivalents for the accused element.").

48. *Id.* at 1369.

49. *Id.*

Although these avenues of rebutting the *Festo* presumption seem permissive at first glance, the deck is, in fact, stacked heavily against a patentee seeking to overcome the *Festo* presumption. Like the *Warner-Jenkinson* presumption, the *Festo* presumption places the initial burden on the patentee to show that prosecution history estoppel should not apply, putting the patentee on the defensive from the outset.<sup>50</sup> In addition, the Federal Circuit has placed significant limits on the evidence patentees may draw upon in attempting to rebut the presumption. For example, the *Festo X* court held that in evaluating whether the reason for amending a claim was tangential to the alleged equivalent only the prosecution record should be relied upon, but that expert testimony could occasionally be introduced to aid in the interpretation of the prosecution record.<sup>51</sup> In light of the scarce documentation that a patent application receives as it proceeds through prosecution,<sup>52</sup> this limitation severely forecloses a patentee's ability to take advantage of an ostensibly broad exception to the *Festo* presumption. The Federal Circuit placed an essentially identical evidentiary limitation on the patentee when she attempts to offer some "other reason" for the claim amendment.<sup>53</sup> Furthermore, the Federal Circuit has construed the "other reason" category to be "narrow" in extent, limiting its usefulness as a means for overcoming the *Festo* presumption.<sup>54</sup> Finally, it should be noted that the Federal Circuit, usually the final arbiter of patent disputes, is most likely in favor of a strong prosecution history estoppel doctrine. Indeed, before being overturned by the Supreme Court, the Federal Circuit had in fact instituted a strict and inflexible prosecution history estoppel bar.<sup>55</sup>

For the reasons outlined above, there is widespread agreement that the currently available avenues for rebutting the *Festo* presumption are only slightly more forgiving than the Federal Circuit's original inflexible bar.<sup>56</sup>

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50. See *Warner-Jenkinson Co. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 33 (1997); *Festo X*, 344 F.3d at 1365.

51. *Festo X*, 344 F.3d. at 1370.

52. See Thomas, *supra* note 6. But see R. Polk Wagner, *Reconsidering Estoppel: Patent Administration and the Failure of Festo*, 151 U. PENN. L. REV. 159, 206-09 (2004) (arguing that the prosecution history "is uniquely appropriate to solving the informational and temporal challenges presented by the administration system").

53. *Festo X*, 344 F.3d at 1370.

54. *Id.*

55. See *Festo VII*, 234 F.3d 558, 558 (Fed. Cir. 2000).

56. See, e.g., Clayton, *supra* note 4; Ryan Thomas Grace, *Losing the Forest Among the Trees in the Festo Saga—Rationalizing the Doctrine of Equivalents and Prosecution History Estoppel in View of the Historical Justifications for Patent Prosecution*, 11 J. INTELL. PROP. L. 275, 318-19 (2004).

This situation is likely inconsistent with the intent of the Supreme Court.<sup>57</sup> Indeed, when discussing rebuttal of the *Festo* presumption, the Court used broad permissive language.<sup>58</sup> Furthermore, the Court gave little guidance on how lower courts should handle the three avenues of rebutting the *Festo* presumption, implicitly suggesting that the Court was only offering a few of the many ways in which patentees could rebut the *Festo* presumption. The Federal Circuit, however, construed the Supreme Court's language as creating only three limited escape hatches from the *Festo* presumption.<sup>59</sup> The Federal Circuit even went so far as to pigeonhole something as broad as "some other reason" into its own distinct category that "while vague, must be . . . narrow . . .".<sup>60</sup>

In light of the difficulties associated with overcoming the *Warner-Jenkinson* and *Festo* presumptions, it is clear that the very first question in the *Festo X* inquiry (that is, does an amendment narrow the scope of a claim?) is most critical. Without a doubt, avoiding narrowing amendments now represents the safest, and perhaps singular, method of avoiding the surrender of claim territory. There has been a great deal of recent Federal Circuit guidance on this matter, and this Note now turns to a discussion of those cases.

## II. RECENT FEDERAL CIRCUIT GUIDANCE ON WHETHER A CLAIM AMENDMENT NARROWS THE SCOPE OF A CLAIM

On three recent occasions, the Federal Circuit has considered how much territory prosecution history estoppel consumes when a patent appli-

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57. See Michael Bartolone, Note, *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.: The Federal Circuit Further Clarifies (or Perhaps Further Confuses) the Application of Prosecution History Estoppel*, 6 TUL. J. TECH. & INTELL. PROP. 273, 281 (2004) (arguing that there is reason to believe the Supreme Court intended for questions regarding rebuttal of the *Festo* presumption to be given "the full benefits of a trial" rather than be handled by courts as questions of law).

58. *Festo VIII*, 535 U.S. 722, 740-41 (2002) ("There are some cases, however, where the amendment cannot reasonably be viewed as surrendering a particular equivalent. The equivalent *may* have been unforeseeable at the time of the application; the rationale underlying the amendment *may* bear no more than a tangential relation to the equivalent in question; or *there may be some other reason suggesting* that the patentee could not reasonably be expected to have described the insubstantial substitute in question.") (emphasis added).

59. *Festo X*, 344 F.3d 1359, 1365 (Fed. Cir. 2003) ("Specifically, the Court *enumerated* three ways in which the patentee may overcome the presumption . . .") (emphasis added).

60. *Id.* at 1370.

cant cancels a broad independent claim and rewrites narrower dependent claims in independent form.<sup>61</sup> In all such cases, the Federal Circuit has uniformly scaled back the scope of the patent claims to their literal terms. However, the recent cases are distinguishable, and, in some situations, there is good reason to allow the patentee continued reliance on the doctrine of equivalents.

#### A. ***Honeywell: The Presence of Additional Claim Limitations in Dependent Claims Creates a Presumption of Surrender If the Base Claim Is Rejected***

In *Honeywell International v. Hamilton Sundstrand Corp.*,<sup>62</sup> plaintiff owned a patent on an aircraft auxiliary power unit (APU) that provided compressed air for the purpose of starting the plane's engines and maintaining the environment in the aircraft's cabin.<sup>63</sup> The APU included a feedback mechanism for preventing a potentially damaging situation, known as "surge," in which the pressure in the APU's main air duct becomes too high and the airflow rapidly reverses direction back into the APU compressor.<sup>64</sup> Plaintiff conceded that defendant's incorporation of air temperature into the APU's feedback mechanism precluded literal infringement, but brought suit for infringement relying on the doctrine of equivalents. In response, defendant argued that plaintiff was estopped from asserting the doctrine of equivalents based on plaintiff's amendments during prosecution.<sup>65</sup> Namely, defendant noted that all of plaintiff's asserted claims were originally drafted as dependent claims that were based upon a broader independent claim that lacked any limitations involving the "inlet guide vanes."<sup>66</sup> Upon rejection of the independent claim for obviousness under the prior art and rejection of the dependent claims for their dependence on an unacceptable base claim, plaintiff cancelled the original independent claim and redrafted the narrower dependent claims as independent claims,

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61. See generally *Honeywell Int'l v. Hamilton Sundstrand Corp.*, 370 F.3d 1131 (Fed. Cir. 2004) (en banc); *Ranbaxy Pharm. Inc. v. Apotex, Inc.*, 350 F.3d 1235 (Fed. Cir. 2003); *Deering Precision Instruments, LLC v. Vector Distribution Sys., Inc.*, 347 F.3d 1314 (Fed. Cir. 2003).

62. 370 F.3d 1131 (Fed. Cir. 2004) (en banc).

63. *Id.* at 1134.

64. *Id.*

65. *Id.* at 1137.

66. In *Honeywell*, plaintiff's APU included a set of "inlet guide vanes," the position of which could be used to assess the minimum airflow at which surge could be avoided. This minimum airflow was compared to the actual airflow conditions and a bleed-valve was opened as necessary to prevent surge. Defendant manufactured a very similar APU. However, in defendant's APU the decision to open the bleed-valve was based upon both the position of the inlet guide vanes and the ambient air temperature. See *id.* at 1137-38.

incorporating all the limitations of the original independent claim.<sup>67</sup> These new independent claims were ultimately accepted.

Noting that there was “no distinction between the narrowing of a pre-existing limitation and the addition of a new limitation,” the Federal Circuit, reviewing the case *en banc*, held that plaintiff was estopped from asserting the doctrine of equivalents for the inlet guide vane limitation of its APU patent.<sup>68</sup> In so holding, the Federal Circuit effectively created a new rule for patent drafters: do not include crucial limitations in dependent claims, for if the independent base claim is rejected the doctrine of equivalents will be lost for any narrowing limitations present in the dependent claims.

One can make an argument that the Federal Circuit’s holding is literally in line with the *Festo* decisions. Indeed, by canceling their broad independent base claim, plaintiffs narrowed the scope of their patent to encompass only territory including an inlet guide vane limitation. That is, with regard to inlet guide vane limitations, the scope of the original claims was infinite in extent since the original independent claim included no restrictions on the use of inlet guide vanes.<sup>69</sup> The amended patent, however, was bounded in the area of inlet guide vane limitations since the final claims included an inlet guide vane limitation. Thus, one might argue, the patentee clearly surrendered territory and estoppel should apply.

However, the territory taken from the patentee in *Honeywell* is peculiar because it appears to be far more vast than what patentees normally surrender through claim amendments. Case law regarding prosecution history estoppel often speaks of patentees being foreclosed from applying the doctrine of equivalents to the narrowed claim language.<sup>70</sup> This language is sometimes juxtaposed with language indicating that estoppel applies to the territory located between the original and amended claim language.<sup>71</sup>

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67. *Id.*

68. *Id.* at 1140-41, 1144.

69. The claims in *Honeywell* used the open transitional phrase “comprising” and were therefore not limited in scope to devices including only the limitations described in the claims. See U.S. Patent No. 4,380,893 (issued Apr. 26, 1983).

70. See, e.g., *Festo VIII*, 535 U.S. 722, 739 (2002) (“[W]here no explanation is established for the narrowing of a claim limitation] prosecution history estoppel would bar the application of the doctrine of equivalents as to that element.”); *Honeywell*, 370 F.3d at 1139 (“However, prosecution history estoppel may bar the patentee from asserting equivalents if the scope of the claims has been narrowed by amendment during prosecution.”).

71. E.g., compare *Festo X*, 344 F.3d 1359, 1367 (Fed. Cir. 2003) (“[I]f the patentee fails to rebut the *Festo* presumption, then prosecution history estoppel bars the patentee from relying on the doctrine of equivalents for the accused element.”), with *id.* at 1366

Thus, courts implicitly may be assuming that application of the doctrine of equivalents to the narrowed claim language usually encompasses most, if not all, of the territory between the original and amended claim language. In line with this approach, the Federal Circuit held in *Honeywell* that the patentee had surrendered not only territory encompassing APUs having no inlet guide vane limitation whatsoever, but also territory including equivalents of the inlet guide vane limitation, which was never amended during prosecution.<sup>72</sup>

There are a number of problems with the court's holding. First, the facts of *Honeywell* clearly show that there is not necessarily even an approximate equality between (1) the territory encompassed by applying the doctrine of equivalents to the final claim language and (2) the territory between the original and final claim language. Indeed, the original patent application was originally infinite in extent with regard to inlet guide vane limitations by virtue of its independent claim that included no such limitation. Such a vast territory cannot possibly be covered via the minor stretching of literal claim language offered by the doctrine of equivalents.<sup>73</sup> Thus, the doctrine of equivalents is arguably not relevant in an estoppel case like *Honeywell*.

Furthermore, as the dissent noted, plaintiff's amendments did not clearly signal a surrender of the territory encompassed by the original dependent claims.<sup>74</sup> Rather, in canceling the broad independent claim, plaintiff likely intended to surrender only territory encompassed by APUs having no inlet guide vane limitation at all. Why then, should the patentee be required to give up *equivalents* of the inlet guide vane element as well? Although the intent of the patentee is arguably irrelevant, *Honeywell* still does not qualify as a case in which the patentee signaled surrender by "[knowing] the words for both the broader and narrower claim, and affirmatively [choosing] the latter."<sup>75</sup> Indeed, given that there was no inlet guide vane limitation in the original independent claim, one could only determine that the patentee knew the words for the broader claim if one dubiously equates the absence of words with broader words.<sup>76</sup> In light of

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(“A patentee is now entitled to rebut the presumption that an ‘unexplained’ narrowing amendment surrendered the entire territory between the original and the amended claim limitations.”).

72. See generally *Honeywell*, 370 F.3d at 1146 (Newman, J., dissenting).

73. This situation is illustrated in Figure 2 *infra*.

74. *Honeywell*, 370 F.3d at 1150-51 (Newman, J., dissenting).

75. See *Festo VIII*, 535 U.S. at 734-35; *supra* Part I.B.

76. This assumes that other language in the specification or claims that touched upon the inlet guide vane limitation did not influence the Federal Circuit in *Honeywell*. Given that the Federal Circuit failed to point out such language, this assumption seems

these considerations, courts addressing questions of prosecution history estoppel should keep in mind the distinction between the territory encompassed by applying the doctrine of equivalents to narrowed claim language and the territory between the original and amended claims. When, as in *Honeywell*, the difference between the two is so vast, courts should determine if the patentee genuinely selected narrower claim language over broader claim language before harshly scaling back the scope of the patent claims to their literal terms. Such an approach is more fair and consistent with the logic of prosecution history estoppel, and more in line with the mandate of the Supreme Court.<sup>77</sup>

Many other shortcomings of the *Honeywell* majority opinion were identified by the dissent.<sup>78</sup> Pointing to 35 U.S.C. § 112 ¶ 4,<sup>79</sup> the dissent noted that dependent claims are in fact intended to stand on their own, expressly including the limitations of the independent base claims.<sup>80</sup> From this standpoint, there was in fact no narrowing amendment to the asserted dependent claims. However, this argument can be carried further. The Federal Circuit has previously noted that “the first question in a prosecution history estoppel inquiry is whether an amendment filed in the Patent and Trademark Office . . . has narrowed the literal scope of a *claim*.<sup>81</sup> Under the Federal Circuit’s holding in *Honeywell*, however, the question that courts must apparently ask is whether an amendment narrows the literal scope of the *patent* as a whole. This approach seems incompatible with the claim-by-claim, element-by-element line of inquiry that courts normally take in patent analysis, such as when applying the all-element rule in an infringement case.<sup>82</sup>

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reasonable. Indeed, rather than accurately ascertaining the scope of surrendered territory, it seems likely that the court’s overriding objective in *Honeywell* was to foreclose patent drafters from dodging narrowing amendments by treating most amendments as “merely adding new claim limitations rather than narrowing preexisting ones.” *Honeywell*, 370 F.3d at 1141. Furthermore, if the Federal Circuit was indeed influenced by some unspecified language in the specification or other claims, then a legitimate concern arises over whether this particular mode of applying prosecution history estoppel will lead to objective and consistent results.

77. *Festo VII*, 535 U.S. at 738 (stating that there is no reason why a narrowing amendment should be deemed to relinquish equivalents “beyond a fair interpretation of what was surrendered”).

78. See generally *Honeywell*, 370 F.3d at 1146-53 (Newman, J., dissenting).

79. 35 U.S.C. § 112 ¶ 4 (2000) (“[A] claim in dependent form shall be construed to incorporate by reference all the limitations of the claim to which it refers.”)

80. *Honeywell*, 370 F.3d at 1146-47 (Newman, J., dissenting).

81. *Festo X*, 344 F.3d 1359, 1366 (Fed. Cir. 2003) (emphasis added).

82. See *supra* Part I.A; see also *Trovan, Ltd. v. Sokymat SA*, 299 F.3d 1292, 1302 (Fed. Cir. 2002) (noting that inventorship is determined on a claim-by-claim basis);

On the other hand, the Supreme Court has held that “[e]stoppel arises when an amendment is made to secure the *patent* and the amendment narrows the *patent’s* scope.”<sup>83</sup> Thus, it is not entirely clear how broad the prosecution estoppel inquiry should be. Should courts analyze estoppel on an element-by-element basis, claim-by-claim basis, or should they look at whether the patent as a whole was narrowed?

Whenever possible, courts applying prosecution history estoppel should limit themselves to an element-by-element approach. As in an infringement analysis, a fine-grained element-by-element approach to estoppel will be more systematic and disciplined. In addition, carrying out a piecewise evaluation of the consequences of changing a small number of words in a claim is a manageable problem that requires courts to consider only a few variables at a time. As a result, it will lead to the most predictable outcome. A holistic approach, on the other hand, could require courts to consider a great deal of factors at once. For example, courts might have to simultaneously weigh the relative importance of a large number of amendments made to the entire patent. In addition, courts will have to determine whether a change in one claim ought to affect the scope of territory encompassed by another claim, and, if so, by how much. In a case like *Honeywell*, involving dependent claims that are inextricably bound to their base claim, it might seem natural to assign a great deal of weight to a change in a base claim when the scope of territory covered by a dependent claim is being evaluated. However, it is less clear if this approach should be carried over to cases in which courts must compare two claims that merely cover similar subject matter or share similar language. Thus, a holistic approach lends itself to a greater level of subjectivity and hence a higher degree of volatility. However, as will be discussed below, in some cases it may indeed be appropriate to consider more than one claim when determining the scope of prosecution history estoppel.<sup>84</sup>

Finally, the *Honeywell* dissent noted the numerous practical problems that the majority opinion creates for patent drafters.<sup>85</sup> By destroying the traditional paradigm of drafting broad independent claims supported by a series of successively narrower dependent claims, the majority decision

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Amazon.com, Inc. v. Barnesandnoble.com, Inc., 239 F.3d 1343, 1351 (Fed. Cir. 2001) (noting that both infringement and validity analyses must be done on a claim-by-claim basis).

83. *Festo VIII*, 535 U.S. 722, 736 (2002) (emphasis added).

84. See *infra* Part II.B.

85. See *Honeywell*, 370 F.3d at 1152-53 (Newman, J. dissenting).

will increase the cost of applying for a patent, the likelihood of litigation, and the time required for examination.<sup>86</sup>

**B. Ranbaxy and Deering: Limitations Narrowed in Dependent Claims Create a Presumption of Surrender If the Base Claim Is Rejected**

Two other Federal Circuit cases with facts very similar to *Honeywell* have been recently decided. In *Ranbaxy Pharmaceuticals, Inc. v. Apotex, Inc.*,<sup>87</sup> plaintiff filed a patent application directed towards the preparation of a drug.<sup>88</sup> The original application included one broad independent claim and nine dependent claims.<sup>89</sup> Of particular importance was language in the independent claim calling for the use of a “highly polar organic solvent.”<sup>90</sup> Citing the indefiniteness of this language, the examiner rejected the claim.<sup>91</sup> The dependent claims, which specified a particular organic solvent for use in the preparation, were rejected for their dependence on an unacceptable base claim.<sup>92</sup> However, the examiner indicated these dependent claims would be acceptable if rewritten in independent form.<sup>93</sup> Accordingly, plaintiff abandoned the original independent claim and redrafted the dependent claims as a single independent claim specifying that the acid used be selected from “the group consisting of a sulfoxide, an amide and formic acid.”<sup>94</sup> Upon learning that defendant was practicing the patented process using acetic acid, plaintiff sued, arguing that defendant’s use of acetic acid infringed under the doctrine of equivalents.<sup>95</sup> Defendant argued in response that plaintiff was precluded from relying on the doctrine of equivalents because plaintiff narrowed its claims when it redrafted its dependent claims as independent claims.<sup>96</sup> Noting that plaintiff’s claim amendment “further defined and circumscribed an existing limitation for the purpose of putting the claims in condition for allowance,” the Federal Circuit held in favor of defendant.<sup>97</sup>

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86. *Id.* (Newman, J., dissenting).

87. 350 F.3d 1235 (Fed. Cir. 2003).

88. *Id.* at 1236-37.

89. *Id.* at 1237.

90. *Id.*

91. *Id.* at 1238.

92. *Id.*

93. *Id.*

94. *Id.*

95. *Id.*

96. *Id.*

97. *Id.* at 1240.

*Deering Precision Instruments, LLC v. Vector Distribution Systems, Inc.*<sup>98</sup> presented a situation nearly identical to *Ranbaxy*. In *Deering*, plaintiff's patent was for a lightweight portable scale.<sup>99</sup> Independent claim 1 of the original application carried a limitation calling for a "sliding weight movably carried by said beam for movement along said scale."<sup>100</sup> Claim 3, dependent on claim 1, added a limitation requiring that the sliding weight be disposed substantially in a particular plane when in its "zero position."<sup>101</sup> The examiner rejected original claim 1 as being obvious under the prior art.<sup>102</sup> In response, plaintiff redrafted claim 3 as an independent claim that was ultimately accepted.<sup>103</sup> However, *Deering* presented one additional twist. Namely, independent claim 9 of plaintiff's original application also included the "zero position" limitation.<sup>104</sup> The examiner mistakenly objected to this claim for its dependence on an unacceptable base claim.<sup>105</sup> Plaintiff responded by pointing out that claim 9 was in fact an independent claim and asserting that the "zero position" limitation was not disclosed in the prior art references.<sup>106</sup> The examiner ultimately accepted claim 9 as originally written.<sup>107</sup> Nevertheless, the Federal Circuit held that plaintiff was estopped from asserting the doctrine of equivalents for the "zero position" limitation based on its cancellation of independent claim 1 and redrafting of claim 3 as an independent claim.<sup>108</sup>

The dissent in *Honeywell* explicitly affirmed the holdings of *Ranbaxy* and *Deering*.<sup>109</sup> However, much of the dissent's argument against the *Honeywell* majority opinion seems applicable to *Ranbaxy* and *Deering* as well. In particular, the dissent's arguments based on 35 U.S.C. § 112 ¶ 4 are unequivocal: "[r]estating a dependent claim in independent form does not change its content or scope; the claim is of identical scope before and after it is rewritten."<sup>110</sup> Furthermore, the dissent's urging that a patentee

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98. 347 F.3d 1314 (Fed. Cir. 2003).

99. *Id.* at 1317.

100. *Id.* at 1325.

101. *Id.* at 1319.

102. *Id.*

103. *Id.*

104. *Id.*

105. *Id.*

106. *Id.*

107. *Id.*

108. *Id.* at 1325.

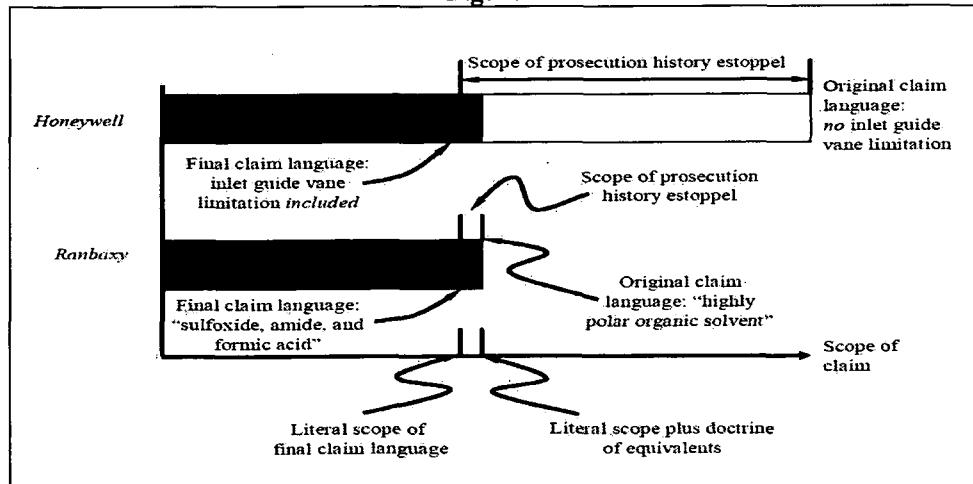
109. *Honeywell Int'l v. Hamilton Sundstrand Corp.*, 370 F.3d 1131, 1152 (Fed. Cir. 2004) (en banc) (Newman, J., dissenting).

110. *Id.* at 1147 (Newman, J., dissenting); *see also id.* at 1149 (Newman, J., dissenting) ("[R]estating a dependent claim into an independent claim of identical scope is not a narrowing amendment; and canceling a broader claim (especially one that does not men-

does not signal an intention to surrender territory by redrafting dependent claims in independent form has weight regardless of whether or not the narrowing limitation was present in the original base claim.<sup>111</sup> This is especially true of a case like *Deering*, in which the limitation at issue was present in a distinct and accepted independent claim, the patentee explicitly asserted that the limitation was not covered by the prior art, and the claim was ultimately accepted as written.<sup>112</sup> Certainly, in a case where the actual narrowing amendment is so dubious, estoppel should not be viral and infiltrate unamended claims, as was the case for application claim 9 in *Deering*.<sup>113</sup>

Figure 2 depicts prosecution history estoppel in both *Honeywell* and *Ranbaxy*. Note that in *Ranbaxy* the territory between the original and final claim language matches the territory encompassed by applying the doctrine of equivalents to the final claim language. This assumes that “highly polar organic solvent” may be regarded as the equivalent of “sulfoxide, amide and formic acid.” In *Honeywell*, however, this is not the case. Note also that the extent of the surrendered territory in *Honeywell* is far more significant than in *Ranbaxy* owing to the absence of the inlet guide vane limitation in the original claim.

Figure 2



tion the element at issue for equivalency) is not a narrowing amendment.”); *id.* (Newman, J., dissenting) (“By statute it is irrelevant whether a claim is in dependent or independent form; it is not a narrowing amendment to go from dependent form to independent form.”).

111. *Id.* at 1151 (Newman, J., dissenting).

112. *Deering*, 347 F.3d at 1319.

113. *Id.* at 1326.

However, the result in *Ranbaxy* is difficult to dispute, and there is a good argument that the result in *Deering* is proper as well. In *Ranbaxy*, the claim limitation at issue was clearly present in the original independent claim. The same is arguably true in *Deering*. This was the principle upon which the dissent in *Honeywell* distinguished *Ranbaxy* and *Deering*,<sup>114</sup> and, unlike *Honeywell*, this places an upper bound on the extent of the surrendered territory. Naturally, this makes the surrender of territory in *Ranbaxy* and *Deering* much easier to stomach. More importantly, *Ranbaxy* and *Deering* may be distinguished from *Honeywell* because the presence of the broader limitation in the original independent claim converts *Ranbaxy* and *Deering* into cases where the patentee truly “knew the words for both the broader and narrower claim, and affirmatively chose the latter.”<sup>115</sup> Although the broader and narrower claim languages were drawn from different claims in *Ranbaxy* and *Deering*, the claims from which the language was drawn were explicitly connected via a dependent claim relationship. Furthermore, the broader and narrower languages in both claims was undeniably directed to the same single limitation. Thus, *Ranbaxy* and *Deering* are also not cases in which concerns over subjectivity should preclude expanding the scope of the prosecution estoppel inquiry beyond the language contained in a single claim.<sup>116</sup>

### C. Ericsson: The Difficulty in Reading Claims Narrowly and the Importance of How Claims Are Parsed Into Limitations

*Ericsson, Inc. v. Harris Corp.*<sup>117</sup> is a rather complicated patent infringement case in which plaintiff held a patent on an interface circuit that reduced the power supplied to a telephone set when it is not in use.<sup>118</sup> The disputed claim as plaintiff originally submitted it to the PTO read in part as follows:

... which by the control signals effectively disconnects the speech signal amplifiers and actively connects the auxiliary amplifiers so that the speech signal amplifiers, which require power, only supply power to the telephone set when the receiver is off its cradle and a call can be made.<sup>119</sup>

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114. *Honeywell*, 370 F.3d at 1152 (Newman, J., dissenting) (noting that unlike *Honeywell* “in Deering and Ranbaxy the dependent claim limited an element of the original independent claim, raising the presumption of surrender”).

115. *Festo VIII*, 535 U.S. 722, 734-35 (2002).

116. See discussion *supra* Part II.A.

117. 352 F.3d 1369 (Fed. Cir. 2003).

118. *Id.* at 1371.

119. *Id.* at 1380 (Newman, J., dissenting).

After the examiner rejected the claim for anticipation and failure to satisfy §112,<sup>120</sup> plaintiff amended the claim to read:

. . . which by the control signals *disables* the speech signal amplifiers and *enables* the auxiliary amplifiers so that the speech signal amplifiers, which require power, only supply power to the telephone set when the receiver is off its cradle and a call can be made.<sup>121</sup>

Of critical importance in *Ericsson* is the “only supply power” limitation, which both parties agreed to give its ordinary meaning. In light of this construction, defendant, who manufactured a similar interface circuit, noted at trial that its device supplied some power to the phone even in its on hook position, a finding of fact the trial court adopted.<sup>122</sup> Accordingly, defendant argued that the “only supply power” limitation of plaintiff’s claim precluded their device from infringing.<sup>123</sup> The jury, however, determined that defendant’s device infringed under the doctrine of equivalents.<sup>124</sup> Noting that such a determination would vitiate the “only supply power” limitation of plaintiff’s claim, the trial judge granted defendant’s motion for judgment as a matter of law of noninfringement.<sup>125</sup>

The Federal Circuit reversed the trial judge’s ruling.<sup>126</sup> According to the Federal Circuit, the jury could have determined that the “only supply power” limitation referred only to power supplied by the “speech signal amplifiers” and not, more generally, to whether the speech signal amplifiers were enabled or disabled.<sup>127</sup> The Federal Circuit further held that the jury could also have determined that in the accused device the power that was supplied to the phone set in its on hook position originated not from the speech signal amplifiers but from the “QRA 23-25” transistors.<sup>128</sup> In light of these findings, the Federal Circuit held that a finding of infringement was appropriate since the narrowing amendment had nothing to do with the limitation at issue.<sup>129</sup>

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120. *Id.* (Newman, J., dissenting).

121. *Id.* (Newman, J., dissenting) (emphasis added).

122. *Id.* at 1372.

123. *Id.*

124. *Id.*

125. *Id.*

126. *Id.* at 1375.

127. *Id.*

128. *Id.* at 1374-75.

129. *Id.* at 1375 (“The only equivalence issue thus concerns when the speech signal amplifiers supply power, not whether they are ‘enabled’ or ‘disabled’ as opposed to ‘actively connected’ or ‘effectively disconnected,’ which was the subject of the amendment.”)

This reading of the claim limitation is quite generous to plaintiff. The term “disabled” is far more restrictive than the relatively open phrase “effectively disconnects.” Thus, the overall claim was undeniably narrowed through amendment. Furthermore, the substituted language modifies the conditions under which power is supplied to the telephone set. However, the Federal Circuit chose to endorse a view in which the claim was parsed into fine-grained limitations that focused on the role of the speech signal amplifiers. This approach shifts the focus of the analysis away from the essence of what the claim encompasses in favor of a mechanical analysis of the claim text. In addition to being difficult to square with prior Federal Circuit guidance on the matter,<sup>130</sup> such an approach opens up a wide avenue for a patentee to avoid prosecution history estoppel, weakening the notice function of patents. Indeed, the dissent in *Ericsson* argued that the majority holding produces “a dramatic loophole in the Festo decisions.”<sup>131</sup>

*Ericsson* is also difficult to square with the Federal Circuit’s opinions in *Ranbaxy*, *Deering*, and *Honeywell*. Just as in *Ericsson*, the Federal Circuit focused strictly on the text of patent claims to assess whether a narrowing amendment had been made.<sup>132</sup> However, in *Ranbaxy*, *Deering*, and *Honeywell*, the Federal Circuit chose a broader context in which to evaluate the claim amendments. More specifically, in those cases, dependent claims were evaluated not just individually, but in the context of the broader independent claims upon which they depended.<sup>133</sup> Interestingly, in choosing a broader context, the Federal Circuit arrived at a determination that a relevant narrowing amendment had in fact been made. Thus, there appears to be a tension here: the probability of determining that there was a relevant narrowing amendment is apparently inversely proportional to the size of the context in which the amendment is evaluated.<sup>134</sup> For this

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In other words, the equivalence question relates to whether the speech signal amplifiers . . . only supply power to the telephone set when the receiver is off-hook. That limitation was never amended and therefore cannot be subject to the Festo presumption.”).

130. For a case illustrating the Federal Circuit’s prior reluctance to parse claims into small elements, see *Kustom Signals, Inc. v. Applied Concepts, Inc.*, 264 F.3d 1326, 1333 (Fed. Cir. 2001) (“The word ‘or’ is not itself an ‘element’ of an apparatus or a step of a method, and its presence to signify alternative elements does not convert ‘or’ into an element. The ruling of non-infringement can not be sustained on this ground.”).

131. *Ericsson*, 352 F.3d at 1380 (Newman, J., dissenting).

132. See *supra* Parts II.A.-B.

133. *Id.*

134. Nelson made a similar point regarding the consequences of determining whether claim elements are small or large. Nelson, *supra* note 18, at 364 (“The larger the relevant element is deemed to be, or the more words or phrases in the section of the claim element, the more the patentee is hurt. This is because the estoppel, which bars the patentee from asserting infringement by equivalents, now applies to a larger portion of the claims.

reason, the issues of how claims will be parsed into limitations and the context in which they will be evaluated when determining whether a narrowing amendment has been made have become absolutely crucial.

Little has been said regarding the increasingly important problem of dividing claims into limitations. One commentator has suggested that “[o]ne possible approach is to consider that a word/phrase is part of the amended limitation when the amended portion directly changes the scope of the meaning portrayed by the phrase (or words) in question and can be reasonably considered part of the same concept/feature in the claim.”<sup>135</sup> Under this “concept/feature” approach, courts might be inclined to parse claims into fairly large limitations. *Ericsson* might have been overturned under this approach. On the other hand, Nelson has proposed that in the context of prosecution history estoppel a limitation be defined as “any word or words added by amendment or argument that reflect(s) a single, new requirement added to the claims.”<sup>136</sup> Nelson has noted that under this “requirement” approach, “one word can indeed be a bona fide limitation.”<sup>137</sup> Thus, the “requirement” approach will likely lead to smaller limitations than the “concept/feature” approach. Unfortunately, neither definition provides a mechanical rule for dividing claims into limitations based on the grammar of the claim. Such a grammar-based rule is probably impossible to formulate, and one may be able to do no better than rules like those discussed in this section, which simply focus the court on the task of seeking out either “features/concepts” or “requirements.” Such rules, though an improvement, still leave a great deal to be desired. Most importantly, there is a great deal of ambiguity inherent in the distinction between “feature/concept” and “requirement.” Indeed, in the case of a very important “requirement,” the “requirement” approach may very well coalesce with the “concept/feature” approach.

Thus, it seems likely that the partitioning of claims into limitations will, to a large extent, remain a matter that courts must do on a case-by-case basis. While this clearly does not serve the goal of uniformity, it does not necessarily mean that the notice function of patents must be sacrificed.

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If the relevant element consists of only one or two words, the patentee is helped because a larger portion of the claims is not barred from assertions of equivalents.”). *Ericsson* provides a vivid illustration of the exact principle suggested by Nelson. *Ranbaxy*, *Deering*, and *Honeywell* are quite similar, but involve the Federal Circuit evaluating multiple claims simultaneously to determine if a narrowing amendment had been made.

135. *Patent Devices May Infringe On a Claimed Invention Under the Doctrine of Equivalents Where They Are Insubstantially Different From the Claimed Invention 99% Of The Time*, 13 Fed. Cir. B.J. 740, 742 (2004).

136. Nelson, *supra* note 18, at 378.

137. *Id.*

One possible way to strengthen the notice function of patent claims in the face of uncertain claim partitioning would be to require the patent examiner, upon receipt of a claim amendment, to clearly define the boundaries of the limitation in which the amended language resides. Just as courts defer to an examiner's objection to a claim on prior art grounds,<sup>138</sup> courts could treat the examiner's determination of the boundaries of a limitation containing amended claim language with deference, thereby enhancing the notice function of patents. This approach has the additional advantage of placing the job of demarcating the most critical claim limitations in the hands of those with some technical background, which is especially crucial in cases involving complex technologies. In *Ericsson*, for example, intricate questions regarding the importance of the speech-signal amplifiers and whether there were other components in the interface circuit that provided power to the telephone set would naturally arise in partitioning the claims. For the purpose of answering these questions, the examiner could also take the liberty of considering extrinsic evidence, something the Federal Circuit has been reluctant to do when dealing with prosecution history estoppel.<sup>139</sup>

The need for extrinsic evidence becomes more evident if one considers what would have happened had the *Ericsson* court followed the recommendation of the dissent<sup>140</sup> and remanded the case to the district court for a determination of whether plaintiff could have rebutted the *Festo* presumption. A hypothetical *Ericsson* remand would have most likely focused on whether the accused equivalent was tangential to the narrowing amendment. Certainly, the issue of whether power was supplied to the telephone set by the speech signal amplifiers or the QRA 23-25 transistors would have become paramount. The Federal Circuit also considered this issue, and it pointed to evidence consisting of defendant's engineering notes and data sheets suggesting that the QRA 23-25 transistors were not part of the speech signal amplifiers.<sup>141</sup> In addition, it pointed to expert testimony that cut both ways on this issue.<sup>142</sup> The Federal Circuit has mandated that courts should only consider evidence contained in the prosecution history when evaluating whether the *Festo* presumption is rebuttable

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138. See *Warner-Jenkinson Co. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 33 n.7 (1997); *supra* Part I.B.

139. See *supra* Part I.C.

140. *Ericsson, Inc. v. Harris Corp.*, 352 F.3d 1369, 1381 (Fed. Cir. 2003) (Newman, J., dissenting).

141. *Id.* at 1375.

142. See *id.*; *id.* at 1352 n.2.

through a showing of tangentialness.<sup>143</sup> In light of this mandate, it is entirely possible that none of this highly relevant evidence would have been considered on remand. Although the expert testimony might have been allowed, it would have been disfavored relative to evidence contained in the prosecution history. Certainly, unless the engineering notes and data sheets were placed in the prosecution history, they would have been disregarded entirely. Thus, *Ericsson* illustrates that the Federal Circuit's evidentiary limitations are likely too restrictive, especially in highly technical cases like *Ericsson*.

Although *Ericsson* is troubling, it is worth noting that its precedential impact may be limited. Since *Ericsson* was heard on appeal from a judgment as a matter of law (JMOL) verdict,<sup>144</sup> it is possible the Federal Circuit was motivated by a strong desire to preserve the sanctity of the jury verdict. In addition, defendant apparently did not argue for either application of the *Festo* presumption or remand on the issue.<sup>145</sup> Thus, it is entirely possible that the Federal Circuit would have responded differently had this not been the case.

### III. CONCLUSION

With its holdings in *Honeywell*, *Ranbaxy*, and *Deering*, the Federal Circuit sent a clear message: prosecution history estoppel will be strictly applied. In light of its most recent *Festo* decision, this message was unsurprising. Nevertheless, in *Honeywell*, the Federal Circuit arguably went too far in its zeal to implement a strict prosecution history estoppel rule. Indeed, *Honeywell* suggests that dependent claims can now be quite dangerous. *Honeywell* also represents a troubling example of the Federal Circuit implementing prosecution history estoppel by mechanically foreclosing application of the doctrine of equivalents to the finalized claim language absent critical language that precisely defined the outer boundary of the original unamended claim. Without such language, the scope of territory consumed by prosecution history estoppel can be excessive. More importantly, the absence of such language suggests that the patentee did not affirmatively select narrower claim language over broader claim language. In such circumstances, prosecution history estoppel is perhaps inappropriate. In contrast to *Honeywell*, the claims in *Ranbaxy* and *Deering* did include precise language defining the outer limits of the original unamended

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143. *Festo X*, 344 F.3d 1359, 1370 (Fed. Cir. 2003); see *supra* Part I.C.

144. *Ericsson*, 352 F.3d at 1373.

145. *Id.* at 1375 n.4.

claim. This is the key factor that makes prosecution history estoppel palatable.

*Ericsson* presents a case that is difficult to reconcile with *Honeywell*, *Deering*, and *Ranbaxy*. Although there might have been some factors unrelated to the merits of the case that influenced the Federal Circuit, *Ericsson* is still a surprising illustration of a finding of infringement via the doctrine of equivalents. In the post-*Festo* era, such results will likely be rare. In contrast to *Honeywell*, *Deering*, and *Ranbaxy*, *Ericsson* further illustrates that Courts are far less likely to determine that a relevant narrowing amendment was made when claim limitations are interpreted within a narrow context. Thus, if the Federal Circuit persists with a rigid prosecution history estoppel rule, clearer guidance must be given on how claims will be parsed into limitations and how broadly of a context they will be evaluated in.

Ideally, the Federal Circuit would have treated *Ericsson* as presenting the question of whether the patentee could have rebutted the *Festo* presumption via a “tangentialness” argument. However, had this been done, it is likely that some highly relevant evidence would have gone unconsidered in light of the Federal Circuit’s partiality for evidence contained within the prosecution history. Thus, *Ericsson* also suggests that the restrictions the Federal Circuit has placed on the evidence courts may consider in evaluating whether the *Festo* presumption has been rebutted are perhaps too narrow, especially in highly technical cases.