

# UIC John Marshall Journal of Information Technology & Privacy Law

---

Volume 24  
Issue 3 *Journal of Computer & Information Law*  
- Spring 2006

Article 4

---

Spring 2006

## A Comedy of Errors: Defining "Component" in a Global Information Technology Market - Accounting for Innovation by Penalizing the Innovators, 24 J. Marshall J. Computer & Info. L. 507 (2006)

William Greubel

Follow this and additional works at: <https://repository.law.uic.edu/jitpl>



Part of the [Computer Law Commons](#), [Internet Law Commons](#), [Privacy Law Commons](#), and the [Science and Technology Law Commons](#)

---

### Recommended Citation

William Greubel, A Comedy of Errors: Defining "Component" in a Global Information Technology Market - Accounting for Innovation by Penalizing the Innovators, 24 J. Marshall J. Computer & Info. L. 507 (2006)

<https://repository.law.uic.edu/jitpl/vol24/iss3/4>

This Comments is brought to you for free and open access by UIC Law Open Access Repository. It has been accepted for inclusion in UIC John Marshall Journal of Information Technology & Privacy Law by an authorized administrator of UIC Law Open Access Repository. For more information, please contact [repository@jmls.edu](mailto:repository@jmls.edu).

## NOTE

# A COMEDY OF ERRORS: DEFINING “COMPONENT” IN A GLOBAL INFORMATION TECHNOLOGY MARKET — ACCOUNTING FOR INNOVATION BY PENALIZING THE INNOVATORS

WILLIAM GREUBEL†

### I.

Since its introduction in 1984 courts have struggled to interpret the proper scope of 35 U.S.C. § 271(f) (hereinafter “271(f)”)<sup>1</sup>. Initially enacted to fill a loophole in U.S. patent law<sup>2</sup>, 271(f) has been given varied

---

† J.D. 2007, The John Marshall Law School. Editor-in-Chief, The John Marshall Journal of Computer and Information Law.

1. 35 U.S.C. § 271(f) (2006).

§ 271. Infringement of Patent

(f)(1) Whoever without authority supplies or causes to be supplied in or from the United States all of a substantial portion of the components of a patented invention, where such components are uncombined in whole or in part, in such a manner as to actively induce the combination of such components outside the United States in a manner that would infringe the patent if such combination occurred within the United States, shall be liable as an infringer.

(f)(2) Whoever without authority supplies or causes to be supplied in or from the United States any component of a patented invention that is especially made or especially adapted for use in the invention and not a staple article or commodity of commerce suitable for substantial noninfringing use, where such component is uncombined in whole or in part, knowing that such component is so made or adapted and intending that such component will be combined outside the United States in a manner that would infringe the patent if such combination occurred within the United States, shall be liable as an infringer. *Id.*

2. Alan M. Fisch & Brent H. Allen, *The Application of Domestic Patent Law to Exported Software: 35 U.S.C. §271(f)*, 25 U. Pa. J. Intl Econ. L. 557, 565 (Summer 2004) (discussing that 271(f) was specifically enacted to close a loophole in patent law created by the

interpretations throughout its relatively brief history.<sup>3</sup> Recently, courts, most notably the Federal Circuit, have struggled with 271(f)'s application in areas involving high technology patents.<sup>4</sup>

Much of the controversy surrounding 271(f) in recent cases has focused on the interpretation of the term "component" as it is used in the statute.<sup>5</sup> Historically, relying on the legislative history of 271(f), courts have given the term "component" a relatively formalistic or narrow construction.<sup>6</sup> Recently, however, the Federal Circuit, citing various policy concerns, diverged from this established precedent, giving the term "component" a much broader functionalistic construction.<sup>7</sup>

Commentators and industry lobby groups agree that the recent holdings of the Federal Circuit in *Eolas*<sup>8</sup>, *AT&T*<sup>9</sup>, and *Union Carbide*<sup>10</sup> represent an ill-advised departure from both the court's previous treatment of 271(f), as well as the purpose and policies that 271(f) represents.<sup>11</sup> In fact, the far-reaching economic implications of the Federal Circuit's current construction of 271(f) have caused some industry scholars to call for the repeal of 271(f) altogether.<sup>12</sup> While extreme, many have recognized that the foreseeable effect of expanded potential corporate liability will force America's high technology innovators to move

Supreme Court's decision in *Deepsouth*); see *Deepsouth Packing Co. v. Laitram Corp.*, 406 U.S. 518 (1972); see also Patent Law Amendments Act of 1984, H.R. 6286, 98th Cong. 101 (1984), reprinted in 1984 U.S.C.C.A.N. (98 Stat. 3383) (codified at 35 U.S.C. § 271(f) (2006)); Stuart Watt, *Patent Infringement: Redefining the "Making" Standard to Include Partial Assemblies*, 60 Wash. L. Rev. 889 (1985) (discussing the legislative passage of 271(f)).

3. *Enpat Inc. v. Microsoft Corp.*, 6 F. Supp. 2d 537 (E.D. Va. 1998) (declining to apply 271(f) to the method claims of a software patent); cf. *Eolas Techs. Inc. v. Microsoft Corp.*, 399 F.3d 1325 (Fed. Cir. 2005) (holding that 271(f) does encompass software).

4. *Eolas*, 399 F.3d 1325 (Fed. Cir. 2005) (applying 271(f)(1) to the infringement of a software method patent claim); see also *AT&T v. Microsoft Corp.*, 414 F.3d 1366 (Fed. Cir. 2005) (applying 271(f) to the infringement of a software method patent claim; *Union Carbide Chems. & Plastics Tech. Corp. v. Shell Oil Co.*, 425 F.3d 1366 (Fed. Cir. 2005) (applying 271(f) to the infringement of a chemical process patent claim).

5. 35 U.S.C. § 271(f)(1) (2006) (stating "[w]hoever without authority supplies or causes to be supplied . . . any component of a patented invention. . .") (emphasis added).

6. Fisch, *supra* n. 3, at 567-73.

7. See *Eolas*, 399 F.3d 1325 (noting that this shift's purpose is to bring the statute up to date and more in line with current technological trends).

8. *Id.*

9. 414 F.3d 1366.

10. 425 F.3d 1366.

11. See Br. of the Software & Info. Indus. Assn. as Amicus Curiae Supporting *Petr., Microsoft Corp. v. AT&T Corp.*, (No. 05-1056) (hereinafter "SIIA Amicus Brief"); see also Br. for the U. S. as Amicus Curiae, *Microsoft Corp. v. AT&T Corp.*, (No. 05-1056).

12. James R. Farrand, *Territoriality and Incentives Under the Patent Laws: Overreaching Harms U.S. Economic and Technological Interests*, 88 J. Pat. & Trademark Off. Socy. 761 (2006) (arguing that the costs imposed by 271(f) greatly outweigh any usefulness that the statute may provide).

R&D and manufacturing facilities overseas to avoid increased liability.<sup>13</sup>

In light, perhaps, of these recent developments and the overwhelming threat of lost American economic opportunity, the Supreme Court recently decided to hear this issue. Specifically, the Court certified the question of whether “digital software code—an intangible sequence of ‘1’s’ and ‘0’s’—may be considered a ‘component of a patented invention’ within the meaning of Section 271(f)(1).”<sup>14</sup> While this issue may simply be resolved by applying the canons of statutory construction to 271(f), there are strong public policy considerations, on both sides, that should influence the Court’s resolution of this conflict. This note will survey the policy concerns supporting a narrow interpretation of the term “component.” Specifically, while a comprehensive economic analysis of 271(f) has yet to be undertaken,<sup>15</sup> this note will focus on the threat that an expansive interpretation of 271(f) poses to America’s technological innovators. Ultimately, as the term “component” applies to software, a narrow construction is the more prudent interpretation for two reasons: (1) the common usage and plain meaning of the term “component” as it is used in 271(f) simply does not encompass computer software; and (2) strong public policy concerns support such a narrow construction.

Part II of this note will discuss the nature of software and draw upon an analogous example of a lay invention used in Microsoft’s *Petition for Certiorari*<sup>16</sup>. It will also discuss the policies underlying U.S. patent law. Furthermore, it will discuss the very important and very relevant presumption against the extraterritorial application of both United States law in general and specifically as it applies to patent law. This section will conclude with a historical overview of 271(f) and a look at the courts’ historical treatment of the term “component.” Part III will analyze the competing policy concerns surrounding the proper construction of “component.” Finally, Part IV of this note will conclude with a proposal for a more reasonable and economically viable construction of “component” as it is used in 271(f)(1).

## II.

### NATURE OF SOFTWARE

Not surprisingly much of the current controversy surrounding 271(f) involves the classification of software as a “component” under the stat-

---

13. *SIIA Amicus Br.*, *supra* n. 12, at 14 (arguing that the “broad reading of [271(f)] may dissuade information-based companies from maintaining their operations in the United States.”).

14. *Petition for Writ of Certiorari, Microsoft Corp.*, (No. 05-1056) (hereinafter “*Petition for Certiorari*.”).

15. *See Farrand, supra* n. 13, at 784.

16. *Petition for Certiorari, supra* n. 15.

ute. The confusion surrounding software, as it applies to 271(f), stems not only from the difficulty in classifying software patents, but, rather, and more fundamentally, from a misunderstanding of the nature of software altogether.<sup>17</sup> Software, as it is most commonly perceived, is nothing more than a computer program “embodied in some kind of storage medium, such as a CD-ROM or a hard drive.”<sup>18</sup> Although this conceptualization of software is both prevalent and ultimately correct, it is also imprecise and misleading.

In actuality, software is “a set of instructions, known as code, that directs a computer to perform specified functions or operations.”<sup>19</sup> Computer programmers develop software by “first authoring “source code”—human readable commands to the computer. . . .”<sup>20</sup> That “source code” is then converted into “computer readable “object code” which is expressed in the binary digital language of “0’s” and “1’s.”<sup>21</sup> Quite simply, the “object code” is nothing more than a set of digital instructions.<sup>22</sup> This distinction, between software as embodied on a storage medium and software as digital command information, is critical.<sup>23</sup> Placing a CD-ROM or a hard drive into a general purpose computer does not affect the status or classification of the computer. However, when the software, or “object code,” is loaded onto the computer, that general purpose computer is altered by the software code so that it performs a specific function. The resulting special purpose computer may, in fact, be a patentable invention.<sup>24</sup> Furthermore, software code alone is “neither a ‘process’ nor a ‘machine, manufacture, or composition of matter.’”<sup>25</sup> Rather, computer

---

17. *Id.* at 3; *See also* Transcript of Oral Argument at 22, *Microsoft v. AT&T*, (No. 05-1056) (working under the mere assumption that software is patentable because the Supreme Court has not yet spoken to this issue).

18. *Id.*

19. *Fantasy Sports Props., Inc. v. Sportlines.com, Inc.*, 287 F.3d 1108, 1118 (Fed. Cir. 2002); *see also* 17 U.S.C. § 101 (2006) (defining a “computer program” as a “set of statements or instructions to be used directly or indirectly in a computer in order to bring about a certain result”); UNITED STATES PATENT & TRADEMARK OFFICE MANUAL OF PATENT EXAMINATION PROCEDURE (“MPEP”) § 2106.IV.B.1(a) (8th ed. 2001) (stating that “a computer program is merely a set of instructions capable of being executed by a computer.”).

20. Petition for Certiorari *supra* n. 14, at 4; *see also Gates Rubber Co. v. Bando Chem. Indus., Ltd.*, 9 F.3d 823, 835 (10th Cir. 1993).

21. Petition for Certiorari, *supra* n. 14, at 4.

22. *Id.* (stating that object code is “nothing more than a complex set of digital commands that instruct a computer to align its circuits in a particular manner to achieve a particular functionality.”).

23. *Id.*

24. *Id.*; *see also In re Alappat*, 33 F.3d 1526, 1545 (Fed. Cir. 1994) (holding that a “general purpose computer programmed to carry out the claimed invention” was patentable as “a new machine because a general purpose computer in effect becomes a special purpose computer once it is programmed to perform particular functions pursuant to instructions from program software.”).

25. *See* 35 U.S.C. § 101 (2006).

software, free from association with any tangible medium is nothing more than an ethereal set of intangible digital instructions.<sup>26</sup> Accordingly, software code—the binary set of digital “0’s” and “1’s”—is not itself patentable.<sup>27</sup> This distinction becomes important when defining “component” under 271(f).<sup>28</sup>

#### PATENT LAW GENERALLY – PURPOSE AND POLICIES

United States patent law is all about incentives.<sup>29</sup> The patent laws create incentives for “invention and for detailed public disclosure.”<sup>30</sup> Equally if not more important, U.S. patent laws provide incentives for patent holders to commercialize the claimed invention, method, assembly, or process.<sup>31</sup> More generally, however, the basic purpose of U.S. patent law is to “promote the progress of science and the useful arts.”<sup>32</sup>

#### PRESUMPTION AGAINST EXTRATERRITORIALITY

Having discussed both the nature of software and that the purpose of U.S. patent law is to provide incentives to drive both continued invention and public disclosure, it is important to note that the laws providing these incentives are presumed to have a limited territorial application and effect.<sup>33</sup> This section will discuss the presumption against the extraterritorial application of U.S. laws both generally and as they specifically relate to the U.S. patent law.

The Supreme Court has stated that U.S. courts “are to presume that legislation of Congress, unless a contrary intent appears is meant to apply only within the territorial boundaries of the United States.”<sup>34</sup> This

26. Petition for Certiorari, *supra* n. 14, at 5.

27. *Id.*; but see *Apple Computer, Inc. v. Franklin Computer Corp.*, 714 F.2d 1240, 1248 (3d Cir. 1983) (stating that computer software, however, may be copyrightable as a particular expression).

28. See 35 U.S.C. § 271(f)(1) (2006) (stating that “[w]hoever without authority supplies . . . components of a patented invention. . .”) (emphasis added).

29. Farrand, *supra* n. 13.

30. *Id.* at 761.

31. *Id.* (stating that U.S. patent laws provide an “investment to commercialize” the patentable subject matter).

32. U.S. Const. Art. I § 8 (stating that Congress shall have the power to “promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries”); see also Farrand, *supra* n. 13, at 787.

33. See e.g. Graeme B. Dinwoodie et al., *International Comparative Patent Law*, 30-31 (Matthew Bender & Co, 2002) (stating that “territorial” means that the reach of a particular law does not extend outside the sovereign jurisdiction of the United States); see generally Donald S. Chisum, *Normative and Empirical Territoriality in Intellectual Property: Lessons from Patent Law*, 37 Va. J. Intl L. 603, 605 (1997).

34. Curtis A. Bradley, *Extraterritorial Application of U.S. Intellectual Property Law: Principal Paper: Territorial Intellectual Property Rights in an Age of Globalism*, 37 Va. J.

presumption may only be overcome by a clear showing of the affirmative intention of Congress.<sup>35</sup> The Supreme Court has articulated five justifications in support of the presumption against extraterritoriality: international law, international comity, choice-of-law principles, likely congressional intent, and separation of powers considerations.<sup>36</sup> While this paper is not the proper vehicle for an in depth discussion of these justifications it is important to note their existence during the analysis of this issue.<sup>37</sup>

While this presumption applies with varied force and effect depending on the interests at stake or the area of law implicated, courts generally refuse to apply patent law abroad.<sup>38</sup> A patent is a government grant of a monopoly for a specified period of time that entitles the recipient "to exclude others from making, using, or selling an invention."<sup>39</sup> First enacted in 1790, the modern patent act was adopted in 1952.<sup>40</sup> The modern version of the Patent Act contains language limiting the extraterritorial scope of its application.<sup>41</sup> Similar territorial language

---

Intl L. 505, 506 (1997); In *EEOC v. Arabian Am. Oil Co.*, the Court stated "It is a longstanding principle of American law that legislation of Congress, unless a contrary intent appears, is meant to apply only within the territorial jurisdiction of the United States." *EEOC v. Arabian Am. Oil Co.*, 499 U.S. 244, 248 (1991) ("*Aramco*") (quoting *Foley Bros., Inc v. Filardo*, 336 U.S. 281, 285 (1949)).

35. Bradley, *supra* n. 35, at 506 (discussing further that the presumption is only a canon of statutory construction and that Congress has "substantial power to legislate extraterritorially especially with respect to U.S. citizens"); see also *Aramco*, 499 U.S. at 248; *F. Hoffman-LaRoche Ltd. v. Empagran S.A.*, 542 U.S. 155, 174 (2004) (emphasizing that courts should adopt any reasonable construction of a statute that avoids extraterritorial application in order to prevent U.S. encroachments on foreign sovereignty).

36. Bradley, *supra* n. 35, at 513-514 (stating that although no definitive account exists, a review of the Supreme Court's extraterritoriality decisions reveals that over time these five justifications have been articulated); see also Petition for Certiorari *supra* n. 15, at 23 (stating that the "presumption against extraterritoriality also reflects the fact that the legislative and executive branches are much better equipped than the judiciary to evaluate the complex foreign policy considerations raised by the extraterritorial application of U.S. law"); *Chi. & S. Air Lines, Inc. v. Waterman S.S. Corp.*, 333 U.S. 103, 111 (1948) (recognizing that decisions affecting international relations are "of a kind for which the judiciary has neither aptitude, facilities nor responsibility.").

37. For a more in depth treatment of these five justifications see Bradley, *supra* n. 35, at 513-517.

38. Bradley, *supra* n. 35, at 520.

39. *Id.*

40. *Id.*; see [Patent] Act of April 10, 1790, ch. 7, 1 stat. 109 (repealed 1793); see also 35 U.S.C. § 1-376 (2006) ("Patent Act").

41. Bradley, *supra* n. 35, at 520-521; see also 35 U.S.C. § 154(a)(1) (stating that the grant of a patent confers a "right to exclude others from making, using, offering for sale, or selling the invention throughout the United States"); 35 U.S.C. § 271(a) (providing that "whoever without authority makes, uses, or sells any patented invention, within the United States during the term of the patent therefore, infringes the patent").

can be dated back to the Patent Act of 1870.<sup>42</sup>

Prior to the addition of this language, however, courts consistently interpreted patent law to be territorial.<sup>43</sup> For example, in *Brown v. Duchesne* the Supreme Court held that U.S. patent law did not apply to "an improvement used in constructing the gaff of a foreign sailing vessel."<sup>44</sup> Describing the issue as one involving "the construction of the patent laws," the Court stated that the patent laws "do not, and were not intended to, operate beyond the limits of the United States."<sup>45</sup>

The Court again applied the presumption against extraterritoriality in *Dowagiac Mfg., Co. v. Minnesota Moline Plow Co.*<sup>46</sup> In that case, third parties manufactured grain drills that infringed plaintiff's patents.<sup>47</sup> The defendant purchased the infringing drills and sold them in the United States and Canada.<sup>48</sup> While there was no question that defendant's sale of the drills in the U.S. constituted infringement, the Supreme Court held that the patent laws did not reach the defendant's sale of the drills in Canada.<sup>49</sup>

More recently, in *Deepsouth Packing Co. v. Laitram Corp.* the Supreme Court, again, had an opportunity to decide the extraterritorial affect of U.S. patent law.<sup>50</sup> There, the defendant was exporting U.S. made components of a shrimp deveiner for assembly outside the U.S.<sup>51</sup> Plaintiff held combination patents covering certain portions of the fully assembled deveiner.<sup>52</sup> Citing both *Duchesne* and *Dowagiac*, the *Deepsouth* Court held that a good protected by a combination patent is only "made" when it is fully assembled.<sup>53</sup> Furthermore, because final assembly occurred outside the U.S., the Court concluded that U.S. patent laws were inapplicable.<sup>54</sup> The Court further noted that to the extent an inventor

42. Bradley, *supra* n. 35, at 521; *see also* [Patent] Act of July 8, 1870, ch. 230, 22, 16 stat. 198, 201.

43. Bradley, *supra* n. 35, at 521.

44. *Id.*; *see Brown v. Duchesne*, 60 U.S. 183 (1857).

45. *Duchesne*, 60 U.S. at 194; *see also* Bradley, *supra* n. 35, at 521; *Deepsouth*, 406 U.S. at 527.

46. 235 U.S. 641 (1915).

47. *Id.* at 643.

48. *Id.*

49. *Id.* at 650 (stating that "the right conferred by a patent under our laws is confined to the United States and its territories . . . and infringement of this right cannot be predicated of acts wholly done in a foreign country").

50. 406 U.S. 518 (1972).

51. *Id.* at 519.

52. *Id.* at 520; *see also* Bradley, *supra* n. 35, at 522, n. 83 (stating that a "combination patent congers protection with respect to a new combination of preexisting elements.>").

53. *Deepsouth*, 406 U.S. at 527-29; *see also* Bradley, *supra* n. 35, at 522.

54. *Id.* at 531 (stating that "[o]ur patent system makes no claim to extraterritorial effect; 'these acts of Congress do not, and were not intended to, operate beyond the limits of the United States'") (quoting *Brown v. Duchesne*, 60 U.S. at 195); *see also* Petition for Certi-



needs protection in foreign markets, “the wording of [the Patent Act] reveals a Congressional intent to have him seek it abroad” through the securing of foreign patents.<sup>55</sup>

### 35 U.S.C. § 271(f)

In response to the perceived inequities of the presumption against extraterritoriality in patent law generally, and the Supreme Court’s ruling in *Deepsouth* specifically, Congress enacted 35 U.S.C. § 271(f) to close this extraterritorial loophole.<sup>56</sup> According to the legislative history, Congress enacted 271(f) to further the very significant policy goal of discouraging the exportation of American manufacturing.<sup>57</sup> Accordingly, 271(f) now makes it an infringement to “supply or cause to be supplied a component to a patented product without permission from the patent holder” regardless of where the final assembly occurs.<sup>58</sup>

Section 271(f) contains two subsections, each providing a separate basis for infringement liability.<sup>59</sup> Liability attaches under (f)(1) only if a supplier exports “all of a substantial portion of the *components of a patented invention*,” so long as the components are supplied “in such a manner as to actively induce the combination of such components outside the United States.”<sup>60</sup> Subsection (f)(2), however, applies to a supplier of “any component” of a patented invention, where the component shipped is “especially made or especially adapted for use in the invention and not a staple article or commodity of commerce suitable for substantial noninfringing use. . . .”<sup>61</sup> Subsection (f)(2) also requires an element of intent.<sup>62</sup>

---

orari *supra* n. 14, at 15 (stating that the *Deepsouth* court emphasized the “territorially limited nature of the United States patent laws”).

55. *Id.* at 531.

56. Fisch, *supra* n. 3, at 565 (stating that Congress “specifically intended 271(f) as a response to the Supreme Court’s decision in *Deepsouth*”); see also Patent Law Amendments Act of 1984, H.R. 6286, 98th Cong. 101 (1984), reprinted in 1984 U.S.C.C.A.N. (98 Stat. 3383) 5827, 5828 (“[271(f)] responds to the United States Supreme Court decision in [*Deepsouth*]. . . .”); Watt, *supra* n. 3 (discussing the legislative passage of 271(f)).

57. Patent Law Amendments Act of 1984, 1984 U.S.C.C.A.N., at 5827 (stating that this “major [change] in the patent law [is intended] to avoid encouraging the manufacturing outside of the United States”); see also Fisch, *supra* n. 3, at 566 (stating that Congress specifically intended to “prevent copiers from avoiding U.S. patents by supplying components of a patented product in this country so that the assembly of the components may be completed abroad”) (quoting 1984 U.S.C.C.A.N., at 5828).

58. Nicholas R. Rericha, Note, *AT&T Corp. v. Microsoft Corp.: Closing the Deepsouth Loophole (for Good this Time)*, 31 Dayton L. Rev. 551, 555 (2006).

59. 35 U.S.C. § 271(f)(1) & (2) (2006).

60. 35 U.S.C. § 271(f)(1) (2006) (emphasis added).

61. 35 U.S.C. § 271(f)(2) (2006).

62. *Id.*; see generally Joan E. Beckner, *Patent Infringement by Component Export: Waymark Corp. v. Porta Systems Corp. and the Extraterritorial Effect of U.S. Patent Law*, 39 Hous. L. Rev. 803, 817-21 (2002) (comparing and contrasting 271(f)(1) & (2)).

Recent court decisions have called into question the proper scope of 271(f). Generally, the application of 271(f) can be broken down into three categories: mechanical devices, non-mechanical devices, and design and method patents.<sup>63</sup> Federal Courts had rare opportunities to apply 271(f) at its inception. When such opportunities arose, however, they generally presented with factual circumstances similar to that of *Deepsouth*, generally involving the assembly of mechanical devices.<sup>64</sup> Under those circumstances courts typically have little trouble deciphering the proper scope of 271(f).<sup>65</sup>

Rapid growth in technology has forced courts to expand their view of 271(f) beyond its relatively straight forward application to mechanical devices.<sup>66</sup> In *W.R. Grace & Co.-Conn. v. Intercat, Inc.*, a district court applied 271(f) to patented chemical compounds.<sup>67</sup> There, the defendant argued that the “plaintiff could not recover for sales of the infringing chemical to foreign countries because 271(f) “only covers components of machines and other structural combinations since the section was enacted specifically to over rule [*Deepsouth*].”<sup>68</sup> The court rejected this argument and held that nothing in 271(f) limited it to mechanical devices.<sup>69</sup>

---

63. See Fisch, *supra* n. 3, at 567-73.

64. See e.g. *T.D. Williamson, Inc. v. Laymon*, 723 F. Supp. 587, 590 (N.D. Okla. 1989) (applying 271(f) in the context of a “caliper pig, used for measuring and reporting on internal geometry of pipelines.”); *Windsurfing Intl. v. Fred Ostermann GmbH*, 668 F. Supp. 812, 813 (S.D.N.Y. 1987) (applying 271(f) in the context of sailboards); *Smith Intl., Inc. v. Hughes Tool Co.*, 1986 U.S. Dist. LEXIS 28247 (C.D. Cal. Mar. 12, 1986) (applying 271(f) in the context of complex drill bits).

65. Fisch, *supra* n. 3, at 567 (stating that in the context of mechanical devices 271(f) is relatively straight forward).

66. *Id.* at 568.

67. 60 F. Supp. 2d 316 (D. Del. 1999).

68. Fisch, *supra* n. 3, at 568 (quoting *Intercat*, 60 F. Supp. 2d at 320) (internal quotations omitted).

69. *Intercat*, 60 F. Supp. 2d at 321 (stating that [t]he plain language of the statute limits its application only to a component of a patented invention. Nowhere in the statute or its legislative history is there a limitation to components of machines and other structural combinations. A contrary holding, refusing to apply the statute to chemical compounds, would be tantamount to legislating additional language to a statute. That simply is not warranted.) (internal quotations omitted); see also *Trustees of Columbia Univ. v. Roche Diagnostcs GmbH*, 150 F. Supp. 2d 191, 204 n. 35 (D. Mass. 2001) (agreeing with the rationale behind extending 271(f) to chemical compounds, but finding that the chemicals in that case were not components of a “greater infringing compound”); *Lubrizol Corp. v. Exxon Corp.*, 696 F. Supp. 302, 325 (N.D. Ohio 1988) (injoining Defendant, pursuant to 271(f), from supplying certain lubricant additives for combination outside the United States); *Bristol-Myers Squibb Co. v. Rhone-Poulenc Rorer, Inc.*, No. 95 Civ. 8833, 2001 U.S. Dist. LEXIS 16895 at 9 (S.D.N.Y. Oct. 19, 2001) (discussing that while it is difficult to apply 271(f) to patents for chemical compounds, nothing in the text, legislative history, or prior court cases interpreting 271(f) indicate that 271(f) does not apply to chemical compounds), *affd* on other grounds, 326 F.3d 1226 (Fed. Cir. 2003).

The third category with which courts struggle to apply 271(f) involves design<sup>70</sup> and method patents.<sup>71</sup> Generally, courts have refused to extend 271(f) to cover design and method patents.<sup>72</sup> Typically, courts do so because design and method patents lack the “requisite “component” parts that are typically present in mechanical inventions.”<sup>73</sup> Recently, however, the Federal Circuit reversed course on this position, effectively expanding the scope and construction of the term “component” as it is used in 271(f).<sup>74</sup>

EXPANDING DEFINITION OF COMPONENT —  
*EOLAS, AT&T, AND UNION CARBIDE*

Eolas Techs., Inc. v. Microsoft Corp.

In *Eolas*, the first of the Federal Circuit’s recent decisions applying an expansive construction to the term “component,” the court found for the

70. See 8-23 Chisum on Patents § 23.01 (2006) (stating that “[a] person may obtain a patent on a new, original and ornamental design for an article of manufacture. A design may consist of surface ornamentation, configuration, or a combination of both. To be ornamental, a design must present a pleasing aesthetic appearance and must not be dictated solely by functional considerations. A design patent must meet the requirements of novelty and nonobviousness”); see also Alan M. Fisch, *Addressing Copyright and Patent As Software’s Legal Aegis: A Review of Software and Intellectual Property Protection*, 5 Cornell J.L. & Pub. Pol’y 119, 122 n. 20 (1996) (discussing the speculative nature of design patent protection for computer software); Daniel J. Kluth & Steven W. Lundberg, *Design Patents: A New Form of Intellectual Property Protection for Computer Software*, 5 Computer Lawyer 1 (1988) (analyzing protection afforded by design patents); Guidelines for Examination of Design Patent Applications for Computer-Generated Icons, 61 Fed. Reg. 11381-82 (Mar. 20, 1996) (setting forth USPTO guidelines relating to the issuance of design patents).

71. 1-1 Chisum on Patents § 1.03(1) (stating that “A process is a mode of treatment of certain materials to produce a given result. It is an act, or a series of acts, performed upon the subject-matter to be transformed and reduced to a different state or thing. If new and useful, it is just as patentable as is a piece of machinery”) (emphasis in original) (quoting *Cochrane v. Deener*, 94 U.S. 780, 787-88 (1877)); see also Kevin M. Lemley, *Just Turn North on State Street and Then Follow the Signs Given by the Federal Circuit: A Sophisticated Approach to the Patentability of Computerized Business Methods*, 8 J. Tech. L. & Pol’y 1 (2003) (discussing various types of business method patents in software); *State Street Bank & Trust Co. v. Signature Fin. Group, Inc.*, 149 F.3d 1368 (Fed. Cir. 1998) (permitting the patenting of pure business methods).

72. Fisch, *supra* n. 3, at 570; see also *Standard Havens Prods., Inc. v. Gencor Indus., Inc.*, 953 F.2d 1360, 1374 (Fed. Cir. 1991) (holding that 271(f) was not implicated by alleged infringement of a patented method for producing asphalt); *Synaptic Pharm. Corp. v. MDS Panlabs, Inc.*, 265 F. Supp. 2d 452, 464 (D.N.J. 2002) (following the lead of other courts in holding that 271(f) “does not protect against the foreign use of process patents.”).

73. Fisch, *supra* n. 3, at 571.

74. See e.g., *Eolas*, 399 F.3d 1325 (holding for the first time that software qualifies as a “component” under 271(f)); *AT&T Corp. v. Microsoft Corp.*, 414 F.3d 1366 (Fed. Cir. 2005) (reaffirming that 271(f)’s component requirement extends to software); *Union Carbide Chems. & Plastics Tech., Corp. v. Shell Oil Co.*, 425 F.3d 1366 (Fed. Cir. 2005) (holding for the first time that 271(f) covered the components of a patented chemical process).

first time that software qualifies as a “component” under 271(f).<sup>75</sup> There, Eolas sued Microsoft “alleging that Microsoft’s Internet Explorer software infringed Eolas’s patent.”<sup>76</sup> As part of its suit, Eolas sought damages for both the domestic and foreign sales of the “golden masters” of Microsoft’s Internet Explorer to Original Equipment Manufacturers (“OEMs”), who subsequently installed the software on computers both domestically and overseas.<sup>77</sup> As to the 271(f) claim, Eolas alleged that the copying of the “golden masters” and the subsequent installation of Microsoft’s Internet Explorer on foreign computers constituted manufacturing of an allegedly infringing device.<sup>78</sup> This allegation raised the question of “whether the software was considered a ‘component of a patented invention’ for the purposes of 271(f) liability.”<sup>79</sup> Judge Zagel of the Northern District of Illinois answered this question in the affirmative, finding that software did constitute a component, and Microsoft appealed.<sup>80</sup>

On appeal the Federal Circuit affirmed, holding that the golden masters were, in fact, components for the purposes of 271(f)(1).<sup>81</sup> Initially, the court found that software is a “patentable invention” under 35 U.S.C. § 101.<sup>82</sup> The court then found that “computer readable program code could qualify as a component of a patented software,” thereby extending 271(f) liability to include the foreign “assembly” or installation of infringing computer software.<sup>83</sup> Specifically, the court held that the software code, incorporated as “an operating element of the ultimate device,” constituted more than “a prototype, mold, or detailed set of instructions.”<sup>84</sup> Rather, the code, as an “operating element,” “drives the functional nucleus of the finished computer product.”<sup>85</sup> The court further held that without the presence of the software code the resultant invention would probably not work at all, and, as such, the “software code on the golden master disk is not only a component, it is probably the key part” of the patented invention.<sup>86</sup> Accordingly, the court affirma-

---

75. *Eolas*, 399 F.3d 1325.

76. Virginia Zaunbrecher, *Eolas, AT&T, & Union Carbide: The New Extraterritoriality of U.S. Patent Law*, 21 Berkeley Tech. L.J. 33, 42 (2006); see also *Eolas*, 399 F.3d at 1328.

77. *Eolas Techs., Inc. v. Microsoft Corp.*, 274 F. Supp. 2d 972, 973 (N.D. Ill. 2003).

78. *Id.* at 1339.

79. Zaunbrecher, *supra* n. 77, at 43 (quoting 35 U.S.C. § 271(f)(1) (2006)).

80. *Eolas*, 399 F.3d at 1328.

81. *Id.* at 1341.

82. *Id.* at 1338-39; see also 35 U.S.C. § 101 (2006).

83. Zaunbrecher, *supra* n. 77, at 43; *Eolas*, 399 F.3d at 1339 (stating that “every form of invention eligible for patenting falls within the protection of [271(f)].”).

84. *Eolas*, 399 F.3d at 1339.

85. *Id.* (quoting *Imageexpo, L.L.C. v. Microsoft Corp.*, 299 F. Supp. 2d 550, 553 (E.D. Va. 2003) (internal quotations omitted)).

86. *Eolas*, 399 F.3d at 1339.

tively decided that software code, as a part of a claimed computer product, is a "component" under 271(f).<sup>87</sup>

In support of its ruling, the Federal Circuit Court relied primarily on the legislative history of 271(f). The court began by noting the absence of limiting language in either the text or legislative history of 271(f).<sup>88</sup> Furthermore, the court relied heavily on the fact that if Congress intended the scope of 271(f) to be limited to tangible or mechanical devices, as Microsoft argued, then Congress would have expressly done so.<sup>89</sup> In sum, the court ultimately found that the legislative history, as well as the Federal Circuit's policy of "protecting software inventions" supported the court's ruling that "271(f)(1)'s 'components' include software code on golden master disks."<sup>90</sup>

#### AT&T v. Microsoft Corp.

The same result was reached in *AT&T Corp. v. Microsoft Corp.*<sup>91</sup> As in *Eolas*, the controversy arose in *AT&T* when "Microsoft shipped golden masters of its Windows software, which allegedly infringed upon a software patent held by AT&T" to overseas OEMs.<sup>92</sup> There, Microsoft argued that even if software is a component under 271(f), the supply of golden masters to foreign OEMs did not satisfy the "supplied" requirement of 271(f)(1).<sup>93</sup> While the "supplied" issue is beyond the scope of this particular paper, it is important to note that the Federal Circuit affirmed its earlier decision in *Eolas*, holding that software could be a "component of a patented invention" under 271(f).<sup>94</sup>

#### Union Carbide v. Shell Oil

The most recent decision of the Federal Circuit regarding the expanding scope of 271(f) came down in *Union Carbide v. Shell Oil*.<sup>95</sup> Relying on its decisions in *Eolas* and *AT&T*, the court affirmatively decided

87. *Id.*

88. *Id.* at 1340 (stating that "neither the statute nor the legislative history contains a limitation to components of machines and other structural combinations") (internal quotations omitted).

89. *Id.*

90. *Id.* at 1341.

91. *AT&T Corp. v. Microsoft Corp.*, 414 F.3d 1366 (Fed. Cir. 2005).

92. Zaunbrecher, *supra* n. 77, at 44; *see also AT&T*, 414 F.3d at 1368.

93. *AT&T*, 414 F.3d at 1368; *see also* 35 U.S.C. § 271(f)(1) (2006) (stating that "[w]hoever without authority supplies or causes to be supplied in or from the United States. . .") (emphasis added).

94. *AT&T*, 414 F.3d at 1369.

95. *Union Carbide Chems. & Plastics Tech. Corp. v. Shell Oil Co.*, 425 F.3d 1366 (Fed. Cir. 2005) (hereinafter "*Union Carbide*").

that 271(f) covered the “components” of a patented process.<sup>96</sup> *Union Carbide* involved the “sale, by defendant Shell, of a silver catalyst to foreign consumers who then used it abroad as a key component in a patented process for the production of ethylene oxide.”<sup>97</sup> *Union Carbide* provided the federal circuit with its first opportunity to apply 271(f) to a pure process claim since *Standard Havens*.<sup>98</sup> Relying heavily on *Eolas*, “even though that case involved a product claim and not a method claim,”<sup>99</sup> the court found that 271(f) made “no distinction between patentable method/process inventions and other forms of patentable inventions.”<sup>100</sup> Accordingly, the Federal Circuit, even over *its own doubt* as to the practicality of *its own decision*, extended liability under 271(f) to include pure process or method claims.<sup>101</sup>

CURRENT CONTROVERSY — *MIRCROSOFT V. AT&T* — GIVING FINAL  
WORD ON “COMPONENT” TO THE SUPREME COURT

On October 27, 2006 the Supreme Court granted certiorari to *Microsoft Corp. v. AT&T Corp.*<sup>102</sup> Two issues were certified for appeal. The first focuses on the inclusion of software code within the meaning of “component” under 271(f)(1), while the second issue centers on the “supplied” requirement of 271(f).<sup>103</sup> While the “supplied” issue is as equally important as the “component” issue, the issue as to the proper construction of “component” is the sole focus of this paper. Furthermore, this case renews a “recurring judicial debate concerning whether patent laws—and

96. *Id.* at 1378-80; but see Mark A. Lemley et al., *Divided Infringement Claims*, 33 AIPLA Q.J. 255, 266 (2005) (arguing that 271(f) does not apply to process patent claims).

97. Zaunbrecher, *supra* n. 77, at 45; see also *Union Carbide*, 425 F.3d at 1369-70.

98. Zaunbrecher, *supra* n. 77, at 45 (stating that in 1991 the Federal Circuit in *Standard Havens* simply stated that it did not “find the provisions of [271(f)] [to be] implicated”); see also *Standard Havens Prods., Inc. v. Gencor Indus., Inc.*, 953 F.3d 1360, 1374 (Fed. Cir. 1991). It is important to note that in *Eolas* and in *AT&T* the Federal Circuit treated the implicated software as a product claim, rather than a process or method claim. See Zaunbrecher, *supra* n. 77, at 43 n.76 (stating that while there were method claims at issue in both cases, the courts decided liability solely on the basis of product claims).

99. Zaunbrecher, *supra* n. 77, at 46.

100. *Union Carbide*, 425 F.3d at 1379.

101. Zaunbrecher, *supra* n. 77, at 46; see also *Union Carbide*, 425 F.3d at 1380 (stating that it is “difficult to conceive of how one might supply or cause to be supplied all of a substantial portion of the steps of a patented method. . .”).

102. See *Microsoft Corp. v. AT&T Corp.*, \_\_\_ U.S. \_\_\_, 127 S.Ct. 467 (2006) (granting Microsoft’s petition for a writ of certiorari to the United States Court of Appeals for the Federal Circuit); see also *Petition for Certiorari*, *supra* n. 15.

103. See *Petition for Certiorari*, *supra* n. 15, at i.

(1) Whether digital software code—an intangible sequence of “1’s” and “0’s”—may be considered a “component of a patented invention” within the meaning of Section 271(f)(1); and, if so,

(2) Whether copies of such a “component” made in a foreign country are “supplie[d] . . . from the United States.” *Id.*

in particular Section 271(f)—should be interpreted according to their plain meaning and legislative history or whether. . . [271(f)] must [] be interpreted in a manner that is appropriate to the technology at issue.”<sup>104</sup>

Microsoft presents four arguments in support of their contention that software object code does not constitute a “component” under 271(f).<sup>105</sup> Initially, Microsoft argues that the Federal Circuit’s characterization of software as a computer program contained on a storage medium is inaccurate.<sup>106</sup> Rather, the proper characterization of software code should be that of an intangible set of digital instructions, separate from any functional or tangible medium.<sup>107</sup>

Additionally, Microsoft argues that the Federal Circuit and other lower courts misinterpreted the legislative history associated with 271(f).<sup>108</sup> Microsoft posits that the better and more reasonable approach is to give the statutory text and legislative history their ordinary meaning.<sup>109</sup> In support of this contention Microsoft argues that the “whole tenor of [271(f)] relates to *physical* inventions” not intangible “design specifications.”<sup>110</sup>

Microsoft also draws upon public policy in support of its arguments.<sup>111</sup> Microsoft argues that the Federal Circuit’s construction of 271(f) “effectively eliminates the right of American software companies to compete with patent holders in foreign markets.”<sup>112</sup> Microsoft further argues that extending 271(f) liability to cutting-edge software technology sectors will place American innovators at a substantial disadvantage in

104. *Id.* at 2 (internal quotations omitted) (stating that the purpose of the evolving interpretation of 271(f) is to ensure that “the statute remains effective.”).

105. It is important to note that Microsoft’s brief on the merits substantially abandoned the “component” argument in favor of the “supplied from” argument. *See generally* Microsoft’s Br. on the Merits, *Microsoft Corp. v. AT&T Corp.*, (No. 05-1056). However, as the oral argument transcript indicates, the Justices were far more concerned with the “component” issue. *See generally* Transcript of Oral Argument, *Microsoft Corp. v. AT&T Corp.* (No. 05-1056). Specifically, the Justices were most concerned with whether the source code, contained on the Golden Master disk, constituted a component of the final infringing product. *Id.* at 7-14.

106. Petition for Certiorari, *supra* n. 15, at 3.

107. *Id.* at 3-4.

108. *Id.* at 12 (stating that “[n]othing in the statutory text or legislative history of [271(f)] even remotely suggests that it was intended to encompass foreign-made copies of software code or other design information.”).

109. *Id.* at 15.

110. *Id.* (emphasis added) (analogizing that a car’s design specifications, not unlike software’s object code, would hardly be considered a “component” of the fully assembled or manufactured car).

111. *Id.* at 19-22.

112. *Id.* (arguing that Congress left open the right to “practice patented inventions outside of the United States.”).

the global market.<sup>113</sup>

Finally, Microsoft argues that the Federal Circuit's characterization of "component" under 271(f) is contrary to the Supreme Court's long standing presumption against extraterritoriality.<sup>114</sup> This argument has two aspects: first, Microsoft contends that the extension of 271(f) violates the interests grounded in comity;<sup>115</sup> second, Microsoft argues that the Federal Circuit's failure to honor the presumption supersedes the Legislative and Executive Branches' proper role and constitutional responsibility to set legislative and foreign policy, thus violating certain separation of powers concerns.<sup>116</sup>

Ultimately, Microsoft is asking the court to indulge in a degree of judicial restraint when interpreting 271(f). To do otherwise, or to affirm the Federal Circuit's expansion of 271(f), Microsoft argues, threatens continued American technological innovation.<sup>117</sup> A threat that could, Microsoft contends, drive American innovators overseas or even threaten the continued viability of America's high technology industries.<sup>118</sup>

### III.

A narrow construction of 271(f) is more prudent for two reasons. First the common usage and plain meaning of the term "component," as it is used in 271(f) simply does not encompass computer software code. Second, regardless of whether "component" can logically be extended to include computer software code, strong public policy requires a more limited construction. As Microsoft argues in its Petition for Certiorari, the Supreme Court should ultimately engage in a measure of judicial restraint and allow the legislative and executive branches to determine whether 271(f) encompasses process or method patents, such as computer software.

---

113. *Id.* at 20 (characterizing the ramifications of extended liability as a "looming threat of crippling global liability.").

114. *Id.* at 23.

115. *Id.* (discussing that comity, or respect for the sovereignty of other nation's laws "serves to protect against unintended clashes between our laws and those of other nations"); (quoting *EEOC v. Arabian Am. Oil Co.*, 499 U.S. 244, 248 (1991)).

116. *Id.* (arguing that the Legislative and Executive branches are "better equipped than the judiciary to evaluate the complex foreign policy considerations raised by the extraterritorial application of U.S. law.").

117. *Id.* at 19-20.

118. *Id.* at 20 (arguing that expanded liability may "drive some American software firms out of business altogether," effectively "imperiling the United States' position as the global leader in high-technology innovation.").



## STATUTORY TEXT AND LEGISLATIVE HISTORY

The proper interpretation of "component" in 271(f) simply cannot logically encompass computer software code. Specifically, software code was not intended to fit within the rubric of "component" for two reasons. First, software "object code," as a compilation of intangible information, cannot be a "constituent part" of a whole. Additionally, the legislative history of 271(f) suggests that software code, or any process or method for that matter, was never intended to fall within the scope of 271(f)'s use of the term "component." These arguments are supported by the courts' pre-*AT&T* and pre-*Eolas* decisions.

"Component," as used in 271(f), simply does not cover or extend to computer software code. Initially, when "interpreting statutory language, words are generally given their common and ordinary meaning."<sup>119</sup> As such, dictionaries serve as instructive sources for determining a term's plain or ordinary meaning.<sup>120</sup> Component is typically defined as a "constituent part" or "ingredient."<sup>121</sup> Accordingly, "component," given its plain meaning, implies a tangible object, such as a piece of a puzzle or a gear in a machine.<sup>122</sup> This definition falls far short of encompassing computer software, especially when analyzed from a definition of software existing at the time when Congress enacted 271(f).<sup>123</sup> An effective analogy is that computer software is more like the blue print of a building, than a piece of a puzzle. Therefore, software, as a construct of intangible digital instructions, is "not a true 'component' that is assembled or incorporated into" a final mechanical product, any more than the blue prints are a "component" of a skyscraper.<sup>124</sup>

---

119. *Alexander S. v. Boyd*, 113 F.3d 1373, 1383 (4th Cir. 1997) (citation omitted); see also *Br. for Petitioner, Microsoft Corp. v. AT&T Corp.*, at 14 (No. 05-1056) (citing *Asgrow Seed Co. v. Winterboer*, 513 U.S. 179, 187 (1995) (finding that where Congress uses an undefined term, courts should afford the term its ordinary meaning)).

120. See *Nat'l Coalition for Students with Disabilities Educ. & Legal Def. Fund v. Allen*, 152 F.3d 283, 288-89 (4th Cir. 1998) (discussing that courts commonly turn to dictionaries to determine the customary usage of a term or phrase).

121. *Webster's II New College Dictionary* 230 (Houghton Mifflin 2001) (defining "component" as a "constituent element" or a "part of a mechanical or electrical complex"); see also *Webster's Ninth New Collegiate Dictionary* 270 (Merriam-Webster Inc. 1988); *Webster's Third New International Dictionary of the English Language* 466 (Merriam-Webster Inc. 1976).

122. See SIIA Amicus Brief, *supra* n. 12, at 7 (arguing that, based on the statutory context, the term "components" in § 271(f) contemplates "physical products" or tangible "articles or commodities of commerce.").

123. See Fred G. Harold, *Introduction to Computers with BASIC* 603 (West 1984) (defining "software" as "[t]he programs written to control operation of computer hardware") (emphasis added).

124. *Fisch*, *supra* n. 3, at 576 (analogizing that software isn't a "component that is assembled or incorporated into the final product, any more than the recipe for chocolate cake is an 'ingredient' of the chocolate cake.").

In addition to the plain language of 271(f) endorsing a limited interpretation of “component,” the legislative history of 271(f) further mandates construing “component” to exclude software. Congress at no time during the debate over 271(f) considered that “component” might extend to “disembodied software or other [intangible] information or instructions.”<sup>125</sup> Additionally, 271(f) was enacted to close the loophole created by *Deepsouth*.<sup>126</sup> As such, the “origins and background of [271(f)] involved strictly physical objects” as “components,” never referring to “intangibles,” “information,” or “instructions,” which would be more commonly associated with computer software.<sup>127</sup> More dispositive perhaps, is the fact that when 271(f) was enacted software was not generally deemed patentable.<sup>128</sup> In light of the fact that in 1984, the end-product, or the operable software application would not, or could not constitute a “patented product” it is substantially more likely that Congress did not contemplate that 271(f) would encompass software code.<sup>129</sup> Absent congressional intent to the contrary, courts must give words in a statute their plain and ordinary meaning.<sup>130</sup> Accordingly, in light of the lack of contrary congressional intent in 271(f)’s legislative history—specifically that 271(f) should be expanded beyond mechanical devices to encompass computer software—“component” must be interpreted narrowly according to its plain meaning. Therefore, the legislative history confirms that Congress specifically and narrowly proscribed, through 271(f) the “domestic exportation of physical components for foreign assembly into otherwise-infringing combinations.”<sup>131</sup>

This conclusion is buttressed by its consistency with “pre-AT&T Federal Circuit Precedent.”<sup>132</sup> Specifically, this analysis is in accord

---

125. Farrand, *supra* n. 13, at 777.

126. See President’s Message to Congress, Patent Law Amendments Act of 1984, Statement on Signing H.R. 6286 Into Law, 20 Weekly Comp. Press. Doc. 1818, 1818 (Nov. 9, 1984) (quoting President Regan, “[Section 271(f)] closes a loophole in existing law which permits copiers to export jobs and avoid liability by arranging for final assembly of patented machines to occur off-shore. . .”).

127. *Id.* at 777 n. 58; see also Patent Law Amendments Act of 1984, 1984 U.S.C.C.A.N. at 5828; *Deepsouth*, 406 U.S. 518.

128. See *Gottschalk v. Benson*, 409 U.S. 63 (1973); *Parker v. Flook*, 437 U.S. 584 (1981); but see the subsequent cases supporting the patentability of software *St. St. Bank & Trust Co. v. Signature Fin. Group*, 149 F.3d 1369 (Fed. Cir. 1998); *AT&T Corp. v. Excel Commun., Inc.*, 172 F.3d 1352 (Fed. Cir. 1999).

129. See SIIA Amicus Brief, *supra* n. 12, at 8; see also Section-by-Section Analysis: Patent Law Amendments Act of 1984, H.R. 6286, 98th Cong., 130 Cong. Rec. H10,525 (Oct. 1, 1984), as reprinted in 1984 U.S.C.C.A.N. 5827, 5828 (explaining that 271(f) “prevent[s] copiers from avoiding U.S. patents by supplying components of a patented product in this country so that the assembly of the components may be completed abroad.”).

130. *Williams v. Taylor*, 529 U.S. 420, 431 (2000).

131. SIIA Amicus Brief, *supra* n. 12 at 16.

132. *Id.* at 8.

with the Federal Circuit's decision in *Pellegrini v. Analog Devices, Inc.*, which noted that 271(f)'s treatment of component contains a physical presence requirement.<sup>133</sup> Indeed, in this respect because the term "component contemplates physical products" 271(f), as applied to software, "must refer to the particular instance of the computer code that is downloaded onto, and thus physically a part of, an accused computer system."<sup>134</sup> It is for this reason that both the plain language of the statute, and the highly informative legislative history indicate the term "component" does not appropriately apply to the golden master disk at issue in *Microsoft Corp. v. AT&T Corp.*<sup>135</sup>

Rather, in remaining consistent with the statute, a "component[]" of a patented invention in the context of computer code *must* refer to the particular instance of the computer code that is downloaded onto, and thus physically part of" the infringing machine.<sup>136</sup> Components, therefore, must be physical manifestations under 271(f). Software, on the other hand, is nothing more than an instruction or an idea, an intangible or metaphysical manifestation. As Microsoft concluded at oral argument before the Supreme Court, "[i]deas don't combine with physical things to make a patented invention. Physical things do."<sup>137</sup> Accordingly, because software is nothing more than a set of intangible instructions or ideas, and a component, under 271(f), must have some form of physical manifestation, it is not until the software is physically incorporated onto a computer's hard drive that it can truly be said to fall under the 271(f) construction of the term "component."<sup>138</sup> Therefore, the plain language and the legislative history of 271(f), along with the support of the courts' pre-*AT&T/Eolas* language, all indicate that computer software code was not intended to fall within the scope of 271(f).

---

133. *Pellegrini*, 375 F.3d 1113, 1117 (Fed. Cir. 2004) (stating that 271(f) only applies where "components of a patent[ed] invention are physically present in the United States and then either sold or exported in such a manner as to actively induce the combination of such components outside the United States in a manner that would infringe the patent if such combination occurred within the United States.") (internal quotations omitted); *see also Id.* (stating further that the sole focus of § 271(f) is "on the location of the accused components," thus implying a physicality or tangible presence requirement); *accord Bayer AG v. Housey Pharms., Inc.*, 340 F.3d 1367, 1372-1373 (Fed. Cir. 2003) (concluding that the term "component" in §271(g)(2) appears to contemplate a physical product.).

134. SIIA Amicus Brief, *supra* n. 12, at 9.

135. *Id.*; *see generally AT&T*, 414 F. 3d 1366 (describing the Microsoft's practice of shipping golden master disks overseas for copying and then subsequent installation onto the final infringing product or computer).

136. *Id.*

137. Transcript of Oral Argument at 54, *Microsoft v. AT&T* (No. 05-1056).

138. *Id.* at 10; *see also Eolas*, 399 F.3d at 1339 (observing that it is the computer that transforms the intangible aspects of computer software code into a physical manifestation of a "machine component in operation.").

## PUBLIC POLICY

Strong public policy supports a finding that “component” as used in 271(f) should be narrowly construed to exempt computer software from its scope. Specifically, both the presumption against extraterritoriality and the negative incentives presented by an expansion of 271(f) require that the section be given a more reasonable limited construction. Such an interpretation would avoid the inclusion of software as a “component.” Furthermore, this result best serves the public policies embodied within the U.S. patent system, which is the promotion of innovation and public disclosure.

The long standing presumption against the extraterritorial application of U.S. law requires that 271(f) be given a narrow construction and avoid including computer software code within the scope of 271(f)’s use of the term “component.” Even where, as here, Congress has “unequivocally expressed its intention to give a U.S. law extraterritorial effect,” that effect must be narrowly construed “in light of the general presumption against extraterritoriality.”<sup>139</sup> The presumption reflects both the interests of comity and recognition that the legislative and executive branches are better equipped to resolve extraterritorial issues raised by U.S. laws.<sup>140</sup>

Accordingly, applying a limited interpretation of “component” in 271(f) serves the purpose of respecting the sovereignty of foreign patent regimes. Indeed, to the extent that American inventors need protection in countries other than the United States, they should simply “seek it abroad through patents secured in countries where [their] goods are being used.”<sup>141</sup> Applying a limited construction, like the Supreme Court did in *Deepsouth*, transfers responsibility to Congress to resolve the ambiguity in the application of 271(f) to software code.<sup>142</sup> Congress is best suited to engage in the requisite investigation and fact finding necessary to most accurately decide whether 271(f) liability should be extended to computer software infringement.<sup>143</sup> In fact, both Congress and the Executive, as dual arbiters of foreign and economic policy are best suited to

---

139. Petition for Certiorari, *supra* n. 14, at 24; see also *Empagram*, 542 U.S. at 174 (stating that as long as “the statute’s language reasonably permits an interpretation consistent with” the general presumption that Congress seeks to avoid interference with other nations’ sovereignty, a court “should adopt it.”).

140. See *Chi. & S. Air Lines, Inc. v. Waterman S.S. Corp.*, 333 U.S. 103, 111 (1948).

141. *Deepsouth*, 406 U.S. at 531; see also Bradley, *supra* n. 34, at 584 (arguing that territorial limitations of U.S. law should be strictly enforced in the interests of international cooperation).

142. See generally *Deepsouth*, 406 U.S. 518.

143. See *Benz v. Compania Naviera Hidalgo, S.A.*, 353 U.S. 138, 147 (1957) (stating that Congress “alone has the facilities necessary to make fairly such an important policy decision where the possibilities of international discord are so evident and retaliative action so certain.”).

weigh the lofty interest at stake; namely, as the Court in *Deepsouth* wisely noted, the right of American companies to compete in foreign markets.<sup>144</sup>

Furthermore, the ability of America's high technology innovators to compete in a global market is tied closely to the construction of 271(f).<sup>145</sup> Our economy is defined by the success of our technological industries. This notion was initially recognized by the United States government in a report on the U.S. economy in 2001.<sup>146</sup> Additionally, in 2005 the computer software industry contributed roughly \$194 billion to the nation's gross domestic product.<sup>147</sup> Furthermore, foreign sales typically represented 40 to 60 percent of industry sales which resulted in a trade surplus of \$20 billion that year.<sup>148</sup> As such, the interpretation of 271(f) and the incentives and disincentives that it can impose upon America's technological leaders will have a profound effect on the continued dominance and vitality of both the American and global economies.

As noted previously, American patent law is all about incentives.<sup>149</sup> Thomas Jefferson himself noted that the purpose of patent law is to ensure private investment for a public good.<sup>150</sup> To a large degree, these incentives exist to subsidize the inherent uncertainty at the "early stages of invention and commercialization of technological advances."<sup>151</sup> Section 271(f), however, fails to provide these positive incentives, and in ac-

144. *Deepsouth*, 406 U.S. at 531.

145. See e.g., SIIA Amicus Brief, *supra* n. 11, at 15 (arguing that the Federal Circuit's "expansive interpretation of 271(f)" negatively impacts numerous high technology sectors that currently enjoy a "comparative advantage over most countries.").

146. United States Department of State, Outline of the U.S. Economy, <http://usinfo.state.gov/products/pubs/oecon/chap3.htm> (last accessed Apr. 6, 2007) (stating that if "steel and shoes were no longer American manufacturing mainstays, computers and the software that make them run were."). See also Br. of the Business Software Alliance as Amicus Curiae Supporting Petr. At 8, *Microsoft Corp. v. AT&T Corp.*, (No. 05-1056) (hereinafter "Business Software Alliance Amicus Brief.").

147. U.S. Dept. of Commerce, Bureau of Economic Analysis, Gross Domestic Product and Related Measures: Level Change From Preceding Period, <http://bea.gov/bea/newsrel/gdpnewsrelease.htm> (last accessed Apr. 6, 2007); see also Business Software Alliance Amicus Brief, *supra* n. 146 at 8.

148. Business Software Alliance Amicus Brief, *supra* n. 146 at 9; see also The Global Threat of Software Counterfeiting, Hearing Before the Subcomm. On Courts, the Internet, and Intellectual Property, 108th Cong. (testimony of Richard C. LaMagna, Senior Manager, Worldwide Anti-Piracy Investigations Law and Corporate Affairs, Microsoft Corp. (Mar. 13, 2003), <http://www.microsoft.com/presspass/exec/lamagna/03-13-03lamagnatestimony.mspx> (last accessed Apr. 6, 2007).

149. Farrand, *supra* n. 12, at 785-86.

150. *Bonito Boats, Inc. v. Thunder Craft Boats, Inc.*, 489 U.S. 141, 148 (1989) (citing 13 WRITINGS OF THOMAS JEFFERSON 335 (Memorial Ed. 1904)) (stating that the patent law is about "drawing a line between the things which are worth to the public the embarrassment of an exclusive patent and those which are not.").

151. *Id.* at 786.

tuality serves only to stifle U.S. technological innovation for three reasons. First, 271(f) provides no meaningful prospect of protection against competition, or even "the right to exploit [an] invention" in a foreign market.<sup>152</sup> Section 271(f) provides no effective protection against competition in foreign markets because it only protects against components made in the United States, and does not reach identical components made in the same foreign markets.<sup>153</sup> Second, where the sale of an invention in a foreign market is material to the decision to commercialize the invention, 271(f) provides only negative incentives, effectively stifling technological growth and innovation. Instead, better protection and positive incentives are gained by the much more prudent and reliable action of securing a patent in the foreign district(s) where sales are anticipated.<sup>154</sup> Third, the recent and drastic change in the interpretation of the scope and function of 271(f) by the Federal Circuit in *AT&T*, *Eolas*, and *Union Carbide* has introduced varying degrees of uncertainty into the high technology economic market, which is anathema to the entire patent regime.<sup>155</sup> For over two decades the technology companies that have driven the rapid expansion and increased capitalization of the American economy have made "investments at home and abroad in reliance on the settled framework of United States patent law."<sup>156</sup> These companies hold justified, reasonable, settled expectations that the practice and framework of domestic design and foreign manufacture for foreign sale will not be upset or subject them to domestic liability for alleged patent infringement. With the ever increasing stake that American technology companies are carving out in foreign markets, it is only reasonable that *foreign*, not domestic, patent regulation govern the *foreign* manufacture and *foreign* sale of domestically designed products and assemblies. The Federal Circuit's unjustified expansion of United States patent regulation to govern these foreign activities, activities that Congress never intended to regulate, effectively upsets a settled and successful business plan, while also, due to the lack of legislative guidelines, introduces disincentives or doubt into the economy by altering the reasonable expectations of the American technology companies.

Without such incentives, the effect of the increased liability imposed on the high-technology sector by the Federal Circuit's interpretation of

---

152. *Id.* at 787-88.

153. *Id.* at 788.

154. *Id.* at 789 (discussing that obtaining foreign patents provides for superior "protection than what 271(f) might theoretically offer in the best circumstances and making [271(f)] superfluous.").

155. Business Software Alliance Amicus Brief, *supra* n. 146 at 9 (stating that "[f]ar from promoting the "object and policy" of patent law, the Federal Circuit's decision creates unforeseeable risk and unbounded liability for software and computer companies.").

156. SIIA Amicus Brief, *supra* n. 11 at 19.

271(f) will be to create the very real risk that companies will no longer be able to develop products within the United States.<sup>157</sup> Essentially, companies will be forced to relocate both development and manufacturing facilities overseas in order to avoid the imposition of this unwarranted expansion in liability. Such an exodus of software development to other countries "directly contradicts the historical and constitutional purpose of the patent law regime."<sup>158</sup> Rather, it is the purpose of and rationale behind the patent law system to protect domestic economic and intellectual development against this threat of liability.<sup>159</sup> Accordingly, any construction of 271(f) that would provide disincentives for domestic economic development must give way to a more prudent and sound construction that would provide incentives for domestic development and global commercialization of patentable products.

Again, the U.S. patent system exists to drive technological innovation through the use of incentives and public disclosure. Accordingly, where, as here with 271(f), a controversial facet of that system stifles, rather than drives, innovation that section should be interpreted as narrowly as possible to avoid the imposition of negative incentives on growth and innovation. Therefore, strong and sound public policy mandates a narrower and fundamentally more reasonable construction be applied to 271(f); specifically, that the term "component" be narrowly construed to exclude software from its definition and scope.

#### IV.

Having seen now that the text, legislative history, and very powerful public policy concerns mandate a narrow and prudent construction of "component," as it is used in 271(f), it is necessary to posit an alternative and inherently more reasonable construction of 271(f). Initially, it is necessary to state that 271(f) unquestionably encompasses tangible mechanical devices.<sup>160</sup> Additionally, it is also without question that courts are bound by the plain and ordinary meaning of statutory language.<sup>161</sup> Therefore, the prudent and judicially responsible course of action is to narrowly construe the scope of the term "component" in 271(f) to its origi-

---

157. Business Software Alliance Amicus Brief, *supra* n. 146, at 12 (stating that the Federal Circuit's decision in *AT&T Corp. v. Microsoft Corp.*, 414 F.3d 1366 (Fed. Cir. 2005) "upsets the industry standard so significantly that it poses the very real risk that companies will no longer be willing or able to develop products within the United States.").

158. *Id.*

159. *Id.* (stating that the protecting against this result is "precisely the rationale behind the presumption against extraterritorial application of United States [patent] laws.").

160. See Patent Law Amendments Act of 1984, 1984 U.S.C.A.N. at 5828; see also *Deepsouth*, 406 U.S. 518.

161. See *Williams*, 529 U.S. at 431.

nal and much more reasonable interpretation.<sup>162</sup>

Such an interpretation would reverse the acceptable interpretation of “component” to the pre-*W.R. Grace* construction, effectively confining 271(f) to mechanical devices or assemblies, similar to the factual circumstances presented in *Deepsouth*. As Justices Breyer and Ginsburg noted during the *Microsoft v. AT&T* oral argument such a construction encourages the socially and economically desirable result of allowing the legislature to determine if a more expansive construction is proper and, if so, to what additional patentable inventions that expansion should extend.<sup>163</sup> This action supports both the interest of comity and respect for the coordinate branches, as well as recognizes the vital importance of protecting American technological innovation and economic expansion in today’s globally competitive market.<sup>164</sup> Finally, this result maintains the necessary policy interest in supporting American technological competition in foreign markets by excising potentially crippling extraterritorial infringement liability.

---

162. Such a result would, much like the Court’s result in *Deepsouth*, make it incumbent upon the Legislative and Executive branches to determine the future scope of 271(f), a job for which they are much better suited, than the Federal Courts.

163. See Transcript of Oral Argument at 53, *Microsoft v. AT&T* (No.05-1056)

JUSTICE BREYER: . . . You’re right, Justice Ginsburg, that the court of appeals for the Federal Circuit thought it was bringing this statute up to date and it even said so. We are making an extension of the statute to keep up to date with technology. That is not for courts to do.

See also SIIA Amicus Brief, *supra* n.11, at 16 (arguing that it is “for Congress to define the duties of the new knowledge-industry firms that export designs and intangible information . . . to foreign markets.”).

164. This position is supported by Judge Rader’s dissenting opinion in *AT&T Corp. v. Microsoft Corp.* where he argued that the Federal Circuit should read 271(f) narrowly because of the presumption against the extraterritorial reach of U.S. patent law. See *AT&T Corp.*, 414 F.3d at 1373, 1378.



