

# Trying to Understand Software: Why Microsoft v. AT&T Was Mistakenly Decided

Drew J. Koning\*

## INTRODUCTION

In the recent Supreme Court case *Microsoft Corp. v. AT&T Corp.*, two contentious issues in patent law jurisprudence collided: 1) extraterritorial protection of patents, and 2) the patenting of software. The Court's decision to appreciably limit software patent protection is misguided as it fails to account for the complexities of patent law as applied to modern technology.

A patent provides its owner with the right to exclude others from utilizing the claimed invention.<sup>1</sup> Under U.S. law, if someone makes, uses, sells, offers to sell, or imports an infringing invention in the United States, that person may be liable for patent infringement.<sup>2</sup> Section 271(f) of the Patent Act provides patent protection for infringement that occurs overseas if a component of the patented item is first manufactured in the United States and then exported for final assembly abroad.<sup>3</sup> This statute is easily applied to the manufacture of tangible goods such as gearboxes or

---

A PDF version of this article is available online at <http://law.fordham.edu/publications/article.ihtml?pubID=200&id=2739>. Visit <http://www.iplj.net> for access to the complete Journal archive.

\* J.D. Candidate, Fordham University School of Law, 2008; B.Sc. Physics & Astronomy, Sheffield University, England, 1998. Drew Koning was an Informatics & Technical Specialist for the American Museum of Natural History in New York from 2002–2005.

<sup>1</sup> See 1 Donald S. Chisum, *Chisum on Patents* § 1.01 (2006).

<sup>2</sup> 35 U.S.C. § 271(a) (2006).

<sup>3</sup> 35 U.S.C. § 271(f).

electrical components, but courts have had difficulty applying the statute to intangible components such as software. In today's global market, the U.S. software industry is increasingly reliant on foreign sales to stay competitive, and so judicial interpretation of extraterritorial protection has become a significant concern for the industry.<sup>4</sup>

Part I of this Comment sets forth the history and case law surrounding § 271(f) of the Patent Act. Part II addresses the application of § 271(f) on software patents and the relevant case law up to and including the recent Supreme Court case, *Microsoft Corp. v. AT&T Corp.* Part III discusses the Supreme Court's interpretation of § 271(f) in *Microsoft*, arguing four points. First, that software, whether tangible or not, satisfies the definition of component. Second, that extending protection to software supplied abroad would not lead to insurmountable damage awards. Third, that leaving the matter for foreign tribunals to resolve would be precarious as the results would vary dramatically from country to country, and finally, that a ruling in favor of AT&T would likely have been beneficial for the U.S. software industry.

### I. THE ADVENT & HISTORY OF § 271(f)

In June of 1967, two Louisiana companies triggered a dispute that would eventually give rise to the new subsection (f) of § 271.<sup>5</sup> Laitram Corporation ("Laitram"), the inventor of a revolutionary shrimp-peeling machine, sued DeepSouth Packing Co., Inc. ("DeepSouth"), a competitor in the shrimp packaging industry.<sup>6</sup> Laitram accused DeepSouth of infringing two of their patents.<sup>7</sup> These two patents, '218 and '927, were directed to machines used

---

<sup>4</sup> See *Court Will Hear Microsoft Suit*, N.Y. TIMES, Oct. 28, 2006, at C2.

<sup>5</sup> *Laitram Corp. v. DeepSouth Packing Co., Inc.*, 310 F. Supp. 926 (D.C. La. 1970); 130 CONG. REC. H10525, reprinted in 1984 U.S.C.C.A.N. 5827 ("This proposal responds to the United States Supreme Court decision in *DeepSouth Packing Co. v. Laitram Corp.* . . .").

<sup>6</sup> *Laitram Corp. v. DeepSouth Packing Co., Inc.*, 301 F. Supp. 1037, 1037-46 (D.C. La. 1969); see also *Laitram Corporation*, <http://www.laitram.com> (last visited Nov. 15, 2007).

<sup>7</sup> See *Laitram Corp.*, 301 F. Supp. at 1037-46.

for removing the veins from the backs of peeled shrimp.<sup>8</sup> The ‘218 patent disclosed a single embodiment of a “slitter” for cutting the backs of the shrimp, exposing the veins for removal,<sup>9</sup> while the ‘927 patent disclosed apparatus for removing the exposed vein.<sup>10</sup> Deepsouth was not only selling these machines domestically, but was also exporting the components of the patented inventions for assembly abroad.<sup>11</sup>

Laitram sought an injunction claiming that § 271(a) of the Patent Act should not only hold Deepsouth liable for domestic infringement but should be interpreted to cover this “underhanded” tactic of exporting individual components.<sup>12</sup> The statute provides for liability if someone “makes, uses, offers to sell, or sells any patented invention, within the United States or imports into the United States any patented invention . . . .”<sup>13</sup>

Deepsouth argued that a face value reading of § 271(a) did not cover their exportation practices.<sup>14</sup> However, Laitram wanted the court to extend the protection afforded to “patented inventions” to include components of those inventions, even if by themselves they might not infringe.<sup>15</sup>

While finding Deepsouth liable for domestic infringement under § 271(a) of the Patent Act, the court was not convinced of Laitram’s arguments and found that U.S. patent laws only covered domestic infringement.<sup>16</sup> Reviewing the pertinent case law, the court stated that “a combination claim of a United States patent is not infringed absent presence of the combination in assembled form within the United States.”<sup>17</sup>

Laitram appealed to the Fifth Circuit, which reversed the district court ruling. The circuit court found that in § 271(a), the

---

<sup>8</sup> *See id.*

<sup>9</sup> *See id.* at 1040–42.

<sup>10</sup> *See id.* at 1051.

<sup>11</sup> *Laitram Corp. v. Deepsouth Packing Co., Inc.*, 443 F.2d 936, 937 (5th Cir. 1971).

<sup>12</sup> *Laitram Corp. v. Deepsouth Packing Co., Inc.*, 310 F. Supp. 926, 926 (E.D. La. 1970).

<sup>13</sup> 35 U.S.C. § 271(a) (2006).

<sup>14</sup> *Laitram Corp.*, 310 F. Supp. at 926.

<sup>15</sup> *Id.*

<sup>16</sup> *Id.* at 929.

<sup>17</sup> *Id.* at 928 (internal quotation marks omitted).

word “makes” should not be given a technical construction, but rather understood by its ordinary meaning.<sup>18</sup> The court held that when all the parts of a patented machine are produced in the United States and that the final assembly abroad is only a minor aspect of the manufacturer, then the machine is “made” within the United States.<sup>19</sup> This ruling gave an entirely new reading of § 271(a) and was immediately appealed by Deepsouth to the United States Supreme Court.

On May 30, 1972, the Supreme Court decided by a 5–4 majority to reverse the Fifth Circuit’s decision.<sup>20</sup> Justice White, writing for the majority, held that § 271(a) did not cover this particular practice of exporting the components of a patented device.<sup>21</sup> The Court stated, “[w]e cannot endorse the view that the ‘substantial manufacture of the constituent parts of [a] machine’ constitutes direct infringement when we have so often held that a combination patent protects only against the operable assembly of the whole and not the manufacture of its parts.”<sup>22</sup> The Court noted that what was at stake was the right of American companies to compete with an American patent holder in foreign markets, and that the Court would require a clear signal from Congress before approving the position of a company such as Laitram.<sup>23</sup>

Justice Blackmun, writing for the dissent, foresaw that the majority’s result would unduly reward “the artful competitor who uses another’s invention in its entirety and who seeks to profit thereby.”<sup>24</sup> The minority’s analysis hinged on the fact that “everything was accomplished in this country except putting the pieces together as directed” and that this subverts “the Constitutional scheme of promoting the Progress of Science and useful Arts . . . .”<sup>25</sup>

---

<sup>18</sup> Laitram Corp. v. Deepsouth Packing Co., Inc., 443 F.2d 936, 938 (5th Cir. 1971).

<sup>19</sup> See *id.* at 939.

<sup>20</sup> Deepsouth Packing Co. v. Laitram Corp., 406 U.S. 518, 534 (1972).

<sup>21</sup> *Id.* at 528.

<sup>22</sup> *Id.*

<sup>23</sup> See *id.* at 531.

<sup>24</sup> *Id.* at 532–33.

<sup>25</sup> *Id.* at 533–34.

The cases immediately following the decision applied the Supreme Court's ruling. In *John Mohr & Sons v. Vacudyne Corp.*, the district court held that if an inventor desired patent protection in markets other than the United States, then Congressional intent commanded this protection be obtained in those markets.<sup>26</sup>

In *Railroad Dynamics, Inc. v. A. Stucki Co.*, the infringing party, relying on *Deepsouth* as precedent, argued that its foreign sales should be excluded from the damages calculations because their infringing products were not placed in truck assemblies in this country.<sup>27</sup> But the district court declined to interpret *Deepsouth* so narrowly. Instead, relying on the statutory language of § 271(a), the court found an infringement because the manufacturing of the entire patented invention had taken place within the United States.<sup>28</sup>

Twelve years later, in 1984, with little forewarning Congress introduced an amendment to the Patent Act of 1952 that would "close a loophole" that was created as a result of *Deepsouth*.<sup>29</sup> The amendment was § 271(f), which put forth two propositions.<sup>30</sup> The first, § 271(f)(1) stated that:

Whoever without authority supplies or causes to be supplied in or from the United States all or a substantial portion of the components of a patented invention, where such components are uncombined in whole or in part, in such manner as to actively induce the combination of such components outside of 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.<sup>31</sup>

The second, § 271(f)(2) stated that:

---

<sup>26</sup> *John Mohr & Sons v. Vacudyne Corp.*, 354 F. Supp. 1113, 1116 (N.D. Ill. 1973).

<sup>27</sup> *Railroad Dynamics, Inc. v. A. Stucki Co.*, 579 F. Supp. 353, 375 (E.D. Pa. 1983).

<sup>28</sup> *Id.* at 376.

<sup>29</sup> *See generally*, 130 CONG. REC. H10525 (1984), *reprinted in* 1984 U.S.C.A.N. 5827.

<sup>30</sup> 35 U.S.C. § 271 (2006) outlines infringement liability of patents. The statute currently includes subdivisions (a) through (i). *Id.*

<sup>31</sup> 35 U.S.C. § 271(f)(1).

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 of 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.<sup>32</sup>

The Congressional record contains very little information regarding the enactment of § 271(f).<sup>33</sup> The statute was but one of a handful of additions Congress made to the Patent Act of 1954 and was considered an addition that would “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.”<sup>34</sup> Likely lobbying groups could have been U.S. manufacturers who were concerned with the possibility of overseas patent infringement; however, Congressman Kastenmeier, who introduced the statute, left no record of what transpired.<sup>35</sup>

After the introduction of § 271(f), courts began to apply the added patent protection that the statute provided U.S. manufacturers. But, the few courts that were presented with § 271(f) arguments grappled with the ambiguity of the statute’s language when trying to determine whether extraterritorial patent protection existed.

---

<sup>32</sup> 35 U.S.C. § 271(f)(2).

<sup>33</sup> See generally 130 CONG. REC. H10525 (1984), reprinted in 1984 U.S.C.C.A.N. 5827.

<sup>34</sup> 1984 U.S.C.C.A.N. at 5828.

<sup>35</sup> See Telephone Interview with Congressman Robert Kastenmeier, on file with author (June 1, 2007).

From 1984 to 2000, § 271(f) arguments were presented in only twenty-four cases.<sup>36</sup> Of these, many courts were reluctant to attach liability. For example, the Southern District of New York denied the application of § 271(f) because the defendant's products were first manufactured abroad and only stored in the United States before export to Canada.<sup>37</sup> The only situations where courts felt comfortable attaching liability were in the handful of cases that presented facts precisely analogous to *Deepsouth*.<sup>38</sup>

But by the turn of the century, the global software market, fueled by the dot-com industry, had created a surge in new patent litigations.<sup>39</sup> The holdings of these cases have been inconsistent, creating a great deal of uncertainty for the software industry. The following section examines these cases and the arguments put forth by stakeholders in the software industry.

## II. TREATMENT OF SOFTWARE UNDER § 271(f)

As discussed above, § 271(f) was designed to protect U.S. manufacturing interests. In 1984, the year the statute was introduced, the overwhelming majority of U.S. manufacturing consisted of tangible products such as automobiles and, in the case of *Deepsouth*, shrimp-peeling machines.<sup>40</sup> But in the last twenty years, U.S. manufacturing has changed significantly. The U.S. economy has shifted from tangible products to intangibles such as services and software. In 1996, the U.S. software market accounted for over 77% of the market worldwide.<sup>41</sup> Likewise, this

---

<sup>36</sup> Lexis and Westlaw search results of § 271(f) provide twenty-four hits.

<sup>37</sup> See *Windsurfing Int'l v. Fred Ostermann GmbH*, 668 F. Supp. 812, 820–21 (S.D.N.Y. 1987).

<sup>38</sup> See, e.g., *T.D. Williamson, Inc. v. Laymon*, 723 F. Supp. 587, 593 (N.D. Okla. 1989) (finding liability where the defendant had shipped all components of an infringing device from Oklahoma to Venezuela for assembly abroad).

<sup>39</sup> From 2000 to 2007, over forty-five cases involving § 271(f) have been filed in federal courts.

<sup>40</sup> See Highdeal, Inc., *Overcoming the Profit Challenge in an Intangible Economy* (2002), <http://www.tmforum.org/browse.aspx?catID=884&linkID=25404&docID=1423>.

<sup>41</sup> See Press Briefing, Stanford Univ., *The US Domination Of Worldwide Software Products Sales Increased in 1995* (Oct. 17, 1996), available at <http://www.stanford.edu/group/scip/avsgt/usmktshare1096.pdf>.

shift in the economy created a burden on the courts to address the problematic area of software patents under § 271(f).

First, there is an intense debate over whether software should even be granted patent protection.<sup>42</sup> However, in 1981 the Supreme Court in *Diamond v. Diehr* held that a device using computer software, which was an integral part of the device, was a patentable object.<sup>43</sup> The Court stated that while software algorithms themselves may not be patented, devices that utilized them may.<sup>44</sup>

This less than clear decision led to a substantial increase in software patents being granted by the United States Patent and Trademark Office and a host of litigations challenging the validity of such patents.<sup>45</sup> Further confusion arose on how § 271(f) applied to software patents. The key language of § 271(f) discusses “components” being “supplied” abroad. The courts were, therefore, left with the question of whether software code is a “component” of a patented device and how software must be “supplied” to create an infringement.<sup>46</sup>

In a series of cases after 2000, the Federal Circuit looked to address some of these issues and fashion some guidelines for which the industry could follow. The Federal Circuit in *Pellegrini v. Analog Devices, Inc.* held that computer chips designed in the United States but manufactured abroad did not infringe a patent under § 271(f) because the chips themselves were never made,

---

<sup>42</sup> See Philip H. Albert, *Lowering the Volume in the Software Patent Debate*, LINUXINSIDER, Mar. 15, 2005, <http://www.linuxinsider.com/story/41376.html>; see also Graham Bowley, *In Decisive Vote, EU Rejects Law on Software Patents*, INT'L HERALD TRIB., July 7, 2005, at 13 (describing the fierce debate taking place in the European Union).

<sup>43</sup> See *Diamond v. Diehr*, 450 U.S. 175, 187 (1981).

<sup>44</sup> *Id.* at 186.

<sup>45</sup> For example, a search of the USPTO database for patents listed under the specification “software” issued in 1980 found 464 patents granted while the same specification found 3,027 patents granted in 1990. See U.S. Patent and Full-Text Image Database, <http://patft.uspto.gov/netahtml/PTO/search-adv.htm> (last visited Nov. 13, 2007) (results were found using the search term “spec/software” and limiting results by the appropriate date ranges); see also *supra* note 39 and accompanying text (noting the number of cases filed).

<sup>46</sup> See Virginia Zaunbrecher, *Eolas, AT&T, & Union Carbide: The New Extraterritoriality of U.S. Patent Law*, 21 BERKELEY TECH. L.J. 33, 37–40 (2006).

used, or sold in the United States or physically “supplied” from the United States.<sup>47</sup> The court held that under § 271(f)(1) there is no liability “unless components are shipped from the United States for assembly.”<sup>48</sup> The court added that “[s]upplying or causing to be supplied” in § 271(f)(1) clearly refers to physical supply of components, not simply to the supply of instructions . . . .<sup>49</sup> This interpretation of § 271(f) created a presumption that § 271(f) did not apply to software.

But that holding did not last long. The following year, the Federal Circuit in *Eolas Technologies, Inc. v. Microsoft Corp.* held that software code written in the United States and sent abroad on “golden master disks” for use abroad did infringe a U.S. patent because the code qualified as a “component” of a patented invention under § 271(f).<sup>50</sup> The *Eolas* court held that the language of § 271(f) did not limit itself to machines or physical structures, but included all forms of invention eligible for patenting.<sup>51</sup> The court reasoned that software was much more than merely a set of instructions, instead software code “is probably the key part of this patented invention.”<sup>52</sup>

The Federal Circuit Court extended this holding the same year (over a dissent) in *AT&T Corp. v. Microsoft Corp.*, finding that master copies of software sent abroad may be deemed “supplied” from the United States for purposes of § 271(f).<sup>53</sup>

These three cases, *Pellegrini*, *Eolas* and *AT&T*, were seen as being at odds with each other and were widely criticized by the software industry.<sup>54</sup> In *NTP, Inc. v. Research in Motion, Ltd.*, the Federal Circuit once again was presented with the question of extraterritorial patent rights for software.<sup>55</sup> In an amicus brief in

---

<sup>47</sup> 375 F.3d 1113, 1117 (Fed. Cir. 2004).

<sup>48</sup> *Id.*

<sup>49</sup> *Id.* at 1118.

<sup>50</sup> 399 F.3d 1325, 1339 (Fed. Cir. 2005).

<sup>51</sup> *See id.*

<sup>52</sup> *Id.*

<sup>53</sup> 414 F.3d 1366, 1370 (Fed. Cir. 2005).

<sup>54</sup> Harold C. Wegner, *A Foreign Square Peg in a Domestic Round Hole*, [http://www.foley.com/files/tbl\\_s31Publications/FileUpload137/3467/Foreign%20Square%20Peg.pdf](http://www.foley.com/files/tbl_s31Publications/FileUpload137/3467/Foreign%20Square%20Peg.pdf) (last visited June 16, 2007).

<sup>55</sup> 392 F.3d 1336 (Fed. Cir. 2004).

support of Research in Motion, Intel argued that “[w]hile each of these cases purports to distinguish the next, the ultimate holdings are difficult to square, and they lack a common analytical approach. The Court has yet to take a consistent and holistic view of infringement liability in the transnational context.”<sup>56</sup> Intel’s brief shows the frustration that the software industry felt with these inconsistent cases. The uncertainty left many patent holders unsure of what protection they held and where it applied.

The Supreme Court finally agreed to address the conflicting case law surrounding § 271(f) by granting certiorari in *AT&T Corp. v. Microsoft Corp.* The case involved a patent for a speech codec<sup>57</sup> held by AT&T, which was allegedly infringed by Microsoft’s Windows Operating System product.<sup>58</sup> AT&T sought damages for every copy of Windows installed on all domestically manufactured computers and every copy that had been installed on computers abroad.<sup>59</sup> Microsoft had stipulated to all domestic infringement, but moved in limine to exclude evidence of foreign sales in the damages award.<sup>60</sup> Microsoft asked the Federal Circuit to apply the holding of *Pellegrini* and find that “supply from the United States of intangible information, such as design information and instructions for foreign component manufacture, cannot constitute infringement under § 271(f).”<sup>61</sup> Microsoft’s argument rested on the presumption that the single “golden master disk” they had sent abroad was merely a set of instructions to be copied onto a foreign disk for foreign installation on foreign computers.<sup>62</sup> Meanwhile, AT&T—relying on the *Diamond* and *Eolas* decisions—argued that software was a patentable component and

---

<sup>56</sup> Brief for Intel Corp. as Amici Curiae Supporting Petitioner at 4, *NTP*, 392 F.3d 1336 (2004) (No. 03-1615), 2005 WL 4798098.

<sup>57</sup> A speech codec is a software program that is capable of coding-converting a speech signal into a more compact code and decoding-converting the more compact code back into a signal that sounds like the original speech signal. Speech Coding, Wikipedia, [http://en.wikipedia.org/wiki/Speech\\_encoding](http://en.wikipedia.org/wiki/Speech_encoding) (last visited Nov. 10, 2007).

<sup>58</sup> See *AT&T Corp. v. Microsoft Corp.*, 414 F.3d 1366, 1368 (Fed. Cir. 2005).

<sup>59</sup> See *id.*

<sup>60</sup> See *id.*

<sup>61</sup> Replacement Reply Brief for Defendant-Appellant at 3, *AT&T Corp.*, 414 F.3d 1366, 2004 WL 4990677.

<sup>62</sup> *Id.* at 7–9.

that the statutory language of § 271(f) did not limit itself to only machines or physical structures.<sup>63</sup>

The Federal Circuit was persuaded by AT&T's arguments and held that even though only a single copy of the infringing software was manufactured in the United States and sent abroad, the resulting copies were essentially supplied from the United States.<sup>64</sup> Curiously, Judge Rader, who had written the *Eolas* opinion, wrote the dissent arguing that the "copying and supplying are separate acts with different consequences" and that the majority had gone too far giving "extraterritorial effect to U.S. patent laws."<sup>65</sup>

Before the Supreme Court, Microsoft continued to argue their two main propositions. First, that the "golden master disk" did not constitute a "component" of a patent, arguing that the disk itself was just a blueprint of the software code.<sup>66</sup> Second, the shipping of a single disk (or transmission over the internet) did not constitute the "supply" of that component.<sup>67</sup>

Because of the major impact the decision would have on the U.S. software industry, the case drew a lot of attention from academics and leaders in the software industry.<sup>68</sup> These interested parties, including law professors, the Department of Justice, Yahoo and other software companies, submitted amicus briefs on behalf of AT&T and Microsoft, with the lion's-share supporting Microsoft.<sup>69</sup>

One such amicus brief, submitted by professors Mark Lemley and John Duffy, agreed with the Federal Circuit's holdings in *Eolas* and *AT&T* that "software code, like any other product, can be a component of a patented invention," but they argued that copies of a "component" made in a foreign country are not

---

<sup>63</sup> Replacement Brief for Plaintiff-Appellee at 28, 47–48, *AT&T Corp.*, 414 F.3d 1366, 2004 WL 4990676.

<sup>64</sup> See *AT&T Corp.*, 414 F.3d at 1370.

<sup>65</sup> *Id.* at 1372–74 (Rader, J., dissenting).

<sup>66</sup> Brief of Petitioner at 7, *Microsoft Corp. v. AT&T Corp.*, 127 S. Ct. 1746 (2007) (No. 05–1056), 2006 WL 3693463.

<sup>67</sup> *Id.*

<sup>68</sup> *Microsoft v. AT&T: Extraterritorial Enforcement of US Patents*, [http://www.patentlyo.com/patent/2007/05/microsoft\\_v\\_att\\_1.html](http://www.patentlyo.com/patent/2007/05/microsoft_v_att_1.html) (May 1, 2007).

<sup>69</sup> *Id.*

“supplied” from the United States.<sup>70</sup> They wrote that ruling in favor of AT&T “has the potential to increase dramatically the patent liability of U.S.-based firms and thereby encourage firms to relocate their research and development facilities outside of the United States.”<sup>71</sup>

This policy concern was addressed in the amicus brief of U.S. Philips Corporation (“Philips”). Philips argued that it is difficult to believe that U.S. software companies will migrate to Europe “where they might not be able to patent their software at all, just to sell a product abroad that they cannot sell in the U.S.”<sup>72</sup> They also claimed that it is even less probable that U.S. software companies will move to countries with little or no intellectual property protection, such as China.<sup>73</sup>

Oral argument was held on February 26, 2007 in front of eight Justices, with Justice Roberts recusing himself due to a conflict of interest.<sup>74</sup> As the Justices listened to AT&T and Microsoft’s arguments, they grappled with the nuances of software technology.<sup>75</sup> Unlike mechanical patents, software patents pose conceptual issues that many find difficult to comprehend without a deeper knowledge of electrical engineering.<sup>76</sup> This lack of a clear understanding was evidenced by the Justices repeated requests for software analogies such as blueprints and player pianos from both parties.<sup>77</sup>

---

<sup>70</sup> Brief for Intellectual Property Professors as Amici Curiae Supporting Petitioner at 1, 6–8, *Microsoft Corp.*, 127 S. Ct. 1746 (No. 05–1056), 2006 WL 3740618.

<sup>71</sup> *Id.* at 2.

<sup>72</sup> Brief for U.S. Philips Corp. & Philips Electronics North America Corp. as Amici Curiae Supporting Respondent at 6, *Microsoft Corp.*, 127 S. Ct. 1746 (No. 05–1056), 2007 WL 197102.

<sup>73</sup> *Id.*

<sup>74</sup> Justice Roberts owns shares of Microsoft. See Henry Blodget, *How To Invest Like a Supreme Court Justice: What John Roberts’ Portfolio Reveals About His Character*, SLATE, July 26, 2005, <http://www.slate.com/id/2123414>.

<sup>75</sup> See Transcript of Oral Argument at 8–9, *Microsoft Corp.*, 127 S. Ct. 1746 (No. 05–1056), 2007 WL 541886.

<sup>76</sup> Is software a set of instructions that computers follow, or is software a process that computers talk to in order to carry out functions? The answer is best seen in a new light, devoid of analogies, as software is a new medium that should be given its own category.

<sup>77</sup> See Transcript of Oral Argument at 19, 34, *Microsoft Corp.*, 127 S. Ct. 1746 (No. 05–1056), 2007 WL 541886.

In the end, the Justices focused their questions on the supply issue and Justice Breyer directed his attention to the issue of whether or not a simple knowledge exchange would constitute an infringement.<sup>78</sup>

On April 30, 2007, the Supreme Court, in a 7-1 majority, reversed the Federal Circuit ruling in favor of Microsoft.<sup>79</sup> Justice Ginsburg, writing the majority opinion, addressed the two arguments put forth by Microsoft. First, the Court held that a tangible copy of computer software, not the software in the abstract, qualifies as a “component” within the meaning of § 271(f) of the Patent Act.<sup>80</sup> The Court held that software can be “conceptualized in (at least) two ways.”<sup>81</sup> Drawing on yet more analogies, the Court held that software can be seen as either “[t]he notes of Beethoven’s Ninth Symphony” (a set of abstract “instructions themselves detached from any medium”) or the “[s]heet music for Beethoven’s Ninth” (“a tangible ‘copy’ of software, the instructions encoded on a medium such as a CD-ROM”).<sup>82</sup>

In its only reference to *Eolas*, the Supreme Court did not exactly overturn the holding, noting that the Federal Circuit had not articulated whether the software at issue was software in the abstract, or a tangible copy of software.<sup>83</sup>

Secondly, the Supreme Court held that § 271(f) was “not applicable where computer software was first sent from the United States to a foreign computer manufacturer on a master disk, or by electronic transmission, and then copied by the foreign recipient for installation on computers made and sold abroad . . . .”<sup>84</sup> The Court’s rationale was that the “copies, as ‘components’ installed on

---

<sup>78</sup> *Id.* at 37.

<sup>79</sup> *See Microsoft Corp.*, 127 S. Ct. at 1746.

<sup>80</sup> *See id.*

<sup>81</sup> *Id.* at 1754.

<sup>82</sup> *Id.*

<sup>83</sup> *Id.* at 1754 n.10. At oral argument, Justice Ginsburg noted the ambiguity on that issue in the Federal Circuit’s opinion in *AT&T*. *See* Transcript of Oral Argument at 13–15, *Microsoft Corp.*, 127 S. Ct. 1746 (No. 05–1056), 2007 WL 541886.

<sup>84</sup> *Microsoft Corp.*, 127 S. Ct. at 1746.

the foreign made computers, were not supplied from the United States.”<sup>85</sup>

The Court closed by stating that “[i]f patent law is to be adjusted better ‘to account for the realities of software distribution,’ the alteration should be made after focused legislative consideration, and not by the Judiciary forecasting Congress’ likely disposition.”<sup>86</sup>

### III. MISTAKEN ARGUMENTS & BAD POLICY

The Justices’ dependence on analogies of dated technologies such as blueprints, player pianos, and sheet music, reveals some of the difficulties the Court had in understanding software and its function in a patentable machine.<sup>87</sup> It was this confusion, along with various policy arguments made by Microsoft and its supporters, that likely influenced the Court’s holding. The following subsections examine this confusion and argue four points: first, that software should be considered a component of a patented invention; second, that extending protection to software supplied abroad would not lead to insurmountable damage awards; third, that relying on foreign tribunals to resolve patent disputes emanating from the United States would result in uncertainty for U.S. software companies; and finally, that a ruling in favor of AT&T would likely have been beneficial for the U.S. software industry.

#### A. *Software is a Component*

While many argue that software should not be patentable at all,<sup>88</sup> the simple fact remains that under *Diamond* software is “an

---

<sup>85</sup> *Id.*

<sup>86</sup> *Id.* at 1760 (quoting *AT&T Corp. v. Microsoft Corp.*, 414 F.3d 1366, 1370 (2005)).

<sup>87</sup> See Transcript of Oral Argument at 19, 34, *Microsoft Corp.*, 127 S. Ct. 1746 (No. 05–1056), 2007 WL 541886.

<sup>88</sup> See Posting of Jabari Zakiya to Free Software Magazine Blog, *Software Ain’t Patentable, Damn It!*, [http://www.freesoftwaremagazine.com/blogs/software\\_aint\\_patentable\\_damn\\_it](http://www.freesoftwaremagazine.com/blogs/software_aint_patentable_damn_it) (Jan. 3, 2007); see also Posting of Dana Blankenhorn to ZDNet, *The*

integral part of a device”<sup>89</sup> and, therefore, a component of a patentable object. The definitions of software found in dictionaries and encyclopedias are varied and are often complicated for a layperson to understand.<sup>90</sup> But most of these definitions describe an invention that is more than just a set of instructions.<sup>91</sup> Indeed, only Justice Stevens, writing the lone dissent in *Microsoft*, realized that software was not a mere blueprint.<sup>92</sup> Disagreeing with the majority’s analogy of software as a set of instructions, Stevens wrote that whether incorporated into a medium, or standalone, software clearly satisfies the dictionary definition of component.<sup>93</sup> Furthermore, he wrote that “unlike a blueprint that merely instructs a user how to do something, software actually causes infringing conduct to occur.”<sup>94</sup> Justice Stevens provided his own analogy that software “is more like a roller that causes a player piano to produce sound than sheet music that tells a pianist what to do.”<sup>95</sup> Stevens also drew on the statutory language of § 271(f)(2) claiming that software’s “sole intended use is an infringing use” and that it is “surely not ‘a staple article or commodity of commerce suitable for substantial noninfringing use’ as that term is used in § 271(f)(2).”<sup>96</sup>

Software is an integral part of any computer. In fact, the software in Microsoft’s operating system, which contained AT&T’s codec, is perhaps the most important component of any computer. To argue that software is just a set of instructions, and that the tangible CD or hard drive that contains these instructions is the integral component, is an absurd proposition. In the case of AT&T’s speech codec, one could hardly argue that the novel and

---

Real Issue in the Software Patent Fight, <http://blogs.zdnet.com/open-source/?p=1552> (Oct. 17, 2007, 08:37 EST).

<sup>89</sup> *Diamond v. Diehr*, 450 U.S. 175, 175 (1981).

<sup>90</sup> See VAN NOSTRAND’S SCIENTIFIC ENCYCLOPEDIA (Douglas M. Considine ed., 7th ed. 1989); see also Software, Webopedia, <http://www.webopedia.com/TERM/s/software.html> (last visited Oct. 21, 2007).

<sup>91</sup> See *id.*

<sup>92</sup> See *Microsoft Corp.*, 127 S. Ct. at 1763 (Stevens, J., dissenting).

<sup>93</sup> See *id.*

<sup>94</sup> *Id.*

<sup>95</sup> *Id.*

<sup>96</sup> *Id.*

useful aspect of the invention is the CD the code is stored upon.<sup>97</sup> Software is a new and extraordinary invention, which does not fit neatly into any preconceptions of what a patentable object is or should be. It is time to recognize software for what it is—an extraordinary invention for which antiquated analogies will simply not work.

### *B. Copying of Software Abroad is Supplied*

The Court in *Microsoft* decreed that copies of Windows made abroad from a “golden disk” did not amount to supply from the United States.<sup>98</sup> The Court, comparing the copying of software to that of key duplication, found that because “the copies of Windows actually installed on the foreign computers were not themselves supplied from the United States,” § 271(f) did not apply.<sup>99</sup> Justice Alito’s concurring opinion likened the act of software supply to that of an author sending her manuscript to a scrivener, who in turn copies the story by hand into a blank book.<sup>100</sup>

This fundamental misunderstanding of software by the Court and their unwillingness to provide software with its own criteria for supply<sup>101</sup> under § 271(f), allowed Microsoft to take advantage of the relative ease of software duplication and transportation. As Justice Stevens argued in his dissent, had Microsoft sent thousands of individual copies of Windows on CD’s, then perhaps the Court would have ruled differently.<sup>102</sup>

---

<sup>97</sup> To be granted a patent by the USPTO, the invention must be both novel and useful. See U.S. Patent and Trademark Office, Manual of Patent Examining Procedure, § 2106 (8th ed., rev. 6 2007) (detailing the authoritative reference on the practices and procedures relative to the prosecution of patent applications before the USPTO defining the applicable statutes, rules, and case law).

<sup>98</sup> 127 S. Ct. at 1757.

<sup>99</sup> *Id.*

<sup>100</sup> See *id.* at 1761 n.\* (Alito, J., concurring).

<sup>101</sup> Software may be supplied by means never envisioned by the authors of the Patent Act or § 271(f). See Brief for Respondent at 28, *Microsoft Corp.*, 127 S. Ct. 1746 (2007) (No. 05–1056), 2007 WL 186523 (providing a more detailed argument on the supply issue).

<sup>102</sup> See *Microsoft*, 127 S. Ct. at 1762–63 (Stevens, J., dissenting).

Microsoft and its amici argued that to hold otherwise would lead to insurmountable damage awards.<sup>103</sup> This is a view shared by many opponents of § 271(f) and is often cited as one of the main reasons why the statute should be dissolved or limited.<sup>104</sup> This is a flimsy argument as software companies would not face endless liability for infringing devices that are assembled abroad.<sup>105</sup> To the contrary, liability would be determined by the companies' own actions.<sup>106</sup> If "they send software abroad with the intent that it be installed on multiple infringing devices, [then] they [would] owe damages for those devices, no more, no less."<sup>107</sup>

Furthermore, AT&T presented evidence in their Brief that refutes Microsoft's argument of endless liability. Microsoft receives a royalty for every "legal" copy of Windows installed on foreign manufactured computers.<sup>108</sup> Thus, the calculation of the appropriate damages would be a simple percentage of those profits received.<sup>109</sup> Microsoft fully acknowledges that the number of golden masters it sends abroad does not limit the number of units it supplies.<sup>110</sup> In *Microsoft Corp. v. Comm'r of Internal Revenue*, Microsoft argued that it was entitled to tax deductions for all foreign sales of software replicated from Microsoft's golden master abroad, claiming that such copies were "export property" under the statute.<sup>111</sup> The Ninth Circuit agreed that all copies created from the golden master were export property, thereby providing Microsoft with another \$31 million in claimed deductions for 1990 and 1991.<sup>112</sup> If Microsoft is able to gain a tax advantage for each copy of Windows that is "copied" abroad, it

---

<sup>103</sup> See Brief for U.S. Philips Corp. et al., *supra* note 72, at 5 (arguing that the real issue "lost" in the pages of arguments made by Microsoft and its amici is the proper measure of damages).

<sup>104</sup> See James Farrand, *Territoriality and Incentives Under the Patent Laws: Overreaching Harms U.S. Economic and Technological Interests*, 21 BERKELEY TECH. L.J. 1215, 1217 (2006).

<sup>105</sup> See Brief for U.S. Philips Corp. et al., *supra* note 72, at 6.

<sup>106</sup> *Id.*

<sup>107</sup> *Id.*

<sup>108</sup> See Brief for Respondent, *supra* note 101, at 32.

<sup>109</sup> See *id.* at 34.

<sup>110</sup> See *id.* at 32.

<sup>111</sup> See *Microsoft Corp. v. Comm'r of Internal Revenue*, 311 F.3d 1178 (9th Cir. 2002).

<sup>112</sup> *Id.* at 1188.

would only seem fair to attribute the copying as supplied and demand that AT&T receive their appropriate share of those profits.

AT&T made this argument before the Federal Circuit and Microsoft responded that the “arguments regarding construction of the tax code are irrelevant to the proper construction of the patent code . . . and ‘has no bearing on the [patent infringement] case at bar.’”<sup>113</sup> The Federal Circuit did not address this issue and neither party raised it before the Supreme Court.

### C. Foreign Interpretation of § 271(f)

Also in this case, Justice Ginsburg argued that patent infringement occurring abroad must be dealt with by the appropriate foreign jurisdiction and that the U.S. court system has no business extending their patent laws overseas.<sup>114</sup> But, software patent law is non-existent in many countries, and so arguing that foreign patent laws should be utilized for extraterritorial protection is an unavailing point.<sup>115</sup>

Yet, Justice Ginsburg’s argument is an interesting segue into examining how a foreign court might have ruled in *Microsoft*.

While the United States has arguably the most elaborate patent system in the world, there has been a great deal of discussion on whether the U.S. model has over-extended its boundaries.<sup>116</sup>

The international viewpoints on extraterritorial reach of patent laws are varied. In the European Union, patent laws emphasize the non-extraterritorial nature of the protection given.<sup>117</sup> Furthermore, European patent protection of software is much more limited than in the United States. This lesser protection is due in part to

---

<sup>113</sup> See Brief of Petitioner at 17, *AT&T Corp. v. Microsoft Corp.*, 414 F.3d 1366 (2005) (No. 04–1285), 2004 WL 4990677 (quoting *Prima Tek II, LLC v. A-Roo Co.*, 222 F.3d 1372, 1379 (Fed. Cir. 2000)).

<sup>114</sup> See *Microsoft Corp. v. AT&T Corp.*, 127 S. Ct. 1746, 1758 (2007).

<sup>115</sup> See Brief for Wisconsin Alumni Research Foundation, et al. as Amici Curae Supporting Respondent, *Microsoft Corp.*, 127 S. Ct. 1746, 2007 WL 215264.

<sup>116</sup> See Robert Pierson, *Extraterritorial Reach Of U.S. Patent Law: Has The Federal Circuit Gone Too Far?*, 17 FORDHAM INTELL. PROP. MEDIA & ENT. L.J. 651, 692 (2007).

<sup>117</sup> See Ladas & Parry, *Patent Litigation in Europe*, [http://www.ladas.com/Litigation/ForeignPatentLitigation/Europe\\_Patent\\_Lit.html](http://www.ladas.com/Litigation/ForeignPatentLitigation/Europe_Patent_Lit.html) (last visited Nov. 18, 2007).

significant public movements against big business and government intervention in software development.<sup>118</sup>

This point of view is shared by some patent law academics in the United States. Professor Samuelson argues that “[b]ased on twenty-four years of studying software intellectual property protection, I believe the software industry would be no less innovative and no less competitive in the world market if software patents disappeared tomorrow.”<sup>119</sup> In Europe, therefore, a *Microsoft* type case is not likely to result in a favorable decision for AT&T.

In other countries, however, tribunals examine the equitable principles of jurisprudence in deciding how far to extend patent protection.

In Japan, while there is no specific statute or case on point, in *Canon Inc. v. Recycle Assist Co.*, the Japanese High Court addressed the issues of patent protection for export items.<sup>120</sup> The Court held that the refilling of a patented item for sale overseas was an infringement, even though the refilling took place in China.<sup>121</sup> Recycle Assist had collected used Canon ink cartridges, which had been legally sold in Japan and overseas by Canon or its licensee, and shipped them to China.<sup>122</sup> In China, the cartridge’s ink tank was reconditioned by cleaning and refilling it with ink. Recycle Assist then imported and sold the reconditioned Canon ink cartridges in Japan and overseas.<sup>123</sup> The High Court held that the act of refilling the cartridges with ink was an essential element recited in the claims, which related to the technical idea of the patented invention and was therefore an infringement.<sup>124</sup> The

---

<sup>118</sup> See Foundation for a Free Information Infrastructure, Patentability and Democracy in Europe, <http://eupat.ffii.org> (last visited Nov. 20, 2007). But see *Astron Clinica Ltd. v. Comptroller-General of Patents, Designs and Trademarks*, (2008) EWHC 85 (pat) (where a U.K. court recently held that software programs should in principle be patentable).

<sup>119</sup> Pamela Samuelson, *Legally Speaking: Software Patents and the Metaphysics of 271(f)*, 50 COMMUNICATIONS OF THE ACM 15, 19 (2007).

<sup>120</sup> See *Canon Inc. v. Recycle Assist Co., Ltd.*, 1922 Hanrei Jiho 30 (Sup. Ct., Jan. 31, 2006).

<sup>121</sup> *Id.*

<sup>122</sup> *Id.*

<sup>123</sup> *Id.*

<sup>124</sup> *Id.*

Court held that the products sold in Japan infringed Canon's patent.<sup>125</sup>

If *Microsoft* were to come before the Japanese High Court, one could foresee the court finding for AT&T. The Court's decision in *Canon* reveals an equitable layer of jurisprudence that goes beyond mere statute. Microsoft was found, after all, to have infringed AT&T's patent with each copy of its Windows software sold in the United States and therefore intent to infringe abroad is arguably present.

The Federal Court of Australia addressed a similar situation after infringing goods were exported to Papua New Guinea to avoid seizure by the government.<sup>126</sup> In discussing the court's jurisdiction, the court acknowledged that their Patent Act contains no express power to order such seizure.<sup>127</sup> The court then stated, "it is not disputed that the Court has general power to make the order in accordance with established principles of equitable relief."<sup>128</sup> Furthermore, "the powers possessed by courts with equitable jurisdiction for the enforcement of their orders are . . . as wide . . . as the occasion at hand may require."<sup>129</sup> The court held that the respondents should not be allowed to "gain a benefit" by "sneaking" the goods out of the jurisdiction.<sup>130</sup> On the other hand, the court found that "the presence of the products in Papua New Guinea [did] not place the rights of the [patent holder] at risk and in need of protection."<sup>131</sup> One can infer that if the Federal Court of Australia were presented with the facts of *Microsoft*, it would rule in AT&T's favor. As in Japanese jurisprudence, the Australian court seems to be making a decision based on equitable principles rather than statutory interpretation.

While both the Japanese and Australian decisions fall short of the broad protection § 271(f) offers a U.S. patent holder, the

---

<sup>125</sup> *Id.*

<sup>126</sup> *See* Roussel Uclaf v. Pan Labs. Pty Ltd. (1994) 51 F.C.R. 316 (Austl.).

<sup>127</sup> *Id.* at 319.

<sup>128</sup> *Id.*

<sup>129</sup> *Id.* at 321 (quoting I C F SPRY, PRINCIPLES OF EQUITABLE REMEDIES 361–68 (4th ed. 1990)).

<sup>130</sup> *Id.* at 320.

<sup>131</sup> *Id.*

judicial intent to go beyond mere statutory interpretation is clear. Microsoft did stipulate to infringing a patent held by AT&T, and so based purely on fairness, Microsoft should be liable for all infringing sales.

*D. Damage to the Software Industry*

In the end, the Court could have made arguments favoring either side of the component and supply debate, as the Federal Circuit did. The Court's decision was, therefore, likely influenced by the underlying policy arguments discussing the effect one holding would have on the software industry. While the outcome of *Microsoft* is certain to have an effect on the software industry, it is difficult to predict to what extent (or degree) the U.S. software industry will suffer. Many critics of the Federal Circuit's decision believe the U.S. software industry would have suffered if Microsoft had lost. One such critic, James Farrand, argues that if the Supreme Court had affirmed the Federal Circuit's interpretation of § 271(f), U.S.-based software companies would be tempted to move their research and development overseas in order to avoid the "perverse" effects of § 271(f) infringement.<sup>132</sup>

As Philips pointed out in its amicus brief, this is a flawed argument.<sup>133</sup> Software companies, like all U.S. companies, would have benefited from the added patent protection § 271(f) can provide.<sup>134</sup> While a ruling in favor of AT&T could have provided an incentive for certain software companies to move development off-shore to avoid possible § 271(f) infringement suits, the U.S. patent laws are considered the strongest in the world, and hold a great appeal for domestic and foreign companies wishing to obtain patent protection.<sup>135</sup> The Federal Circuit's ruling in *AT&T* prevents U.S. software companies from creating "infringement mills" overseas that would make software available to anyone in the world via the web.<sup>136</sup> The application of § 271(f) to software would ensure that any software development taking place in the

---

<sup>132</sup> See Farrand, *supra* note 104, at 1239.

<sup>133</sup> See Brief for U.S. Philips Corp. et al., *supra* note 72, at 6.

<sup>134</sup> *Id.*

<sup>135</sup> *Id.*

<sup>136</sup> See Brief for Respondent, *supra* note 101, at 49.

U.S. is immediately protected, even if the bulk of development occurs on foreign soil. Interestingly, while critic Farrand argued that if AT&T had won, a mass exodus of U.S. software companies would have ensued, at no point does he claim that § 271(f)'s initial introduction in 1984 led to any U.S. manufacturing migration overseas. In fact, most would agree that any industry migration over the past thirty years has been due to high corporate tax rates, cheap labor markets, and weak labor standards in foreign nations.<sup>137</sup> Additionally, if some facets of the software industry were to suffer, it would only be those companies that desire to infringe the inventions of others.<sup>138</sup> As Justice Blackmun stated in his dissent in *Deepsouth*, today's result will unduly "reward the artful competitor who uses another's invention in its entirety and who seeks to profit thereby"<sup>139</sup> and that this "subverts the Constitutional scheme of promoting the Progress of Science and useful Arts."<sup>140</sup>

Furthermore, software providers are moving in the direction of Web Services.<sup>141</sup> Instead of consumers buying software from a retailer and then installing it on their home or office computer, a consumer's computer becomes a portal to software applications that run on network servers located at a central site and are accessed through the internet.<sup>142</sup> The Supreme Court's ruling might have inadvertently provided the perfect incentive for software companies to run such servers overseas, thereby avoiding possible infringement liability under § 271(f). If this server-side solution does take hold, it will be Microsoft, the biggest software

---

<sup>137</sup> Regardless of this decision, software companies are already moving a lot of their research and development operations abroad, most notably to Ireland, where low corporate tax rates and a large technology educated work force has fueled the migration. See, e.g., Shelley Emling, Ireland Works to Stay in the Outsourcing Game, INT'L HERALD TRIB., June 5, 2004, at 19.

<sup>138</sup> See Brief for U.S. Philips Corp. et al., *supra* note 72, at 21.

<sup>139</sup> See *Deepsouth Packing Co. v. Laitram Corp.*, 406 U.S. 518, 532-33 (1972).

<sup>140</sup> *Id.* at 534 (quoting *Laitram Corp. v. Deepsouth Packing Co.*, 443 F.2d 936, 939 (5th Cir. 1971)).

<sup>141</sup> See David Coursey, *Server Versions of Microsoft Apps Speak to Web Services Future*, EWEK, Oct. 13, 2004, <http://www.eweek.com/c/a/Enterprise-Apps/Server-Versions-of-Microsoft-Apps-Speak-to-Web-Services-Future/>.

<sup>142</sup> See Web Services Tutorial, <http://www.w3schools.com/webservices/default.asp> (last visited Feb. 1, 2008) (providing an introduction to Web Services).

company on the planet, who lobbies Congress to extend § 271(f) to cover extraterritorial regions.

#### CONCLUSION

The majority's opinion in *Microsoft* exposes a fundamental misunderstanding of software and its unique function in modern technology. With Justice Stevens as the lone voice of reason, the future of software patent protection seems bleak. The onus is now on Congress to decide whether to modify § 271(f) to include software or to let the industry rely on the uncertainty of patent protection abroad. If software is to be afforded adequate patent protection, then Congress must act quickly. Congress took twelve years after *Deepsouth* to close that "loophole," and if Congress decides to wait that long again, they risk the statute becoming obsolete in today's global market.