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Nicholaus R. Rericha
University of Dayton

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AT&T CORP. V. MICROSOFT CORP: **CLOSING THE *DEEPSOUTH* LOOPHOLE (FOR GOOD THIS TIME)**

*Nicholaus R. Rericha**

I. INTRODUCTION

Recently, Microsoft Corporation has come under a heavy barrage of attacks for violating 35 U.S.C. § 271(f).¹ This statute protects patent holders against potential infringers that ship components of a patented product to be assembled and sold overseas without obtaining rights.²

Software patent holders, including AT&T, have successfully argued that Microsoft violated § 271(f) when it “supplied” a “component,” the patented software, to a foreign country by means of a limited number of “golden master disks.”³ These master disks contain the Windows[®] operating system and are used to copy Windows[®] onto computers that will be sold to foreign customers.⁴ Microsoft operates this way because it is less expensive and more efficient to send one disk to the country of final assembly rather than thousands of disks.⁵ In *AT&T Corp. v. Microsoft Corp.*, Microsoft sent a speech codec,⁶ which was patented by AT&T, on a

* Nick Rericha is a Staff Writer for the University of Dayton Law Review 2005-2006. He graduated with a B.S. in Electrical Engineering from G.M.I in Flint, MI in 2000. His Juris Doctorate is expected in May of 2007.

¹ 35 U.S.C. § 271(f) (2006). Infringement of Patent:

(1) 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.

(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 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. *Id.*

² *Id.* This statute is meant to prevent an infringer from manufacturing a patented product into pieces, and then shipping the pieces overseas for assembly.

³ *AT&T Corp. v. Microsoft Corp.*, 414 F.3d 1366, 1368 (Fed. Cir. 2005).

⁴ *Id.* at 1368.

⁵ *Id.* at 1370 (Microsoft would be required to pay for the shipping costs of sending thousands of disks instead of one if it chose to not send a golden master disk).

⁶ See *infra* nn. 50-53 and accompanying text (stating that a speech codec is a software algorithm that reduces the original file size of a sound into a more compact and manageable file).

golden master disk for replication overseas.⁷

The issues in the recent Federal Circuit cases in which Microsoft was found to have violated § 271(f) relate to the interpretation of both the meaning of § 271(f) and the holdings of other case law dealing with this issue.⁸ The first issue is whether software is considered a component within the context of § 271(f).⁹ The next issue is whether Microsoft supplied that component to a foreign assembler by sending one golden master disk to be copied.¹⁰ The final issue is whether the *Pellegrini v. Analog Devices Inc.*¹¹ decision should compel reversal.¹² The *Pellegrini* Court held that sending instructions overseas for a foreign manufacturer to manufacture the patented product does not violate § 271(f).¹³

This Note will analyze and critique the arguments in *AT&T Corp.* and will argue that the case was ultimately decided correctly. Software, as patentable subject matter,¹⁴ is a “component” because it is required for Windows® to operate correctly.¹⁵ This Note will argue that software should not be considered a process for patentability purposes, but as a product. This consideration will forever close the loophole that Microsoft has attempted to utilize.

Next, Microsoft *supplied* the patented software to a foreign manufacturer when it shipped a disk containing the codec via a golden master disk from the U.S. Finally, the holding in *Pellegrini* is distinguished from all cases involving § 271(f) and software once and for all because, unlike the instructions in *Pellegrini*, the software in *AT&T Corp.* is the actual component supplied by Microsoft.¹⁶

Section II of this Note will discuss the factual background of the case as well as the procedural history. It will also include a discussion about

⁷ *AT&T Corp.*, 414 F.3d at 1370.

⁸ *Id.* (holding that software is a component that is supplied when shipped on a golden master disk); *Eolas Techs. Inc. v. Microsoft Corp.*, 399 F.3d 1325, 1328 (Fed. Cir. 2005) (Holding “that ‘components,’ according to section 271(f)(1), includes software code on golden master disks.”).

⁹ *AT&T Corp.*, 414 F.3d at 1368.

¹⁰ *Id.*

¹¹ 375 F.3d 1113, 1118 (Fed. Cir. 2004) (holding that “§271(f) clearly refers to physical supply of components, not simply to the supply of instructions or corporate oversight. In other words, although Analog [Devices] may be giving instructions from the United States that cause the components of the patented invention to be supplied, it is undisputed that those components are not being supplied in or from the United States.”). For more information regarding the *Pellegrini* decision, see *infra* § II(B).

¹² *AT&T Corp.*, 414 F.3d at 1370 (“reject[ing] Microsoft’s argument that [*Pellegrini*] compels reversal”).

¹³ *Pellegrini*, 375 F.3d at 1118.

¹⁴ Software was held not patentable subject matter until the *Diamond v. Diehr* decision in 1981. *Diamond v. Diehr*, 450 U.S. 175 (1981); see *infra* nn. 99-110 and accompanying text.

¹⁵ Without sound compression, Windows® would require a much larger amount of hard drive space on a user’s computer, causing the computer system to become bogged down. See *infra* nn. 50-53 and accompanying text.

¹⁶ Software instructions are in no way similar to instructions on how to build an integrated circuit. See *infra*, §§ II(B) (discussing the background of *Pellegrini*) and III(C) (arguing that the holding in *Pellegrini* is not relevant to software cases).

the *Deepsouth* decision. Section III will discuss the statutory interpretations of § 271(f) by both the majority and the dissenting opinions. This Section will also discuss the conflicting findings of the intent of Congress and the interpretation in light of *Pellegrini*. Section IV will conclude that, although software is intangible, it is a product much like physical products. By shipping AT&T's patented product on a golden master disk for foreign manufacture, Microsoft is liable under § 271(f).

II. BACKGROUND

Section 271(f) was born out of a reaction against the Supreme Court's decision in *Deepsouth Packing Co. v. Laitram Corp.*¹⁷ To fully understand the issues discussed in this Note, it is helpful to review the *Deepsouth* decision and the historical development of § 271(f). First, this Section will provide a background on the *Deepsouth* decision, and how the law has changed as a result of its holding. Next, it will discuss the facts and procedural history of *AT&T Corp.* Finally, it will provide an overview of the Court of Appeals for the Federal Circuit's (CAFC) reasoning in the case.

A. *The Deepsouth Decision and the Development of § 271(f)*

The addition of § 271(f) was part of the Patent Law Amendments of 1984.¹⁸ This addition was in response to the Supreme Court's holding in *Deepsouth Packing Co. v. Laitram Corp.*¹⁹

Both parties in *Deepsouth* held patents for machinery that devein²⁰ shrimp in an efficient manner.²¹ After extensive litigation, it was determined that Laitram held the superior patent.²² At the time of the decision, United States patent law defined an infringer as one who "without authority makes, uses or sells any patented invention, within the United States."²³ Because the patent laws were only effective within the United States, to avoid infringement, *Deepsouth* would send the deveining machine parts in three boxes to foreign customers for assembly overseas.²⁴

The Supreme Court had to decide whether "Deep-south [was] barred from the American market by Laitram's patents [by shipping the

¹⁷ 406 U.S. 518 (1972).

¹⁸ 35 U.S.C. § 271(f). Subsection (f) was added November 8, 1984. *Supra* n. 1.

¹⁹ See 130 Cong. Rec. H10525 (daily ed. Oct. 1, 1984) (reprinted in 1984 U.S.C.C.A.N. 5827, 5828). "This proposal responds to the United States Supreme Court decision in *Deepsouth* [], concerning the need for a legislative solution to close a loophole." *Id.* "[The proposal] adds to the exclusive right[] . . . to exclude others from importing into the United States products produced by a process covered by the patent." *Id.*

²⁰ A deveining machine is used to remove the "veins" from under the shell of the shrimp. The veins are actually intestine sacks that run along the length of the shrimp's body. *Deepsouth*, 406 U.S. at 519.

²¹ *Id.* at 519.

²² *Id.*; *Laitram Corp. v. Deepsouth Packing Co.*, 443 F.2d 928 (5th Cir. 1971).

²³ *Deepsouth*, 406 U.S. at 522 (quoting 35 U.S.C. § 271(a) (1952)).

²⁴ *Id.* at 523-24.

deveiners] in less than fully assembled form, for use abroad.”²⁵ This issue turned on whether a product substantially manufactured in the United States is the equivalent to a product that is made in the United States.²⁶ The Court stated that Laitram needed to show that Deepsouth made, used or sold the patented deveining machine within the United States.²⁷ The Court rejected Laitram’s argument that “substantial manufacture” was the equivalent of “make” under § 271, holding that making requires full assembly.²⁸ In holding that “substantial manufacture” is not the equivalent of “make,” the Court reaffirmed the Second Circuit’s holding in *Radio Corp. of America v. Andrea*,²⁹ which held “that unassembled export of the elements of an invention did not infringe the patent.”³⁰ The Court also stated that it “would require a clear signal from Congress” to interpret § 271 to cover pieces of parts to be assembled later overseas.³¹

In 1984, Congress sent a clear signal to the Court by adding Section (f) to § 271. Congress agreed with the position of Justice Blackmun in his prophetic dissent in *Deepsouth*. Justice Blackmun posited that a loophole was created within the Patent Act where “an infringer [could] set up shop next door to a patent-protected inventor whose product enjoys a substantial foreign market and deprive him of this valuable business.”³² Justice Blackmun also stated that the majority’s application of § 271 would allow an infringer to “reap the fruits of the American economy . . . but would not be subject to the responsibilities of the American patent laws.”³³

By adding Section (f) to § 271, Congress closed the loophole created by *Deepsouth*.³⁴ The provision now makes it an infringement to supply or cause to be supplied a component to a patented product without permission from the patent holder.³⁵ This provision, had it been enacted at the time of *Deepsouth*, would have changed the result of the *Deepsouth*

²⁵ *Id.* at 519.

²⁶ *Id.* at 527 (“The . . . question thus resolves itself into the question of manufacture: did Deepsouth ‘make’ (and then sell) something cognizable under the patent law as the patented invention, or did it ‘make’ (and then sell) something that fell short of infringement?”).

²⁷ *Id.*

²⁸ *Id.* at 528 (holding “[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”) (citations omitted).

²⁹ 79 F.2d 626, 629 (2d Cir. 1935) (holding “[n]o wrong is done [upon] the patentee until the combination is formed. His monopoly does not cover the manufacture or sale of separate elements capable of being, but never actually, associated to form the invention. Only when such association is made is there a direct infringement of his monopoly, and not even then if it is done outside the territory for which the monopoly was granted.”).

³⁰ *Deepsouth*, 406 U.S. at 529.

³¹ *Id.* at 532.

³² *Id.* at 534 (Blackmun, J., dissenting).

³³ *Id.*

³⁴ 35 U.S.C. § 271(f).

³⁵ *Id.*

case; Deepsouth would not have been permitted to build the machine in thirds and then ship them to a foreign country for assembly without permission from Laitram.

B. *Pellegrini v. Analog Devices, Inc.*

Pellegrini is relevant to *AT&T Corp. v. Microsoft Corp.* because it held that sending instructions on how to fabricate a patented product to foreign manufacturers did not violate § 271(f).³⁶ Parties and courts have also interpreted *Pellegrini* to mean that only physical components are covered by the statute.³⁷

Gerald Pellegrini (“Pellegrini”) is the inventor of patented brushless motor drive integrated circuits.³⁸ Analog Devices (“Analog”) fabricates and sells the integrated circuits overseas.³⁹ Pellegrini sued Analog for direct infringement and inducement of infringement in the foreign manufacturers.⁴⁰ Pellegrini’s argument was that because Analog was headquartered in the United States, and it provided the foreign manufacturers instructions on how to make the integrated circuits, Analog violated § 271(f).⁴¹ The issue before the CAFC was whether § 271(f) is violated when an alleged infringer sends instructions on how to manufacture a patented product overseas without the patent holder’s permission.⁴² The CAFC stated that § 271(f) only applies “where components of a patent invention are physically present in the United States and then either sold or exported.”⁴³ The CAFC held that § 271(f) only applies to the “physical supply of components,” therefore supplying instructions does not violate § 271(f).⁴⁴ This Note will argue that this language, which was used by the CAFC, was unfortunate because software companies have used it to argue that software does not fall within § 271(f) because it is not physical.

C. *AT&T Corp. v. Microsoft Corp.*

Microsoft is a global corporation that sells its Windows[®] Operating System (“Windows[®]”) all over the world. To distribute Windows[®] to

³⁶ *Pellegrini*, 375 F.3d at 1118.

³⁷ In the principal case of this Note, Microsoft argues that *Pellegrini* limits § 271(f) to physical components that are physically exported from the United States. *AT&T Corp.*, 414 F.3d at 1368. The Court in *Eolas* upheld the decision in *Pellegrini* by stating that the components must be physically supplied from the United States. *Eolas*, 399 F.3d at 1340.

³⁸ *Pellegrini*, 375 F.3d at 1114.

³⁹ *Id.*

⁴⁰ *Id.*

⁴¹ *Id.* at 1115.

⁴² *Id.* (“This case presents the question whether components that are manufactured outside the United States and never physically shipped to or from the United States may nonetheless be ‘supplied or caused to be supplied in or from the United States’ within the meaning of 35 U.S.C. § 271(f)(1) if those components are designed within the United States and the instructions for their manufacture and disposition are transmitted from within the United States.”).

⁴³ *Id.* at 1117.

⁴⁴ *Id.* at 1118.

foreign original equipment manufacturers in the most efficient manner possible, Microsoft sends one *golden master* disk, created in the United States, to foreign *replicators*. Microsoft sends one disk, instead of thousands or millions because it can save money on shipping and import and export costs.⁴⁵ In addition to using a golden master disk, Microsoft also sends a master copy of Windows[®] via electronic transmission.⁴⁶ Under an agreement with Microsoft, these replicators make copies of the master Windows[®] disk and then distribute them to foreign computer assemblers.⁴⁷ The assemblers then install the operating system onto computers that are shipped to foreign customers.⁴⁸ No foreign replicated version of Windows[®] is sold in the U.S.⁴⁹

Windows[®] contains an AT&T speech codec that is the subject matter of AT&T's United States Reissue Patent No. 32,580 ("the '580 patent").⁵⁰ A speech codec⁵¹ is a software program that converts human voice and audible sounds into a compact form, and then decodes the compacted signal back into audible sound to be sent to a speaker.⁵² Speech codecs are useful because they lower the amount of required memory to store the information on a computer by compressing the information. Microsoft relies on AT&T's '580 patent to keep the size of Windows[®] speech and sound files manageable so that the operating system requires less space on a hard drive. One current example of a type of sound encoding and compression that is popular today is the mp3 file format.⁵³

⁴⁵ *AT&T Corp.*, 414 F.3d at 1368 (stating that "Microsoft has taken full advantage of the replicable nature of software to efficiently distribute Windows[®] internationally").

⁴⁶ *Id.* (stating that electronic transmission includes consumer downloading). For example, instead of a potential Adobe Photo Shop customer driving to a retail store to buy the popular photograph editing software, the customer may choose to point his or her browser to Adobe's website and purchase the software by paying and then downloading the software directly to his or her computer. *Id.*

⁴⁷ *Id.*

⁴⁸ *Id.*

⁴⁹ *Id.*

⁵⁰ *AT&T Corp. v. Microsoft Corp.*, 2004 U.S. Dist. LEXIS 3340 at *5 (S.D.N.Y. Mar. 5, 2004). Microsoft relies on this technology to compress speech and sound files into a manageable size. Without the codec technology, Windows[®] would take up more space on the computer's hard drive. This would leave less space available on the hard disk for the computer user's personal data.

⁵¹ A "codec" is defined as a Compression/Decompression Module. Mountain Data Systems, *Acronym Finder*,

<http://www.acronymfinder.com/af-query.asp?p=dict&String=exact&Acronym=CODEC> (accessed Mar. 8, 2006). "A 'speech codec' is a software program that codes a speech signal into a more compact form, and decodes it back into a signal that sounds like the original." *AT&T Corp.*, 414 F.3d at 1368 n. 1. One current example of a type of sound encoding and compression that is popular today is the mp3 file format. See generally Mary Bell, *About, Inc.*, The New York Times Co.,

<http://inventors.about.com/od/mstartinventions/a/MPThree.htm> (accessed Mar. 8, 2006) [hereinafter *Bell*]. Although it is not a true example of a speech codec, the mp3 encoder program compresses the music or speech and then the mp3 player completes the process by decoding the file into audible sounds. *Id.*

⁵² *AT&T Corp.*, 414 F.3d at 1368.

⁵³ *Bell, supra* n. 51, at <http://inventors.about.com/od/mstartinventions/a/MPThree.htm>. Mp3 technology is an example of one type of sound compression technology, and not the specific technology taught in the '580 patent.

D. *Procedural History*

On June 4, 2001, AT&T filed a patent infringement suit because of the alleged infringement of AT&T's '580 patent.⁵⁴ Microsoft countered by filing a motion for summary judgment,⁵⁵ which included a motion in limine to exclude and protect evidence of foreign sales.⁵⁶ However, both parties agreed to proceed as a motion of partial summary judgment.⁵⁷

Microsoft argued two defenses to the infringement suit.⁵⁸ First, it argued that software is intangible, and therefore it cannot be a component under § 271(f).⁵⁹ In the alternative, Microsoft argued that even if Windows[®] software was a component, it was not "supplied" from the U.S. because the software put on the foreign computers was copied abroad and not created in the U.S.⁶⁰ The District Court rejected both of Microsoft's arguments and denied summary judgment.⁶¹ The court held that there was nothing in the statutory text or legislative history to provide a basis for narrowly interpreting § 271(f) to preclude software as a component.⁶² Next, the court found that Microsoft "supplied" the golden master disk containing Windows[®] (an essential component of the finished computer product) by sending it overseas.⁶³ The court held that it is irrelevant that copies put on the foreign computers were not copied in the U.S.⁶⁴ Both parties agreed to a final judgment holding Microsoft liable for infringement of the '580 patent under § 271(f).⁶⁵

Microsoft appealed the case to the CAFC and made the same arguments that the software is not a "component," and foreign-copied software is not "supplied" from the U.S.⁶⁶ The CAFC affirmed the District Court's decision.⁶⁷ The CAFC relied on *Eolas*⁶⁸ in holding that software is a

⁵⁴ *AT&T Corp.*, 2004 U.S. Dist. LEXIS 3340 at *1.

⁵⁵ *Id.*

⁵⁶ *Id.* at n. 3.

⁵⁷ *Id.*

⁵⁸ *Id.* at *3

⁵⁹ *Id.*

⁶⁰ *Id.*

⁶¹ *Id.* at **28-29.

⁶² *Id.* at **17-18 ("There is no limitation of the term 'components,' either in the statutory text or in the legislative history [of Section 271(f)], to machines or other structural combinations Further, there is nothing in the legislative history of Section 271(f) or in any jurisprudence interpreting it to say that software cannot be a component under Section 271(f).").

⁶³ *Id.* at **24-25 (rejecting Microsoft's argument that the software was not supplied by stating that "Microsoft seeks to equate replication of the object code abroad with the manufacturing or 'supply' of it from abroad. Microsoft's argument ignores the undisputed fact that the object code is originally manufactured in the United States, and *supplied from the United States* to foreign replicators or OEMs [(original equipment manufacturer)] with the intention of incorporating such software into foreign-assembled computers.") (emphasis added).

⁶⁴ *Id.*

⁶⁵ *AT&T Corp.*, 414 F.3d at 1368.

⁶⁶ *Id.*

⁶⁷ *Id.* at 1372.

⁶⁸ *Eolas*, 399 F.3d at 1325.

component under § 271(f).⁶⁹ The court found that, due to the inherent nature of software and common practice in the industry, shipping one disk or electronically transmitting software is “supplying” under § 271(f).⁷⁰

E. *The Reasoning of the U.S. Court of Appeals of the Federal Circuit*

There were two issues before the CAFC in *AT&T Corp.* The first issue before the court was whether software is a “component” under § 271(f).⁷¹ The next issue was whether software sent on a golden master disk, or by electronic means, to foreign companies for replication constitutes “supplied” for the purposes of § 271(f).⁷²

Relying on *Eolas*, the court determined that software is a component for the purposes of § 271(f).⁷³ Patented software is often considered a “process” invention because it involves a list of required steps to reach a desired result.⁷⁴ Microsoft argued in *Eolas* that the software on the golden master disk was like a mold or a set of instructions.⁷⁵ Microsoft also argued that § 271(f) is limited to only structural patents because of the reaction of *Pellegrini*.⁷⁶ The court disagreed, stating that the copied versions of the software were exact replicas of the original on the golden master disk.⁷⁷ The court found no evidence in the legislative history or within the statute itself to find that the section is limited to only structural patents.⁷⁸ The court found that software is a component under § 271(f) for two reasons: 1) section 271(f) is not limited to machines or physical structures and covers process patents; and 2) software code is a “functional nucleus of the finished

⁶⁹ *AT&T Corp.*, 414 F.3d at 1369.

⁷⁰ *Id.* at 1370.

⁷¹ *Id.* at 1369 (stating that “[t]he first question . . . [is] whether software may be a ‘component’ of a patented invention under § 271(f)”).

⁷² *Id.* (stating that “[t]he remaining question, then, is whether software replicated abroad from a master version exported from the United States—with the intent that it be replicated—may be deemed ‘supplied’ from the United States for the purposes of § 271(f)”).

⁷³ *Eolas*, 399 F.3d at 1340. This case is factually similar to *AT&T Corp.* It involved Microsoft sending the *Eolas*’ web browsing patented software, along with Windows[®], on a golden master disk for overseas replication. *AT&T Corp.*, 414 F.3d at 1368.

⁷⁴ *Id.* at 1339 (“Without question, software code alone qualifies as an invention eligible for patenting under these categories, at least as processes.”). For more discussion on software as a process patent, see *infra* nn. 99-113 and accompanying text.

⁷⁵ *Id.* The *Eolas* Court did not agree with this analogy, and stated that “software code is much more than a prototype, mold, or detailed set of instructions.” *Id.*

⁷⁶ *Id.* at 1340.

⁷⁷ *Id.* (Holding that “Pellegrini requires only that components are physically supplied from the United States. Pellegrini does not impose on section 271(f) a tangibility requirement that does not appear anywhere in the language of that section.”).

⁷⁸ *Id.* (“In fact, neither the statute nor the legislative history contains a limitation to ‘components of machines and other structural combinations.’ Microsoft, in effect, asks this court to add the word ‘physical’ in front of ‘components’ in section 271(f). If the statute intended to limit the reach of ‘components of patented inventions,’ it would have expressly included some narrowing restriction. The statute simply does not include the limitation that Microsoft advocates.”) (citations omitted).

computer product.”⁷⁹ Therefore the speech codec is a component of Windows[®] under § 271(f).

Next, the court determined that Microsoft “supplied” the software component for assembly overseas by sending Windows[®] either electronically or on a golden master disk.⁸⁰ The court began its statutory analysis with a textual interpretation by giving the words “their ordinary, contemporary, common meaning.”⁸¹ The court interpreted “supplied” within § 271(f) in the context of software and software distribution.⁸² Software is typically created by generating a copy, or having the receiving party download the content from the supplier.⁸³ “Uploading a single copy to the server is sufficient to allow any number of exact copies to be downloaded, and hence ‘supplied.’”⁸⁴ The court also stated that “Microsoft has taken full advantage of the replicable nature of software to efficiently distribute Windows[®] internationally.”⁸⁵ Finally, the court held that under § 271(f) there was no difference between sending a golden master disk and sending a copy electronically.⁸⁶ In each instance, both versions were supplied to the foreign entity for replication.⁸⁷

The court, by interpreting software as a process which is vital to the operation of a machine or computer, held that software is a component under § 271(f). Additionally, Microsoft supplied AT&T’s software component when it sent the Windows[®] golden master disk overseas for foreign replication and distribution. The court got it right, but a reevaluation of whether software truly is a process patent will further protect software under § 271(f).

⁷⁹ *Id.* at 1339.

⁸⁰ *AT&T Corp.*, 414 F.3d at 1369.

⁸¹ *Id.*; *Williams v. Taylor*, 529 U.S. 420, 431 (2000) (stating that “fail,” in context of the statute, “connotes some omission, fault, or negligence on the part of the person who has failed to do something”).

⁸² *AT&T Corp.*, 414 F.3d at 1369. Unlike the dissenting opinion, the majority interpreted the word “supplied” within the context of software distribution, stating:

As the statute sets forth no specific definition of the word “supplied,” we accordingly look to its “ordinary, contemporary, common meaning,” which is necessarily context-dependent. In the present case, § 271(f) is being invoked in the context of software distribution. Therefore, in order for us to properly construe the ‘supplied or caused to be supplied in or from the United States’ requirement, we must look at the way software is typically “supplied.”

Id. In contrast, the dissenting opinion interpreted “supplied” in the following manner:

[T]his extraterritorial expansion flows from this court’s broad construction of “supplies.” This court reasons that the “nature of the technology” justifies a different, unordinary, and uncommon construction of that term. Thus, this court distinguishes intangible software components from tangible components on the grounds that “the ‘supplying’ of software commonly involves generating a copy.”

Id. at 1373.

⁸³ *Id.* at 1370 (“Given the nature of the technology, the ‘supplying’ of software commonly involves generating a copy.”).

⁸⁴ *Id.*

⁸⁵ *Id.*

⁸⁶ *Id.*

⁸⁷ *Id.*

III. ANALYSIS

The CAFC was correct in determining that software is a *component* under § 271(f), and it was *supplied* to foreign customers. First, a textual interpretation of the word *component* results in the finding that software is a component within the meaning of § 271(f). More specifically, the statute is meant to include any type of invention under any patentable category of invention. However, as will be seen, viewing software as a product patent instead of a process patent will increase protection of software under § 271(f). Next, the plain meaning of the word *supplied* in § 271(f) includes sending golden master discs or electronic transmissions. Finally, the *Pellegrini* decision has no effect on software components because software is more than a set of instructions, and the statute does not require the component to be a physical item.

A. *Software is a Component within the Meaning of § 271(f)*

The CAFC correctly held that software is unmistakably a component within the meaning of the statute.⁸⁸ The holding does not go far enough, however, to finally put the issue of whether software is a component to rest. Section 271(f) provides that one may not “suppl[y] or cause[] to be supplied in or from the United States all or a substantial portion of the components of a patented invention.”⁸⁹ A component is defined as “a simple part, or a relatively complex entity regarded as a part, of a system; element; constituent.”⁹⁰

In the present case, the patented speech codec is a component within the plain meaning of the statute. The speech codec is a *part* or a *complex entity* that, in addition with other *parts* (i.e. other software routines), comprises the Microsoft Windows[®] operating system. Without the speech codec, Windows[®] would not operate as we know it. Sounds either would not be present within Windows[®], or more likely, the sounds that were incorporated would take much more memory, resulting in a less efficient operating system.

The court essentially brushes off Microsoft’s argument that software is not a component by relying on the analysis of the *Eolas* decision.⁹¹ The question, however, requires a more detailed analysis to fully establish that software is a component under § 271(f). The court in *Eolas* held that software is “much more than . . . [a] detailed set of instructions.”⁹² Software

⁸⁸ *Id.* at 1369 (“The first question, i.e., whether software may be a ‘component’ of a patented invention under § 271(f), was answered in the affirmative in *Eolas Techs. Inc. v. Microsoft . . .*”).

⁸⁹ 35 U.S.C. § 271(f); see *supra* n. 1.

⁹⁰ *American Heritage Dictionary of the English Language* 273 (William Morris ed., New College ed., Houghton Mifflin 1979).

⁹¹ *Eolas*, 399 F.3d at 1339-40; see *supra* n. 88 and accompanying text.

⁹² *Id.* at 1339.

code is the “functional nucleus of the finished computer product.”⁹³ The *Eolas* court states that process patents⁹⁴ are afforded the same patent law protection as product⁹⁵ patents.⁹⁶ If the invention is patentable under 35 U.S.C. § 101, then it is a “component” under § 271(f).⁹⁷ Therefore, a component does not need to be physical to be protected by § 271(f).⁹⁸

It is time to stop referring to software as a process patent, instead the courts should start referring to it as a product patent. Product patents are those patents in which the subject matter is either a machine, manufacture, or composition of matter.⁹⁹ On the other hand, “[a] process is not a structural entity but rather an operation or series of steps leading to a useful result.”¹⁰⁰

Viewed as a product patent, software would be afforded greater protection. Although the *Eolas* court gets close to stating that software is product patent, it does not quite do so.¹⁰¹ It cites the lower court opinion when declaring “process and product—software and hardware—are practically interchangeable in the field of computer technology.”¹⁰² Without software, much of the hardware that exists as circuits, hard drives, and displays would not operate.¹⁰³ The software code is just as important to the system as the microprocessor, capacitor, integrated circuit, or the circuit board itself. Removing a software component from a device or system is essentially the same as removing a resistor or cutting circuit traces on the circuit board. If the software component is removed, the device simply will not work.

Classifying software as a process is based on faulty and outdated logic. For many years, software was simply not patentable. Software’s long and difficult road in becoming patentable is the reason for today’s issue of

⁹³ *Id.* (citing *Imagexpo, L.L.C. v. Microsoft, Corp.*, 299 F. Supp. 2d 550, 553 (E.D. Va. 2003)) (stating that software is the heart of the computer, and the computer would not operate correctly without it.).

⁹⁴ See *infra* n. 99 and accompanying text.

⁹⁵ See *infra* n. 100 and accompanying text.

⁹⁶ *Id.*

⁹⁷ *Id.*

⁹⁸ *Id.*

⁹⁹ Donald S. Chisum, *Chisum on Patents* vol. 1, § 1.02, 11 (Matthew Bender 2005). “Three of the four classes of statutory subject matter of utility patents (machines, manufactures, and compositions of matter) relate to structural entities and can be grouped as ‘product’ claims in order to contrast them with process claims.” *Id.*

¹⁰⁰ *Id.* at § 1.03, 78. “Over the years, the courts have had more conceptual problems with process claims than with product claims. Chemical processes were easily understood. Mechanical processes were another matter.” *Id.*

¹⁰¹ *Eolas*, 399 F.3d at 1339 (stating “[w]ithout question, software code alone qualifies as an invention eligible for patenting under these categories, at least as processes”).

¹⁰² *Id.*

¹⁰³ *Imagexpo*, 299 F. Supp. 2d at 553.

whether software is a component.¹⁰⁴ Although the Patent and Trademark Office has moved away from the “Mental Steps Doctrine,”¹⁰⁵ it and the courts have not moved far enough.¹⁰⁶ Initially, algorithms were unpatentable because they were viewed merely as ideas.¹⁰⁷

The Patent and Trademark Office (“PTO”) is still behind the times with regard to providing protection for patents. The PTO instructs its examiners that a claim for software code, on its own without hardware, is non-statutory subject matter.¹⁰⁸ It further instructs that “[w]hen a computer program is claimed in a process where the computer is executing the computer program’s instructions, Office personnel should treat the claim as a process claim.”¹⁰⁹ It is only when a claim claims both an actual, physical computer component and software will an examiner treat the software as a product claim.¹¹⁰

At the micro level, it may be argued that a software routine is a set of instructions.¹¹¹ For example, a “While” loop may tell the hardware to wait until a certain condition is true before it takes action.¹¹² This is certainly an *instruction* or a *process*. However, as one moves higher in abstraction, the software is less of a “process” and more of a “product.”¹¹³

¹⁰⁴ See *Gottschalk v. Benson*, 409 U.S. 63, 71-72 (1972) (holding that a computer program for converting BCD numerals to pure binary numbers was simply an idea or an algorithm and therefore not patentable because “one may not patent an idea”).

¹⁰⁵ The “Mental Steps Doctrine” states that a decision making process, or instruction like software, is not patentable. See Roger E. Schecter & John R. Thomas, *Intellectual Property The Law of Copyrights, Patents and Trademarks* § 14.5.1, 302 (West 2003); see also Chisum, *supra* n. 99, at § 1.03[6], 116 (stating that “the basic idea is that no patent can be obtained for a method an essential component of which consists of human mental participation (or possibly even the mechanical equivalent of human mental participation)”).

¹⁰⁶ *Id.*; see also *Diehr*, 450 U.S. at 187 (opening the door to the patentability of software by holding a program that uses a well-known temperature algorithm in conjunction with a thermometer to calculate the exact curing time of rubber was patentable, and that the applicants were not seeking to patent the algorithm, but the process of curing the rubber); *In re Alappat*, 33 F.3d 1526, 1544 (Fed. Cir. 1994) (holding that mathematical computations used to create smooth and continuous lines on an oscilloscope patentable because the computations created “useful, concrete and tangible results”).

¹⁰⁷ *Gottschalk*, 409 U.S. at 71-72.

¹⁰⁸ 61 Fed. Reg. 7478, 7482 (Feb. 28, 1996) (“Since a computer program is merely a set of instructions capable of being executed by a computer, the computer program itself is not a process and Office personnel should treat a claim for a computer program, without the computer-readable medium needed to realize the computer program’s functionality, as non-statutory functional descriptive material.”).

¹⁰⁹ *Id.*

¹¹⁰ *Id.* (“When a computer program is recited in conjunction with a physical structure, such as a computer memory, Office personnel should treat the claim as a product claim.”).

¹¹¹ See generally *Computer Assoc. Intl. v. Altai, Inc.*, 982 F.2d 693, 707 (2d Cir. 1992) (“At a higher level of abstraction, the instructions in the lowest-level modules may be replaced conceptually by the functions of those modules. At progressively higher levels of abstraction, the functions of higher-level modules conceptually replace the implementations of those modules . . . until finally, one is left with nothing but the ultimate function of the program.”).

¹¹² See Sun Microsystems, Inc., *The Java™ Tutorial*, <http://java.sun.com/docs/books/tutorial/java/nutsandbolts/while.html> (accessed Mar. 7, 2006) (“You use a while statement to continually execute a block of statements while a condition remains true.”).

¹¹³ See generally *id.*

When analyzed in the context of a speech codec within Windows[®], a macro approach must be taken. The software becomes not a set of instructions, but a tangible desired result.¹¹⁴ In this case, the tangible result is compressed speech for use within the operating system.

Today, software is so integral to products because technology is shifting away from analog systems and toward integrated and digital systems.¹¹⁵ As this shift progresses and more complex integrated circuits are developed, there is less of a need for physical and analog components.¹¹⁶ Software is doing the job that analog circuits have done in the past.¹¹⁷ Theoretically, a circuit may consist of a single microprocessor or microcontroller, and the software that operates it. In this theoretical case, the microcontroller and software are each fifty percent of the system.¹¹⁸ How can one argue that the software that runs this theoretical circuit is simply a process and not an actual component to the system?

The distinction between a process patent and product patent is important when considering whether software is a *component*. Previous decisions have held that process patents are not protected by § 271(f).¹¹⁹ The court in both *AT&T Corp.* and *Eolas* did not address the decision in *Enpat Inc. v. Microsoft Corp.*, which held that process patents, such as the disputed software in the case, were not components under § 271(f).¹²⁰ When evaluating the plaintiff's claim that Microsoft Project 97 (and other products) violated § 271(f) by copying their software overseas, the *Enpat Inc.* court held that:

[P]laintiffs' patent describes the steps required to

¹¹⁴ *Eolas*, 399 F.3d at 1339 (stating "in the context of this patented invention, the computer transforms the code on the golden disk into a machine component in operation"); see generally *Alappat*, 33 F.3d at 1544 (holding that an algorithm that created a smooth waveform created a "tangible result" and was thus patentable); *State Street Bank & Trust Co. v. Signature Fin. Group, Inc.*, 149 F.3d 1368, 1373 (Fed. Cir. 1998) (holding that a data processing system for managing mutual fund accounts created a tangible result that an account manager could use to make decisions).

¹¹⁵ Peter Van Zant, *Microchip Fabrication*, 558-59 (5th ed., McGraw-Hill Professional 2004).

¹¹⁶ *Id.*

¹¹⁷ Ken Greenebaum & Ronen Barzel, *Audio Anecdotes II: Tools, Tips, and Techniques for Digital Audio*, 93 (A K Peters 2004).

¹¹⁸ See generally *Eolas*, 399 F.3d at 1339 (stating that "process and product—software and hardware—are practically interchangeable in the field of computer technology").

¹¹⁹ See *Enpat Inc. v. Microsoft Corp.*, 6 F. Supp. 2d 537, 539 (E.D. Va. 1998) (holding invalid a patent that disclosed an automated, electronic network based, project management server system for managing multiple work groups because "plaintiffs' patent describes the steps required to accomplish a particular task rather than the composition of a patented physical product"); see also *Synaptic Pharm. Corp. v. MDS Panlabs, Inc.*, 265 F. Supp. 2d 452, 464 (D.N.J. 2002) (holding that § 271(f) does not apply to method patents and therefore Synaptic's assays (tests) to determine which compounds would bind with receptors in the heart was not protected); *Standard Havens Prods., Inc. v. Gencor Indus., Inc.*, 953 F.2d 1360, 1374 (Fed. Cir. 1991) (holding that providing machines to perform a patented process overseas does not implicate § 271(f) because no actual components were provided).

¹²⁰ *Enpat.*, 6 F. Supp. 2d at 539 ("While it is true that any process involves the use of physical objects, this alone is not enough to bring a method patent within the purview of § 271(f), as the above cases illustrate. We conclude that plaintiffs' patent has no 'components' for purposes of § 271(f).").

accomplish a particular task rather than the composition of a patented physical product. While it is true that any process involves the use of physical objects, this alone is not enough to bring a method patent within the purview of § 271(f), as the above cases illustrate. We conclude that plaintiffs' patent has no "components" for purposes of § 271(f).¹²¹

The courts in *AT&T Corp.* and *Eolas* may have overruled *Enpat* without expressly declaring it by stating that "software could very well be a 'component' of a patented invention for the purposes of § 271(f)."¹²² Although *Enpat* and related decisions may have been overruled, the argument that software is a product and more than a process strengthens the argument that software is a *component* for § 271(f) purposes.

The *AT&T Corp.* court made the correct decision in holding that software is a component under § 271(f). The speech codec is essential to the operation of Windows®. However, evaluating the speech codec and other software programs as product patents will prevent litigation and finally provide software with the protection it deserves.

B. *Sending Software Via a Golden Master Disk is Supplying Under § 271(f)*

The majority's decision that Microsoft *supplied* the AT&T speech codec and is therefore liable under § 271(f) is correct. This effectively answers the question of whether software sent by electronic transmissions is *supplying* the software. First, statutory interpretation yields the conclusion that the method in which Microsoft distributes its software is supplying. Second, it was the intent of Congress to close the loophole in *Deepsouth* for all patent types.

1. The Majority Was Correct When Interpreting the Statute in the Context of Software Distribution

According to the plain meaning of the statute, Microsoft violated § 271(f) when it shipped the speech codec on a golden master disk to foreign replicators. "Supply" is defined as "to give, furnish, or provide (what is needed or wanted)."¹²³ In this case, what is needed is the AT&T speech codec contained in the Windows® source.¹²⁴ Microsoft "provides" this code by sending it to the foreign replicators by either golden master disk or electronic transmission.¹²⁵ Microsoft is supplying the software to be

¹²¹ *Id.*

¹²² *AT&T Corp.*, 414 F.3d at 1369.

¹²³ *Webster's New World College Dictionary* 1438 (Michael Agnes, 4th ed., IDG Books Worldwide 2000) [hereinafter *Webster's*].

¹²⁴ *AT&T Corp.*, 414 F.3d at 1368.

¹²⁵ *Id.*

distributed within the plain meaning of the statute.

The majority was correct in interpreting the statute in light of the inherent nature of the software, and how the software is distributed.¹²⁶ Software is increasingly being distributed over the Internet by downloading from a host server. The seller of the software saves time and money by not requiring packaging materials and shipping costs.¹²⁷ Providing one copy of the software for further replication is supplying. There is no difference between providing one copy or thousands because the end result is the same—thousands of copies are supplied to the foreign distributor.

The holding in this case closed a loophole that allowed the distribution of patented software components by electronic transmission.¹²⁸ Hypothetically, what if instead of sending the golden master disks, the foreign computer manufacturers downloaded the AT&T and Windows software from a U.S. server upon assembly of the computer? Would this scenario be a violation of § 271(f)? According to the majority, the answer is yes.¹²⁹ The software in this hypothetical situation is supplied to the user by electronic transmission. There would be a violation even if the software is downloaded from a foreign server where the software on the foreign server was originally sent from the United States because the software would have originally been provided from the United States. So long as a single copy is provided from the U.S. by any means, it is supplying under § 271(f).

The dissenting opinion's interpretation of the statute is misplaced. First, it states that "supplying" cannot include "'copying,' 'replicating,' or 'reproducing'" within the plain, ordinary meaning.¹³⁰ This statement admittedly ignores the context in which software is distributed.¹³¹ The dissenting opinion states that the majority's interpretation is too broad and creates a new rule that is only applicable to software.¹³² However, one must look at the nature in which software is distributed to determine the correct interpretation. The plain meaning of the word "supply" includes to

¹²⁶ *Id.* at 1370. Thousands of software programs are purchased by downloading from the Internet everyday. See generally CNET Networks, Inc., <http://www.download.com/> (last accessed Mar. 7, 2006) (listing thousands of free software programs for download); Microsoft Corp., <http://www.microsoft.com/office/trial/default.msp> (last accessed Mar. 7, 2006) (listing various Microsoft Office software titles available for download).

¹²⁷ *Id.* at 1370 (stating that "Microsoft has taken full advantage of the replicable nature of software to efficiently distribute Windows® internationally").

¹²⁸ See *Eolas*, 399 F.3d at 1340-41 (not addressing whether supplying software components via electronic transmissions is within § 271(f)).

¹²⁹ *AT&T Corp.*, 414 F.3d at 1370-71 ("Liability under § 271(f) does not depend on the medium used for exportation: a disk is merely a container that facilitates physical handling of software, much like bottles for liquids or pressurized cylinders for gases.").

¹³⁰ *Id.* at 1373-74 (Rader, J., dissenting).

¹³¹ *Id.* at 1374 (relying on a strict interpretation of "supply," the dissent does not evaluate the term as it relates to software distribution).

¹³² *Id.* (opining that the court uses a "broad construction of 'supplies'" that leads to a rule which "applies only to software inventions").

“furnish” or to “give” what is required.¹³³ In the case of software distribution today, it is typically “furnished” by either a golden master disk or electronic transmission.¹³⁴ To ignore this reality is to create a loophole for software components.

Next, the dissenting opinion errs in stating that “[a]s a matter of logic, one cannot supply one hundred components of a patented invention without first making one hundred copies of the component, regardless of whether the components supplied are physical parts or intangible software.”¹³⁵ Again, this statement ignores the realities of software distribution. What is being supplied to the foreign replicators in this case is the *actual component provided by Microsoft*.¹³⁶ When software is copied, the copied version is an exact, digital replica of the original version. It is the same exact version that Microsoft provided on the golden master disk.¹³⁷ Software companies provide their software everyday to millions of customers without creating millions of copies to distribute by allowing customers to download the software from their server.¹³⁸ Therefore, it is possible to *supply* one hundred software components without actually creating one hundred components first. Both means create the same result in that one hundred components are provided for foreign distribution.

2. Congress Intended to Cover All Patent Types When It Enacted § 271(f)

The majority was correct in deciding that Congressional intent requires a finding that software is supplied when it is distributed using traditional software distribution methods.¹³⁹ Section 271(f) must be read in light of both the entire body of law and the technology at issue.¹⁴⁰ To do otherwise would create a loophole similar to the loophole in *Deepsouth* that § 271(f) was intended to close. A special exception for software would be created to the disadvantage of many software inventors.¹⁴¹ When read in light of the entire Patent Act, all patents in all patentable categories are

¹³³ *Webster's* at 1348.

¹³⁴ *AT&T Corp.*, 414 F.3d at 1367-68 (majority).

¹³⁵ *Id.* at 1373 (Rader, J., dissenting).

¹³⁶ *Id.* at 1370 (majority) (stating that Microsoft sent an actual component).

¹³⁷ *Id.* at 1368.

¹³⁸ *Supra* n. 131 and accompanying text.

¹³⁹ *AT&T Corp.*, 414 F.3d at 1371.

¹⁴⁰ *See U.S. Natl. Bank v. Indep. Ins. Agents of Am.*, 508 U.S. 439, 455 (1993) (stating “[o]ver and over we have stressed that ‘in expounding a statute, we must not be guided by a single sentence or member of a sentence, but look to the provisions of the whole law, and to its object and policy’”) (quoting *U.S. v. Heirs of Boisdore*, 49 U.S. 113, 122 (1849)).

¹⁴¹ This special exception would lead to unscrupulous companies bundling patented software, shipping a disk over seas, and reaping profits from foreign sales of the patented software (much like Microsoft in this case).

covered by § 271(f).¹⁴²

The dissent focuses its opinion on the fact that the Patent Act was never meant to have extraterritorial effect.¹⁴³ It correctly states that § 271(f) was only meant to make companies liable for shipment of patented components from the United States, and it was not meant to include the actual manufacturing of patented products overseas.¹⁴⁴ The dissenting opinion states that under the majority opinion § 271(f) covers “manufacturing activities occurring wholly abroad.”¹⁴⁵ The dissent misses the central holding of the majority and, as a result, creates an extreme interpretation of the majority opinion. The statute has not been extended extraterritorially to cover the activities of foreign manufacturers. It simply covers the act of *supplying* the components for manufacture, just like the deveiners in *Deepsouth*. The statute does not cause liability where unknown manufacturers are copying the software that is not intentionally supplied by a U.S. supplier. A company is only liable where it knowingly supplies a copy of the software for distribution purposes, and it is only liable for supplying the component, not for the act of foreign replication.¹⁴⁶

Section 271(f) was created to stop manufacturers from building components in the United States and shipping them overseas for manufacture and assembly.¹⁴⁷ In keeping with the intent of Congress, the majority correctly does not carve out an exception for software under § 271(f) and holds that software supplied on a golden master disk to foreign replicators violates the statute.¹⁴⁸

C. *Pellegrini Has No Relevance in Software Distribution Cases*

Microsoft has mistakenly taken the holding in *Pellegrini* to mean that § 271(f) is limited to only physical components supplied from the

¹⁴² 35 U.S.C. § 271(f); see *Inventions patentable*, 35 U.S.C. § 101 (2006) (stating, “[w]hoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title”).

¹⁴³ *AT&T Corp.*, 414 F.3d at 1373 (Rader, J., dissenting); see also *Dowagiac Mfg. Co. v. Minn. Moline Plow Co.*, 235 U.S. 641, 650 (1915) (stating that “infringement of this right cannot be predicated of acts wholly done in a foreign country”); *Intl. Rectifier Corp. v. Samsung Elecs. Co.*, 361 F.3d 1355, 1360 (Fed. Cir. 2004) (stating that “it is well known that United States patent laws ‘do not, and were not intended to, operate beyond the limits of the United States’”) (internal quotations omitted).

¹⁴⁴ *AT&T Corp.*, 414 F.3d at 1373.

¹⁴⁵ *Id.* at 1375.

¹⁴⁶ 35 U.S.C. § 271(f).

¹⁴⁷ *Id.*

¹⁴⁸ *AT&T Corp.*, 414 F.3d at 1371 (“Congress obviously intended the statute to have an extraterritorial effect to the extent that the exportation was facilitated by acts in the United States, and the acts at issue here originating from the United States can be understood to be similarly within the meaning of the statute.”).

United States.¹⁴⁹ Therefore, Microsoft argued that software, being intangible, is not afforded the protection of the statute.¹⁵⁰ Courts have recently limited the meaning of *Pellegrini* by holding that the word “physical” does not affect what is a “component.”¹⁵¹

The majority correctly points out that what was transmitted overseas in *Pellegrini* was the instructions on how to create the component, not the actual component itself.¹⁵² In *AT&T Corp.*, the actual components were sent, not the instructions on how to make the component.¹⁵³ Thus, *Pellegrini* does not control.¹⁵⁴ It is again helpful to think of software as a product patent as opposed to a process patent because software is much more than a set of instructions.¹⁵⁵ In this case, the codec was not instructions telling the foreign distributor how to create the software code of the codec; it was the actual component Microsoft originally shipped overseas.¹⁵⁶

Again, the dissenting opinion misses the mark by using too strict an interpretation of § 271(f), specifically the word *supply*. Under the dissent’s view that *Pellegrini* controls the case, there should be no liability because the components installed on the foreign computers, like the integrated circuits in *Pellegrini*, were not physically supplied from the United States.¹⁵⁷ Unlike the integrated circuits in *Pellegrini*, the software was the actual component physically sent overseas.¹⁵⁸ Although Microsoft only sent one golden master disk containing the software, the subsequently copied versions were identical and were caused to be supplied by the original version shipped.¹⁵⁹ Therefore, this fundamental difference between *AT&T Corp.* and *Pellegrini* means that *Pellegrini* has no influence on this case.

Additionally, the majority held that liability does not turn on the method of software distribution.¹⁶⁰ This finally closes the door on the physical requirement. One could argue that electronic transmission is not

¹⁴⁹ *Id.*; see *Pellegrini*, 375 F.3d at 1118 (“Analog also does not supply ADMC chips in or from the United States, and does not cause ADMC chips to be supplied in or from the United States. Thus, 35 U.S.C. § 271(f)(1) is inapplicable.”).

¹⁵⁰ *AT&T Corp.*, 414 F.3d at 1371.

¹⁵¹ *Eolas*, 399 F.3d at 1340-41. The Court in *Eolas* upheld the *Pellegrini* requirement that “components are physically supplied from the United States.” *Id.* at 1341. This did not clarify whether software transmitted electronically is protected by the statute. However, in *AT&T Corp.*, the Court holds that the method of exportation is not significant; only the fact that exportation has occurred is significant. *AT&T Corp.*, 414 F.3d at 1371.

¹⁵² *AT&T Corp.*, 414 F.3d at 1370.

¹⁵³ *Id.*

¹⁵⁴ *Id.*

¹⁵⁵ See *supra*, § III(A), nn. 99-123 and accompanying text.

¹⁵⁶ *AT&T Corp.*, 414 F.3d at 1370.

¹⁵⁷ *Pellegrini*, 375 F.3d at 1118.

¹⁵⁸ *AT&T Corp.*, 414 F.3d at 1370.

¹⁵⁹ 35 U.S.C. § 271(f).

¹⁶⁰ *AT&T Corp.*, 414 F.3d at 1371.

physically supplying a tangible object, and under *Pellegrini* there would be no liability. However, electronic transmission is a physical mode of exportation because electrons are transmitted recreating the component at the desired location. In any event, the majority held that “[l]iability under § 271(f) is not premised on the mode of exportation, but rather the fact of exportation.”¹⁶¹ Therefore, the exportation does not have to be physical, and any mode of exportation could cause liability under the statute.

IV. CONCLUSION

AT&T Corp. v. Microsoft Corp. provides software inventions with all of the protection enjoyed by other physical inventions. Software, due to the role that it plays with hardware and its importance in today’s products and systems, is a component within the meaning of § 271(f). Next, shipping a golden master disk or transmitting the original source code for foreign replication creates liability under the statute. The mode of exportation for software and any other patentable invention is no longer relevant.

The CAFC made the correct decision in its holding, and therefore did not carve out an exception for software companies to escape liability by sending one copy for replication. However, the holding would be strengthened if the court performed its analysis in light of software being a product patent, rather than a process patent.

¹⁶¹ *Id.*