

**EXPORTING COMPONENTS OF PATENTED PRODUCTS:
A UNIQUE WAY TO INFRINGE**

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For the most part, United States patent law is only concerned with activities that take place in the United States and its territories. One of the rare exceptions to this may be found in 35 U.S.C. § 271(f). The first part of this statute makes it an act of infringement for a party in the United States to supply a foreign entity with components of a patented invention when the components are uncombined as sent but are supplied in a manner that induces their being combined abroad to form a product covered by the patent.¹ Remarkably, liability may occur even though an infringing product has never been made, used, or sold in the United States and without the patent owner having experienced any demonstrable harm.²

This article argues that the most recent interpretation of this statute by the Federal Circuit is so vague and expansive that it will be almost impossible for manufacturers operating in the United States to assess and avert the risk of patent infringement associated with the sale of components to foreign entities. The consequent incentive is for the manufacturer to either forgo the sale or to relocate manufacturing facilities outside the United States. Thus, § 271(f), which was enacted based in part on the idea that it would improve the United States trade balance and encourage the development of United States jobs, actually does the opposite. At a minimum, the language used in the statute should be

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¹ 35 U.S.C. § 271(f)(1) (2012).

² James R. Farrand, *Territoriality and Incentives Under the Patent Laws: Overreaching Harms U.S. Economic and Technological Interests*, 21 BERKELEY TECH. L.J. 1215, 1216–17 (2006).

clarified by the Supreme Court, and ideally, the statute should be repealed entirely.

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I. INTRODUCTION

Activities occurring in other countries generally have no effect with respect to the infringement of a United States patent.³ There is, however, an exception. Under certain circumstances, 35 U.S.C. § 271(f) allows the owner of a patented invention to sue a person or entity that has merely supplied components of the invention to a foreign entity.⁴ 35 U.S.C. § 271(f) reads as follows:

(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.

³ *Id.*; see also Melissa Feeney Wasserman, *Divided Infringement: Expanding the Extraterritorial Scope of Patent Law*, 82 N.Y.U. L. REV. 281 (2007) (arguing that U.S. patent law needs to become more extraterritorial).

⁴ Farrand, *supra* note 2; Wasserman, *supra* note 3.

(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.⁵

Remarkably, § 271(f) may be invoked even though the act of providing individual components of a combination invention is not, in itself, infringing, and even though the party receiving the components in a foreign country does not itself engage in any infringing activities. Thus, unlike other sections of United States law dealing with inducing infringement⁶ or contributory infringement,⁷ there is no requirement in § 271(f) that there have been any direct infringement of a United States patent, *i.e.*, there need not have been the making, use, or sale of an invention in the United States or its territories.⁸

Several of the most important requirements that are needed for a patent holder to invoke § 271(f) are those that are italicized in the statute as shown above. Under paragraph two, at least one component transferred must be “especially made or especially adapted for use in the invention and not a staple article or commodity of commerce suitable for substantial noninfringing use.”⁹ This provides a simple, straightforward test that can be used by manufacturers exporting goods to comfortably conclude that their activities will not infringe this section of the statute.

⁵ 35 U.S.C. § 271(f) (2012) (emphasis added) (The statute was signed into law as part of the Patent Law Amendments Act of 1984.).

⁶ § 271(b).

⁷ *Id.*

⁸ For a review on inducing patent infringement, see Timothy R. Holbrook, *The Supreme Court's Quiet Revolution in Induced Patent Infringement*, 91 NOTRE DAME L. REV. 1008 (2016).

⁹ § 271(f).

Unfortunately, the law is much more complicated with respect to paragraph one. The most important limitations in this section with respect to assessing whether a transfer creates an infringement risk will typically be that (a) all, or a substantial portion of, the components of the patented invention must have been provided to a foreign party; and (b) this must have been done in a manner that induces the subsequent combining of components in an “infringing” manner.¹⁰ In December of 2014, the Federal Circuit decided *Promega Corp. v. Life Technologies Corp.*,¹¹ and defined these restrictions in such broad and vague terms as to raise the question of whether these restrictions significantly limit the statute at all. Under this decision, a United States manufacturer will generally find it almost impossible to determine if the transfer of components to foreign entities is within the scope of § 271(f)(1).

Clarity may improve however. In response to a Petition for a Writ of Certiorari filed in June of 2015,¹² the Supreme Court invited the Solicitor General to file a Brief expressing the views of the United States.¹³ This Brief was filed on May 11, 2016¹⁴ and, on June 27, 2016, the Supreme Court granted the Petition.¹⁵ It is possible that, in its decision, the Supreme Court will redefine at

¹⁰ More specifically, the invention would be a direct infringement if made in the United States.

¹¹ 773 F.3d 1338 (Fed. Cir. 2014).

¹² Petition for Writ of Certiorari, *Life Technologies Corp. v. Promega Corp.*, 2015 WL 3941490 (June 26, 2015) (No. 14-1538), www.scotusblog.com/case-files/cases/life-technologies-corporation-v-promega-corporation/.

¹³ Supreme Court of the United States, *Order List: 577 U.S.: Orders in Pending Cases* (Oct. 5, 2015), https://www.supremecourt.gov/orders/courtorders/100515zor_4f15.pdf (noting the order for No: 14-1538 inviting the Solicitor General to file a brief for the United States).

¹⁴ Brief of the United States as Amicus Curiae on Petition for Writ of Certiorari at 23, *Life Technologies Corp. v. Promega Corp.*, 2016 WL 2765361 (May 11, 2016) (No. 14-1538), www.scotusblog.com/case-files/cases/life-technologies-corporation-v-promega-corporation/.

¹⁵ See *Life Techs. Corp. v. Promega Corp.*, 136 S. Ct. 2505 (2016). The Court has limited its review to the question of whether supplying a single, commodity component of a multi-component invention is an infringing act under 35 U.S.C. § 271(f)(1) (2012). It will not address the question of whether a single entity can “actively induce” itself to infringe.

least some of the terms used in § 271(f) in a clearer and more restrictive way.

This article argues that, apart from some limited instances in which Federal Circuit and Supreme Court decisions have provided clear guidelines,¹⁶ United States manufacturers must currently assume that the transfer of components to foreign entities for assembly and sale abroad carries with it a substantial risk of patent infringement. The article also suggests that § 271(f), and particularly its first paragraph, unfairly rewards United States patent holders at the expense of United States manufacturers. At a time when manufacturing in the United States is near an all time low, and the United States trade imbalance is near an all time high, this statute provides a clear incentive for companies to move their manufacturing operations outside the country. Until a more reasonable statutory construction is arrived at or, more optimistically, the statute is eliminated entirely, companies need to be aware of the risk it presents with respect to exportation of goods.

II. HISTORICAL PERSPECTIVE

A. *Deepsouth Packing Co. v. Laitram Corp.*

35 U.S.C. § 271(f) was enacted in response to the 1972 Supreme Court decision, *Deepsouth Packing Co. v. Laitram Corp.*¹⁷ This case involved an appeal by Deepsouth of a lower court injunction barring it from distributing or using machinery for the deveining of shrimp because this would infringe patent claims owned by Laitram.¹⁸ The claims were directed at a “slitter” (which was designed to mechanically generate slices in deshelled shrimp in a way that exposed the sandy “veins” running along their backs) and at a “tumbler” (which was used after the slitter to mechanically

¹⁶ Regarding the transfer of tangible subject matter and the use of the actual materials sent in an infringing product abroad, see *Microsoft Corp. v. AT&T Corp.*, 127 S.Ct. 1746 (2007). Regarding the infringement of method claims, see *Cardiac Pacemakers, Inc. v. St. Jude Med., Inc.*, 315 Fed. 1348 (Fed. Cir. 2009).

¹⁷ 406 U.S. 518 (1972).

¹⁸ *Id.* at 519.

remove veins).¹⁹ Both the slitter and tumbler were “combination inventions,” *i.e.*, they were made up of components that were known in the art but which were combined in a new and nonobvious way.²⁰

There was no dispute that the injunction that Deepsouth had received prevented it from making, using, or selling slitters or tumblers within the scope of Laitram’s claims in the United States.²¹ However, Deepsouth argued that, since the individual components of the devices were not covered by the claims and since the patents only applied to activities occurring in the United States, it should not be liable for past sales of components to foreign entities and the injunction should be modified to recognize its right to continue these sales in the future.²²

Although the district court agreed with Deepsouth’s argument,²³ the Court of Appeals for the Fifth Circuit reversed.²⁴ The appellate court argued that to “make” an invention in the context of the patent statute means “the substantial manufacture of the constituent parts of the machine.”²⁵ It stated:

The Constitutional mandate [to accord patent protection] cannot be limited to just manufacturing and selling within the United States. The infringer would then be allowed to reap the fruits of the American economy—technology, labor, materials, etc.—but would not be subject to the responsibilities of the American patent laws. We cannot permit an infringer to enjoy these benefits and then be

¹⁹ *Id.* at 520.

²⁰ *Id.* at 520–21.

²¹ *Id.* at 522.

²² *Id.* at 520–24. Although the components were not combined in the United States, there was no doubt that Deepsouth recognized that they would be combined to form a shrimp deveining machine once delivered. The components were shipped to foreign customers in three separate boxes which could be assembled to form a complete machine in less than an hour.

²³ *Laitram Corp. v. Deepsouth Packing Co.*, 310 F. Supp. 926, 929 (E. D. LA 1970), rev’d, 443 F.2d 936 (5th Cir. 1971), rev’d and remanded, 406 U.S. 518 (1972).

²⁴ *Laitram Corp. v. Deepsouth Packing Co.*, 443 F.2d 936 (5th Cir. 1971), rev’d and remanded, 406 U.S. 518 (1972).

²⁵ *Id.* at 938–39.

allowed to strip away a portion of the patentee's protection.²⁶

The Supreme Court granted a Petition for a Writ of Certiorari and, on May 30, 1972, completely rejected the holdings of the lower court:

The Court of Appeals, believing that the word “makes” should be accorded “a construction in keeping with the ordinary meaning of that term,” held against Deepsouth on the theory that “makes” “means what it ordinarily connotes—the substantial manufacture of the constituent parts of the machine.” . . . [W]e find the Fifth Circuit's definition unacceptable because it collides head on with a line of decisions so firmly embedded in our patent law as to be unassailable absent a congressional recasting of the statute.²⁷

The Court emphasized that, in order for there to be an inducement to infringe, direct infringement must have occurred.²⁸ This requires the making, use, or sale of a patented invention in the United States or its territories. Since an invention that is a combination of components does not exist unless all of the components are assembled, the sale of uncombined components cannot constitute an infringement.²⁹ The Court concluded that:

[W]e note that what is at stake here is the right of American companies to compete with an American patent holder in foreign markets. Our patent system makes no claim to extraterritorial effect; “these acts of Congress do not, and were not intended to, operate beyond the limits of the United States. . . .” To the degree that the inventor needs protection in markets other than those of this country, the wording of 35 U.S.C. §§ 154 and 271 reveals a congressional intent to have him seek it abroad through patents

²⁶ *Id.* (citations omitted). Although this decision was written prior to the enactment of 35 U.S.C. § 271(f) (2012), the court, remarkably, seems to believe that United States patents accord their owners rights with respect to foreign markets.

²⁷ *Deepsouth*, 406 U.S. at 528 (citations omitted).

²⁸ *Id.* at 526.

²⁹ *Id.* at 526–31.

secured in countries where his goods are being used. Respondent holds foreign patents; it does not adequately explain why it does not avail itself of them.³⁰

It is worth noting that the Court recognized that it is not just the rights of United States patent holders that were at stake, but also the right of other United States companies to compete in foreign commerce.³¹ This recognition was sorely lacking in the subsequent legislative effort that resulted in the adoption of section § 271(f).³²

*B. Enactment of Legislation*³³

Although twelve years passed from the time that *Deepsouth* was decided until the adoption of § 271(f), the legislative history of the statute leaves no doubt that it was enacted in response to the Supreme Court's decision.³⁴ At the time that the relevant legislation was introduced, Robert Kastenmeier, the sponsor in the House of Representatives, stated:

The second part of this bill [the part concerned with 271(f)] provides greater protection for U.S. patent holders when copiers produce all of the parts of a patented product in the country but who move offshore for final assembly before export. This proposal responds to a suggestion made by the Supreme Court in *Deepsouth*

³⁰ *Id.* at 531 (quoting *Brown v. Duchesne*, 60 U.S. 183, 195 (1856)) (citations omitted).

³¹ *Id.*

³² There were, however, four justices who dissented and agreed with the Court of Appeals that the invention in this case should be considered to have been made in the United States by *Deepsouth*. These judges seem to take the view that the patent statute is infringed when an invention is essentially or substantially made in the United States. *See id.* at 532–34.

³³ To find a summary of the progression of the legislation, see William R. Thornewell II, *Patent Infringement Prevention and the Advancement of Technology: Application of 35 U.S.C. § 271(f) to Software and “Virtual Components”*, 73 *FORDHAM L. REV.* 2815, 2816–19 (2005).

³⁴ The proposal to add section (f) to 35 U.S.C. § 271, was included as part of the Patent Law Amendments Act of 1984. *See* S 1535, 98th Cong., 1st Sess. (June 23, 1983); 129 *CONG. REC.* S9005-06 (June 23, 1983); H.R. 4526, 98th Cong., 1st Sess. (Nov. 18, 1983).

Packing Co. v. Laitram Corp., 406 U.S. 518 (1972) for a legislative solution to this issue.³⁵

A committee report characterized the corresponding Senate Bill as follows:

The bill simply amends the patent law so that when components are supplied for assembly abroad to circumvent a patent, the situation will be treated the same as when the invention is “made” or “sold” in the United States. (Patent infringement currently is defined as making, using, or selling an invention in the United States.)

The bill is needed to help maintain a climate in the United States conducive to invention, innovation, and investment. Permitting the subterfuge which is allowed under the *Deepsouth* interpretation of the patent law weakens confidence in patents among businesses and investors.³⁶

Later, the same report says:

Subsection (b)(3) of Section 2 will prevent copiers from avoiding U.S. patents by shipping overseas the components of a product patented in this country so that the assembly of the components will be completed abroad. This proposal responds to a comment by the United States Supreme Court in *Deepsouth Packing Co. v. Laitram Corp.*, 406 U.S. 518 (1972), calling for a legislative solution to close a loophole in patent law.³⁷

The arguments quoted above, and many others made during the enactment of § 271(f), seem exaggerated. Although the Supreme Court did indicate that it would not expand the reach of patent law to include activities occurring outside the United States in the absence of a clear and certain signal from Congress,³⁸ there is

³⁵ 129 CONG. REC. E5777-79, at E5778 (daily ed. Nov. 18, 1983), https://ipmall.law.unh.edu/sites/default/files/hosted_resources/lipa/patents/129%20Cong.%20Rec.%20E5777-79%20daily%20ed.%20Nov.%2018,%201983%29.pdf.

³⁶ S. REP. NO. 98-663, 98th Cong., 2d Sess., at 3 (Oct. 5, 1984).

³⁷ *Id.* at 6.

³⁸ *Deepsouth Packing Co. v. Laitram Corp.*, 406 U.S. 518, 531 (1972).

nothing to justify the suggestion that the Court was “calling for a legislative solution” to close a “loophole” in the law.³⁹ The characterization of *Deepsouth* as having engaged in a “subterfuge” and the Supreme Court’s decision as having been based on a defect in the law characterizes the comments of almost every organization and individual that weighed in on the legislation during congressional hearings. For example, Donald Banner, speaking behalf of Intellectual Property Owners, Inc., stated:

The existing patent law on this point is unfair. It permits a subterfuge. The law should not permit substantially all the manufacturing activity to take place in the United States and yet allow the patent to be avoided by a technicality.⁴⁰

Similarly, speaking for the American Intellectual Property Law Association, Bernarr Pravel suggested:

We believe that a patentee, such as Laitram, should have the right to benefit from his invention. The holding in the *Deepsouth* Case enables domestic copiers to circumvent the protection afforded by the patent laws by taking simple evasive production and marketing tactics. This loophole in the law negatively affects the patentees’ ability to export his invention or license others to do so. Defeating the expectation of innovative companies of benefitting from export trade is a severe disincentive, serious injustice, and is especially contrary to current economic policies designed to reduce United States trade deficits.⁴¹

Others supporting § 271(f) included the United States Patent and Trademark Office (“USPTO”),⁴² Chemical Manufacturers

³⁹ *See id.* at 531.

⁴⁰ *Patent Law Improvements Act: Hearing on S. 1535 and S. 1841 Before the Subcomm. on Patents, Copyrights and Trademarks of the Comm. on the Judiciary*, 98th Cong. 46 (1984) (statement of Donald W. Banner, Intellectual Property Owners, Inc.).

⁴¹ *Patent Law Improvements Act: Hearing on S. 1535 and S. 1841 Before the Subcomm. on Patents, Copyrights and Trademarks of the Comm. on the Judiciary*, 98th Cong. 61 (1984) (statement of Bernarr R. Pravel, American Intellectual Property Law Association).

⁴² *Patent Law Improvements Act: Hearing on S. 1535 and S. 1841 Before the Subcomm. on Patents, Copyrights and Trademarks of the Comm. on the*

Association, and National Association of Manufacturers⁴³ and private companies such as Monsanto and Procter & Gamble.⁴⁴ The only person or entity who seems to have expressed a substantial concern about the wisdom of the legislation was Peter Maggs, a professor of law at the University of Illinois:

A closer look should be taken at the attempt to reverse the Deepsouth decision. It seems quite possible that if this legislation is enacted, copiers will merely shift production operations overseas, beyond the reach of the U.S. patent system. This would mean a loss of jobs in the United States, with no real gain for holders of United States patents. Indeed, along these economic lines an argument could be made for legislation providing that manufacture of goods for export in general does not constitute an infringement of a U.S. patent.⁴⁵

Apart from the brief objection noted above, no person or entity seems to have considered the possibility that a “legislative solution” might not be needed, or that trying to impose one might

Judiciary, 98th Cong. 19 (1984) (statement of Hon. Gerald J. Mossinghoff, Assistant Secretary and Commissioner of Patents and Trademarks and Rene D. Tegmeyer, Assistant Commissioner for Patents, Patent and Trademark Office).

⁴³ *Patent Law Improvements Act: Hearing on S. 1535 and S. 1841 Before the Subcomm. on Patents, Copyrights and Trademarks of the Comm. on the Judiciary*, 98th Cong. 169 (1984) (statement of Richard C. Witte, Chemical Manufacturers Association, and National Association of Manufacturers).

⁴⁴ *Patent Law Improvements Act: Hearing on S. 1535 and S. 1841 Before the Subcomm. on Patents, Copyrights and Trademarks of the Comm. on the Judiciary*, 98th Cong. 151 (1984) (statement of John E. Maurer, General Consulting Attorney, Monsanto Company); see also Ronald W. Reagan, *Statement on Signing the Patent Law Amendments Act of 1984*, REAGAN LIBRARY (Nov. 9, 1984), <https://www.reaganlibrary.archives.gov/archives/speeches/1984/110984e.htm> (“[The legislation] also closes a loophole in existing law which permitted copiers to export jobs and avoid liability by arranging for final assembly of patented machines to occur offshore.”).

⁴⁵ *Innovation and Patent Law Reform: Hearing on H.R. 3285, H.R. 3286, and H.R. 3605 Before the Subcomm. on Courts, Civil Liberties, and the Admin. of Justice of the Comm. on the Judiciary*, 98th Cong. 1735 (1984) (comments on S. 1535 submitted by Peter B. Maggs, Prof. of Law, Univ. of Ill. at Urbana-Champaign).

not be a good idea. The sending of parts abroad by Deepsouth did not deprive Laitram of any profits in the United States or prevent Laitram from selling its machinery in other countries. What commentators characterized as a “loophole”⁴⁶ might equally have been characterized as a well-established, bright-line principle that one cannot infringe a patent unless one actually, not approximately, makes or does something covered by the claims. Similarly, what commentators referred to as a “technicality”⁴⁷ is based on the principle that patent law cannot legitimately extend beyond a country’s own borders, an idea rooted in international comity.⁴⁸ Finally, the fact that Deepsouth did not assemble the components of Laitram’s machine prior to sending them to foreign countries could just as easily be described as an attempt to avoid infringing Laitram’s United States patents as an attempt at subterfuge.

During the enactment of § 271(f), there were suggestions that patent law as expressed in *Deepsouth* damaged the trade balance of the United States and led to a loss of United States jobs.⁴⁹ In fact, the opposite appears more likely. After the Supreme Court decision, but before the enactment of § 271(f), Deepsouth could continue to employ people to manufacture the components that were being shipped overseas.⁵⁰ After the enactment of § 271(f), this was no longer possible, and there is no reason to assume that

⁴⁶ See, e.g., *Patent Law Improvements Act: Hearing on S. 1535 and S. 1841*, *supra* note 44.

⁴⁷ See, e.g., *Patent Law Improvements Act: Hearing on S. 1535 and S. 1841*, *supra* note 43.

⁴⁸ For a discussion of comity in the context of patent law, see Farrand, *supra* note 2, at 1220–25.

⁴⁹ See, Thornewell, *Patent Infringement Prevention and the Advancement of Technology: Application of 35 U.S.C. § 271(f) to Software and "Virtual Components,"* 73 *FORDHAM L. REV.* 2815, 2835–2836 (2005); see also S. REP. NO. 98-663, 98th Cong., 2d Sess., at 3 (Oct. 5, 1984). Evidently those making such allegations thought that their validity was self-evident and provided no actual support for these ideas. See *id.*

⁵⁰ Compare *Deepsouth Packing Co. v. Laitram Corp.*, 406 U.S. 518, 526 (1972) (indicating that, in the absence of an intent by Deepsouth that its production and sales activity would lead to the use of deviousness in the US, there can be no infringement), with 35 U.S.C. § 271(f) (2012) (suggesting the opposite).

customers would then be forced to buy machines or components from Laitram. Instead, customers might find a foreign supplier or, if profits warranted it, Deepsouth itself might move its manufacturing operation overseas. In either case, the effect of § 271(f) is to foster a loss of United States jobs and trade.

*C. Microsoft Corp. v. AT&T Corp.*⁵¹

In 2001, AT&T filed suit in the United States District Court for the Southern District of New York, alleging that Microsoft had infringed AT&T's claims to an apparatus for recording speech.⁵² The undisputed facts were that Microsoft's Windows program included code which, after installation, allowed computers to compress and encode speech in a manner similar to the apparatus claimed by AT&T.⁵³ Microsoft transferred this software from the United States to foreign manufacturers on a master disk or by electronic transmission, and the software was then copied and installed on computers sold abroad.⁵⁴ Although the software, prior to installation, clearly did not infringe any patent claims, AT&T alleged that it was a component of its claimed invention which, when combined with a computer overseas, constituted an infringement under 35 U.S.C. § 271(f).⁵⁵

Microsoft denied any liability based primarily on two arguments: (1) software is intangible information and, as such, cannot be characterized as a "component" of an invention as this term is used in § 271(f); and (2) the software code installed on the foreign computers was not "supplied" from the United States but rather generated abroad.⁵⁶ The District Court did not accept these arguments and held in favor of AT&T.⁵⁷ The decision was affirmed on appeal to the Federal Circuit and then taken up for review by the Supreme Court.⁵⁸

⁵¹ 127 S.Ct. 1746 (2007).

⁵² U.S. Patent No. RE32,580 (filed Sept. 18, 1986).

⁵³ *Microsoft*, 127 S.Ct. at 1750.

⁵⁴ *Id.* at 1751, 1753.

⁵⁵ *Id.* at 1753.

⁵⁶ *Id.*

⁵⁷ *Id.*

⁵⁸ *Id.*

With Justice Ginsburg writing for the majority, the Supreme Court reversed the lower court rulings and accepted both arguments made by Microsoft.⁵⁹ The Court held that section 271(f) only applies to components that are *amenable to being combined* to form a patented invention.⁶⁰ Software is not combinable unless it is part of an activating medium, and therefore software code, as an idea without physical embodiment, is not a component within the meaning of the statute.⁶¹ Thus, Microsoft could not be liable for infringement solely because the code that it had supplied was loaded on computers.⁶²

The second issue addressed by the Court was whether the § 271(f) requirement, that an infringer must have “supplied” components of an invention, means that the same components sent must also be the ones in the final invention or, if instead, copies of the components sent will suffice.⁶³ Here, the Supreme Court took the view that § 271(f) only applies to situations in which the components sent and the components used in the invention assembled abroad are identical.⁶⁴ It held that:

Section 271(f) prohibits the supply of components “from the United States . . . in such manner as to actively induce the combination of *such components*.” § 271(f)(1) (emphasis added). Under this formulation, the very components supplied from the United States, and not copies thereof, trigger § 271(f) liability when combined abroad to form the patented invention at issue. Here, as we

⁵⁹ *Microsoft*, 127 S.Ct. at 1753.

⁶⁰ *Id.* at 1755.

⁶¹ *Id.*

⁶² This view may have important consequences in the area of biotechnology. Genes are essentially abstract code expressed in the form of nucleotides arranged on a double stranded biopolymer. Genes reproduced and transferred from one organism to another would not appear to be supplied components within the meaning of 35 U.S.C. § 271(f) (2012).

⁶³ *Microsoft*, 127 S.Ct. at 1756–57; *see also* *AT&T Corp. v. Microsoft Corp.*, 414 F.3d 1366, 1370 (Fed. Cir. 2005), *rev'd*, 550 U.S. 437 (2007), and *order recalled and vacated*, 227 Fed. Appx. 920 (Fed. Cir. 2007) (asserting that, “for software ‘components,’” the act of copying is subsumed in the act of “supplying”).

⁶⁴ *Microsoft*, 127 S.Ct. at 1757.

have repeatedly noted, the copies of Windows actually installed on the foreign computers were not themselves supplied from the United States. Indeed, those copies did not exist until they were generated by third parties outside the United States The absence of anything addressing copying in the statutory text weighs against a judicial determination that replication abroad of a master dispatched from the United States “supplies” the foreign-made copies from the United States within the intentment of § 271(f).⁶⁵

In the last portion of the opinion, the Court emphasized that, despite the passage of § 271(f) by Congress, there is a strong presumption against extraterritoriality that should act as a restraint against expansive interpretations of this section of the law⁶⁶ and rejected the view that the ease with which infringement can be avoided should be a substantial factor in deciding how to interpret § 271(f)(1).⁶⁷

On a technical level, *Microsoft* establishes that the components referred to in 35 U.S.C. § 271(f)(1) are limited to tangible subject matter and that the actual material sent from the United States must itself be combined with other elements to establish an infringing invention.⁶⁸ More generally, it indicates that the Supreme Court is very cognizant of the potential issues of extraterritoriality posed by this statute and that they are likely to be reluctant to construe its terms expansively in the future.⁶⁹

*D. Cardiac Pacemakers v. St. Jude Medical*⁷⁰

This case has a complicated litigation history, which, for the most part, is of no importance to the present discussion. Of relevance is that Cardiac Pacemakers sued St. Jude for infringing patent claims to *methods* of using implantable cardioverter

⁶⁵ *Id.*

⁶⁶ *Id.* at 1758–59.

⁶⁷ *Id.* at 1760.

⁶⁸ *Id.* at 1755.

⁶⁹ *Id.* at 1759–60.

⁷⁰ *Cardiac Pacemakers, Inc. v. St. Jude Med., Inc.*, 576 F.3d 1348 (Fed. Cir. 2009).

defibrillators (“ICDs”) in the District Court for the Southern District of Indiana.⁷¹ The court held that 35 U.S.C. § 271(f)(1) applies to method claims and that St. Jude’s shipment of ICDs abroad could result in a violation of that section of the statute.⁷² St. Jude appealed this holding, and the Federal Circuit affirmed the district court’s decision. St. Jude then filed a petition for rehearing en banc, which was granted.⁷³

The en banc court overruled both the district court and its own previous decision and held that method claims are not covered by § 271(f).⁷⁴ One reason for this is that, like the abstract information discussed in *Microsoft*, individual steps in a process claim are not tangible components capable of being transferred in the sense of the statute.⁷⁵ Thus, the court stated:

In interpreting the terms of Section 271(f), it is critical to recall what a “patented invention” consists of when method patents are at issue. We have noted “the distinction between a claim to a product, device, or apparatus, all of which are tangible items, and a claim to a process, which consists of a series of acts or steps.” Thus, a component of a tangible product, device, or apparatus is a tangible part of the product, device, or apparatus, whereas a component of a method or process is a step in that method or process. As we demonstrate herein, this fundamental distinction between claims to a product, device, or apparatus on one hand and claims to a process or method on the other, is critical to the meaning of the statute and dooms Cardiac’s argument on this issue.⁷⁶

⁷¹ *Id.* at 1352.

⁷² *Id.* at 1359. The district court relied on a previous Federal Circuit decision, *Union Carbide Chems. & Plastics Tech. Corp. v. Shell Oil Co.*, 425 F.3d 1366 (2005), in holding that method claims could be infringed under 35 U.S.C. § 271(f) (2012). *Id.*

⁷³ *Cardiac Pacemakers, Inc. v. St. Jude Med., Inc.*, 315 Fed. Appx. 273 (Fed. Cir. 2009).

⁷⁴ *Cardiac Pacemakers, Inc.*, 576 F.3d at 1362.

⁷⁵ *Id.*

⁷⁶ *Id.* at 1362 (citations omitted).

Importantly, the court draws a distinction between the tangible compositions or devices that may be used in performing the steps of a method and the steps themselves:

Cardiac disagrees that a component of a patented method is a step of that method. Instead, Cardiac urges us to adopt a definition of “component” that would encompass “the apparatus that performed the process.” That position is clearly contrary to the text of Section 271(f). It is not even supported by the lone amicus brief we have received in favor of including method patents within Section 271(f)’s reach.⁷⁷

Thus, it is the steps that are the components referred to in § 271(f) and not the tangible materials used in performing the steps. In order to infringe under § 271(f), a United States company would have to supply a foreign party with a method step, and this is not possible under the way in which the term “supply” has been construed:

Although such patented methods do have components, as indicated, Section 271(f) further requires that those components be “supplied.” That requirement eliminates method patents from Section 271(f)’s reach. The ordinary meaning of “supply” is to “provide that which is required,” or “to furnish with . . . supplies, provisions, or equipment.” These meanings imply the transfer of a physical object. Supplying an intangible step is thus a physical impossibility, a position that not even Cardiac seems to dispute As we have noted before, “it is difficult to conceive how one might supply or cause to be supplied all or a substantial portion of the steps in a patented method in the sense contemplated by” Section 271(f).⁷⁸

III. PROMEGA CORP. V. LIFE TECHNOLOGIES CORP.⁷⁹

Short tandem repeats (STRs) are sequence elements that are repeated multiple times at specific sites in the human genome.⁸⁰

⁷⁷ *Id.* at 1363 (citations omitted).

⁷⁸ *Id.* at 1364.

⁷⁹ 773 F.3d 1338 (Fed. Cir. 2014).

The number of repeats at any given locus varies from one individual to the next, and by analyzing multiple sites, a profile may be obtained that allows an individual to be identified.⁸¹ One difficulty with STR profiling is that, in order for it to be efficiently performed, PCR amplification at multiple sites must be simultaneously carried out and, historically, it has been difficult to find PCR primers that can be used together without adversely affecting one another's effectiveness.⁸²

Promega owned (or had) an exclusive license to several patents that covered kits for STR profiling. In 2010, it brought suit before a jury in the United States District Court for the Western District of Wisconsin alleging that Life Technologies had infringed upon these patents.⁸³ One of the allegations made was that Life Technologies had violated § 271(f)(1) by shipping *Taq* polymerase from the United States to a Life Technologies facility in the United Kingdom where it was sold as part of STR profiling kits.⁸⁴ In addition to the polymerase, the kits included a primer mix; a PCR reaction mix; a buffer solution; and control DNA.⁸⁵ The jury found in favor of Promega on this issue and awarded damages based on the sales that had occurred overseas.⁸⁶ This finding was vacated in a JMOL by the district court, and Promega appealed to the Federal Circuit.⁸⁷

A. Requirement for "All or a Substantial Portion of the Components"

After ruling on issues concerning the validity of Promega's claims,⁸⁸ the Federal Circuit addressed the two primary findings on

⁸⁰ *Id.* at 1342.

⁸¹ *Id.*

⁸² *Id.*

⁸³ *Id.* at 1343–44.

⁸⁴ *Id.* at 1345.

⁸⁵ *Promega Corp. v. Life Technologies Corp.*, 773 F.3d 1338, 1345 (Fed. Cir. 2014).

⁸⁶ *Id.*

⁸⁷ *Id.*

⁸⁸ During appeal, the Federal Circuit found most of the claims that Promega tried to enforce to be invalid due to their failure to meet the enablement

which the lower court had based its JMOL.⁸⁹ The first of these concerned the requirement of § 271(f)(1) that an infringer must have supplied “all or a substantial portion of the components of a patented invention.”⁹⁰ By comparing the language of § 271(b)⁹¹ and § 271(f) and carrying out a textual analysis, the district court reached the conclusion that infringement under § 271(f) could not be the result of supplying only a single component of multicomponent invention.⁹² Since Life Technologies had only supplied *Taq* polymerase to a kit that had a total of five components, the court concluded that no infringement had occurred.⁹³

On appeal, the Federal Circuit reversed based on the following reasoning:

The dictionary definition of “substantial” is “important” or “essential.” A “portion” is defined as a “section or quantity within a larger thing; a part of a whole.” Nothing in the ordinary meaning of “portion” suggests that it necessarily requires a certain quantity or that a single component

requirement of patentability. However, one claim survived and provided a basis for Promega’s assertions under § 271(f). This read as follows:

42. A kit for analyzing polymorphism in at least one locus in a DNA sample, comprising: a) at least one vessel containing a mixture of primers constituting between 1 and 50 of said primer pairs; b) a vessel containing a polymerizing enzyme suitable for performing a primer-directed polymerase chain reaction; c) a vessel containing the deoxynucleotide tri-phosphates adenosine, guanine, cytosine and thymidine; d) a vessel containing a buffer solution for performing a polymerase chain reaction; e) a vessel containing a template DNA comprising i) a simple or cryptically simple nucleotide sequence having a repeat motif length of 3 to 10 nucleotides and ii) nucleotide sequences flanking said simple or cryptically simple nucleotide sequence that are effective for annealing at least one pair of said primers, for assaying positive performance of the method.

U.S. Patent No. RE37,984, col. 16 (filed Feb. 11, 2003).

⁸⁹ Promega Corp. v. Life Techs. Corp., No. 10-cv-281-bbc, 2010 U.S. Dist. LEXIS 82708, at *10-15 (W.D. Wis. Aug. 9, 2010).

⁹⁰ *Id.* at *10–13.

⁹¹ Section 271(b) is also concerned with inducing infringement, but requires there to have been direct infringement in the United States.

⁹² *Life Techs.*, 2010 U.S. Dist. LEXIS 82708, at *10-15.

⁹³ *Id.* at *15.

cannot be a “portion” of a multi-component invention. Rather, the ordinary meaning of “substantial portion” suggests that a single important or essential component can be a “substantial portion of the components” of a patented invention⁹⁴

Taq polymerase is an enzyme used to amplify the DNA sequences in order to obtain enough replicated sample for testing. Without *Taq* polymerase, the genetic testing kit recited in the Tautz patent would be inoperable because no PCR could occur. LifeTech’s own witness admitted that the *Taq* polymerase is one of the “main” and “major” components of the accused kits. In short, there is evidence in the record to support the jury’s finding that a polymerase such as *Taq* is a “substantial portion” of the patented invention.⁹⁵

As a practical matter, there are at least two problems with this analysis. The first is that almost any component might be found to be “important” to an invention that it is a part of, and the only criteria provided by the court for determining exactly what this term means is that “important components” include those that are essential for the operability of an invention. For example, since the STR assays of the Life Technologies kits could not be carried out in the absence of the *Taq* polymerase, the Federal Circuit concluded that this enzyme, by itself, constitutes a substantial portion of the components in the assay kits.⁹⁶

While the court’s finding that the *Taq* polymerase is essential is certainly correct, it is also true that the assays could not have been performed in the absence of the primers, the reaction mix, or the buffer.⁹⁷ The sole component of the kits that might be left out

⁹⁴ *Promega Corp. v. Life Techs. Corp.*, 773 F.3d 1338, 1353 (Fed. Cir. 2014) (citations omitted).

⁹⁵ *Id.* at 1353, 1356 (citations omitted).

⁹⁶ *Id.*

⁹⁷ PCR amplifications require primers to hybridize to specific DNA sequences and thereby set sites of amplification, a reaction mixture that contains reactants needed for the amplification to proceed and a buffer to suspend components and maintain the desired pH. *PCR Amplification*, PROMEGA CORP.,

without completely destroying operability would be the DNA control sequences, and even these cannot be unequivocally identified as being outside the scope of § 271(f)(1) since the Federal Circuit did not suggest that *only* components that are essential to operability are “important.”⁹⁸ The control sequences would certainly be “important” in the sense that they help to ensure the reliability of assays. Thus, the guidance provided by the court does little to help in determining whether a particular component might, by itself, trigger liability.

The second problem with the Federal Circuit’s construction of “all or a substantial portion” was pointed out in the Amicus Brief for the United States filed in support of the Supreme Court granting certiorari in this case.⁹⁹ Specifically, the Brief argues that defining this phrase as referring to a quantitative portion of components is actually more compatible with a textual analysis of the statute than defining it in terms of the relative importance of components:

The term “substantial” can have either a quantitative meaning (“of ample or considerable amount”) or a qualitative meaning (“important”). Section 271(f)(1)’s context makes clear that the provision uses the term “substantial” in its quantitative sense. Section 271(f)(1) imposes liability for supplying “*all or a substantial portion of the components*” of the invention. 35 U.S.C. 271(f)(1) (emphases added). The term “all” necessarily carries a quantitative meaning: when used with a plural noun, “all” means “the whole of” or “the whole number of.” The term “portion” likewise invokes a quantity: “a part of any whole.” The phrase “all or a substantial portion of the components” therefore is most naturally read to include (1)

<https://www.promega.com/resources/product-guides-and-selectors/protocols-and-applications-guide/pcr-amplification/> (last visited Feb. 19, 2017).

⁹⁸ *Life Techs.*, 773 F.3d at 1356.

⁹⁹ Brief of the United States as Amicus Curiae On Petition for Writ of Certiorari, *supra* note 14, at 16–17 (citations omitted). For arguments based on a comparison between the language used in § 271(f)(1) and § 272(f)(2), see Brief of the United States as Amicus Curiae On Petition for Writ of Certiorari, *supra* note 14, at 17–19.

all of the components of a patented invention, and (2) a quantitatively substantial percentage of those components. In a five-component invention like the genetic testing kit at issue here, the single most important component might constitute a substantial portion of the *invention*, but it cannot constitute a substantial portion of the *components*.¹⁰⁰

Overall, the Federal Circuit's treatment of the term "all or a substantial portion"¹⁰¹ leaves the basis for its presence in the statute unclear. As such, it is not a substantive requirement that a manufacturer might comfortably use as a basis for concluding that a prospective transfer will not be infringing.

B. Requirement for Active Inducement

The Federal Circuit also reviewed the district court's finding that the requirement in § 271(f)(1) that an infringer must "actively induce the combination of components" means that there must be another party, unrelated to the infringer, that is the object of the inducement.¹⁰² Since Life Technologies just supplied *Taq* polymerase to a foreign branch of the same company, the district court concluded that no unrelated party existed and infringement had not occurred.¹⁰³

Again, the Federal Circuit reversed, stating:

To begin, we acknowledge that the word "induce" can suggest that one is influencing or persuading "another." However, induce also encompasses the more broad concept of "to bring about, to cause." . . . The object of the transitive verb "induce" can either be a person or a thing, such as an activity or result. The statute is written such that an activity—"the combination"—is the object of "induce," not a person. Had Congress wanted to limit "induce" to actions completed by two separate parties, it could easily have done so by assigning liability only where one party

¹⁰⁰ *Id.* at 16–17 (citations omitted).

¹⁰¹ *Life Techs.*, 773 F.3d at 1352.

¹⁰² *Id.* at 1351–53; *see also* *Promega Corp. v. Life Techs. Corp.*, No. 10-cv-281-bbc, 2010 U.S. Dist. LEXIS 82708, at *15-18 (W.D. Wis. Aug. 9, 2010).

¹⁰³ *Life Techs.*, 773 F.3d at 1351.

actively induced *another* “to combine the [patented] components.” Yet, “another” is absent from § 271(f)(1) . . .

¹⁰⁴

Given Congress’ choice of broadening language — which focuses solely on the activity abroad (“the combination”) rather than the actor performing the combination—and acknowledgment of “the need for a legislative solution to close a loophole” identified in *Deepsouth*, Legislative History, 1984 U.S.C.C.A.N. at 5828, it is unlikely that Congress intended § 271(f)(1) to hold companies liable for shipping components overseas to third parties, but not for shipping those same components overseas to themselves or their foreign subsidiaries.¹⁰⁵

It should be noted that the court construes an *activity* (the making of the combination invention) and *not infringement* as being the object of inducing.¹⁰⁶ It should also be noted that there is no indication that inducement to make the combination requires anything more than the sale of a component.¹⁰⁷ These factors suggest that United States manufacturers supplying components to companies abroad may be liable even if they did not realize that a composition subsequently made and sold abroad was covered by a United States patent, even though they may have done nothing to encourage the assembly the infringing product beyond having supplied one or more components.

IV. SUMMARY AND ANALYSIS

The decisions by the Supreme Court and the Federal Circuit discussed herein have given United States manufacturers a few clear benchmarks for determining when sales to foreign buyers can be carried out without creating a substantial risk of infringement under section § 271(f). Under current law, manufacturers will not infringe any claims to *methods* by selling components to products overseas or by providing information on how to perform a

¹⁰⁴ *Id.*

¹⁰⁵ *Id.* at 1352–53.

¹⁰⁶ *Id.* at 1351.

¹⁰⁷ *Id.*

method.¹⁰⁸ Nor should there be infringement in situations in which material sent to a buyer is not used directly as part of an invention, but is only used to make copies that are incorporated into inventions.¹⁰⁹ This may be used to exclude the transfer of software (as in *Microsoft*) and perhaps some types of biological inventions from creating a risk of infringement.

Apart from transfers involving these factors, trying to reliably ascertain whether the transfer of a component to a foreign buyer may infringe § 271(f)(1) becomes much more complicated. One element in the statute that might be relied on in trying to find a basis for concluding that a sale can be safely made is the requirement that a manufacturer must have supplied a foreign entity with “all or a substantial portion of the components of a patented invention.”¹¹⁰ However, according to the Federal Circuit in its *Life Technologies* decision, even a single component may fulfill this requirement provided that it is important or essential to the operability of the invention.¹¹¹ As previously discussed herein, this statutory construction could apply to almost any component and will therefore be essentially useless to a manufacturer trying to ascertain the risk associated with a sale.

A second element in § 271(f)(1) that might provide a basis for limiting the scope of the statute is that components must be supplied “in such manner as to *actively induce* the combination of such components outside of the United States.”¹¹² The requirement of active inducement also appears in § 271(b), a statute that differs from § 271(f) in that it is concerned with inducing direct infringement in the U.S. Nevertheless, there has historically been a tacit assumption that the requirement of active inducement is essentially the same in both statutes.¹¹³

¹⁰⁸ See *Cardiac Pacemakers, Inc. v. St. Jude Med., Inc.*, 576 F.3d 1348, 1362 (Fed. Cir. 2009).

¹⁰⁹ *Microsoft Corp. v. AT&T Corp.*, 127 S.Ct. 1746, 1757 (2007).

¹¹⁰ See *Life Techs.*, 773 F.3d at 1356.

¹¹¹ *Id.*

¹¹² *Id.* at 1351.

¹¹³ This is important because the law surrounding 35 U.S.C. § 271(b) (2012) has received a great deal of clarification in decisions by the United States Supreme Court, whereas § 271(f) has received relatively little attention.

The elements necessary for establishing an intent to induce infringement¹¹⁴ under 35 U.S.C. § 271(b) were considered by the Federal Circuit in *DSU Medical Corp. v. JMS Co.*¹¹⁵ Part of this case was heard en banc with the objective of resolving prior conflicting decisions of the Federal Circuit regarding whether an inducer need only have had an intent to induce the *acts* that that led to infringement (in which case knowledge of infringement is not required) or whether the inducer must have had an intent to actually induce infringement itself.¹¹⁶ Citing *Manville Sales Corp. v. Paramount Systems, Inc.*,¹¹⁷ the *DSU Medical Corp.* court stated:

The plaintiff has the burden of showing that the alleged infringer's actions induced infringing acts and that he knew or should have known his actions would induce actual infringements. The requirement that the alleged infringer knew or should have known his actions would induce actual infringement necessarily includes the requirement that he or she knew of the patent.¹¹⁸

Later, the court further elaborated on the requirements for active inducement:

To establish liability under section 271(b), a patent holder must prove that once the defendants knew of the patent, they “actively and *knowingly* aid[ed] and abett[ed] another's direct infringement.” However, “knowledge of the acts alleged to constitute infringement” is not enough. The “mere knowledge of possible infringement by others

Specifically, there have been four recent Supreme Court decisions addressing the meaning of inducement under § 271(b), but only in *Microsoft* was inducement under § 271(f) considered.

¹¹⁴ Although 35 U.S.C. § 271(b) (2012) does not specify that intent is required to induce infringement, it has long been held to be a requirement. See Timothy R. Holbrook, *The Intent Element of Induced Infringement*, 22 SANTA CLARA HIGH TECH. L.J. 399, 408 (2005).

¹¹⁵ See *DSU Med. Corp. v. JMS Co., Ltd.*, 471 F.3d 1293, 1304 (2006).

¹¹⁶ See Holbrook, *supra* note 8, at 1008.

¹¹⁷ *Manville Sales Corp. v. Paramount Sys. Corp.*, 917 F.2d 544, 554 (Fed. Cir. 1990).

¹¹⁸ *DSU Med. Corp.*, 471 F.3d at 1304 (citations omitted).

does not amount to inducement; specific intent and action to induce infringement must be proven.”¹¹⁹

Thus, it appears settled that infringement under § 271(b) is restricted to those instances in which there was bad intent involved. However, there is an important distinction between § 271(b) and § 271(f). The former statute states that “[w]hoever actively induces *infringement* of a patent shall be liable as an infringer[,]”¹²⁰ whereas the latter is concerned with actively inducing “the *combination of such components outside of the United States* in a manner that would infringe.”¹²¹ Just on its face, it would appear that § 271(f)’s language is much more in keeping with the view that all that is needed for a manufacturer to be liable is for it to have induced the *actions* on the part of a foreign purchaser.

This view is also consistent with the way that the Federal Circuit discussed inducement in its recent *Life Technologies* decision.

We first address whether “to actively induce the combination” requires involvement of a third party *or merely the specific intent to cause the combination of the components of a patented invention* outside the United States

The object of the transitive verb “induce” can either be a person or a thing, such as an activity or result. The *statute is written such that an activity — “the combination” — is the object of “induce,” not a person*”¹²²

Neither this decision by the Federal Circuit nor the *Microsoft* decision by the United States Supreme Court ever mentions intent to induce *infringement* (as opposed to intent to induce the combination of an infringing composition) as a factor in determining liability. In *Microsoft*, the Court states:

¹¹⁹ *Id.* at 1305.

¹²⁰ 35 U.S.C. § 271(b) (2012) (emphasis added).

¹²¹ *Id.* § 271(f)(1) (emphasis added).

¹²² See *Promega Corp. v. Life Techs. Corp.*, 773 F.3d 1338, 1351 (Fed. Cir. 2014) (citations omitted). Note the absence of any suggestion of intent to induce *infringement*.

Section 271(f) prohibits the supply of components “from the United States . . . in such manner as to actively induce the combination of *such components*.” § 271(f)(1) (emphasis added). Under this formulation, the very components supplied from the United States, and not copies thereof, trigger § 271(f) liability when combined abroad to form the patented invention at issue.¹²³

If inducement under § 271(f) only means inducing the making of a combination, a manufacturer in the United States sending a component overseas that is then used in as part of composition will rarely know the degree to which these actions may be creating a potential for infringement under § 271(f) and, short of abandoning sales from the United States, will generally be able to do nothing to avoid liability.¹²⁴ It also means that if the manufacturer is aware of a potentially problematic patent, it cannot use a good faith belief that the foreign composition was noninfringing as a means of exoneration. As far as can be told from case law, merely selling the component may be all that is needed to fulfill the § 271(f)(1) requirement for active inducement.

V. CONCLUSION

As previously noted, the Supreme Court is currently reviewing the Federal Circuit’s holding that the sale of a single commodity component of a multi-component invention may be an infringing act under 35 U.S.C. § 271(f)(1).¹²⁵ A reversal of the Federal Circuit would provide manufacturers with an additional benchmark that they can use in concluding that some sales can be made to foreign buyers without incurring substantial risks of infringement. However, a great deal of uncertainty will remain in instances where it is unclear whether a component being sold actually qualifies as a commodity or where the manufacturer needs to sell more than a single component.

¹²³ Microsoft Corp. v. AT&T Corp., 127 S.Ct. 1746, 1757 (2007) (emphasis added).

¹²⁴ Reasons for this include the possibility of there being unidentified United States patents relevant to products made abroad and a lack of control concerning what foreign purchasers do.

¹²⁵ See *Life Techs.*, 773 F.3d at 1341.

What is needed is for Congress to repeal § 271(f) entirely. To the extent that the statute had any merit at the beginning (and it is not clear that it did), it has none today. Two of the justifications for passing the bill were that it would improve the United States trade deficit and protect United States jobs. In fact, the bill does the opposite. It puts United States manufacturers in a position where they must consider how goods that they sell overseas will be used. If the goods are combined in a way that would infringe a United States patent on a device or composition, there is a possibility that the manufacturer will be facing a lawsuit and exposure to substantial damages. This is true even though infringement only occurs in a theoretical sense (composition claims in United States patents do not normally cover products made and sold outside of the US) and even though the United States manufacturer cannot control, and has not directly benefited from, the sale of the foreign products. Thus, legislation that was supposed to promote the export of United States goods and protect United States jobs has, ironically, created a problem for manufacturers that can most easily be solved by these manufacturers either abandoning foreign sales entirely or moving the production of goods outside of the US.

One underlying motivation that drove the passage of the statute, that patent holders were being cheated of rights due to a loophole in the law, does not seem to have a clear factual basis. The statute imposes liability when no product has been made, used, or sold in the United States that would affect a patent owner's profits, and the ability of the patent owner to enforce its rights against a foreign company that attempts to sell an infringing product in the United States has not been compromised. If the United States patent owner also has patents in foreign countries, then these can still be enforced. If the patent owner has not pursued patent protection in those countries or has been unable to secure such rights, then what is there to justify holding a United States manufacturer, a party that did not even make the sales, liable?

Perhaps at the time that the legislation establishing § 271(f) was enacted, the thought was that, if a foreign company could not buy components made in the U.S., it would not be able to make products containing those components and foreigners would have no choice but to buy higher value United States goods. There does

not appear to be anything in the congressional record that actually supports such a view, but even if it was true in 1984, it certainly is not today. A foreign company that cannot buy a component made in the United States will simply buy it elsewhere. The only things affected will be the sale of components by United States companies and the jobs derived from those sales.