

Extraterritorial Reach of U.S. Patent Law: Has the Federal Circuit Gone Too Far?

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INTRODUCTION

You have a U.S. patent covering invention X comprising three components: A, B, and C, and assume the law only protects inventions within the U.S. I would be infringing your patent if, without permission, I used invention X within the U.S. But what if invention X is partly inside the U.S. and partly outside the U.S.; would I still be infringing? What if I export components A, B, and C to Canada and make invention X in Canada; would I be infringing then? Now assume that very scenario is illegal, i.e., it is illegal to export components of a patented invention with the intention of making the patented invention outside the U.S. What if A, B, and C are lines of software code and your invention is a video game and several hundred thousand copies are made in Canada; would I be liable for every copy made? These scenarios depict the cutting edge problems with determining the extraterritorial reach of U.S. patent law.

In 1976, the U.S. Supreme Court enunciated a long-established principle: “[W]e . . . insist on a clear congressional indication of intent to extend the patent privilege.”¹ The Supreme Court’s

¹ *Deepsouth Packing Co. v. Laitram Corp.*, 406 U.S. 518, 532 (1972).

statement was in response to the export of components for combination outside the U.S.² At issue was a patent that covered a working machine, but the patent did not cover the components.³ The alleged infringer cleverly thought, and the Supreme Court agreed, that he could export the components and complete the machine outside the U.S. without violating the patent on the machine because he did not “make” or “use” the machine within the U.S.⁴ A few short years later, Congress passed legislation to close this loophole,⁵ thus, making it illegal to supply components for infringement (albeit actual infringement would occur outside U.S. borders).⁶ When infringers subtly modify their behavior to technically circumvent U.S. patent law and embarrass the spirit of U.S. patent protection, how can courts offer protection while abiding by the proscriptions against extraterritorial reach? Two cases highlight this struggle.⁷ First, if the invention at issue is located both outside and inside U.S. borders, such as a transnational communications system, how do courts determine if an alleged infringer actually “used” the invention within the U.S.? Second, if the invention at issue is intangible and easily replicable, such as software code, how do courts determine if an alleged infringer actually “supplied” the components for the resulting copies made outside the U.S.?

Part I of this Note discusses pertinent background including the original presumption against extraterritorial effect, forms of infringement, and types of patent claims. Part II discusses the two leading cases interpreting the edges of extraterritorial reach. Part III analyzes the Federal Circuit’s contextual approach in the two leading cases on extraterritorial reach.

² *Id.* at 523.

³ *See id.* at 528.

⁴ *Id.* at 528–29.

⁵ *See Pellegrini v. Analog Devices, Inc.*, 375 F.3d 1113, 1116 (Fed. Cir. 2004) (citing 130 Cong. Rec. H10525 (1984)).

⁶ *Id.* (referring to 35 U.S.C. § 271(f)).

⁷ *See NTP, Inc. v. Research In Motion, Ltd.*, 418 F.3d 1282 (Fed. Cir. 2005), *cert. denied*, 126 S. Ct. 1174 (2006); *AT&T Corp. v. Microsoft Corp.*, 414 F.3d 1366 (Fed. Cir. 2005), *cert. granted*, 127 S. Ct. 467 (2006) (mem.).

I. BACKGROUND

Inquiry of the extraterritorial reach of U.S. patent law begins with the conceptual understanding of the Federal Circuit's contextual application of U.S. patent law. U.S. patent law can have extraterritorial effect if the form of infringement and type of patent, when combined, constitute territorial subject matter.⁸ Traditionally, U.S. patent law only affected acts within the United States.⁹ Historically, the Supreme Court has narrowly interpreted statutes to apply exclusively to acts inside the United States, unless Congress expressly stated otherwise.¹⁰ Courts have provided extraterritorial effect to U.S. patents not by broadly interpreting the Patent Act,¹¹ but rather by broadening the concept of subject matter considered to be inside the United States.¹² Courts have contextualized each infringement statute to the type of patent claim.¹³ For example, "using" a patented invention within the

⁸ See *NTP*, 418 F.3d at 1316. "Not only will the analysis [of extraterritoriality] differ for different types of infringing acts, it will also differ as the result of differences between different types of claims." *Id.* "Extraterritorial effect" or "extraterritorial reach," as used in this paper, refers to jurisdiction of U.S. patent law that extends beyond the territorial bounds of the United States. "Territorial," as used in this paper, refers to subject matter considered within the United States. "Extraterritorial," as used as an isolated term in this paper, refers to subject matter considered beyond jurisdiction of U.S. patent law.

⁹ See *Brown v. Duchesne*, 60 U.S. 183, 195 (1856) (describing patent holder rights limited to the United States); *Deepsouth Packing Co.* 406 U.S. at 527 (citing 35 U.S.C. § 271(a)). The Supreme Court held that manufacture and exportation of components for completed assembly outside the United States did not constitute making the claimed combination invention. *Id.* at 527–28; Curtis A. Bradley, *Territorial Intellectual Property Rights in an Age of Globalism*, 37 VA. J. INT'L L. 505, 513–16 (1997) (presenting five justifications for a presumption against extraterritorial reach of U.S. patent law: international law, comity between nations, *lex loci delicti*, congressional intent, and separation-of-powers). Bradley argued extraterritorial impact of U.S. law is a political and foreign policy question reserved for the Executive and Legislative branches. *Id.* at 516.

¹⁰ See Bradley, *supra* note 9, at 510–12 (discussing that the Supreme Court construes federal statutes to have only territorial effect) (citing *Am. Banana Co. v. United Fruit Co.*, 213 U.S. 347, 357 (1909)); see also Stanley Young, *Global Aspects of United States Patent Protection*, 823 PLI/Pat 363, 376 (2005) (describing explicit and implicit congressional intent underlying relevant statutes).

¹¹ 35 U.S.C. § 271 (2000) (defining infringement).

¹² See *NTP*, 418 F.3d at 1316.

¹³ See *id.* Although the BlackBerry e-mail system had a network component in Canada, the Federal Circuit held the system was territorial subject matter for U.S. patent law because BlackBerry users "used" the system within the U.S. *Id.* at 1317. The Federal

United States violates 35 U.S.C. § 271(a). However, “use” of a *device* differs from “use” of a *process*.¹⁴

Part A of this section discusses the origins of the presumption against extraterritorial effect for U.S. patent law. Part B discusses the various forms of infringement as a factor in determining extraterritorial effect. Part C discusses various types of patent claims as a factor in determining extraterritorial effect. Part D discusses the interplay between the courts and Congress in honing the edges of extraterritorial reach. Part E discusses jurisdiction.

A. *Presumption against Extraterritorial Effect*

Prior to the enactment of the modern statute for patent infringement, the Supreme Court held “acts of Congress do not, and were not intended to, operate beyond the limits of the United States”¹⁵ In 1856, the Supreme Court refused to enforce a patentee’s rights over a French vessel temporarily docked at a Boston port.¹⁶ In 1915, the Supreme Court refused to enforce a patentee’s rights over grain drills sold in a foreign country despite the fact that the drills were made in the U.S. because the seller only purchased and resold the patented invention.¹⁷ After Congress codified the modern-day infringement laws, the Supreme Court remained steadfast to its longstanding tradition of viewing U.S. patent law with a presumption against extraterritoriality and

Circuit held the Blackberry process was not territorial subject matter because users did not “use” the process in the U.S. *Id.* at 1318 (discussing that a process is merely a series of steps and the user did not complete the steps within the U.S. because one step occurred in Canada).

¹⁴ See *id.* at 1316–18 (discussing difference between use of a system and use of a process). To “use” a process in the U.S. all steps of the process must be performed within the U.S. *Id.* at 1318.

¹⁵ *Brown v. Duchesne*, 60 U.S. 183, 195 (1856) (describing the presumption that rights conferred on patent holders by Congress do not extend outside the United States); cf. *Am. Banana*, 213 U.S. at 356 (describing reasons for a presumption against extraterritorial effect). The Supreme Court held that the Sherman Antitrust Act did not apply to a U.S. corporation operating in Panama and Costa Rica, because extraterritorial effect would be “contrary to the comity of nations” *Id.*

¹⁶ *Brown*, 60 U.S. at 188 (stating holding).

¹⁷ *Dowagiac Mfg. Co. v. Minn. Moline Plow Co.*, 235 U.S. 641, 650 (1915) (stating holding). The only act of infringement the defendant committed was selling the invention and because the defendant sold the invention in Canada, the Supreme Court held “[infringement] cannot be predicated of acts wholly done in a foreign country.” *Id.*

refused to grant extraterritorial effect unless there was “a clear congressional indication of intent to extend the patent privilege”¹⁸

In 1856, in *Brown v. Duchesne*,¹⁹ the Supreme Court held that an improvement aboard a French vessel did not infringe the U.S. patent covering the improvement because the French vessel was only temporarily in a U.S. port.²⁰ The *Alcyon*, a French schooner, sailed into Boston as part of a roundtrip voyage from St. Peters, a French colony.²¹ The gaff saddle, a component of the schooner, incorporated an improvement covered by the plaintiff’s patent.²² The builder of the schooner added the improvement prior to launching the ship “in order to fit her for sea.”²³ The lower court held that the defendant did not infringe the plaintiff’s improvement patent, and the plaintiff appealed.²⁴

The Supreme Court inquired whether Congress intended for the patent laws to supersede the Government’s power to make treaties, particularly regarding international trade.²⁵ The Court refused to construct a statute that would “disarm the Government of [such] a power . . . unless plain and express words indicated that such was the intention of the Legislature.”²⁶ The Court emphasized that the exclusive right conferred on a patent holder concerned conduct

¹⁸ *Deepsouth Packing Co. v. Laitram Corp.*, 406 U.S. 518, 532 (1972). For discussion on *Deepsouth*, see *infra* Part I.B.1.

¹⁹ 60 U.S. 183 (1856).

²⁰ *Id.* at 188 (stating holding).

²¹ *Id.* at 193 (stating facts).

²² *Id.*

²³ *Id.*

²⁴ *Id.* at 194 (stating procedural history).

²⁵ *Id.* at 195 (discussing separation of powers). Prior to turning to Congress’ intent behind the patent laws, the Court dismissed plaintiff’s assertion that the defendant used the improvement in the United States because the defendant only used the improvement “on the high seas, and in other places out of the jurisdiction of the United States.” *Id.* at 196. The Court stated that making or selling the improvement in the United States would constitute infringement, but because the improvement was a sail component, “the vessel could hardly be said to use [the improvement] while she was at anchor in the port” *Id.*

²⁶ *Id.* at 195. The patent laws represented Congress’s power to regulate commerce and “promote the progress of science and useful arts.” *Id.*

solely “within the limits of the United States.”²⁷ The construction of the patent laws preferred by the plaintiff would confer upon the patentee a power that could “seriously embarrass the commerce of the country with foreign nations.”²⁸ The Court held that Congress did not contemplate nor intend this implication.²⁹ Thus, the Court held that patentee rights did not extend to foreign vessels lawfully entering U.S. ports.³⁰

The Court found a presumption against extraterritorial effect because larger policy issues outweighed the rights of the patentee—policy issues such as international trade, the Executive’s power to negotiate trade treaties, and Congress’s lack of expressed intent to frustrate the Executive’s treaty-making power.³¹

In 1915, in *Dowagiac Manufacturing Co. v. Minnesota Moline Plow Co.*,³² the Supreme Court held that a patentee could not recover damages for foreign sales of infringing grain drills made in the U.S. because the location of sales controlled liability and therefore sales in Canada were beyond the reach of U.S. patent law.³³ Plaintiff held a patent for an improvement of a grain drill, and manufactured and sold grain drills with the improvement.³⁴

²⁷ *Id.* (describing rights of patent holders). “[T]hese acts of Congress do not, and were not intended to, operate beyond the limits of the United States . . .” *Id.*

²⁸ *Id.* at 197. Plaintiff’s construction of patent law would “confer . . . not only rights of property, but also political power, and enable [patentees] to embarrass the treaty-making power” of the Government and enable patentees to interfere with Congress’s power to regulate commerce. *Id.*

²⁹ *Id.* “We think these laws ought to be construed in the spirit in which they were made . . . and should not be strained by technical constructions to reach cases which Congress evidently could not have contemplated.” *Id.* “[I]t is impossible to suppose that Congress in passing these laws could have intended to . . . enable [the patentee] to exercise political power . . .” *Id.* at 198. The Court also opined whether Congress could empower an individual to impair the powers of either the legislative or executive branches. *Id.*

³⁰ *Id.* at 198 (stating holding). The Court added “that the use of such improvement . . . while she is coming into or going out of a port of the United States, is not an infringement . . . provided it was placed upon her in a foreign port, and authorized by the laws of the country to which she belongs.” *Id.* at 198–99.

³¹ *See id.* at 198.

³² 235 U.S. 641 (1915).

³³ *Id.* at 650 (stating that plaintiff could not add Canadian sales to calculation of damages). The defendant did not make the drills. *Id.*

³⁴ *Id.* at 642–43 (stating facts). The patent pertained to improvements on commonly used grain drills called “shoe-drills.” *Id.*

Defendant, a wholesaler of agricultural implements, purchased and resold drills in the U.S. and Canada “embodying substantially the same improvements.”³⁵ The trial court enjoined defendant from *any* further sales and awarded plaintiff nominal damages, which the court of appeals affirmed.³⁶

The Supreme Court held that plaintiff could not recover any profits or damages of drills *sold in Canada* because the patent only conferred on the plaintiff rights “confined to the United States and its Territories”³⁷ The Court added that infringement “cannot be predicated of acts wholly done in a foreign country.”³⁸ The Court distinguished an earlier case finding liability for foreign sales because here, the defendant did not make the infringing drills.³⁹

B. Infringement as a Factor in Determining Extraterritorial Effect

Courts often evaluate the type of infringement when determining whether to give extraterritorial effect to U.S. patent law. In 1952, Congress enacted Title 35 of the United States Code, which is the basis for current U.S. patent law.⁴⁰ 35 U.S.C. § 271

³⁵ *Id.* Manufacturer of infringing drills settled with plaintiff prior to this case. *Id.* Interestingly, although the Court held the plaintiff deserved more than nominal damages, the Court agreed with the lower courts’ justification for ruling that the defendant did not willfully infringe the patent because the patent at issue was not for a “new and operative grain-drill, *but only for* particular improvements in a type of grain-drill then in use and well known.” *Id.* at 644–45 (emphasis added).

³⁶ *Id.* at 643 (stating procedural history). The Circuit Court of Appeals affirmed the award of nominal damages because: 1) the patent was an improvement of a common drill; 2) marketability of the drill did not depend on the improvement; 3) plaintiff did not show defendant’s profits resulted from the improvement; and 4) plaintiff did not show other data essential to assessing damages sustained from the infringement. *Id.* at 643–44.

³⁷ *Id.* at 650 (stating scope of patent holder rights). The Court remanded the case for more factual findings to determine a reasonable approximation of damages because the defendant sold over 2500 drills, and “[t]he patent was valid and the invention meritorious.” *Id.* at 650–51 (describing why plaintiff was entitled to more than nominal damages).

³⁸ *Id.* at 650.

³⁹ *Id.* (citing *Goulds’ Mfg. Co. v. Cowing*, 105 U.S. 253 (1881)) (discussing that the defendant manufactured the infringing products in the United States).

⁴⁰ See *Patent Laws*, Excerpted from *General Information Concerning Patents* print brochure, <http://www.uspto.gov/web/offices/pac/doc/general/laws.htm> (last visited Jan. 12, 2007).

defines infringement.⁴¹ Some provisions of § 271 define direct infringement and other provisions of the statute define indirect infringement.⁴² Some provisions of § 271 explicitly provide for extraterritorial effect, while other provisions of the statute remain exclusive to acts occurring within the United States.⁴³ In addition to § 271, the International Trade Commission (“ITC”) provides another forum for redress to plaintiffs who suffer damages from the importation of infringing goods.⁴⁴

Direct infringement is defined by §§ 271(a), 271(f), and 271(g).⁴⁵ Section 271(a) pertains to actual infringement done within the U.S.⁴⁶ Section 271(f) pertains to exportation of goods for infringement outside the U.S.⁴⁷ Section 271(g) pertains to importation of goods made by patented processes.⁴⁸ This Note will focus on the Federal Circuit’s recent interpretations of §§ 271(a) and 271(f), however brief discussions of other sections are provided.

1. Section 271(a)

35 U.S.C. § 271(a) addresses direct infringement and does not have any explicit extraterritorial reach. Section 271(a) defines infringement as the following actions done without authority: “mak[ing], us[ing], offer[ing] to sell, or sell[ing] any patented invention, within the United States or import[ing] into the United

⁴¹ 35 U.S.C. § 271 (2000).

⁴² *Id.* Sections 271(a), 271(f), and 271(g) prohibit direct infringement. *Id.* §§ 271 (a), (f), (g). Sections 271(b) and 271(c) prohibit indirect infringement. *Id.* §§ 271 (b), (c). Indirect infringement includes induced and contributory infringement. *Id.*

⁴³ Sections 271(f) pertains to active supplying of goods outside the U.S. Section 271(g) pertains to importation of goods made outside the U.S., but the method of manufacture (outside the U.S.) was with a patented process. *Id.* §§ 271 (f), (g). Section 271(a) has no express extraterritorial effect. *Id.* § 271(a).

⁴⁴ Anne Elise Herold Li, Note, *Is the Federal Circuit Affecting U.S. Treaties? The ITC, § 271(g), GATT/TRIPS & the Kinik Decision*, 16 FORDHAM INTELL. PROP. MEDIA & ENT. L.J. 601, 611 (2006). For discussion on ITC, see *infra* Part I.B.3.a.

⁴⁵ 35 U.S.C. §§ 271(a), (f), (g) (2000).

⁴⁶ *Id.* § 271(a) (stating infringer “makes, uses, offers to sell, or sells . . . within the United States . . .”).

⁴⁷ *Id.* § 271(f) (stating infringer “supplies or causes to be supplied in or from the United States . . .”).

⁴⁸ *Id.* § 271(g) (stating infringer “imports into the United States . . . a product . . . made by a process patented in the United States . . .”).

States”⁴⁹ The principal limitation of § 271(a) is territoriality. Section 271(a) clearly requires that the listed activities occur *within the United States*. The difficult issue for courts to determine is whether an activity is actually within the United States.⁵⁰ For example, the Federal Circuit has approached the “use” prong of § 271(a)⁵¹ with two distinct analyses: (1) user-oriented analysis, and (2) control-oriented analysis.⁵² The user-oriented analysis focuses on whether the alleged infringer *used* the patented invention within the United States.⁵³ The control-oriented analysis focuses on whether the infringer *controlled* the patented invention from within the United States.⁵⁴

a) User-Oriented Analysis

The following cases highlight the user-oriented analysis of § 271(a) by focusing on the situs of “use” or manufacture. The cases are also important for their analysis of combination patents.⁵⁵ In *Deepsouth Packing Co. v. Laitram Corp.*,⁵⁶ the Supreme Court did not consider making and exporting components of a combination invention territorial subject matter because the defendant did not make nor use the claimed invention within the United States under § 271(a).⁵⁷ The defendant manufactured and

⁴⁹ *Id.* § 271(a).

⁵⁰ See Yar Chaikovsky, *Globalization, Technology without Boundaries & the Scope of U.S. Patent Law*, 9 INTELL. PROP. L. BULL. 95, 99 (2005).

⁵¹ 35 U.S.C. § 271(a) (2000). Other prongs of § 271(a) include: making, offering to sell, selling, and importing. *See id.*

⁵² See Chaikovsky, *supra* note 50, at 98–99.

⁵³ See *id.* at 99. The user-oriented analysis flows from the Supreme Court analysis in *Deepsouth*, a case that dealt with the export of components of a product. *See id.*

⁵⁴ See *id.* The control-oriented analysis flows from a series of lower court cases that dealt with subject matter that extended beyond U.S. borders such as international radar systems. *See id.*

⁵⁵ Combination patents are patents that cover an operable machine or assembly. Combination patents do not protect individual components used to make the operable machine or assembly, *unless* the components are combined to make the operable machine or assembly. *See infra* note 69 and accompanying text.

⁵⁶ 406 U.S. 518 (1972).

⁵⁷ *Id.* at 527–28 (stating holding). The Court held making and exporting components for a shrimp deveining machine did not infringe the plaintiff’s patent because the combination patent only covered the operational whole assembly and not the individual components. *Id.* at 528.

exported components for a shrimp deveining machine.⁵⁸ If final assembly occurred within the United States (i.e., the components combined), the product would have infringed the plaintiff's patent.⁵⁹ Nevertheless, the district court held that "making," under 35 U.S.C. § 271(a), in the context of combination patents did not include mere manufacture of components.⁶⁰ The district court refused to enjoin Deepsouth Packing ("Deepsouth") from exporting such components.⁶¹ The Fifth Circuit reversed the lower court.⁶² In doing so, the Fifth Circuit departed from other Circuits' precedents by following the spirit of the Patent Act and capturing conduct purely conceived to circumvent U.S. patent law.⁶³

Although the Supreme Court recognized the Fifth Circuit's intention,⁶⁴ the Supreme Court confined plaintiff's rights to those sprouting from the patent statute.⁶⁵ The Court emphasized that

⁵⁸ *Id.* at 523 (stating facts).

⁵⁹ *Id.* (stating facts). Defendant, Deepsouth, did not dispute infringement for making and selling completed deveiners in the United States, nor did Deepsouth dispute damages or injunction against further manufacturing and sales of deveiners in the United States. *See id.* n.5. Deepsouth requested modification of the injunction against exporting deveiner components to foreign costumers who intended to complete assembly outside the United States. *Id.* at 523–24. The Court noted that plaintiff's invention included a "slitter" and "tumbler" both of which were combination patents, "[n]one of the parts referred to are new, and none are claimed as new; nor is any portion of the combination less than the whole claimed as new And this combination . . . is the thing patented." *Id.* at 520–21 (quoting *Prouty v. Ruggles*, 16 Pet. 336, 341 (1842)).

⁶⁰ *See id.* at 524–25 (stating district court ruling).

⁶¹ *Id.* at 525 (stating district court ruling). Although combination may be predictable, the Court noted that "[i]t may be urged that . . . [this] result is not logical But it is founded on twin notions that underlie the patent laws. One is that a combination patent protects only the combination. The other is that monopolies . . . are not viewed with favor." *Id.* (quoting *Deepsouth Packing Co. v. Laitram Corp.*, 310 F. Supp. 926, 929 (E.D. La. 1970))

⁶² *Id.*

⁶³ *See id.* The Supreme Court relayed the sentiment behind the Fifth Circuit's panel opinion: "[the Second, Third, and Seventh Circuits] 'worked themselves into . . . a conceptual box' by adopting 'an artificial, technical construction' of the patent laws." *Id.* (quoting *Deepsouth Packing Co. v. Laitram Corp.*, 443 F.2d 936, 938–39 (5th Cir. 1971)).

⁶⁴ *Id.*

⁶⁵ *Id.* at 526 (describing 35 U.S.C. § 271 as the only source of authority that could give plaintiff a right to suppress Deepsouth from exporting deveiner components). The Court dismissed a theory of contributory infringement because there was no evidence of direct infringement inside the United States. *Id.* (describing prerequisite for application of 35 U.S.C. § 271(c)).

infringement, as defined by § 271(a), clearly did not include making or using a patented invention outside the United States.⁶⁶ Thus, the Court ruled that in order for plaintiff to recover, the plaintiff must show defendant made, used, or sold “the patented product within the bounds of this country.”⁶⁷ Plaintiff argued that Deepsouth sold the patented invention, but the Court reduced the sales question to a manufacturing question.⁶⁸ The Court held that Deepsouth did not manufacture the patented invention because “a combination patent protect[ed] only against the operable assembly of the whole and not the manufacture of its parts.”⁶⁹ In support of its ruling to deny the plaintiff a right to suppress Deepsouth’s extraterritorial activity, the Court reiterated the essence of *Brown v. Duchesne*, “Our patent system makes no claim to extraterritorial effect . . . and we correspondingly reject the claims of others to such control over our markets.”⁷⁰

Congress later passed § 271(f), making it an infringement to export components for completed assembly abroad. For discussion on subsequent cases dealing with § 271(f) see *infra* Part I.B.2. *Deepsouth* is still the basis for interpreting combination patents.⁷¹

⁶⁶ *Id.* at 527.

⁶⁷ *Id.* (describing plaintiff’s burden for relief). To prevail plaintiff must show direct infringement as defined by 35 U.S.C. § 271(a). *Id.*

⁶⁸ *Id.* (describing that manufacture was a necessary preceding step to selling the invention). The Court asked, “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?” *Id.*

⁶⁹ *Id.* at 528. The Court dismissed the Fifth Circuit’s view that “‘substantial manufacture of the constituent parts of [a] machine’ constitute[d] direct infringement . . .” *Id.* (quoting *Deepsouth Packing Co. v. Laitram Corp.*, 443 F.2d 936, 938–39 (5th Cir. 1971)). The dissent criticized the majority opinion for constructing 35 U.S.C. § 271(a) too narrowly and such a narrow construction would unfairly “reward the artful competitor . . .” *Id.* at 532–33 (Blackmun, J., dissenting).

⁷⁰ *Id.* at 531 (describing presumption against extraterritorial effect and suggesting that appropriate route to patent protection in other countries is through acquisition of patents in those countries) (citing *Brown v. Duchesne*, 60 U.S. 183, 195 (1856) (citations omitted)).

⁷¹ See *Waymark Corp. v. Porta Sys. Corp.*, 245 F.3d 1364, 1366 (Fed. Cir. 2001) (“No wrong is done the patentee until the combination is formed. His monopoly does not cover the manufacture or sale of separate elements . . . to form the invention.” (quoting *Deepsouth Packing Co. v. Laitram Corp.*, 406 U.S. 518, 529 (1972))).

In *Waymark Corp. v. Porta Systems Corp.*,⁷² the Federal Circuit did not consider testing components of a combination patent territorial subject matter because the defendant did not test nor use the claimed *combination* invention within the United States, under § 271(a).⁷³ The defendant tested components of a battery testing system within the United States and exported such components to Mexico, but never used the entire system within the United States.⁷⁴ The plaintiff's patent claimed the system and method of using the system.⁷⁵ The district court granted summary judgment for defendant.⁷⁶

The Federal Circuit, citing *Deepsouth*, distinguished “use” of *components* from “use” of a *combination* invention comprising those components.⁷⁷ The court stated that although testing components constituted use of those components under § 271(a), the plaintiff did not claim the components rather the plaintiff claimed the entire combined system.⁷⁸ Thus, the court held the defendant did not use the claimed invention, under § 271(a).⁷⁹ However, the court remanded the case for further proceedings on § 271(f).⁸⁰

b) Control-Oriented Analysis

The following cases highlight the control-oriented analysis of § 271(a) by focusing on the situs of “control” over the invention. In *Decca Ltd. v. United States*,⁸¹ the Court of Claims considered a

⁷² 245 F.3d 1364 (Fed. Cir. 2001). The court affirmed-in-part, vacated-in-part, and remanded a lower court ruling. *Id.* at 1365. The court affirmed on the § 271(a) issue, but remanded on the § 271(f) issue. *Id.*

⁷³ *Id.* at 1366–67. The Federal Circuit held that testing components of a combination invention within the United States did not constitute “use,” under § 271(a), of the claimed combination invention. *Id.*

⁷⁴ *Id.* at 1365–66.

⁷⁵ *Id.* at 1365 (stating that the system monitors and warns operator when battery capacity falls below an acceptable capacity).

⁷⁶ *Id.* at 1365–66.

⁷⁷ *Id.* at 1366.

⁷⁸ *Id.* at 1366–67.

⁷⁹ *Id.*

⁸⁰ *Id.* at 1368–69. For discussion on the court's analysis of § 271(f), see *infra* Part I.B.2.

⁸¹ 544 F.2d 1070 (Ct. Cl. 1976).

transnational navigation system territorial subject matter because the U.S. Government used the invention within the United States, under § 271(a).⁸² The Government set up a navigation system with three broadcast stations located in Hawaii, North Dakota, and Norway.⁸³ The plaintiff's patent covered a system that included broadcasting, receiving, and analyzing signals to identify the location of ships and aircraft.⁸⁴ The lower court determined the location of "use," under § 271(a), by analyzing the locations of control and beneficial use, thus forming the basis for "control-oriented" analysis.⁸⁵ The court held that the Government infringed plaintiff's patent because the control point was within, and benefits went to, the United States.⁸⁶

The Court of Claims endorsed the lower court's control point and beneficial use analysis.⁸⁷ The court emphasized that an invention that "cannot be confined to one country" should not be "without any territoriality merely because it operate[d] in more than one country, and at sea."⁸⁸ The court considered the home territory of the invention as the place where the invention was controlled.⁸⁹ The court noted that the Government controlled and monitored the navigation system from within the United States, as well as synchronized all stations to master stations located within

⁸² *Id.*

⁸³ *Id.* at 1081.

⁸⁴ *Id.* at 1077, 1083. The lower court emphasized that the patent focused on reception of signals and not generation of signals. The lower court stated that had the scenario been different, e.g., the patent covered generation of the signals, then the Norwegian station would have been beyond reach of U.S. patent law. *Id.* See also Chaikovsky, *supra* note 50, at 99–100.

⁸⁵ *Id.* at 1082–83. The lower court emphasized that its ruling rested on the "combination of circumstances" and not "any one factor." *Id.* at 1083. The lower court also emphasized that the benefit of the system was within the United States because the Government owned all the components of the navigation system. *Id.*

⁸⁶ *Id.* (stating lower court holding).

⁸⁷ See *id.* at 1075. In recognition of the lower court's opinion, the Court of Claims added to its opinion the entire lower court opinion. *Id.* at 1075–98.

⁸⁸ *Id.* at 1074.

⁸⁹ See *id.* "[T]he location of the whole for purposes of the United States Patent Law is where the 'master' station or stations are, which is in the United States of America. . . ." *Id.*

the United States.⁹⁰ The court held that the location of control for the navigation system was within the U.S., and thus the navigation system was territorial subject matter, under § 271(a).⁹¹ The Court of Claims left open the question of whether there is a legal fiction that cloaked United States flagged ships at sea with territoriality for purposes of U.S. patent law.⁹²

The next case established that even though an essential component is located in the United States that fact alone is insufficient to establish territoriality.⁹³ In *Freedom Wireless, Inc. v. Boston Communications Group, Inc.*,⁹⁴ the District Court of Massachusetts did not consider a transnational system territorial subject matter because the defendant did not use the invention within the United States, under § 271(a).⁹⁵ Defendant Rogers Wireless (“Rogers”), a Canadian wireless phone service, contracted with codefendant Boston Communications Group (“BCG”), a U.S. company, to provide certain prepaid billing services.⁹⁶ Although all of Rogers’ customers, receiving towers,

⁹⁰ *Id.* “[D]efendant established through the use of atomic clocks . . . the necessary synchronization of that station and part of that activity occurred in this country. Further, it is from the United States all actions are taken to ensure synchronizations of the transmissions of that station with those in the United States.” *Id.* at 1082–83.

⁹¹ *Id.* The Court of Claims agreed with the analysis in *Rosen v. NASA*, in which the Patent Office Board of Patent Interferences found that a space satellite system was reduced to practice inside the United States because the satellite was controlled from inside the U.S. *Id.* at 1074 (citing 152 U.S.P.Q. 757 (BNA) (Ct. Cl. 1966)). The lower court also distinguished *Deepsouth* because *use* of the completed shrimp deveining invention occurred outside the U.S., unlike the navigation system that the Government *used* and *benefited* from. *Id.* at 1081.

⁹² *See id.* at 1072–73. The Court of Claims rejected the lower court’s analysis that found territoriality on ships and aircraft that flew the U.S. flag because it was debatable theory. *Id.*

⁹³ *See Freedom Wireless, Inc. v. Boston Commc’ns Group, Inc.*, 198 F. Supp. 2d 11 (D. Mass. 2002).

⁹⁴ *Id.*

⁹⁵ *Id.* at 18. The court held the defendant did not use the infringing wireless phone service within the United States, as required by § 271(a), because the control point of the service was outside the United States. *Id.*

⁹⁶ *Id.* at 13. BCG provided Rogers with the technology required to implement prepaid calling services. *Id.* When a prepaid customer attempted to place a call, certain information, including caller identity and location, was transmitted to BCG’s system and routed through its database, “which had current information relating to the caller’s prepaid account balance . . .” *Id.* at 13–14. The system “determine[d] the cost of the

and phone switches, as well as most of BCG network nodes, were located in Canada, BCG's main database was located in the U.S.⁹⁷ Plaintiff patentee sued Rogers and BCG, among others, for infringement of its prepaid billing service.⁹⁸ Rogers moved for summary judgment, asserting that the court lacked personal jurisdiction and that Rogers did not use the patented invention within the United States as required by § 271(a).⁹⁹

The district court began its analysis with the requirements for infringement—Rogers must have “made, used, offered to sell, or sold a patented invention within the United States.”¹⁰⁰ The plaintiff asserted that Rogers relied on BCG's database, which was located within the U.S., and thus Rogers used the patented invention within the U.S.¹⁰¹ The court inquired whether Rogers' use of the BCG database in the U.S. constituted “use” within the United States.¹⁰² The court noted two cases that dealt with transnational systems and reached different territorial conclusions. In *Decca*, the Court of Claims held that a transnational navigation system satisfied the territoriality requirement of § 271(a) because the system was *controlled from within the United States*.¹⁰³ On the other hand, in *Hughes Aircraft Co. v. United States*, the United States Court of Federal Claims held that a satellite system did not satisfy § 271(a) because the system was *controlled from outside*

requested call, calculate[d] the maximum duration for the call, and sen[t] this information back” to Rogers's network. *Id.* at 14.

⁹⁷ *Id.* at 14.

⁹⁸ *Id.*

⁹⁹ *Id.*

¹⁰⁰ *Id.* at 15 (describing requirements of 35 U.S.C. § 271(a)). The district court emphasized that the Federal Circuit has interpreted § 271(a) to exclude acts wholly done outside the United States. *Id.* (citing *Rotec Indus., Inc. v. Mitsubishi Corp.*, 215 F.3d 1246, 1251 (Fed. Cir. 2000); *Ortho Pharm. Corp. v. Genetics Inst., Inc.*, 52 F.3d 1026, 1033 (Fed. Cir. 1995)). The district court also noted that the Supreme Court has held that rights of a patentee remain “confined to the United States and its territories.” *Id.* (citing *Deepsouth Packing Co. v. Laitram Corp.*, 406 U.S. 518, 531 (1972)).

¹⁰¹ *Id.* The plaintiff emphasized the essential nature of the BCG database to Rogers' system. *Id.*

¹⁰² *Id.* at 15–16.

¹⁰³ *Id.* at 16. In *Decca*, the Court of Claims held that a global navigation system was used within the United States despite one broadcast station in Norway because the system was controlled from within the U.S. *Id.* (citing *Decca Ltd. v. United States*, 544 F.2d 1070, 1074 (Ct. Cl. 1976)).

the United States.¹⁰⁴ The court held that even though the BCG database was essential, it was not the control point for Rogers' wireless phone system.¹⁰⁵ Rather, Rogers controlled its system from within Canada, and therefore Rogers did not use the system within the United States.¹⁰⁶

2. Section 271(f)

35 U.S.C. § 271(f) also addresses direct infringement, but unlike § 271(a), it has explicit extraterritorial reach. In 1984, in response to the Supreme Court ruling in *Deepsouth*, Congress enacted § 271(f).¹⁰⁷ Section 271(f)(1) prohibits supplying goods to actively induce infringement outside the United States.¹⁰⁸ Section 271(f)(2) prohibits supplying goods with the knowledge and intention of infringement outside the United States.¹⁰⁹ Thus, § 271(f) expanded direct infringement to include exportation of

¹⁰⁴ *Id.* at 16–17. In *Hughes*, the court held that a satellite system was not used within the United States because the satellite never entered the U.S., no direct control of the satellite originated in the U.S., and the control point was outside the U.S. *Id.* (citing *Hughes Aircraft Co. v. United States*, 20 Fed. Cl. 197, 242–43 (1993)). The district court also noted that the Goddard Space Center, the only part of the satellite system in the United States, functioned merely as a communications relay link and not a control point. *Id.* at 17 (citing *Hughes*, 20 Fed. Cl. at 243). The U.S. Court of Federal Claims was created in 1992 and is a successor of the original Court of Claims.

¹⁰⁵ *Id.* at 17 (stating that although the BCG database was essential it did not direct, control, or monitor the wireless phone system).

¹⁰⁶ *Id.* at 18. The court also noted that Rogers' wireless system “was a Canadian system that happened to extend into the United States, not a domestic system that happened to extend into Canada.” *Id.*

¹⁰⁷ *Pellegrini v. Analog Device, Inc.*, 375 F.3d 1113, 1116 (Fed. Cir. 2004) (citing 130 Cong. Rec. H10525 (1984)). In *Deepsouth*, the Supreme Court held that exportation of components intended for combination abroad did not violate the combination patent covering the device because the completed device was not *made* or *used* within the U.S. *Deepsouth Packing Co. v. Laitram Corp.*, 406 U.S. 518, 528 (1972). For discussion on Congress's response to *Deepsouth*, see *infra* Part I.D.

¹⁰⁸ 35 U.S.C. § 271(f)(1) (2000). “Whoever without authority supplies or causes to be supplied in or from the United States all or a substantial portion of components of a patented invention . . . to *actively induce the combination* of such components outside the United States in a manner that would infringe the patent if such combination occurred within the United States . . .” *Id.* (emphasis added).

¹⁰⁹ *Id.* § 271(f)(2). “Whoever without authority supplies or causes to be supplied in or from the United States any component of a patented invention . . . *knowing that such component is so made or adapted and intending that such component will be combined* outside the United States . . .” *Id.* (emphasis added).

components inducing or intending combination of such components to make a patented invention outside the United States.¹¹⁰ The Federal Circuit has held that § 271(f) applies to supplying both tangible and intangible products.¹¹¹ The Federal Circuit has also held that § 271(f) applies to device claims, but not process claims.¹¹²

In *Waymark Corp.*, the Federal Circuit considered exporting components of a combination invention territorial subject matter even though the invention was never completed because § 271(f) did not require actual combination.¹¹³ The defendant exported components but never completed assembly of the claimed invention.¹¹⁴ The lower court held defendant did not infringe under § 271(f) because defendant never made the invention and thus, “[t]here can be no contributory infringement [under § 271(f)(2)] without the fact or intention of direct infringement.”¹¹⁵

Focusing on the legislative history, the Federal Circuit found that “[Section] 271(f)(2) d[id] not incorporate the doctrine of contributory infringement” because § 271(f)(2) lacked specific language requiring it,¹¹⁶ and § 271(f)(2) only required *intent* to combine the components of an alleged infringing device.¹¹⁷ The court found that the legislative history behind § 271(f) did not show any language requiring actual combination.¹¹⁸ The Federal Circuit distinguished § 271(c), the statute for contributory

¹¹⁰ Both subsections require the alleged infringer to directly “suppl[y] or cause to be supplied” goods outside the U.S. *Id.* §§ 271(f)(1), 271(f)(2).

¹¹¹ *See Pellegrini*, 375 F.3d at 1117 (construing language of § 271(f) to mean actual components of an invention); *Eolas Technologies Inc. v. Microsoft Corp.*, 399 F.3d 1325, 1331–32 (Fed. Cir. 2005) (describing that intangible software code is a “component” of a computer product for purposes of § 271(f)), *cert. denied*, 126 S. Ct. 568 (2005).

¹¹² *See NTP, Inc. v. Research In Motion, Ltd.*, 418 F.3d 1282, 1322–24 (discussing that § 271(f) does not apply to process claims), *cert. denied*, 126 S. Ct. 1174 (2006).

¹¹³ *Waymark Corp. v. Porta Sys. Corp.*, 245 F.3d 1364, 1368 (Fed. Cir. 2001). “The statute does not require actual assembly.” *Id.* The court affirmed-in-part, vacated-in-part, and remanded a lower court ruling. *Id.* at 1365.

¹¹⁴ *Id.* at 1365.

¹¹⁵ *Id.* at 1367. The lower court also denied plaintiff’s motion for reconsideration of § 271(f)(2). *Id.* Contributory infringement is a form of indirect infringement and covered by 35 U.S.C. § 271(c). Indirect infringement is discussed *infra* Part I.B.4.

¹¹⁶ *Id.* at 1368.

¹¹⁷ *Id.* at 1367–68 (describing a facial inspection of the statutory language).

¹¹⁸ *Id.* at 1368.

infringement, from § 271(f) because § 271(c) contained language requiring proof of direct infringement.¹¹⁹ Thus, the court held § 271(f)(2) did not require actual combination of physical components and remanded for further inquiry on whether defendant *intended* combination abroad.¹²⁰

In *Pellegrini v. Analog Devices, Inc.*,¹²¹ the Federal Circuit did not consider export of instructions for producing an invention abroad territorial subject matter because § 271(f) required that the components of the invention physically emanate from within the United States.¹²² Defendant Analog Devices, Inc. (“Analog”), a U.S. corporation, manufactured circuits exclusively outside the U.S. and sold most of these circuits to foreign customers.¹²³ The plaintiff sued Analog for direct infringement and induced infringement.¹²⁴ Analog filed a motion for partial summary judgment with respect to foreign sales.¹²⁵ The district court, noting U.S. patent law did not have extraterritorial effect, granted partial summary judgment in favor of Analog on the issue of foreign sales and the plaintiff appealed this ruling.¹²⁶

The Federal Circuit inquired whether § 271(f)(1) applied to “products manufactured outside the United States and never shipped to or from the United States.”¹²⁷ Plaintiff asserted that

¹¹⁹ *Id.*

¹²⁰ *Id.*

¹²¹ 375 F.3d 1113 (Fed. Cir. 2004).

¹²² *Id.* at 1117 (interpreting 35 U.S.C. § 271(f)(1)). The court held that manufacturing directives sent from the United States did not constitute supplying the patented invention in or from the U.S., as required by § 271(f)(1). *Id.*

¹²³ *Id.* at 1115 (stating facts).

¹²⁴ *Id.* at 1114.

¹²⁵ *Id.* at 1115.

¹²⁶ *Id.* (discussing procedural history). The district court rejected plaintiff’s assertion that since defendant’s headquarters were located in the United States and order instructions emanated from there, the chips should be considered to have been supplied from the U.S. *Id.*

¹²⁷ *Id.* at 1116 (discussing defendant’s main argument). The court also noted the significance of 35 U.S.C. § 271(f), “[It] was enacted in the wake of the United States Supreme Court’s decision in *Deepsouth* in which the Court acknowledged that unauthorized manufacturers . . . could avoid liability . . . by manufacturing the unassembled components of those products in the United States and then shipping them outside the United States for assembly. Congress enacted § 271(f) in order to close that loophole.” *Id.* (citations omitted).

Analog supplied or caused to be supplied the infringing circuits, as required by § 271(f)(1), by controlling the production within the U.S. through accepting orders and relaying production instructions to all foreign manufacturing sites.¹²⁸ First, the court focused on the clear meaning of § 271(f)(1) by stating it only applied to “components of a patent[ed] invention . . . physically present in the United States and then either sold or exported ‘in such a manner as to actively induce the combination’”¹²⁹ Second, the court stated that § 271(f)(1) “focuse[d] on the location of the accused components, not the accused infringer.”¹³⁰ Thus, the court held Analog was not liable under § 271(f)(1) for foreign sales because the components were never shipped from the United States and because sending instructions did not constitute physical shipment of components.¹³¹

In *Eolas Technologies Inc. v. Microsoft Corp.*,¹³² the Federal Circuit considered exporting software code territorial subject matter because § 271(f) included intangible inventions.¹³³ The defendant, Microsoft, exported master disks with source code for its operating system to foreign computer manufacturers for purposes of copying code to computers for sale outside the United States.¹³⁴ The plaintiff’s patent claimed a browser function that

¹²⁸ *Id.* Plaintiff listed other characteristics of control: “Analog is incorporated in the United States and has executive, marketing, and product line responsibilities for [infringing circuits]; that Analog conceived and designed the [infringing circuits]; . . . and that Analog receives purchase orders from and invoices customers worldwide for [infringing circuits] and increases production levels for [infringing circuits] in response to those purchase orders.” *Id.*

¹²⁹ *Id.* at 1117 (quoting 35 U.S.C. § 271(f)(1)).

¹³⁰ *Id.* (noting precedent). In *North American Philips v. American Vending Sales, Inc.*, the Federal Circuit held that infringement occurred where the infringing act “[was] committed and not where the injury [was] felt.” *Id.* (quoting 35 F.3d 1576 (Fed. Cir. 1994)).

¹³¹ *Id.* at 1117–18 (stating holding). The court also emphasized that “‘the right conferred by a patent under our law is confined to the United States and its territories, and infringement of this right cannot be predicated on acts wholly done in a foreign country.’” *Id.* at 1119. (quoting *Dowagiac Mfg. Co. v. Minn. Moline Plow Co.*, 235 U.S. 641, 650 (1915)).

¹³² 399 F.3d 1325 (Fed. Cir. 2005), *cert. denied*, 126 S. Ct. 568 (2005).

¹³³ *Id.* at 1339. The court held § 271(f) included software code on a master disk because 271(f) encompassed “every form of invention eligible for patenting” *Id.*

¹³⁴ *Id.* at 1331.

defendant's operating system allegedly infringed.¹³⁵ The district court determined "source code is the legal equivalent of a piece of computer hardware and that 'in a legal sense, a[sic] source code is a made part of a computer product.'"¹³⁶ Therefore, the district court considered source code a "component" for the purposes of § 271(f).¹³⁷

The Federal Circuit treated intangible inventions, under § 271(f), no differently than structural inventions.¹³⁸ The court rejected the defendant's assertion that Congress intended "components," under § 271(f), to mean "physical components" as used in *Deepsouth* because the legislative intent behind § 271(f) was to close loopholes, not preserve them.¹³⁹ Relying on the legislative history, the court held that the language of § 271(f) did not require components of a patented invention be tangible.¹⁴⁰ Thus, the court affirmed the district court's ruling that "components," under § 271(f) included software code.¹⁴¹

In *NTP, Inc. v. Research In Motion*,¹⁴² the Federal Circuit did not consider a transnational *process* territorial subject matter because § 271(f) did not apply to process inventions.¹⁴³ The legislative history behind § 271(f) supported the court's assertion

¹³⁵ *Id.* at 1328.

¹³⁶ *Id.* at 1331–32.

¹³⁷ *Id.* at 1332. The Federal Circuit reiterated the lower court's statement that, for legal purposes, in the field of computer technology the terms "software" and "hardware" are used interchangeably. *Id.* at 1339.

¹³⁸ *Id.* at 1339. The Federal Circuit emphasized that it was sound policy to counsel "against varying the definition of 'component of a patented invention' according to the particular form of the part under consideration. . . ." *Id.* at 1339–40.

¹³⁹ *Id.* at 1340. Microsoft asserted that because 271(f) was Congress' response to *Deepsouth*, the language in 271(f) should be narrowly confined to the situation in *Deepsouth*, for example, the export of physical components. *Id.*

¹⁴⁰ *Id.*

¹⁴¹ *Id.* at 1341. On October 31, 2005, the Supreme Court denied certiorari. Order List: 546 U.S. (Oct. 31, 2005), available at <http://www.supremecourtus.gov/orders/courtorders/103105pzor.pdf> (last visited Jan. 15, 2007).

¹⁴² 418 F.3d 1282 (Fed. Cir. 2005).

¹⁴³ *Id.* at 1322–23. Since the court found infringement for the method claims under § 271(a), the court did not consider the method claims under § 271(f). *Id.* at 1321. For discussion on facts of the case, see *infra* Part II.A.1.

that Congress did not focus on process claims.¹⁴⁴ The court refused to equate the sale of handheld devices to supplying “components of a patented invention” for purposes of § 271(f) because a user did not combine the “components” to complete a patented process outside the United States.¹⁴⁵ Thus, the court held § 271(f) did not apply to process claims.¹⁴⁶

3. Section 271(g)

35 U.S.C. § 271(g) also addresses direct infringement and has explicit extraterritorial reach. In 1988, the Omnibus Trade and Competitiveness Act added § 271(g).¹⁴⁷ Section 271(g) prohibits unauthorized importation, use, selling or offering to sell “within the United States a product which is made by a process patented in the United States”¹⁴⁸ Thus, § 271(g) provides patent protection to patent holders of a process by disallowing would-be infringers from conducting the process outside the U.S. and then importing the goods resulting from the process.¹⁴⁹

¹⁴⁴ *Id.* at 1322 (citing S. REP. NO. 98-663, at 3, 6 (1984) and 130 Cong. Rec. 28, 069 (1984)). As stated earlier, Congress enacted 271(f) in response to *Deepsouth*, which involved a combination patent and not a process patent. *Id.*

¹⁴⁵ *Id.* “While it is difficult to conceive of how one might supply . . . a substantial portion of the steps of a patented method . . . it is clear that RIM’s supply of the BlackBerry handheld devices and [related] products to its customers in the United States is not the statutory ‘supply’ of any ‘component’ steps for combination into NTP’s patented methods.” *Id.*

¹⁴⁶ *Id.* at 1322–23.

¹⁴⁷ See *Bayer AG v. Housey Pharm., Inc.*, 340 F.3d 1367, 1372 (Fed. Cir. 2003) (discussing legislative history behind 35 U.S.C. § 271(g)). The Omnibus Trade and Competitiveness Act was the result of a policy trend started in the 1970’s to increase America’s competitiveness in the global economy. See Kent H. Hughes, *Facing the Global Competitiveness Challenge*, ISSUES IN SCIENCE AND TECH. ONLINE, <http://www.issues.org/21.4/hughes.html> (last visited Jan. 15, 2007).

¹⁴⁸ 35 U.S.C. § 271(g) (2000). “Whoever without authority imports into the United States or offers to sell, sells, or uses within the United States a product which is made by a process patented in the United States” *Id.*

¹⁴⁹ Because of cheaper labor costs overseas, without any laws to prohibit him, a would-be infringer could conduct a process overseas and import the results of the process and sell the goods more cheaply and undercut the value of the patent holder’s process patent, let alone circumvent the exclusive right of the patent all together.

Section 271(g) only applies to tangible products.¹⁵⁰ The Federal Circuit has interpreted “made,” in § 271(g), to mean “manufactured.”¹⁵¹ Liability only attaches if the process directly manufactured the product.¹⁵² Mere predicate processes to identify the product are insufficient for liability.¹⁵³ Determination of whether a product was “made by” a patented process to satisfy § 271(g) is a judicial question.¹⁵⁴ Alternatively, with respect to imported products a patentee can seek redress from the International Trade Commission (“ITC”).¹⁵⁵

In *Bayer AG v. Housey Pharmaceuticals, Inc.*,¹⁵⁶ the Federal Circuit did not consider importation of a drug identified by a patented process territorial subject matter because the patented process did not make the imported drug under § 271(g).¹⁵⁷ Defendant Housey Pharmaceuticals, Inc. (“Housey”) held patents for “a method of screening” substances.¹⁵⁸ Bayer AG (“Bayer”) sought a declaratory judgment against Housey for patent invalidity, unenforceability, and non-infringement.¹⁵⁹ In its counterclaim of infringement, Housey alleged Bayer used the patented screening process to identify the pharmacological properties of Bayer’s drug.¹⁶⁰ The district court dismissed Housey’s counterclaim of infringement for failure to state a claim and Housey appealed.¹⁶¹

The Federal Circuit inquired whether “made,” as used in § 271(g), meant “manufactured.”¹⁶² The court examined other

¹⁵⁰ See *Bayer AG*, 340 F.3d at 1377 (holding that § 271(g) only applies to tangible articles of manufacture).

¹⁵¹ *Id.*

¹⁵² See *id.*

¹⁵³ *Id.*

¹⁵⁴ *Id.* (discussing Congress’s intention for courts to decide proximity question on a “case-by-case basis”).

¹⁵⁵ For discussion of ITC, see *infra* Part I.B.3.a.

¹⁵⁶ See 340 F.3d 1367 (Fed. Cir. 2003).

¹⁵⁷ *Id.* at 1377–78 (stating that importation of a drug identified by a patented process was not manufactured by a patented process, as required by § 271(g), because the process merely produced information regarding the drug and not the drug itself).

¹⁵⁸ *Id.* at 1369.

¹⁵⁹ *Id.*

¹⁶⁰ *Id.*

¹⁶¹ *Id.* at 1370.

¹⁶² *Id.* at 1371–72 (describing disputed statutory language of 35 U.S.C. § 271(g)). Housey conceded that if “made” meant “manufactured,” then Bayer’s proposition would

provisions of the patent statute to resolve the meaning of the term “made.”¹⁶³ One provision described a person who used “a patented process to ‘produce’ a product as a ‘manufacturer.’”¹⁶⁴ Another provision described a person who made a product as “a person then engaged in the manufacture of a product”¹⁶⁵ The court noted that the statutory exceptions within § 271(g) connoted a physical structure because practically speaking only physical structures can be “materially changed,” or “become a trivial or nonessential component of another product”¹⁶⁶ The court noted that Congress enacted § 271(g) to supplement remedies provided for by the ITC against importation of goods made abroad by patented processes,¹⁶⁷ which Congress considered inadequate for owners of process patents.¹⁶⁸ The legislative history suggested that Congress was only concerned with “articles” produced from processes.¹⁶⁹ Thus, the court held “made” meant “manufactured” and production of information, for screening purposes or otherwise, was not covered by § 271(g).¹⁷⁰

In *NTP*, the Federal Circuit did not consider a transnational method territorial subject matter because § 271(g) did not apply to process inventions.¹⁷¹ The court, relying on *Bayer*, held § 271(g)

be correct that “information is not a manufactured product” and thus § 271(g) would not be applicable. *Id.*

¹⁶³ *Id.*

¹⁶⁴ *Id.* at 1372 (quoting 35 U.S.C. § 287(b)(3)(B)(iii) (2000)) (describing statutory language in similar section of Omnibus Trade and Competitiveness Act of 1988 which enacted § 271(g)).

¹⁶⁵ *Id.* (quoting 35 U.S.C. § 287(b)(4)(A) (2000)).

¹⁶⁶ *Id.* at 1372–73 (quoting 35 U.S.C. § 271(g)(1) (2000)) (Section 271(g) provides the following exceptions for a product made by a patented process if “(1) it is materially changed by subsequent processes; or (2) it becomes a trivial and nonessential component of another product”).

¹⁶⁷ *Id.* at 1373 (citing 19 U.S.C. § 1337 (2000)).

¹⁶⁸ *Id.* at 1373–74 (citing H.R. REP. NO. 100-60 at 8–9).

¹⁶⁹ *Id.* at 1374. A proposed precursor of § 271(g) contained language declaring infringement as importation of “a product *manufactured by a patented process.*” *Id.* (quoting S. REP. NO. 98-663 at 30 (1984)) (emphasis in original).

¹⁷⁰ *Id.* at 1377 (stating holding).

¹⁷¹ *NTP, Inc. v. Research In Motion, Ltd.*, 418 F.3d 1282, 1324 (Fed. Cir. 2005). The court probably did not analyze the system claims under § 271(g), for the same reason it did not analyze the system claims under § 271(f). For discussion on facts of the case, see *infra* Part II.A.1.

did not apply to production of intangible items.¹⁷² The court noted that “transmission of information” like the “production of information,” at issue in *Bayer*, did not constitute a tangible result and therefore § 271(g) is inapplicable to plaintiff’s process claim.¹⁷³ Since the process claim merely transmitted information it did not produce tangible results, thus § 271(g) did not apply to the asserted process claim.¹⁷⁴

a) International Trade Commission

Section 337 of the 1930 Tariff Act,¹⁷⁵ defined unfair methods of competition in importation as:

The importation into the United States, the sale for importation, or the sale within the United States after importation by the owner, importer, or consignee, of articles that—(i) infringe a valid and enforceable United States patent . . . or (ii) are made, produced, processed, or mined under, or by means of, a process covered by the claims of a valid and enforceable United States patent.¹⁷⁶

The ITC investigates violations of § 337.¹⁷⁷ The ITC conducts proceedings that complement federal judicial proceedings.¹⁷⁸ Although the ITC cannot award damages, the ITC can issue temporary or permanent exclusion orders, which are comparable to a preliminary or permanent injunction from a federal district court.¹⁷⁹ The primary purpose of either an injunction or an exclusion order is to stop the continued infringement of the patent holder’s patent. The Federal Circuit has recognized that § 337 may have wider scope regarding tangible articles than § 271(g), but

¹⁷² *Id.* at 1323.

¹⁷³ *Id.*

¹⁷⁴ *Id.*

¹⁷⁵ 19 U.S.C. § 1337 (2004).

¹⁷⁶ *Id.* at (a)(1)(B).

¹⁷⁷ Bryan Farney, An Overview of Section 337 Actions in the ITC, Part I, <http://library.findlaw.com/1999/Aug/17/128707.html> (last visited Jan. 15, 2007).

¹⁷⁸ See Li, *supra* note 44, at 611.

¹⁷⁹ Farney, *supra* note 177; see also *Bayer AG v. Housey Pharm., Inc.*, 340 F.3d 1367, 1374 (Fed. Cir. 2003) (discussing enactment of 35 U.S.C. § 271(g)). “Congress recognized the availability of redress from the ITC, but noted that the remedies available thereunder were insufficient to fully protect the owners of process patents.” *Id.*

Congress believed § 337 did not provide enough protection for owners of process patents.¹⁸⁰

Section 337 is limited to infringement through importation.¹⁸¹ The major benefit to the ITC is speed—actions proceeding through the ITC are quicker than actions proceeding through federal district court.¹⁸² The major limitation of an ITC proceeding is uncertainty—the ITC retains discretion to conduct an investigation, therefore a litigant’s grievance may not be heard.¹⁸³ If the ITC accepts the complaint, the ITC gives the case to an Administrative Law Judge (“ALJ”) to conduct discovery and issue a ruling.¹⁸⁴ The ITC also has discretion regarding whether or not to review the ALJ ruling.¹⁸⁵ The President of the United States can also veto an ITC ruling for policy reasons.¹⁸⁶

Parties can request a rehearing with the ITC or appeal an ITC ruling in the Federal Circuit.¹⁸⁷ A difference which may play a crucial role in a litigant’s decision to pursue an ITC proceeding is that the ITC has nationwide in rem jurisdiction, rather than the mere in personam jurisdiction of a federal district court.¹⁸⁸ In rem jurisdiction is preferable to in personam jurisdiction in patent infringement cases because often times the patent holder merely wishes to stop the infringement and in rem jurisdiction pertains to the actual imported goods, while in personam jurisdiction requires service upon the actual importers and infringers which is more

¹⁸⁰ *Bayer*, 340 F.3d at 1374 (stating that “Congress recognized the availability of redress from the ITC, but noted that the remedies available thereunder were insufficient to fully protect the owners of process patents.”).

¹⁸¹ See *Farney*, *supra* note 177.

¹⁸² *Id.* See also *Li*, *supra* note 44, at 611 (stating that speed is a “key feature” of ITC proceedings).

¹⁸³ See *Farney*, *supra* note 177 (comparing ITC proceedings to the automatic review of complaints filed with the district court).

¹⁸⁴ *Id.* § II.

¹⁸⁵ *Id.*

¹⁸⁶ *Li*, *supra* note 44, at 616; *Farney*, *supra* note 177, § II.J.1. Although rarely used, President Reagan vetoed an exclusion order that he believed would unfavorably affect too many people and the computer trade industry. *Farney*, *supra* note 177, § II.J.1.

¹⁸⁷ *Farney*, *supra* note 177, § II.K (citing 19 U.S.C. § 1337(c) (1994)). “The appeal must take place within sixty days of the end of the time allotted for presidential review.” *Li*, *supra* note 44, at 616.

¹⁸⁸ See *Farney*, *supra* note 177, § II.M.1.

costly and time-consuming.¹⁸⁹ This difference is also beneficial in that it precludes would-be importers from reconstituting their companies to circumvent *in personam* court orders.¹⁹⁰

4. Indirect Infringement

In addition to §§ 271(a), 271(f), and 271(g), which prohibit direct infringement or overt acts constituting infringement, §§ 271(b) and 271(c) prohibit indirect infringement. Section 271(b) prohibits the active inducement of infringement.¹⁹¹ Section 271(c) prohibits contributory infringement:

Whoever offers to sell or sells within the United States or imports into the United States a component . . . knowing [that the component is] . . . especially adapted for use in an infringement of [a machine, manufacture, combination or composition, or process] patent, and not a staple article or commodity of commerce suitable for substantial noninfringing use, shall be liable as a contributory infringer.¹⁹²

In other words, proffering a component suitable for nothing other than an infringing purpose is infringement according to § 271(c). For either section to have extraterritorial reach, a direct infringement must occur within the United States.¹⁹³

Contributory infringement, § 271(c), is broader in scope than § 271(b).¹⁹⁴ The language of § 271(c) states, “[w]hoever offers to

¹⁸⁹ See Li, *supra* note 44, at 612 (discussing the advantages of the ITC having *in rem* jurisdiction in addition to *in personam* jurisdiction).

¹⁹⁰ See *id.* (discussing the difficulty of getting *in personam* jurisdiction over foreign importers that do not “reside” or have “minimum contacts” within any jurisdiction); Farney, *supra* note 177, § II.M.1 (discussing the practice of importing infringing articles through an unnamed company).

¹⁹¹ 35 U.S.C. § 271(b) (2000). “Whoever actively induces infringement of a patent shall be liable as an infringer.” *Id.*

¹⁹² *Id.* § 271 (c).

¹⁹³ See Mark A. Lemley et al., *Divided Infringement Claims*, 33 AIPLA Q.J. 255, 257 (2005) (citing *Dynacore Holdings Corp. v. U.S. Philips Corp.*, 363 F.3d 1263, 1272 (Fed. Cir. 2004)). Because indirect infringement requires direct infringement, this paper will focus on case law addressing direct infringement only.

¹⁹⁴ See Donald Chisum, *Normative and Empirical Territoriality in Intellectual Property: Lessons from Patent Law*, 37 VA. J. INT’L L. 603, 615. In 1994, Congress amended

sell or sells . . . or imports . . . a component”¹⁹⁵ An example of § 271(c)’s broad scope can be seen by the following hypothetical.¹⁹⁶ A patent covers the combination of components A and B. Defendant then sells B to consumers and consumers combine B with A. Consumers consummate the direct infringement.¹⁹⁷ It is not feasible to sue the consumers, but the patent holder can sue the defendant for contributory infringement.¹⁹⁸ A limitation on contributory infringement is that it requires knowledge and willfulness, which are not requirements for direct infringement.¹⁹⁹

C. Claim Type as a Factor for Determining Extraterritorial Effect

Courts often evaluate the form of patent claim being infringed when determining whether to give extraterritorial effect to U.S. patent law. Utility patents provide four different types of claims: “process, machine, manufacture, or compositions of matter, or any new and useful improvement thereof”²⁰⁰ The type of claim can determine whether a court will consider the invention territorial subject matter.²⁰¹ In a recent Federal Circuit case, the court reached different conclusions on territoriality after analyzing the patentee’s *system* claims and *process* claims.²⁰²

§ 271(c) to expand its territorial scope by adding the language, “offers to sell or sells . . . or imports” *Id.* (quoting 35 U.S.C. § 271(c) (1994 & Supp. 1996)).

¹⁹⁵ 35 U.S.C. § 271(c) (2006) (emphasis added).

¹⁹⁶ Chisum, *supra* note 194, at 615.

¹⁹⁷ *Id.*

¹⁹⁸ *Id.* The patent holder must apply the minimum contacts test for personal jurisdiction over the defendant. *See id.*

¹⁹⁹ *Id.* at 616.

²⁰⁰ 35 U.S.C. § 101 (2000). In addition to the four statutory categories of claim types an inventor may also claim a product by describing the process used to create the product, called “product-by-process” claim which is a creature of the Patent Office and the courts. Gregory S. Maskel, Note, *Product-by-Process Patent Claim Construction: Resolving the Federal Circuit’s Conflicting Precedent*, 17 FORDHAM INTELL. PROP. MEDIA & ENT. L.J. 115, 117 (2006).

²⁰¹ *See* NTP, Inc. v. Research In Motion, Ltd., 418 F.3d 1282, 1316 (Fed. Cir. 2005), *cert. denied*, 126 S. Ct. 1174 (2006). “Not only will the analysis [of extraterritoriality] differ for different types of infringing acts, it will also differ as the result of differences between different types of claims.” *Id.*

²⁰² *See id.* at 1317 (describing different conclusions for § 271(a) analysis regarding system claims and method claims).

In *NTP*, the Federal Circuit distinguished the impact of § 271(a) on *system* claims and *process* claims.²⁰³ At issue was the Blackberry e-mail system, which included components located in Canada.²⁰⁴ The court held that for purposes of “use,” under § 271(a), plaintiff’s system claims encompassed the Blackberry system, but plaintiff’s method claims *did not* encompass the Blackberry method.²⁰⁵ A sample of the plaintiff’s *system* claims is claim 150 from U.S. Patent No. 6,317,592 (“the ’592 patent”):

150. In a communication system comprising a wireless system which communication system transmits electronic mail inputted to the communication system from an originating device . . . and after reception of the electronic mail by the destination processor, information contained in the electronic mail and an identification of a wireless device in the wireless system are transmitted by the wireless system to the wireless device and from the wireless device to one of the mobile processors, the wireless device and one mobile processor²⁰⁶

A sample of plaintiff’s *process* claims is claim 311 of U.S. Patents No. 6,067,451 (“the ’451 patent”).²⁰⁷

311. A method of transmitting and distributing inputted information through a distributed system, comprising: originating electronic mail from a processor in a communication system which electronic mail includes (a) an address of an interface . . . (b) an identification of a RF receiver in the RF system to receive the inputted information, and (c) the inputted information to be delivered to the RF receiver; receiving the originated electronic mail . . . ; adding information to the inputted

²⁰³ See *id.* at 1317–18.

²⁰⁴ *Id.* at 1287–90 (describing Blackberry system).

²⁰⁵ *Id.* at 1317–18.

²⁰⁶ U.S. Patent No. 6,317,592 claim 150 (filed Dec. 6, 1999).

²⁰⁷ One of the disputed process claims in *NTP* was claim 313. *NTP*, 418 F.3d at 1291. However, claim 313 is a dependent claim. See U.S. Patent No. 6,067,451 claim 313 (filed Sep. 28, 1998). “A method in accordance with claim 311 wherein” *Id.* For purposes of contrasting the language of *system* and *process* claims, the author has chosen to produce the independent claim upon which claim 313 depends, claim 311. *Id.*

information and the identification of the at least one designated RF receiver . . . ; broadcasting the inputted information and the identification of the RF receiver . . . ; receiving the broadcasted inputted information and the identification of the RF receiver with the RF receiver; and storing the received inputted broadcast information in a memory and processing the information stored in the memory²⁰⁸

The court's decision to apply different extraterritorial character to the plaintiff's different types of claims turned on the difference between *using* a device and *using* a process "within the United States," as required by § 271(a).²⁰⁹ The Federal Circuit noted that a process is nothing more than a series of steps.²¹⁰ To use a process "within the United States," an alleged infringer must complete every step of the patented process "within the United States."²¹¹ Thus, the Federal Circuit seemingly gave extraterritorial effect to the plaintiff's *system* claims and not its *method* claims because the court distinguished between "use" of a *system* and "use" of a *process*. Rather than merely extending protection capriciously, the court expanded or contracted its notion of territorial subject matter based on the type of claim.

D. Interplay between the Courts and Congress

Congress has legislated changes to the Patent Act when it disagreed with a Supreme Court interpretation of the Patent Act or when a case illuminated a loophole in the Patent Act. For example, § 271(f) was Congress's response to a loophole in the patent laws at the time of *Deepsouth*.²¹² In *Deepsouth*, the Supreme Court strictly interpreted § 271(a) and refused to give the

²⁰⁸ U.S. Patent No. 6,067,451 claim 311 (filed Sep. 28, 1998).

²⁰⁹ *NTP*, 418 F.3d at 1317–18. (“[T]he 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. . . . [A process] consists of doing something, and therefore has to be carried out or performed.” (quoting *In re Kollar*, 286 F.3d 1326, 1332 (Fed. Cir. 2002))).

²¹⁰ *Id.* at 1318.

²¹¹ *Id.*

²¹² See *Pellegrini v. Analog Devices, Inc.*, 375 F.3d 1113, 1116 (Fed. Cir. 2004) (citing 130 Cong. Rec. H10525 (1984)).

statute extraterritorial effect.²¹³ The Court held that the defendant who exported components and induced their combination outside the U.S. did not infringe the combination patent on the invention because the defendant did not make the invention within the U.S.²¹⁴ In response to this ruling, Congress enacted § 271(f) which expanded the definition of infringement to include exportation of components with intent to complete assembly of a patented device outside the United States.²¹⁵ Despite the enactment of § 271(f), *Deepsouth* is still the cited authority for interpreting combination patents.²¹⁶

Recently, the Federal Circuit addressed the scope of § 271(f). In 2004, the Federal Circuit held that instructions disseminated from defendant's headquarters in the United States did not apply to § 271(f) because the defendant did not export any physical components.²¹⁷ In 2005, the Federal Circuit ruled against Microsoft in two cases holding that § 271(f) applied to exported software code used to make duplicates overseas.²¹⁸

E. Jurisdiction

35 U.S.C. § 293 allows a plaintiff to bring suit in the District Court of the District of Columbia against a foreign, nonresident patentee.²¹⁹ Section 293 stipulates that nonresident patentees may

²¹³ *Deepsouth Packing Co. v. Laitram Corp.*, 406 U.S. 518, 527 (1972). “With all respect, this seems to me too narrow a reading of 35 U.S.C. § 154 and 271(a). . . . [T]he result is unduly to reward the artful competitor” *Id.* at 532–33 (Blackmun, J., dissenting).

²¹⁴ *Id.* at 528–29 (holding that a combination patent only covers the specified combination and not its individual components).

²¹⁵ See *supra* note 107 and accompanying text.

²¹⁶ See *Waymark Corp. v. Porta Sys. Corp.*, 245 F.3d 1364, 1366 (Fed. Cir. 2001) (“No wrong is done the patentee until the combination is formed. His monopoly does not cover the manufacture or sale of separate elements . . . to form the invention.” (quoting *Deepsouth*, 406 U.S. at 529)).

²¹⁷ *Pellegrini*, 375 F.3d at 1117–18.

²¹⁸ *Eolas Techs. Inc. v. Microsoft Corp.*, 399 F.3d 1325 (Fed. Cir. 2005), *cert. denied*, 126 S. Ct. 568 (2005); *AT&T Corp. v. Microsoft Corp.*, 414 F.3d 1366 (Fed. Cir. 2005), *cert. granted*, 127 S. Ct. 467 (2006) (mem.).

²¹⁹ See Chad A. Schiefelbein, *Accepting an Exception to the “Government Contracts Exception” of the District of Columbia’s Long-Arm Statute*, 30 VAL. U. L. REV. 1023, 1060–61.

designate “a person residing within the United States” to receive process or notice.²²⁰ Section 293 also provides:

If the person designated cannot be found . . . or if no person has been designated, the United States District Court for the District of Columbia shall have jurisdiction and summons shall be served by publication or otherwise as the court directs. The court shall have the same jurisdiction to take any action respecting the patent or rights thereunder that it would have if the patentee were personally within the jurisdiction of the court.²²¹

Section 293 serves as a long-arm statute providing plaintiff’s at least one forum for relief.²²²

II. DIVINING THE EDGES OF EXTRATERRITORIAL REACH

As the global economy spreads and multinational companies continue to merge, borders become irrelevant, which will spur disputes over territorial subject matter for U.S. patent law. Two cases exemplify the difficult task of defining the edges of extraterritorial reach while recognizing the Supreme Court’s maxim against extending extraterritorial effect to U.S. patent law. The *NTP* case is a unique example of the Federal Circuit seemingly injecting extraterritorial reach into § 271(a), yet not running afoul of the Supreme Court’s proscription because the Federal Circuit’s analysis focused on specific claim types.²²³ On the other hand, *AT&T v. Microsoft*²²⁴ is an example of the Federal Circuit actually injecting limitless extraterritorial reach into § 271(f) and violating the Supreme Court proscription because the

²²⁰ 35 U.S.C. § 293 (2000).

²²¹ *Id.*

²²² See Schiefelbein, *supra* note 219, at 1060–61.

²²³ See *NTP, Inc. v. Research In Motion, Ltd.*, 418 F.3d 1282, 1316 (Fed. Cir. 2005) (discussing the impact of different infringing acts and claim types on analysis of § 271(a)), *cert. denied*, 126 S. Ct. 1174 (2006).

²²⁴ 414 F.3d 1366 (Fed. Cir. 2005), *cert. granted*, 127 S. Ct. 467 (2006) (mem.).

Federal Circuit's analysis encompassed acts wholly done outside the U.S.²²⁵

Part A of this section discusses *NTP* and the Federal Circuit's two-factor analysis of § 271(a) problems, as well as the inherent differences between "use" of a process and "use" of a system. Part B of this section discusses *AT&T* and its seemingly boundless approach to analyzing § 271(f) problems pertaining to intangible property.

A. *NTP v. Research In Motion*

In *NTP*, the Federal Circuit analyzed the claims surrounding the popular Blackberry wireless e-mail system, including patents containing process and system claims.²²⁶ The court did not consider a transnational *process claim* territorial subject matter because the defendant did not "use" the completed process invention within the United States, under § 271(a).²²⁷ However, the court considered the transnational *system claim* territorial subject matter because the defendant "used" the system invention within the United States, under § 271(a).²²⁸ Defendant Research In Motion ("RIM"), a Canadian corporation, set up a wireless e-mail system with a "relay" station located in Canada.²²⁹ Plaintiff owned

²²⁵ *Id.* at 1372–73 (Rader, J., dissenting). *See also* *Dowagiac Mfg. Co. v. Minn. Moline Plow Co.*, 235 U.S. 641, 650 (1915) (stating that infringement "cannot be predicated of acts wholly done in a foreign country.").

²²⁶ *NTP*, 418 F.3d at 1287–90 (describing Blackberry system).

²²⁷ *Id.* at 1318. The court held that the processes integrated into the Blackberry wireless e-mail system were not "used" within the United States, under § 271(a), because not all of the steps in the processes were completed within the United States. *Id.* The court analyzed infringement on two types of patent claims: process claims and system claims. *Id.* at 1287.

²²⁸ *Id.* at 1317. The court held that Blackberry system was "used" within in the United States, under § 271(a), because Blackberry customers manipulated the handheld device in the U.S. *Id.*

²²⁹ *Id.* at 1290. The Blackberry system is a "push" e-mail system which instantly delivers e-mail to recipients, rather than recipient having to initiate a connection to the server and "pull" e-mail messages from the server. *Id.* at 1287–88. The system incorporates a desktop utility that receives e-mail addressed to user, connects via the internet to the relay station in Canada, and transmits the e-mail to the relay station. *Id.* The relay station wirelessly transmits the e-mail message to the user's handheld device. *Id.* When the user initiates an e-mail with the handheld device the e-mail message follows the reverse path. *Id.*

patents with process claims and systems claims covering the processes and systems employed by RIM and incorporated into the Blackberry e-mail system.²³⁰ The district court held RIM infringed both plaintiff's process and system claims.²³¹

1. "Use" of a Process under § 271(a)

The Federal Circuit evaluated RIM's "use," under § 271(a), of the process claims and system claims separately and focused on the situs of infringement.²³² The court noted that "patent infringement occurs where the offending act is committed and not where the injury is felt."²³³ The court recognized a distinction between "use" of a patented *process* and "use" of a patented *system*.²³⁴ The court held infringement of a process required completion of the entire process within the United States—"because a process is nothing more than the sequence of actions of which it is comprised, the use of a process necessarily involves doing or performing each of the steps recited."²³⁵ Since the defendant completed one of the necessary steps in Canada, the defendant did not complete all the steps of the patented process within the United States, and thus, the defendant did not "use" the claimed process, under § 271(a).²³⁶ The court examined the alternative prongs of § 271(a) and, relying

²³⁰ *Id.* at 1288–89.

²³¹ *Id.* at 1287.

²³² *Id.* at 1316. "The situs of the infringing act is a 'purely physical occurrence.'" *Id.* (quoting *N. Am. Philips Corp. v. Am. Vending Sales, Inc.* 35 F.3d 1576, 1579 (Fed. Cir. 1994)).

²³³ *Id.* (quoting *Philips*, 35 F.3d at 1579).

²³⁴ *Id.* at 1317. The court distinguished the analysis in *Deepsouth*, stating "[a]lthough the Supreme Court focused on the whole operable assembly of a system claim for infringement in *Deepsouth*, there is no corresponding operable assembly of a process claim." *Id.* at 1317–18. See also *In re Kollar*, 286 F.3d 1326, 1332 (Fed. Cir. 2002) (recognizing distinction between device claims and method claims).

²³⁵ *NTP*, 418 F.3d at 1318 ("A method or process consists of one or more operative steps, and accordingly, '[i]t is well established that a patent for a method or process is not infringed unless all steps or stages of the claimed process are utilized.'" (quoting *Roberts Dairy Co. v. U.S.*, 530 F.3d 1342, 1354 (Ct. Cl. 1976))).

²³⁶ *Id.* (stating holding). As a consequence to finding no direct infringement of the process claim, the defendant is not liable for contributory or induced infringement of the process claim. *Id.*

on the legislative history, held that in the context of process claims, § 271(a) was limited to “use.”²³⁷

2. “Use” of a System under § 271(a)

Contrary to the court’s finding for process claims, the court found territoriality for the system claims because the system was “used” within the United States, under § 271(a).²³⁸ Focusing on the situs of the infringement, the court applied the analysis from *Decca*, “[t]he use of claimed system under § 271(a) is the place at which the system as a whole is put into service, i.e., the place where control of the system is exercised and beneficial use of the system obtained.”²³⁹ RIM argued that since the relay station was located in Canada, the system was not subject to NTP’s claims.²⁴⁰ The court distinguished the role of the relay station and the role of RIM’s customers.²⁴¹ The relay station was merely a component of the Blackberry system, while the Blackberry users manipulated the handheld devices, and initiated and received e-mails within the United States, thus the users controlled and benefited from the system within the United States.²⁴² Therefore, the court held the situs of the infringement of the system claims was within the United States and thus, RIM infringed NTP’s system claims.²⁴³

The Federal Circuit has developed a unique two-factor analysis of § 271(a) problems: a) the type of infringement and b) the type of patent claim. However, the following questions remain: First, is it

²³⁷ *Id.* at 1319 (“The Senate Report explains, ‘Under our current patent laws, a patent on a process gives the patentholder the right to exclude others from using that process in the United States without authorization from the patentholder. The other two standard aspects of the patent right—the exclusive right to make or sell the invention—are not directly applicable to a patented process.’” (quoting S. REP. NO. 100-83, at 30 (1987))). For discussion on the court’s analysis of process claims under § 271(f) and § 271(g), see *supra* Part I.B.2 and Part I.B.3.

²³⁸ *Id.* at 1317.

²³⁹ *Id.* (citing *Decca Ltd. v. United States*, 544 F.2d 1070, 1083 (Ct. Cl. 1976)).

²⁴⁰ *Id.* (referring to RIM’s appeal of jury finding that system claims occurred within the United States).

²⁴¹ *Id.*

²⁴² *Id.* For a similar conclusion that an essential component is insufficient to find territoriality, see *Freedom Wireless, Inc. v. Boston Commc’ns Group, Inc.*, 198 F. Supp. 2d 11, 17 (D. Mass. 2002).

²⁴³ See *NTP*, 418 F.3d at 1317.

appropriate to treat various claims differently under U.S. patent law? Second, with respect to “use” of transnational systems, under § 271(a), how much is enough?

B. *AT&T v. Microsoft*

In *AT&T Corp. v. Microsoft Corp.*,²⁴⁴ the Federal Circuit considered foreign replication of software code originally exported from the United States territorial subject matter because the original software code was a component supplied for subsequent identical software inventions, under § 271(f).²⁴⁵ Defendant Microsoft exported disks with master versions of its software for purposes of replication outside the United States.²⁴⁶ The plaintiff’s patent claimed a speech codec²⁴⁷ that defendant’s software allegedly infringed.²⁴⁸ At trial Microsoft moved in limine to exclude evidence of foreign sales of its software and the parties converted the motion into partial summary judgment.²⁴⁹ The lower court held software was a “component,” under § 271(f), and foreign copies of the software “were not shielded from § 271(f) in light of the statute’s purpose of prohibiting the circumvention of infringement through exportation.”²⁵⁰

The Federal Circuit focused on the ease of replication in software distribution and interpreted § 271(f) in the light of “ordinary, contemporary, common meaning, absent an indication

²⁴⁴ 414 F.3d 1366 (Fed. Cir. 2005), *cert. granted*, 127 S. Ct. 476 (2006) (mem.).

²⁴⁵ *See id.* at 1370. The court held § 271(f) liability extended to copies of software made abroad because § 271(f) expressly described that supplying *and copying*, in terms of software distribution, “is subsumed in the act of ‘supplying’ . . .” *Id.* The court affirmed the lower court’s ruling, pursuant to *Eolas v. Microsoft*, that the master version of the software was a component. *Id.* at 1369 (citing *Eolas Techs., Inc. v. Microsoft Corp.*, 399 F.3d 1325, 1331–32 (Fed. Cir. 2005), *cert. denied*, 126 S. Ct. 568 (2005)).

²⁴⁶ *Id.* at 1368.

²⁴⁷ A “codec” is a software program that codes and decodes signals. Coding compresses the signal and decoding expands signal to original form. *Id.* at 1328 n.1.

²⁴⁸ *Id.* at 1368.

²⁴⁹ *Id.* Microsoft’s motion in limine contained two arguments: 1) “component,” under § 271(f), did not include intangible software; and 2) “supplied,” under § 271(f), did not apply because the software was installed on foreign-assembled computers abroad. *Id.*

²⁵⁰ *Id.* The lower court’s reasoning that software is a “component” is similar to the lower court’s reasoning in *Eolas*. *See Eolas*, 399 F.3d at 1331–32.

Congress intended them to bear some different import.”²⁵¹ The court emphasized that a single copy of software uploaded to a server could “allow any number of exact copies to be downloaded, and hence ‘supplied.’”²⁵² The Federal Circuit rejected the defendant’s assertion that § 271(f) liability should only extend to each exported disk because it “fail[ed] to account for the realities of software distribution.”²⁵³ The Federal Circuit emphasized that it would be contrary to the legislative intent behind § 271(f) to allow advances in technology to circumvent § 271(f).²⁵⁴ Thus, the Federal Circuit held copying of software abroad is tantamount to supplying for purposes of § 271(f).²⁵⁵

Judge Rader, author of the *Eolas* opinion, wrote a strongly-worded dissent in which he equated copying with manufacturing and accused the majority of “provid[ing] extraterritorial expansion” of U.S. patent law by penalizing acts wholly done outside the United States.²⁵⁶ The Supreme Court has recently granted certiorari.²⁵⁷

The question remains, with respect to “supplying” of intangible goods, under § 271(f): Where is the line separating the reach of U.S. patent law and acts done wholly outside the U.S.?

III. RECOMMENDATIONS

Part A of this section discusses the benefits of the two-factor analysis employed by the Federal Circuit in *NTP* and suggests approaches to the in-between cases. Part B of this section

²⁵¹ *AT&T*, 414 F.3d at 1369 (quoting *Williams v. Taylor*, 529 U.S. 420, 431 (2000) (internal quotation marks and citations omitted)).

²⁵² *Id.* at 1370.

²⁵³ *Id.* (stating the cost-saving nature of software distribution realized by shipping minimal goods and replicating products on site). The Federal Circuit refused Microsoft’s reading of § 271(f) because it would lead to absurd results. *Id.*

²⁵⁴ *Id.* at 1371 (“It would be unsound to construe a statutory provision that was originally enacted to encourage advances in technology by closing a loophole, in a manner that allows the very advances in technology thus encouraged to subvert that intent.”).

²⁵⁵ *See id.* at 1370.

²⁵⁶ *Id.* at 1372–73 (Rader, J., dissenting).

²⁵⁷ *See Microsoft Corp. v. AT&T Corp.*, 127 S. Ct. 467 (2006) (mem.).

discusses the problematic analysis of the Federal Circuit in *AT&T* and suggests an alternative approach.

A. *Double-Barreled Approach is Appropriate for § 271(a)*

The two-factor analysis employed by the Federal Circuit in *NTP* for § 271(a) is appropriate because the analysis captures activities that are substantially within the U.S. while not overextending the reach of U.S. patent law. In *NTP*, RIM allegedly infringed two different claim types: process claims and system claims.²⁵⁸ The Federal Circuit found territoriality for the system claims and not the process claims because the court held that the concept of “use” of a *system* differed from the concept of “use” of a *process*, under § 271(a).²⁵⁹ The court held close to the abstract idea of a process: it is merely a series of steps.²⁶⁰ The court found, as a matter of law, that RIM could not have used the process invention within the United States because it did not complete all the necessary steps of the process within the United States.²⁶¹ However, the court took a broader analytic approach to the “use” of a *system*, under § 271(a).²⁶² Consequently, with respect to “use” under § 271(a), the court took a holistic approach to territoriality regarding the *system* claims and a bright-line approach regarding the *process* claims.²⁶³ Therefore, some subject matter is ripe for litigants to debate, like “use” of a *system*, under § 271(a), and other subject matter is not in play because of bright-line rules, like “use” of a *process*, under § 271(a).²⁶⁴

²⁵⁸ See *NTP, Inc. v. Research In Motion, Ltd.*, 418 F.3d 1282, 1288–89 (Fed. Cir. 2005), *cert. denied*, 126 S. Ct. 1174 (2006).

²⁵⁹ See *id.* at 1317.

²⁶⁰ See *id.* at 1318.

²⁶¹ See *id.*

²⁶² See *id.* at 1317. The Federal Circuit applied a beneficial use and control-oriented analyses to find RIM “used” the Blackberry system within the United States, under § 271(a). *Id.*

²⁶³ See *id.* at 1316–18.

²⁶⁴ See *id.* The bright-line rule for “use” of process patents precludes beneficial use and control-oriented analyses.

1. How Much is Enough?

With respect to “use” of transnational systems, under § 271(a): How much is enough? *Freedom Wireless* and *NTP* both dealt with transnational wireless communication systems but the court in *Freedom Wireless* did not find territoriality and the court in *NTP* did.²⁶⁵ These two cases are on opposite sides of the spectrum. For example: If a transnational system has a bulk of its network outside the United States, then *Freedom Wireless* would apply and there is no territoriality.²⁶⁶ If a transnational system has a bulk of its network inside the United States, then *NTP* would apply and there is territoriality.

But what if the transnational system has equal parts outside and inside the United States? The control-oriented analysis may provide an answer, but large multinational corporations may divest control to several points, making the location of control fertile ground for contention. A litigant can thrust and parry arguments pinpointing the location of control to sway the court in finding or not finding territoriality. Another possible tactic is to analyze territorial impact factors in a balancing test to quantify the economic impact of the invention on U.S. markets, thus avoiding statutory formalities and preserving the essence of territorial patent protection.²⁶⁷

B. *Unlimited Liability for Intangible Property is Inappropriate for § 271(f)*

With respect to the export of intangible property, under § 271(f), one question arises: When does infringement end and wholly foreign activity begin? The Federal Circuit has recently answered that for infringement of intangible property, it does not end. In *AT&T*, the Federal Circuit held that foreign replication of

²⁶⁵ See *Freedom Wireless, Inc. v. Boston Commc'ns Group, Inc.*, 198 F. Supp. 2d 11, 18 (D. Mass. 2002) (stating holding); *NTP*, 418 F.3d at 1317 (stating holding).

²⁶⁶ See *Freedom Wireless*, 198 F. Supp. 2d at 18 (D. Mass. 2002) (stating holding).

²⁶⁷ See Elizabeth M. N. Morris, *Territorial Impact Factors: An Argument for Determining Patent Infringement Based Upon Impact on the U.S. Market*, 22 SANTA CLARA COMPUTER & HIGH TECH. L.J. 351, 352 (2006). Morris argues that the territorial impact factors are: “(1) control, (2) ownership, and (3) beneficial use of the allegedly infringing product.” *Id.* at 368.

software is territorial subject matter.²⁶⁸ *AT&T* drew its analysis from *Eolas*, but *Eolas* did not address whether foreign replication of software was territorial or not, it merely characterized software code as components of software inventions.²⁶⁹ Judge Rader, author of *Eolas*, vigorously dissented in *AT&T* fearing the “parade of horrors” that may befall the software industry as a result of the majority’s holding.²⁷⁰ At bottom, the majority’s holding converted *AT&T*’s U.S. patent into a global patent.²⁷¹ Further, the *AT&T* panel departed from the Supreme Court’s maxim in *Deepsouth*: “[W]e . . . insist on a clear congressional indication of intent to extend the patent privilege”²⁷² The Supreme Court has recently granted certiorari and the boundless tide of extraterritorial reach the *AT&T* opinion has unleashed may finally recede.²⁷³

The Solicitor General opines that the tide should turn.²⁷⁴ In an amicus brief, the Solicitor General points out the contradictory holdings of *AT&T* and *Pellegrini*.²⁷⁵ The Federal Circuit in *Pellegrini* held that § 271(f) only applied to components “physically present in the United States and then either sold or exported.”²⁷⁶ In addition, *AT&T* contradicts *Pellegrini* on yet another level.

Should Microsoft be liable for copies manufactured overseas, then liability would either be: (a) unlimited; or (b) limited to the copies it knew of or induced to be made overseas. I suggest these

²⁶⁸ *AT&T Corp. v. Microsoft Corp.*, 414 F.3d 1366, 1370 (Fed. Cir. 2005), *cert. granted*, 127 S. Ct. 467 (2006) (mem.).

²⁶⁹ *Id.* at 1369 (citing *Eolas Techs. Inc. v. Microsoft Corp.*, 399 F.3d 1325, 1339 (Fed. Cir. 2005), *cert. denied*, 126 S. Ct. 568 (2005)) (discussing whether software is a “component” under § 271(f)).

²⁷⁰ *AT&T*, 414 F.3d at 1372 (Rader, J., dissenting).

²⁷¹ *See id.* at 1376 (Rader, J., dissenting). The majority opinion “suggests that *AT&T* might otherwise have no remedy for infringement occurring wholly outside the United States. *AT&T*, however, is not left without remedy. *AT&T* can protect its foreign markets from foreign competitors by obtaining and enforcing foreign patents.” *Id.*

²⁷² *Deepsouth Packing Co. v. Laitram Corp.*, 406 U.S. 518, 532 (1972).

²⁷³ *Microsoft Corp. v. AT&T Corp.*, 127 S. Ct. 467 (2006) (mem.).

²⁷⁴ *See generally* Brief for The United States as Amicus Curiae, *Microsoft Corp. v. AT&T Corp.*, 2006 WL 2805326.

²⁷⁵ *See id.* at 13 (quoting *Pellegrini v. Analog Devices, Inc.*, 375 F.3d 1113, 1117 (Fed. Cir. 2004)).

²⁷⁶ *Id.*

two answers because endless copies can be reproduced, but the exporter could only intend a certain amount to be copied. Either the exporter is liable for every copy subsequently made or he is liable for those copies he intended, expected or foresaw to be produced. The first proposition is absurd and therefore should be dismissed for regulating wholly foreign activities.²⁷⁷ The second proposition should also be dismissed because it is tantamount to a tenuous control-oriented analysis.²⁷⁸ *Pellegrini* stood for the proposition that export of instructions to induce infringement abroad was not within the scope of § 271(f) because the defendant did not supply any physical components.²⁷⁹ The *Pellegrini* court dismissed any notion of a control-oriented analysis to substitute for the physical supply requirement of § 271(f) problems.²⁸⁰ Therefore, the *AT&T* court's imposition of liability on Microsoft was inappropriate because it either lays Microsoft open to infinite liability or the *AT&T* court contradicts itself by employing a weak control-oriented analysis.

IV. CONCLUSION

Although there is a traditional presumption against extraterritorial reach of U.S. patent law, Congress has exercised its right to legislate extraterritorially by enacting § 271(f) and § 271(g). Courts have also given U.S. patent law extraterritorial effect by contextualizing the infringement statutes to suit specific types of patent claims and new technologies, such as software and networks.²⁸¹ As technology progresses and the global economy spreads, territorial questions will continue to grow between the cracks in the concrete of U.S. patent law. Through contextual analytic approaches, such as the two-factor analysis employed by

²⁷⁷ See *Dowagiac Mfg. Co. v. Minn. Moline Plow Co.*, 235 U.S. 641, 650 (1915) (stating infringement "cannot be predicated of acts wholly done in a foreign country.")

²⁷⁸ See *Pellegrini*, 375 F.3d at 1118 (holding dissemination of instructions did not satisfy physical supply requirement of § 271(f)). See also *supra* note 127 and accompanying text.

²⁷⁹ *Pellegrini*, 375 F.3d at 1118.

²⁸⁰ *Id.*

²⁸¹ See *AT&T Corp. v. Microsoft Corp.*, 414 F.3d 1366, 1370 (Fed. Cir. 2005), *cert. granted*, 127 S. Ct. 467 (2006) (mem.).

the *NTP* court, courts can preserve the spirit of U.S. patent law and not violate proscriptions against extending extraterritorial reach to U.S. patent law.²⁸² Courts should also recognize that in keeping with the spirit of the U.S. patent law, they should observe the longstanding principle that U.S. patent law does not cover acts occurring wholly outside the U.S. and avoid decisions that lead to absurd conclusions.

The best alternative to boundless and absurd conclusions is for the courts to take a conservative approach and wait for legislative action. It worked for the critics of *Deepsouth*.

²⁸² See generally *NTP, Inc. v. Research In Motion, Ltd.*, 418 F.3d 1282 (Fed. Cir. 2005), *cert. denied*, 126 S. Ct. 1174 (2006).