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The Recent Expansion of Extraterritoriality in Patent Infringement Cases

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ABSTRACT

The rapid pace of globalization has intensified the desire to expand the territorial reach of United States law to determine patent infringement. In an unprecedented move, the Federal Circuit, in *AT&T v. Microsoft Corp.*, held that copying in a foreign country software made in the United States infringed United States patents under United States law. This decision holds a defendant liable for activity occurring entirely outside of the United States. Perhaps, this case reflects aspects unique to the technological nature of software. If so, this decision violates the fundamental principle that all forms of invention are to receive the same treatment under the patent laws without discrimination.

INTRODUCTION

[¶1] The rapid pace of globalization has intensified the desire to expand the territorial reach of United States law to determine patent infringement.[1] Historically, enforcement of patent rights was limited to infringement activity occurring solely within

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[1] *See* Eolas Techs., Inc. v. Microsoft Corp., 399 F.3d 1325 (Fed. Cir. 2005) (finding patent infringement where exported software components were used solely abroad); *see* AT&T Corp. v. Microsoft, 414 F.3d 1366 (Fed. Cir. 2005) (holding that the foreign copying of U.S.-made software abroad a patent infringement in the U.S.); *see* Union Carbide v. Shell Oil Co., 425 F3d 1366 (Fed. Cir. 2005) (holding defendant's supplying of catalysts from the U.S. to foreign affiliates a patent infringement); *see* NTP, Inc. v. Research in Motion, LTD., 418 F.3d 1282 (Fed. Cir. 2005) (finding patent infringement in the U.S. when part of the patented system was located in Canada, a foreign country).

the borders of the United States.[2] The concept of territoriality is not unique to patent law, but is instead a venerable principle of the law of the United States generally.[3] However, the fundamental and traditional principal of territoriality recently has been expanding to find patent infringement for activity occurring entirely outside of the United States.[4]

[¶2] Previously, the Supreme Court and the Federal Circuit have expanded the territorial reach of patent laws only in very limited circumstances. One circumstance has been when the nature of a system or device is such that it cannot be physically located in any single country's territory. An example of this would be when the nature of a system's components permits their use to be separated from their physical location, such that the system may not be located wholly within one jurisdiction.[5] In such cases, instead of focusing on physical location, the system is deemed located where it is primarily used or controlled.[6]

[¶3] Another reason for expanding the territorial reach of patent law is based on distinctions regarding the type of patent claims obtained. Whether claims are written to cover devices and systems versus whether they protect processes or methods has affected the decision whether to extend the territoriality of the patent laws beyond the boundaries

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[2] Brown v. Duchesne, 60 U.S. 183, 195 (1856) (stating the patent rights Congress grants are domestic in character and confined to the boundaries of the United States); Dowagiac Mfg. Co. v. Minnesota Moline plow Co., et al., 235 U.S. 641, 650 (1915)(stating patent rights are confined to the United States and its territories and such rights do not extend to acts occurring wholly outside the U.S.).

[3] EEOC v. Arabian American Oil Co., 499 U.S. 244, 248 (1991) ("It is a long-standing principle of American law that legislation of Congress, unless a contrary intent appears, is meant to apply only within the territorial jurisdiction of the United States."). *See also Smith v. United States*, 507 U.S. 197, 204, n. 5 (1993) (stating "commonsense notion that Congress generally legislates with domestic concerns in mind."); Foley Bros., Inc. v. Filardo, 336 U.S. 281, 285 (1949) (presuming Congress normally intends its statutes to have domestic, and not extraterritorial, effect).

[4] AT&T v. Microsoft, 414 F.3d at 1373 (J. Rader, dissenting).

[5] NTP, 418 F.3d at 1313 (assessing patent infringement for system claims under 271(a)). Decca, 544 F.2d at 1083 (analyzing patent infringement for system claims under 28 U.S.C. § 1498)). .

[6] *See* NTP, 418 F.3d at 1313. Decca, 544 F.2d at 1083 (focusing on the allegedly infringing system being owned, controlled, and used within the territorial boundaries of the United States).

of the United States.[7] For example, courts have found patent claims on processes require, under 35 U.S.C. § 271(a),[8] all steps of the process occur within the United States for patent infringement to arise.[9] If, however, the claims are drawn to a device, where only one part of the system takes place outside the United States, extraterritorial application of the patent law of the United States is appropriate.[10]

[¶4] In an unprecedented move, the Federal Circuit, in *AT&T v. Microsoft Corp*.,[11] held that copying in a foreign country of software made in the United States infringed United States patents under United States law. Such a holding "provides extraterritorial expansion to U.S. law by punishing under U.S. law 'copying' that occurs abroad."[12] Although courts have previously expanded the geographic boundaries where United States patent law applies, never before have the arguments for extraterritorial reach diverged so far from the traditional arguments to extend territoriality. This extraterritorial application of the patent laws perhaps is related to the unique qualities of software as a technological art. Because software is a mysterious concept that most laymen do not understand intuitively, issues that should remain separate have been conflated and confused, leading to an unfortunate and unprecedented application of extraterritoriality of the patent laws.

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[7] In re Kollar, 286 F.3d 1326, 1332 (Fed. Cir. 2002)(recognizing a difference between a claim product as a tangible item, and a claim to a process, which consists of a series of acts or steps); NTP, 418 F.3d at 1317. (differentiating between assessing infringement for a claimed device or system versus a process).
[8] 35 U.S.C. § 271(a), reads: Except as otherwise provided in this title, whoever without authority makes, uses, offers to sell, or sells any patented invention, within the United States or imports into the United States any patented invention during the term of the patent therefor, infringes the patent.
[9] In re Kollar, 286 F.3d 1326, 1332 (Fed. Cir. 2002) (recognizing a difference between a claim product as a tangible item, and a claim to a process, which consists of a series of acts or steps); NTP, 418 F.3d at 1316-17 (differentiating between assessing infringement for a claimed device or system versus a process).
[10] NTP, 418 F.3d at 1317.
[11] AT&T v. Microsoft, 414 F.3d 1366.
[12] *Id.* at 1373 (J. Rader, dissenting).

[¶5] *AT&T* is a monumental case because never before have courts related their decision to extend the geographic boundaries of patent law to be dependant on the nature of the field of technology on which the patent was granted. The holding in *AT&T* expands territoriality while violating the fundamental principle of providing "the same treatment to all forms of invention without discrimination."[13]

[¶6] In *AT&T*, the court looked to the nature of software inventions as an excuse to treat them differently from inventions involving other technological arts.[14] Despite difficulties in separating computer software from its existence as an arrangement of algorithms,[15] any expansion of extraterritorial application of United States patent law should not be based on the nature of the technological arts, but on principles derived from precedent. The dissimilar treatment in *AT&T* is in conflict with precedent and United States treaty agreements.[16] Perhaps the *AT&T* case reveals problems associated with patenting software.[17] In any case, *AT&T* goes too far in extending extraterritoriality for United States patents, and is likely to encourage software manufacturers to make their software overseas to escape patent infringement liability in the United States.

[¶7] Part I of this Article is a general overview of the strict application of the doctrine of territoriality in patent infringement cases. Part II discusses the limits of the strict application of the doctrine of territoriality. Part III reviews Congress's legislative

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[13] Eolas Techs., Inc. v. Microsoft Corp., 399 F.3d 1325, 1339 (Fed. Cir. 2005) (citing the TRIPS Agreement, Part II, Section 5 (1994)).
[14] AT&T, 414 F.3d at 1371 (stating: Section 271(f), if it is to remain effective, must therefore be interpreted in a manner that is appropriate to the nature of the technology at issue.").
[15] *See* Steven M. Greenberg, 11 J. TECH. L. & POL'Y 77, 78 (June 2006).
[16] *E.g.* TRIPS Agreement, Part II, Section 5 (1994) ("[P]atents shall be available and patent rights enjoyable without discrimination as to the place of invention [ ][and] the field of technology . . . .").
[17] *See generally*, Martin Campbell-Kelly, *Not All Bad: An Historical Perspective on Software Patents*, 11 MICH. TELECOMM. & TECH. L. REV. 191 (2005)(discussing the controversies surrounding the patenting of software).

solution to close a loophole in the doctrine of territoriality. Part IV discusses the subsequent expansion by the courts of extraterritoriality beyond what Congress intended.

I. General Overview of the Strict Application of the Doctrine of Territoriality in Patent Infringement Cases

A. *Brown v. Duchesne*

[¶8] *Brown v. Duchesne*[18] describes the underlying principles behind the doctrine of territoriality with respect to the reach of United States patent law. In *Brown*, the patented invention was an improvement in constructing gaff in sailing vessels.[19] The patentee alleged that the defendant used the patented invention in Boston, violating the patentee's rights.[20] The defendant was the captain of a French schooner that was built, owned, and manned by French subjects and docked in Boston Harbor.[21] While in France, the vessel was equipped with the patented invention, which had been "in common use in French merchant vessels for more than twenty years . . . ."[22]

[¶9] The patentee did not argue that it was infringement for the foreign vessel to be fitted with the patented invention in France, a foreign port.[23] The issue patentee wanted resolved was whether the vessel could use the patented invention "within the jurisdiction of the United States, while she is temporarily there for purposes of commerce, without the consent of the patentee?"[24]

[¶10] The Court, instead of applying the exact letter of the law, interpreted the patent statutes in the context of the public policy affecting commerce and the intent of

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[18] 60 U.S. 183 (1856).
[19] *Id.* at 193.
[20] *Id.* at 191-92.
[21] *Id.* at 193.
[22] *Id.*
[23] *Id.* at 194.
[24] *Id.*

Congress.[25] The Court recognized that the Patent Clause, which grants Congress the power to "promote the Progress of Science and the useful Arts,"[26] is domestic in its character and is "necessarily confined within the limits of the United States."[27] Consequently, the Court found the Patent Clause does not grant Congress the power to regulate a foreign country's commerce or vessel of commerce, where such vessel occasionally visits ports of the United States in pursuit of commercial aims.[28] "That power and the treaty-making power of the General Government are separate and distinct powers from [the Patent Clause], and are in no degree connected with it."[29] The Court reasoned that Congressional intent should be read in this context when interpreting the patent laws, and that distinct and separate powers, conferred on Congress for a different purpose, ought not to be read into the patent laws.[30]

[¶11] The Court interpreted the patent statutes as merely granting patentees means of compensation from those who trespass upon their inventions within the United States.[31] Such patent rights, limited by the boundaries of the United States, "cannot

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[25] *Id.* at 194, stating in pertinent part:

> The general words used in the clause of the patent laws granting the exclusive right to the patentee to use the improvement, taken by themselves, and literally construed, without regard to the object in view, would seem to sanction the claim of the plaintiff. But this mode of expounding a statute has never been adopted by any enlightened tribunal-because it is evident that in many cases it would defeat the object which the Legislature intended to accomplish. And it is well settled that, in interpreting a statute, the court will not look merely to a particular clause in which general words may be used, but will take in connection with it the whole statute (or statutes on the same subject) and the objects and policy of the law, as indicated by its various provisions, and give to it such a construction as will carry into execution the will of the Legislature, as thus ascertained, according to its true intent and meaning.

[26] *Id.* at 195 (citing U.S. CONST. art. I, § 8, cl.8).
[27] *Id.* at 195.
[28] *Id.*
[29] *Id.*
[30] *Id.*
[31] *Id.*

extend beyond the limits to which the law itself is confined."[32] Any use of the patented invention outside the United States was not an infringement of those rights.[33] Concentrating on the patentee's rights, the Court noted that the patentee sustained no damage from the defendant's use and the defendant derived no material benefit from "a single voyage to the United States . . . in the ordinary pursuits of commerce."[34] If there were any monetary damage, it is so minute that "it is incapable of any appreciable value."[35]

[¶12] Finally, the Court stated that the patent laws should be "construed in the spirit in which they were made . . . [and not go] far beyond the object they intended to accomplish."[36] The Court concluded that patentee's suit went far beyond trying to enforce property rights.[37] If successful in enforcing his rights, the patentee would gain political rights that would impinge on the treaty-making power of Congress and interfere with "its constitutional power to regulate commerce."[38] It was not reasonable, the Court concluded, to interpret that Congress passed the patent laws intending to grant patentee a right to private property so strong as to enable him to exercise political power such that the "Government would be unable to carry into effect its treaty stipulations without the consent of the patentee."[39] Accordingly, a foreign vessel, lawfully entering a port of the United States, equipped with patentee's invention, did not infringe the patent if such

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[32] *Id.*
[33] *Id.* It is worth noting that at the time of this decision, the boundaries of the United States were not as well defined as they are today.
[34] *Id.* at 196.
[35] *Id.*
[36] *Id* .at 197.
[37] *Id.*
[38] *Id.*
[39] *Id.* at 197-98.

invention was installed legally in the foreign vessel's home port, authorized by the laws of such country.[40]

[¶13] In order to find infringement in *Brown*, the Court suggested the patented invention would need to have been manufactured while at the United States port, or have been sold in the United States port. Such activities would have affected the patentee's sales in the United States, thus interfering with the patentee's rights. Since the plaintiff sustained no such damage and defendant received no such advantage, there should be no compensation.[41]

[¶14] *Brown* represents a very strict view of territoriality, as the Court would not grant damages for activity that occurred beyond the territorial boundaries of the United States.

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

[¶15] Strict application of the territoriality principle did not trigger a cause for alarm until a creative infringer found a way to get around the patent laws. *Deepsouth Packing Co. v. Laitram Corp.*[42] is the modern seminal case holding that the United States patent laws are territorial in application and thus are not infringed through acts in foreign countries that would be infringements if they occurred in the United States. Although there was no infringement found, the Court recognized the shortcomings of the doctrine of territoriality and called on Congress to extend the territorial reach of the United States patent laws.

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[40] *Id.* at 198.
[41] Courts, however, have found that patents could be infringed through use of a patented invention on board a United States merchant vessel on the high seas, because this is a place of United States jurisdiction. Gardiner v. Howe, 9 Fed.Cas. 1157 (1865); *see also* 35 U.S.C. § 100(c) (1952) (defining United States to mean the United States of America, its territories, and possessions).
[42] 406 U.S. 518 (1972).

[¶16] In *Deepsouth*, the patentee, Laitram Corporation, owned patents on shrimp deveiners, devices which prepare shrimp by removing their skeletons and intestines. Deepsouth began exporting less than the complete invention by selling unassembled shrimp deveiner kits abroad. Deepsouth's kits were overtly contrived, as it took less than an hour to assemble the parts sent in three separate boxes.[43] Separately, the parts in these kits did not infringe Laitram's patents, which covered only the entire combination. Laitram sued Deepsouth for patent infringement under section 271(a), which prohibits the making and selling of an invention within the United States.[44] Even though Deepsouth overtly manufactured and exported its deveiners in an unassembled state to surreptitiously avoid patent infringement, the Court nonetheless found noninfringement, holding that Laitram's patent grant did not extend over Deepsouth's exports abroad.[45]

[¶17] The Court held that the United States patent system "makes no claim to extraterritorial effect" and such laws are not meant to operate beyond the boundaries of the United States.[46] To expand patent rights beyond United States territory would require "a clear and certain signal from Congress . . . ."[47] Instead of extending territoriality like the Federal Circuit did in *AT&T*, the Supreme Court called on Congress to react to its decision.

II. Case Law Addressing the Limits of the Strict Application of the Doctrine of Territoriality

A. *Decca Limited v. United States*

[43] *Id.* at 524 ("Deepsouth sells these components as though they were the machines themselves; the act of assembly is regarded, indeed advertised, as of no importance.").
[44] *See supra* note 8.
[45] *Id. at 531; Id.* at 526 ("If Laitram has a right to suppress Deepsouth's export trade it must be derived from its patent grant, and thus from the patent statute.").
[46] *Id.* at 531.
[47] *Id.*

[¶18] In *Decca Limited v. United States*,[48] the court analyzed a patented system in terms of where it was controlled and used, rather than where it was physically located, in applying the doctrine of territoriality.[49] The patented invention in *Decca* relates to a hyperbolic radio navigation system that detects and locates mobile receivers such that their location can be pinpointed on a navigation chart in the form of hyperbolas.[50] The transmitting stations must be at fixed locations to send out radio signals to be detected by mobile receivers. Through time difference interval analysis, the location of the mobile receiver is detected.

[¶19] The patentee sued the United States for patent infringement under 28 U.S.C. § 1498,[51] requesting reasonable compensation. The United States allegedly infringed the patented invention through using its Omega navigational system, which broadcasts certain radio waves in order to pinpoint the location of ships or planes on or over the high seas.[52] The purpose of that system is to operate worldwide so that a plane or ship can navigate around the globe.[53] For example, one of the stations was located in the United States, the other in Norway.[54] The receivers on ships and planes have computers that

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[48] 544 F.2d 1070 (Ct. Cl. 1976).
[49] Decca, 544 F.2d at 1074 (stating that the patented system is infringed in the United States, where it is controlled).
[50] 544 F.2d at 1075 (trial judge portion of opinion).
[51] 28 U.S.C. § 1498 reads, in pertinent part (*emphasis added*):

> (a) Whenever an invention described in and covered by a patent of the United States is used or manufactured by or for the United States without license of the owner thereof or lawful right to use or manufacture the same, the owner's remedy shall be by action against the United States in the United States Court of Federal Claims for the recovery of his reasonable and entire compensation for such use and manufacture . . . .
>
> . . . .
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> (c) **The provisions of this section shall not apply to any claim arising in a foreign country.**

[52] *Id.* at 1074.
[53] *Id.*
[54] *Id.*

read the signals and decipher its location.[55] Because parts of the Omega system were not located in the United States, the government argued that the territorial limits of the patent laws precluded recovery based on equipment located in foreign countries.[56]

[¶20] The court found that the navigation system necessarily had to operate worldwide, so that the ship or plane could use the mobile receiver anywhere:[57] "Of its very nature the system cannot be confined to one country."[58] In any case, the court did not find that the system was without any territoriality, merely because it "operates in more than one country, and at sea."[59] For purposes of patent infringement, the court found the system to be located and controlled in the United States, where all the stations are monitored and from where receivers retrieve and analyze data.[60] That is to say, the stations located in the United States were "master" stations, and the stations or receivers located outside of the United States were "in a manner 'slaves'."[61]

[¶21] In finding that the U.S. patent laws did extend to this infringement, the court rejected the contention that it was applying extraterritorial effect to the patent laws, and distinguished its holding from *Deepsouth*.[62] In *Deepsouth*, the patent laws in a foreign country may have had different consequences for the assembly than under U.S. law.[63] For the navigation system, however, "host to a 'slave' broadcast station . . . would be viewed like the attempted application of the United States Law to the French ship in

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[55] *Id.*
[56] *Id.* at 1075 (trial judge portion of opinion). *See* 28 U.S.C. § 1498(c), which reads in pertinent part: "The provisions of this section [28 U.S.C. § 1498] shall not apply to any claim arising in a foreign country."
[57] *Id.* at 1074.
[58] *Id.*
[59] *Id*.
[60] *Id*. at 1074 (using the analysis from Rosen v. NASA, 152 U.S.P.Q. 757 (1966) finding that space satellite invention was reduced to practice in the United States where the control stations were located).
[61] *Id*.
[62] *Id*.
[63] *Id*.

Brown v. Duchesne."[64] The court contended that a foreign country that allows the U.S. navigation station in its territory would impliedly consent to its use rather than assert its own patent laws. Any remedy to rid itself of the station would merely be to remove the station from its jurisdiction, not to claim extraterritoriality of its patent laws.[65] In other words, no other country's patent laws would apply to this type of infringement.[66] The only country where there was patent infringement was where the system was in beneficial use and where it was controlled: the United States.[67]

[¶22] Since it was impossible for the invention to exist entirely in any one country, a decision had to be made as to where the invention is used. That is to say, getting a patent in Norway would not have improved the chances of finding infringement. "But there is no doubt that, to the extent possible, the system was made in the United States."[68]

B. *In re Kollar*

[¶23] In addition to the Court of Claims, the Federal Circuit also made distinctions between what constitutes infringement for process claims versus apparatus claims in a case called *In re Kollar*.[69] Although that case did not involve extraterritoriality issues, it discussed the distinctions between process and apparatus claims and is used as a basis for making extraterritoriality decisions in other cases.

[¶24] Kollar appealed from a final decision of the United States Patent and Trademark Office (PTO) Board of Patent Appeals and Interferences (Board) holding

[64] *Id*. (emphasis added).
[65] *Id*. at 1074-75.
[66] *Id*.
[67] *Id*. at 1083.
[68] *Id*. at 1082 (trial judge portion of opinion).
[69] 286 F.3d 1326 (Fed. Cir. 2002).

Kollar's claims invalid under the on-sale bar.[70] The claims were rejected based on Kollar's sale of the invention prior to the critical date. Kollar argued the sale was for experimental uses and did not fall within commercial on-sale bar activity.[71] Also, Kollar argued that the invention was not ready for patenting as is required under the *Pfaff* test.[72]

[¶25] The Federal Circuit agreed with Kollar that the sale was for experimental purposes.[73] The court found that the Board failed to recognize any distinction between "product, device or apparatus" claims.[74] It was important to differentiate tangible items, like devices and products, from processes, which are a series of acts.[75] To be considered sold, a process required that the steps be "carried out or performed."[76] The court found that the mere transfer of knowledge of how to engage in the process is not a sale of the process under § 102(b), "because the process has not been carried out or performed as a result of the transaction."[77]

C. *NTP Research v. Research in Motion*

[¶26] The Federal Circuit further applied the distinctions between claim types in determining patent infringement and extraterritoriality in *NTP Research v. Research in Motion,*[78] the famous Blackberry case.

[¶27] Patentee, NTP Research (NTP), owned a patent on a system for integrating hard-wired (wireline) e-mail systems with wireless e-mail systems.[79] Defendant,

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[70] 35 U.S.C. § 102(b) (2000).
[71] Kollar, 286 F.3d 1326, 1329 (Fed. Cir. 2002) (citing Pfaff v. Wells Elecs., 525 U.S. 55, 67 (1998), requiring a commercial offer for sale to trigger an on-sale bar).
[72] *See* Pfaff v. Wells Elecs., 525 U.S. 55, 67 (1998) (setting forth the *Pfaff* Test: "[An] on sale bar applies when two conditions are satisfied before the critical date. First, the product must be the subject of a commercial offer for sale. . . . Second, the invention must be ready for patenting."); Kollar, 286 F.3d at 1329-30.
[73] *Id*. at 1330.
[74] *Id*. at 1332.
[75] *Id*. at 1332.
[76] *Id*.
[77] *Id*.
[78] 418 F.3d 1282, 1287 (Fed. Cir. 2005).

Research in Motion (RIM), manufactured and administered a wireless e-mail system using the popular Blackberry handheld device. NTP sued RIM for allegedly infringing over forty system and method patent claims through employing the Blackberry e-mail system. Instead of being a single device, the patented invention involved a system having multiple components or multiple steps, which by their nature were used in separate physical locations.[80] This case involved extraterritorial issues because RIM is a Canadian corporation using a relay component that is located in Canada, not in the United States.[81]

[¶28] RIM argued that its Blackberry e-mail system could not infringe NTP's patents under § 271(a) because the relay component, the alleged control point of the Blackberry e-mail system, was located in Canada.[82] RIM argued that in order to directly infringe, the entire system and method must be located within the territorial boundaries of the United States.[83] The court disagreed with RIM, finding infringement under § 271(a).[84]

[¶29] The issue presented to the court was "whether the using, offering to sell, or selling of a patented invention is an infringement under § 271(a) if a component or a step of the patented invention is located or performed [outside the United States]."[85] The court found *Deepsouth* inapposite because this case involved a "system that is partly within and partly outside the United States," and not an act of making the patented

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[79] *Id*.
[80] *Id*. at 1313.
[81] *Id*. at 1290.
[82] *Id*. at 1314.
[83] *Id*.
[84] *Id*. at 1316.
[85] *Id*. at 1315.

invention wholly outside the United States.[86] Instead, the court looked to *Decca* to resolve this issue.[87]

[¶30] The court noted that the rationale in *Decca* focused on the "operable assembly as a whole."[88] The patented navigation system simply could not be found "solely within the territorial limits of [the United States]."[89] The court never reached the conclusion of whether or not the system was made in the United States, but looked at where the system was being used and controlled.[90] Because the United States government owned and controlled the allegedly infringing equipment in *Decca*, and was the primary beneficiary of the use of the allegedly infringing system, the court in that case found infringement under § 271(a).[91] The court in *Decca* also made a distinction between analyzing infringement under system claims versus method claims.[92]

[¶31] In *NTP*, the court focused on where the Blackberry e-mail system was used, "*i.e.*, the place where control of the system is exercised and beneficial use of the system obtained."[93] The court agreed with the jury that "RIM's customers located within the United States controlled the transmission of the originated information and also benefited from such exchange of information."[94] The key to the court's analysis was that RIM's customers "send and receive messages by manipulating the handheld devices in their possession in the United States, the location of the use of the communication system as a

[86] *Id*.
[87] *Id*.
[88] *Id*. at 1316.
[89] *Id*.
[90] *Id*.
[91] *Id*.
[92] *Id*.
[93] *Id*. at 1317 (citing Decca, 544 F.2d at 1083).
[94] *Id*.

whole occurs in the United States." [95] The court found that the situs of the use/injury with respect to the system claims occurred within the United States, thereby finding infringement under § 271(a).[96]

[¶32] The court came to a different conclusion regarding the method claims, finding that all steps of the claims must be performed within the territory of the United States for infringement to occur.[97] The court made a distinction between using a system, where the components are used collectively, and a process, where components are used individually.[98] Since the relay was located in Canada, the method claims were not infringed.[99]

D. Zoltek Corp. v. United States

[¶33] In *Zoltek Corp. v. United States*,[100] the Federal Circuit held the United States liable for using a patented method under 28 U.S.C. § 1498 only when it practiced "every step of the claimed method in the United States."[101]

[¶34] The plaintiff, Zoltek Corp., owned the right to a patented invention relating to methods for manufacturing carbon fiber sheets having a low radar signature to be used in "stealth" aircraft.[102] Defendant, the United States, caused its contractors to use plaintiff's invention in designing and building the F-22 fighter.[103] In order to produce silicon fiber products used in the fighter, the defendant's contractors manufactured and

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[95] *Id*.
[96] *Id*. at 1316-17 ("The situs of the infringement 'is wherever an offending act [of infringement] is committed") (citations omitted).
[97] *Id*. at 1317.
[98] *Id*. at 1318 ("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.").
[99] *Id*.
[100] 442 F.3d 1345 (Fed. Cir. 2006).
[101] *Id.* at 1347.
[102] *Id*.
[103] *Id*. at 1349.

carbonized fiber sheets in Japan and then imported them into the United States.[104] One type of fiber was entirely manufactured and processed in Japan; the other was manufactured abroad but then processed into mats in the United States.[105] The Government argued that the patentee's claims were barred under 28 U.S.C. § 1498(c), which states that 28 U.S.C. § 1498 shall not apply to any claim arising in a foreign country.[106] The issue the court resolved was whether each and every step of a claimed method patent must take place in the United States for liability to attach under 28 U.S.C. § 1498.

[¶35] Because the alleged fiber sheets were either entirely made in Japan and later imported into the United States, or were manufactured in Japan and then processed into mats in the United States, the method claims of the patented invention were not infringed. In applying *NTP Research*, the court found that only direct infringement under § 271(a) could trigger government liability under 28 U.S.C. § 1498.[107] For a method or process claim to be infringed under § 271(a), all the steps of the patented process must have been performed in the United States.[108] Since that did not occur here, the court held the United States was not liable for infringement.[109] That is to say, the court made a distinction

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[104] *Id*.
[105] *Id*.
[106] *Id*. 28 U.S.C. § 1498 (2000).
[107] *Id*. at 1350 (citing *NTP Research* at 418 F.3d 1282, 1316 (Fed. Cir. 2005) (citations omitted)). *Contra*, 442 F.3d at 1379 (J. Plager, dissenting).
[108] 442 F.3d at 1350. *Contra* 442 F.3d at 1379 (J. Plager, dissenting) (stating "[t]here is no basis[] for reading into § 1498(a) the requirement that each step be performed *in the United States*).
[109] *Id*. at 1350. *See also* 442 F.3d at 1365 (J. Gajarsa, concurring)(stating: "Whereas utility can be extracted from a device only after it has been 'made,' utility is extracted from a process concurrent with its being 'practiced . . . .' This is unlike use of a system as a whole, in which the components are used collectively, not individually.").

between what constituted an infringement of a claimed invention on products versus methods.[110]

III. Congressional Creation of Section 271(f), and its Progeny

A. Aftermath of *Deepsouth* and the Development of Section 271(f)

[¶36] In 1984, Congress responded to the Supreme Court's call for legislative action in *Deepsouth* to close a loophole in the patent law. [111] Congress drafted 35 U.S.C. § 271(f), which reads:

> (1) Whoever without authority supplies or causes to be supplied in or from the United States all or a substantial portion of the components of a patented invention, where such components are uncombined in whole or in part, in such manner as to actively induce the combination of such components outside of the United States in a manner that would infringe the patent if such combination occurred within the United States, shall be liable as an infringer.
>
> (2) Whoever without authority supplies or causes to be supplied in or from the United States any component of a patented invention that is especially made or especially adapted for use in the invention and not a staple article or commodity of commerce suitable for substantial noninfringing use, where such component is uncombined in whole or in part, knowing that such component is so made or adapted and intending that such component will be combined outside of the United States in a manner that would infringe the patent if such combination occurred within the United States, shall be liable as an infringer.[112]

[¶37] The purpose of § 271(f) is to prevent the unscrupulous copier from avoiding United States patents by shipping overseas components of a patented product, so that the assembly of the infringing combination of components will be completed overseas.[113] Congress intended to proscribe the subterfuge that was allowed in *Deepsouth* by amending the patent laws so that when "components are supplied for assembly abroad to

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[110] *Id*.
[111] S. REP. NO. 98-663, at 6 (1984).
[112] 35 U.S.C. § 271(f) (2000).
[113] S. REP. NO. 98-663, at 6 (1984).

circumvent a patent, the situation will be treated the same as when the invention is 'made' or 'sold' in the United States."[114]

B. *Pellegreni v. Analog Devices*

[¶38] *Pellegreni v. Analog Devices*[115] clarified that the meaning of the terms "supplies" or "causes to be supplied" under 35 U.S.C. § 271(f) requires that components be physically shipped from the United States.[116] Pellegreni owned U.S. Patent No. 4,651,069[117] covering brushless motor drive circuits.[118] Pellegreni sued Analog Devices, alleging Analog's ADMC chips infringed the '069 Patent. Analog, however, manufactured and sold the allegedly infringing ADMC chips exclusively outside the United States.[119] Pellegreni alleged that because Analog is headquartered in the United States, all decisions as to where to manufacture, sell, and market the ADMC chips were made in the United States.[120] Such behavior was a patent infringement according to Pellegreni since the ADMC chips are being "supplie[d]" or "caus[ing] to be supplied" from within the United States under § 271(f).[121] Analog, not surprisingly, disputed that § 271(f) applied to any products that were never shipped to or from the United States and were manufactured outside the United States.[122]

[¶39] In its analysis, the court discussed that Congress wrote § 271(f) to close a loophole identified in *Deepsouth* to prevent copiers from avoiding infringement merely

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[114] S. REP. NO. 98-663, at 3 (1984).
[115] 375 F.3d 1113 (Fed. Cir. 2004).
[116] *Id.* at 1118.
[117] U.S. Patent No. 4,651,069 (filed Feb. 21, 1985).
[118] 375 F.3d at 1114.
[119] *Id.* at 1115.
[120] *Id*.
[121] *Id*. at 1116.
[122] *Id*.

by shipping components abroad to be recombined outside the United States.[123] The court found that § 271(f) is focused entirely on the location of the accused components, not on the accused infringer.[124] Without an intervening sale or exportation from within the United States, the court held that there can be no liability under § 271(f)(1).[125] Corporate oversight or instructions regarding the manufacturing, sale, and marketing of ADMC products overseas did not amount to "[s]upplying or caus[ing] to be supplied" in the United States under § 271(f)(1).[126]

IV. The Expansion of Extraterritoriality Beyond What Congress Intended

A. *Eolas Techs., Inc. v. Microsoft Corp.*

[¶40] In *Eolas Techs., Inc. v. Microsoft Corp.*,[127] the Federal Circuit, instead of struggling to define the word "supplied", grappled with what constitutes a "component" of a patented invention under § 271(f). Plaintiff, Eolas, sued defendant, Microsoft, for infringing plaintiff's '906 patent on Internet browsing software. The claimed invention was a computer program product that allowed a user to "view news clips or play games

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[123] *See* 130 Cong. Rec. H10525 (1984), which reads in pertinent part:

> Section 101 [of the Bill] makes two major changes in the patent law in order to avoid encouraging manufacturers outside the United States.
> . . . .
> [Section 271(f)] will prevent copiers from avoiding U.S. patents by supplying components of a patented product in this country so that the assembly of the components may be completed abroad. This proposal responds to the . . . decision in *Deepsouth* . . . concerning the need for a legislative solution to close a loophole in patent law.

[124] *Id*. at 1117.
[125] *Id*.
[126] *Id*. at 1118. *See* Rotec Indus. Inc. v. Mitsubishi Corp., 215 F.3d 1246 (Fed. Cir. 2000) (holding: "These extraterritorial activities, however, are irrelevant to the case before us, because '[t]he 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 of [sic] acts wholly done in a foreign country.'" (quoting *Dowagiac Mfg. Co. v. Minn. Moline Plow Co.*, 235 U.S. 641, 650, 35 S.Ct. 221, 59 L.Ed. 398 (1915))).
Section 271(f) did not apply where components were manufactured abroad refusing to extend liability where an offer to supply components was made.
[127] 399 F.3d 1325 (Fed. Cir. 2005).

across the Internet."[128] Eolas claimed damages for domestic as well as foreign sales of Windows with Internet Explorer. The pertinent issue in this case was whether "software code made in the United States and exported abroad is a 'component[] of a patented invention' under section 271(f).'[129] For the first time, the Federal Circuit held that "components" in § 271(f)(1) includes "software code on golden master disks."[130]

[¶41] In order to export the Windows operating system abroad, Microsoft supplied a limited number of golden master disks, made in the United States, to Original Equipment Manufacturers (OEMs) abroad. The OEMs, located in foreign countries, used these disks to replicate the Windows operating system code onto computer hard drives for sale outside the United States. To find infringement under § 271(f), a substantial portion of the components of a patented invention must be supplied, without authority, in a manner as to actively induce the combination of such components outside the United States. Because the golden master disk contents are copied onto computer hard drives,

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[128] *Id.* at 1328. In order to determine infringement, the trial court construed the patent claims. In interpreting the term *executable application*s, the trial court made some distinctions that are not technically accurate, and the Federal Circuit affirmed them. The trial court noted that the term *executable application* did not have a customary meaning in the computer science field. To determine the definition of *application,* the trial court used two versions of the Microsoft Press Computer Dictionary, and other web-based encyclopedias. The court concluded that the term *application* means a computer program to allow an end-use to perform a specific task (*e.g.*,Word or Excel), but it is something separate from an *operating system* or *utility*. This definition is not entirely accurate. It may make sense to separate out operating system because it is system software as opposed to application software. But *utility applications* perform chores. This is not really different from Word or Excel on a technical level. Utility applications are really more of a subcategory of application software, and not a separate orthogonal grouping. Although a dictionary may be helpful to the laymen, it does not do a good job of expressing important subtleties. The use of the dictionary to interpret computer terms in this case more analogous to looking up the word "contract" in a dictionary. This is meant to define contract generally, but it does not do a good job of explaining when an offer is made, when it is accepted, or what amounts to consideration. *See* 399 F.3d at 1336-37.

The problem with the court's use of definitions is that there does not seem to be a technical reason for making any distinction between an application, an operating system, or a utility. In reality, these are all special mathematical operations so that a computer can understand the instructions it has been given. There is no value in distinguishing these applications from one another from a technical point of view.

[129] 399 F.3d at 1325.
[130] *Id*. at 1328.

the disk itself is not a physical or tangible part of an infringing product.[131] Thus, in order for Microsoft's conduct to be an infringement under § 271(f), the golden master disks and the computer readable program code thereon had to amount to "components" of the computer software invention.[132]

[¶42] Microsoft argued that the use of the word "components" in § 271(f) must be defined in the same way as it was in *Deepsouth*, which dealt with the "components" of a physical and tangible machine.[133] As a result, "components" under § 271(f) must be limited to physical machines. Since software is intangible, and not a machine component or a physical component, Microsoft concluded that software would not meet the definition of components. The court disagreed, noting that there is no statutory language requiring the definition of component be limited to machine, structural, or physical components, and that the "computer transforms the code on the golden disk into a machine component in operation."[134]

[¶43] Microsoft further argued that *Pellegrini* mandated that the word "components" in § 271(f) are physical.[135] The court again disagreed, reiterating that *Pellegreni* only mandated that components be physically supplied or shipped from the United States and that corporate oversight or giving instructions from the United States did not amount to the physical supplying of components.[136]

[¶44] Not only did the court find the golden master disks to be components, but went one step further.[137] The court said the software code on the golden master disk is

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[131] *Id*. at 1331.
[132] *Id*. at 1339.
[133] *Id*. 1340 (discussing Deepsouth, 406 U.S. 518).
[134] *Id*. at 1339.
[135] *Id*. (citing Pellegrini, 375 F.3d 1113).
[136] *Id*. at 1340-41.
[137] *Id*. at 1339.

virtually indispensable to the patented invention, without which it could not function.[138] The court goes on to state that all forms of invention deserve to be treated the same, no matter the field of invention or whether it is a process or product invention.[139] With software inventions, it is difficult to determine where the software process ends and the product begins.[140] In this patented invention, "the computer transforms the code on the golden disk into a machine component in operation."[141]

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

[¶45] In *AT&T Corp. v. Microsoft Corp.*,[142] the Federal Circuit expanded the extraterritorial reach of the patent laws beyond all precedent. In both *Eolas* and *AT&T*, the court found that computer software could be considered a component of the patented invention for § 271(f) purposes.[143] The court in *AT&T* went one step further, however, holding that "supplying" software means providing a copy from the United States, invoking § 271(f) liability even where the copies were made in a foreign country.[144]

[¶46] In *AT&T*, Microsoft sent its foreign licensees master versions of its Windows software to be replicated abroad, either via "golden master" disks or electronic transmission.[145] Unlike in *Eolas*, where the actual disks exported were incorporated into the foreign computers, the foreign manufacturers and licensees replicated the master versions and generated multiple copies of Windows software to install on foreign-

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[138] *See id.*
[139] *Id*. at 1340 (citing TRIPS Agreement, Part II, Section 5 (1994) ('[P]atents shall be available and patent rights enjoyable without discrimination as to the place of invention[][and] the field of technology . . . .").
[140] *Id*. at 1339.
[141] *Id*.
[142] 414 F.3d 1366 (Fed. Cir. 2005).
[143] *Id*. at 1369.
[144] *Id*. at 1370 (stating "[u]ploading a single copy to the server is sufficient to allow any number of exact copies to be downloaded, and hence "supplied").
[145] *Id*. at 1368.

assembled computers. These computers were then sold to foreign customers, not to customers in the United States.

[¶47] Microsoft argued that liability under § 271(f) does not attach unless a master disk shipped from the United States is actually incorporated into a foreign-assembled computer.[146] The court disagreed by looking to the "nature" of software as a technology, concluding that "'supplying'[] software commonly involves generating a copy."[147] Understandably, the court refused to treat software sent by electronic transmission differently from that sent on a disk.[148] The court, however, failed to see a difference between finding an infringement based on components sent from the United States, either via disk or electronic submission, and finding infringements for products entirely manufactured abroad.[149] Preoccupying itself with the "technical realities of the invention at issue,"[150] the court failed to follow the law.

[¶48] The court found there to be essentially no difference between *copying* and *supplying* under § 271(f) so that patent infringement could be imposed under those facts.[151] The court held that the term "copying is subsumed in the act of 'supplying'," holding that sending a single copy abroad with the intent that it be replicated invoked § 271(f) liability for those foreign-made copies.[152] In other words, the court looked to the nature of the software industry. Because in that industry "supplying" a copy of software

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[146] 414 F.3d at 1370.
[147] *Id.* at 1370.
[148] *Id*. at 1371 (stating "[l]iability under § 271(f) is not premised on the mode of exportation, but rather the fact of exportation.").
[149] *Id*. at 1372 (J. Rader, dissenting).
[150] *Id*. at 1372 (stating: "We prefer an interpretation of § 271(f) that is informed by actual industry practices, not by hypothetical scenarios that have no bearing on the technical realities of the invention at issue.").
[151] *Id*. at 1370 ("the act of copying is subsumed in the art of 'supplying').
[152] *Id*.

generally involves making a "copy," these words have the same meaning.[153] Thus, the court should only have attached patent infringement liability under § 271(f) for each individual export of a disk from the United States as a component of an incomplete invention for assembly abroad.[154]

C. *Union Carbide Chems. & Plastics Tech. Corp. v. Shell Oil Co.*

[¶49] To better understand the dramatic step beyond *Eolas* taken by the court in *AT&T*, the *Union Carbide Chems. & Plastics Tech. Corp. v. Shell Oil Co*.[155] case is instructive.

[¶50] The patented invention in *Union Carbide* involved Union Carbide's improved silver catalysts for commercially producing ethylene oxide (EO), which is used to make polyester fiber, resin and film.[156] Shell supplied the catalyst, a component of the patented process, from the United States directly to foreign associates.[157] The court found Shell potentially liable for infringement for such conduct under § 271(f)(2), which states that whoever supplies a component of a patented invention for the purpose that it be combined outside the United States is liable as an infringer.[158]

[¶51] This case was similar to *Eolas* where a computer disc with program code was a component exported and used to perform a patented process or method under § 271(f). The court emphasized that *Union Carbide* was a much stronger case for finding infringement under § 271(f) than in *AT&T* because Shell actually supplied the catalysts to foreign associates. "Shell's foreign affiliates do not copy these catalysts and use the

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[153] *Id*.
[154] *Id.* at 1373 (J. Rader, dissenting).
[155] 425 F.3d 1366 (Fed. Cir. 2005).
[156] *Id*. at 1369-70.
[157] *Id*. at 1379.
[158] *Id*. at 1366 (remanding the case to determine potential liability under 271(f)(2)).

copies in a foreign process, but instead use the catalysts supplied by Shell directly in their processes."[159]

[¶52] In *AT&T*, the court looked to the whether the patented invention was "copied" instead of whether it was "supplied" from the United States. The problem with this conclusion is that although the supplying of software often involves generating a copy, this "does not actually distinguish software components from physical components of other patented inventions."[160] In Judge Rader's dissent in *AT&T*, he sets forth an incredibly pertinent point: "The only true difference between making and supplying software components and physical components is that copies of software components are easier to make and transport. The ease of copying a patented component is not the proper basis for making distinctions under § 271(f)."[161]

[¶53] In this dissent, Judge Rader vigorously disagreed with the court's equating of copying with supplying for purposes of liability under § 271(f).[162] "[O]ne act of 'supplying' cannot give rise to liability for multiple acts of copying [outside the United States]"[163]

[¶54] In *AT&T*, the court fixated on the relative expense or cost of copying, which is related to the nature of software technology. Technologies, however, are not supposed to be treated differently because of their nature.[164] Besides, the ease of copying is merely a function of time. The cost or ease of copying for other technologies will decrease over time in other fields as well.

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[159] *Id*. at 1379.
[160] AT&T, 414 F.3d at 1374 (Rader, J., dissenting).
[161] *Id.*
[162] *Id.*
[163] *Id*. at 1373.
[164] *See supra* note 16.

[¶55] In *AT&T*, the Federal Circuit should not have closed a perceived loophole as it relates to copying software, but should let Congress address the issue as the Supreme Court did in *Deepsouth*. "AT&T [] is not left without a remedy. AT&T can protect its foreign markets from foreign competitors by obtaining and enforcing foreign patents."[165] Acquiring patents in foreign jurisdictions ensures that the United States will not be the only jurisdiction where relief for patent infringement can be sought. Certainly, low copying costs are not a viable reason to externalize patent protection, giving extraterritorial effect to the patent laws. Unfortunately, the ruling in *AT&T* may encourage software companies to make their software offshore to avoid the reach of United States patent laws.[166]

CONCLUSION

[¶56] The Federal Circuit's decision in *AT&T Corp. v. Microsoft Corp.* is unprecedented in its extraterritorial application of the patent laws for activity occurring entirely outside of the United States.[167] The court held that the copying of United States-made software in a foreign country infringed United States patents under United States

[165] *Id*. at 1376. This may not always be the case, as some jurisdictions may not allow patent protection for some types of inventions. In situations where it may be too costly for a patentee to sue in a foreign country, which of course would not apply to AT&T, supplemental jurisdiction under 28 U.S.C. § 1367 is a potential procedural solution. Applying supplemental jurisdiction over a claim, however, is entirely discretionary with the trial court. *United Mine Workers of Am. v. Gibbs*, 383 U.S. 715, 726 (1966). Such supplemental jurisdiction does require that the claims be derived "from a common nucleus of operative fact." *Mars Inc. v. Kabushiki-Kaisha Conlux*, 24 F.3d 1368, 1375 (Fed. Cir. 1994)(quoting *Ortman v. Stranray*, 163 U.S.P.Q. 331 (N.D. Ill. 1969, *rev'd on other grounds*, 437 F.2d 213 (7th Cir. 1971). Recently, however, the Federal Circuit has held that issues of "comity, judicial economy, convenience, fairness, and other exceptional circumstances constitute compelling reasons to decline jurisdiction under 1367(c)." *Voda v. Cordis Corp.*, _F.3d_, 2007 WL 269431 (Fed. Cir.) at *9.

[166] *See* AT&T Corp. v. Microsoft Corp., No. 01 Civ.4872 (WHP), 2004 WL 406640, at * 8 (S.D.N.Y. 2004) (setting forth Microsoft's "doomsday" policy argument: "[I]f Section 271(f) liability attaches to foreign distribution of its infringing software, [Microsoft] would simply pick up [its] manufacturing operation for the golden master, go [one] hundred miles north to Vancouver, set up the operation in Vancouver, [and] burn [its] golden master CDs [there].")

[167] 414 F.3d at 1373 (J. Rader, dissenting).

law. Such a holding extends the territorial reach of the patent laws beyond the geographic boundaries of the United States in a manner unparalleled in the case law.

[¶57] The doctrine of territoriality is not unique to patent law and is a principle of United States law generally.[168] Historically, the courts have expanded the territorial reach of the patent laws only in limited circumstances. For example, in cases where an invention could not be entirely performed in any one jurisdiction, the courts have expanded territorial reach of the patent laws. Depending on the type patent claims obtained, system/apparatus claims versus process/method claims, territoriality has been applied differently. Never before, however, have courts extended geographic reach of the patent laws based on the nature of the technology involved.

[¶58] The court focused on the relative ease of copying software and the method of supplying software was entangled in generating a copy. The holding in *AT&T* expands territoriality while violating the fundamental principle of providing "the same treatment to all forms of invention without discrimination.[169] Such dissimilar treatment is unnecessary because patentees may seek patents in foreign countries if they wish to curtail foreign competition.

[168] *See supra* note 3.
[169] Eolas, 399 F.3d at 1339 (citing the TRIPS Agreement, Part II, Section 5 (1994)).