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PATENT LAW IN THE GLOBAL ECONOMY: A MODEST PROPOSAL FOR U.S. PATENT LAW AND INFRINGEMENT WITHOUT BORDERS

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I. INTRODUCTION

WITH the globalization of the marketplace and the growing significance of intellectual property rights in the world economy, there has been increased pressure, particularly among developed countries, to expand domestic intellectual property laws beyond national borders. For over the past two decades, there has been a trend among the U.S. legislature and courts—albeit an inconsistent one—towards extraterritorial expansion of the scope of U.S. patent law to include activities outside of the United States. 1 In a recent decision, the United States Supreme Court pulled back on the trend among federal courts giving extraterritorial effect to Section 271(f) of the Patent Act by more narrowly interpreting the statute. 2 Despite reining in the Federal Circuit’s extraterritorial trend, the Court did not—and to a great extent was unable to—address the more fundamental challenge of deriving a national patent regime consistent with U.S. patent law’s underlying policy objectives and twenty-first century technologies in a world of infringement without borders. 3

The problem with applying U.S. patent law extraterritorially is that it extends U.S. law to activities occurring in foreign nations that should be governed by the foreign sovereigns’ laws. On many occasions, another country’s law on validity, infringement, or priority may be different from U.S. law, and outcome determinative with respect to the rights of the parties. For example, this situation could occur in countries that require ab-

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3. The Supreme Court did not have the jurisdiction to fully address the more fundamental issues, or to “fix” the problem even if it thought it may have been better public policy, because the Court must limit its opinion only to the case or controversy and the issues on appeal and to interpretation of federal law drafted by Congress.
solute novelty for patentability, or countries that define patent law subject matter differently than the U.S.\textsuperscript{4}

Creating liability under U.S. law for activities that do not violate the domestic laws of the places where the activity occurs is contrary to basic presumptions of all major international treaties on intellectual property law and principles of comity. Further, the application of U.S. patent law with respect to infringing activities occurring abroad undermines the capacity of U.S. companies to compete in the U.S. market for the patented invention against other companies located abroad; this asymmetry creates incentive for U.S. companies to relocate abroad or to move research, development, and manufacturing abroad, thus damaging the domestic economy and reducing employment opportunities for the U.S. labor force.

Part II of this Article provides an overview of provisions of the U.S. Patent Act that have been increasingly given extraterritorial effect. Part III discusses the basic principles of the territorial presumption with respect to U.S. and international law. Part IV argues that the application of U.S. patent law to activities outside of the U.S. is inconsistent with U.S. economic interests. Part V considers some of the various approaches that courts and commentators have applied and proposed to address infringement across borders. Finally, I propose a different approach and amendments to the infringement provisions of the Patent Act that I argue more effectively promote the fundamental policy objectives of U.S. patent law—incentives for innovation and advancement of the U.S. economy. While advocating for a territorially limited approach to patent infringement liability, where damages are limited to evidence of specific economic impact on the U.S. market for the patented subject matter, I propose repealing Section 271(f) and establishing a broader conception of third-party liability under Sections 271(b), (c), and (g) that more effectively protects the legitimate interests of patent holders and U.S. economic interests.

II. U.S. PATENT LAW AND EXTRATERRITORIALITY

A patent is a federal property right that allows the grantee to exclude others from making, using, or selling an invention.\textsuperscript{5} In the United States, patent rights arise under Article I, Section 8 of the United States Constitution, which grants Congress the power "to promote the progress of science and useful arts, by securing for limited time to authors and inventors the exclusive right to their respective writings and discoveries."\textsuperscript{6} The first Patent Act was enacted in 1790 and amended in 1952.\textsuperscript{7} The Act provides that the grant of a patent confers a right to exclude others from "mak[ing],

\textsuperscript{4} Most countries do not grant business method patents and many do not grant patents on software or genetically altered organisms. See Holbrook, \textit{supra} note 1, at 2163-64 (discussing comparative patent law).


\textsuperscript{6} U.S. Const. art. I, § 8, cl. 8.

us[ing], offer[ing] to sell, or sell[ing] any patented invention, within the U.S.” and “whoever without authority makes, uses, offers to sell, or sells any patented invention, within the U.S. . . . during the term of the patent therefor[e], infringes the patent.”

It is important to note the operative language of the Act, “within the U.S.,” reflects the intent and purpose of the law: that the law provides incentive for innovation within the U.S. territory, the territory in which the U.S. patentee (anyone who owns a U.S. patent) is entitled to a commercial market advantage for the life of the patent as a quid pro quo for the public disclosure of the invention.

A. Direct Infringement

Historically, U.S. patent law limited direct infringement liability to activities occurring within the U.S. that involved the unauthorized making, using, and selling of patented inventions. The Supreme Court in Deep-south Packing Co. v. Laitram Corp., affirmed this strict territorial presumption. In Deepsouth, the Court held that because the components of a patented invention were shipped as separate units outside of the United States, they did not infringe the U.S. patent—i.e., there was no “making” within the language of the Patent Act. In response to the concern that would-be infringers could circumvent liability on a technicality, Congress amended the Act by adding Section 271 (f), which created a new cause of action for direct patent infringement:

(1) Whoever without authority supplies or causes to be supplied in or from the U.S. all or a substantial portion of the components

8. § 271(a).


This, then, provides the primary purpose behind United States patent law defining infringement in terms of making, using, offering for sale, and selling. Overall, the terms are meant to ensure that the patentee is able to control all use of the invention that are “commercial,” i.e., that result in the actor deriving economic return from satisfying demand from consumers for the patented invention in the marketplace.

Id. But cf. id. at n. 20 (“This provides an interesting contrast with the early English view posited by Hulme, in which the patent right was mean [sic] to confer only the status of sole domestic manufacturer.” (citing E. Wyndham Hulme, The History of the Patent System Under the Prerogative and at Common Law, 12 LAW Q. REV. 141, 153 (1896))).

10. See 35 U.S.C. § 271(a); see also, e.g., Deepsouth Packing Co. v. Laitram Corp., 406 U.S. 518, 527 (1972) (“The statute makes it clear that it is not an infringement to make or use a patented product outside of the United States. . . . Laitram must show a § 271(a) direct infringement by Deepsouth in the United States . . . ”); Dowagiac Mfg. Co. v. Minn. Moline Plow Co., 235 U.S. 641, 650 (1915) (“The right conferred by a patent under our law is confined to the United States and its territories . . . ”); Brown v. Duchesne, 60 U.S. 183, 195 (1856) (“The power . . . [of Congress to provide for patent laws] is domestic in its character, and necessarily confined within the limits of the United States.”).


12. See id. at 529 (upholding strict territorial presumption).
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 U.S. in a manner that would infringe the patent if such combination occurred within the U.S., shall be liable as an infringer.

(2) Whoever without authority supplies or causes to be supplied in or from the U.S. 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 U.S. in a manner that would infringe the patent if such combination occurred within the U.S., shall be liable as an infringer. 13

Under the current framework, U.S. patentees may claim infringement under Section 271(f)(1) or (2), depending upon whether the components are staple articles—basic articles that may also be used in non-infringing products—or if the components are “especially made or adapted for use in the [patented] invention,” respectively. 14 Under Section 271(f)(2), components “supplied” that are especially made or adopted for use in a patent invention are subject to liability for infringement. Under Section 271(f)(1), where the components are “staple” or generic, most of the components of the patented invention must be supplied to be subject to liability.

In Waymark Corp. v. Porta Systems Corporation, 15 the Federal Circuit interpreted Section 271(f) to extend under some circumstances to activities occurring outside of the U.S. territory. The Waymark court held that § 271(f) does not require that the components of the patented invention actually be combined in the United States. Instead, Section 271(f) only requires that the components be “supplied”—from the United States—with intent that they are combined outside of the United States. 16

Section 271(f) applies much easier to patented inventions with mechanical or concrete components as opposed to more abstract inventions such biotechnology or software. 17 The Federal Circuit, however, in Eolas Technologies, Inc. v. Microsoft Corp., 18 interpreted this section to apply

14. See id.
15. 245 F.3d 1364 (Fed. Cir. 2001).
16. See id. at 1368 (“[T]he language of [§] 271(f)(2) addresses the implications of extraterritorial enforcement consistently.”).
18. 399 F.3d 1325 (Fed. Cir. 2005).
to software method patents. The court interpreted the term “components” of a patent invention under Section 271(f) as not being limited to “machines” or physical structures and to include software and source code.\textsuperscript{19}

In a parallel case, \textit{AT&T Corp. v. Microsoft Corp.},\textsuperscript{20} the Federal Circuit interpreted software as a “component” within the meaning of Section 271(f), and that software copied and transmitted abroad on golden master disks, where all the copies were to be made in a foreign country, would give rise to liability.\textsuperscript{21} The court concluded that the golden master disks that were reproduced/copied abroad could be considered “supplied in or from the U.S.” within the meaning of Section 271(f).\textsuperscript{22} The court held defendant Microsoft liable for damages for infringing activities occurring both in and out of the United States despite the fact that all the copying of software had occurred outside of U.S. territory.\textsuperscript{23} Interpreting Section 271(f) broadly, the court reasoned that in the field of computer technology, “supplying” software means generating copies of that software.\textsuperscript{24} The Supreme Court, however, recently reversed this decision and interpreted the term “components” under Section 271(f) not to include software.\textsuperscript{25} The Court was unable to address the more fundamental underlying issue—whether to or how to apply U.S. patent law where the infringing activities occur in multiple jurisdictions and/or outside the U.S. territory, either at one time or in a sequence of steps as part of a concerted effort.

The Process Patent Act of 1988 also created infringement liability for importation of products of patented processes. The added section, 271(g), provides:

Whoever without authority imports into the U.S. or offers to sell, sells, or uses within the U.S. a product which is made by a process patented in the U.S. shall be liable as an infringer, if the importation, offer to sell, sale, or use of the product occurs during the term of such process patent. In an action for infringement of a

\textsuperscript{19} See id. at 1339 (“[T]he language of section 271(f) in the context of Title 35 shows that this part of the claimed computer product is a ‘component of a patented invention.’”).

\textsuperscript{20} 414 F.3d 1366 (Fed. Cir. 2005), rev’d, 550 U.S. 437 (2007).

\textsuperscript{21} See Microsoft, 414 F.3d at 1369 (reaffirming that software code alone, “without question, . . . qualifies as an invention eligible for patenting”); id. at 1371-72 (holding that software copied and transmitted abroad on golden master disks gives rise to liability under § 271(f)).

\textsuperscript{22} See id. at 1369 (quoting 35 U.S.C. § 271(f) (2000)); id. at 1370-71 (“Our interpretation of ‘supply[ed] or cause[d] to be supplied in or from the United States’s in the context of software comports with Congress’s motivation for enacting § 271(f).”).

\textsuperscript{23} See id. at 1372 (affirming district court and holding Microsoft liable under § 271(f)).

\textsuperscript{24} See id. at 1370-71 (holding “medium of exportation” insufficient grounds to avoid liability). The court stated, “[I]iability under § 271(f) is not premised on the mode of exportation, but rather the fact of exportation.” Id. at 1371.

\textsuperscript{25} See AT&T Corp. v. Microsoft Corp., 550 U.S. 437 (2007).
process patent, no remedy may be granted for infringement on account of the noncommercial use or retail sale of a product unless there is no adequate remedy under this title for infringement on account of the importation or other use, offer to sell, or sale of that product. A product which is made by a patented process will, for purposes of this title, not be considered to be so made after:

(1) it is materially changed by subsequent processes; or

(2) it becomes a trivial and nonessential component of another product.\(^{26}\)

The Federal Circuit in *Bayer AG v. Housey Pharmaceuticals*\(^ {27}\) limited the scope of 271(g) to importation of physical objects that are products of patented processes and held that importation of information derived from a process patent did not constitute infringement under that section.\(^ {28}\)

B. *Indirect Patent Infringement*

The doctrine of indirect infringement has origins in case law that date back to the 1800s.\(^ {29}\) In 1952, Congress amended the Patent Act, and addressed indirect infringement through Sections 271(b) and (c), providing:

(b) Whoever actively induces infringement of a patent shall be liable as an infringer.

(c) Whoever offers to sell or sells within the U.S. or imports into the U.S. a component of a patented machine, manufacture, combination or composition, or a material or apparatus for use in practicing a patented process, constituting a material part of the invention, knowing the same to be especially made or adapted for use in an infringement of such patent, and not a staple article or commodity of commerce suitable for substantial non-infringing use, shall be liable as a contributory infringer.\(^ {30}\)

Liability for contributory infringement or inducement only requires that a party outside of the U.S. territory act with the intention to infringe the U.S. patent within the U.S. territory, but then, unlike in the case of direct infringement under Section 271(f), a separate act of direct infringement

\(^{26}\) 35 U.S.C. § 271(g).

\(^{27}\) 340 F.3d 1367 (Fed. Cir. 2003).

\(^{28}\) See *id*.


\(^{30}\) 35 U.S.C. §§ 271(b)-(c).
in the United States connected to the inducement is necessary to implicate Sections 271(b) and (c).31

III. THE TERRITORIAL PREJUSMPTION

A. U.S. Law

Historically, courts in the United States have maintained a strong presumption of territoriality in interpreting federal laws.32 Generally, courts have refused to construe a statute as governing conduct abroad absent clear congressional intent.33 The scope of U.S. patent law has long been held to be geographically limited and not extending beyond the U.S. territory.34

B. International Law

Both sovereignty and jurisdictional limitations are important principals contributing to the theory of international patent law. One basic presumption of international law is sovereignty—the idea that a nation’s law should be limited to the territorial boundaries of the nation.35 International law scholars and commentators distinguish legislative jurisdiction from both judicial jurisdiction and enforcement jurisdiction: legislative jurisdiction generally is defined as a state’s power to draft laws, judicial jurisdiction as a state’s power to subject individuals and property to its judicial power, and enforcement jurisdiction as a state’s power to induce or compel compliance with its laws.36

Sections 402 and 403 of the Restatement (Third) of Foreign Relations Law provide for legislative jurisdiction over extraterritorial activities under

31. See, e.g., Honeywell, Inc. v. Metz Apparatwerke, 509 F.2d 1137 (7th Cir. 1975).

32. See, e.g., Margulies, supra note 17 at 481; see also, e.g., EEOC v. Arabian Am. 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.'"); Foley Bros. v. Filardo, 336 U.S. 281, 285 (1949) ("[L]egislation of Congress, unless a contrary intent appears, is meant to apply only within the territorial jurisdiction of the United States.").

33. See generally Margulies, supra note 17.

34. See In re Amtorg Trading Corp., 75 F.2d 826, 831 (1935) ("It follows, therefore, that the courts will protect the owner of a United States patent against an infringement thereof anywhere in the United States and its territories, where suit is brought in the proper jurisdiction. But the protection which the laws of the United States afford is limited to the territory named in the statute."); Moy, supra note 9 § 14:12 n. 10 (4th ed. 2007) ("The right conferred by a patent under our law is confined to the United States and its territories." (quoting Dowagiac Mfg. Co. v. Minnesota Moline Plow Co., 235 U.S. 641, 650 (1915))).


the effects doctrine and rule of reason.\textsuperscript{37} Under Section 402, a state may exercise legislative or prescriptive jurisdiction, \textit{inter alia}, over conduct outside its territory that has or is intended to have substantial effects within its territory.\textsuperscript{38} Even where the substantial effects requirement under Section 402 is met, Section 403 also requires that any assertion of prescriptive jurisdiction be "reasonable" in light of a nonexclusive list of factors including the location of the challenged conduct, the effects within the regulated state, and the extent to which the regulation is consistent with and important to the "international system."\textsuperscript{39}

The United States is a signatory to a number of international treaties providing minimum standards for intellectual property rights for member states including the Paris Convention, the Agreement on Trade Related Aspects of Intellectual Property Rights (TRIPS), and the North American Free Trade Agreement (NAFTA).\textsuperscript{40} These standards provide for the protection of intellectual property rights and reflect two basic principles: (1) "national treatment"; and (2) "minimum rights," both of which presume limiting national intellectual property law territorially.\textsuperscript{41} The national treatment principle invokes a territorial approach to choice of law in which the applicable law is the law of the jurisdiction where the alleged illegal conduct occurred.\textsuperscript{42} Under this approach, each member state applies the same laws to citizens of other member countries as they do to their own citizens with respect to activities conducted within their own territory.\textsuperscript{43} The minimum rights principle accounts for differences

\textsuperscript{37} See id. (citing RESTATEMENT (THIRD) FOREIGN RELATIONS LAW §§ 402-403) (describing legislative jurisdiction as "a nation's power to 'make its law applicable to the activities, relations, or status of persons, or the interest of persons in things, whether by legislation, by executive act or order, by administrative rule or regulation, or determination of a court'.")

\textsuperscript{38} See id.

\textsuperscript{39} See id.

\textsuperscript{40} See, e.g., Paris Convention for the Protection of Industrial Property, of March 20, 1883 and most recently amended on October 2, 1979; Agreement of Trade-Related Aspects of Intellectual Property Rights, April 15, 1994, Marrakesh Agreement Establishing the World Trade Organization. The North American Free Trade Agreement (NAFTA) has corollary provisions to those in TRIPs for the protection of intellectual property rights. See, e.g., Arts. 1701-1718 of NAFTA, between the Government of Canada, the Government of United Mexican States, and the Government of the United States of America done at Washington on December 8 and 17, 1992 and subsequently amended. For a discussion and background on international intellectual property agreements and those that the United States is a signatory, see DINWOODIE, HENNESSY, PERLMUTTER, INT'L INTELLECTUAL PROP. LAW & POLICY, Ch. 2 (Matthew Bender & Company, Inc. 2001).

\textsuperscript{41} See, e.g., 4 THOMAS J. MCCARTHY, MCCARTHY ON TRADEMARKS AND UNFAIR COMPETITION § 29:25 (4th ed. 2008).


\textsuperscript{43} See id.
among national laws and incorporates the presumption that each sovereign will apply its own laws to conduct occurring within its own territory.\textsuperscript{44}

C. Comity Considerations

The concept of comity concerns the relationship of independent sovereigns and international relations.\textsuperscript{45} The principle of comity requires that each sovereign nation respect other sovereigns by not extending the reach of their laws to activities outside their territory and within the territory of another sovereign.\textsuperscript{46} Comity reflects the respect of one sovereign nation for another and is an underlying principle in all major intellectual property treaties, including the Paris Convention and TRIPS.\textsuperscript{47} In \textit{AT&T Corp. v. Microsoft Corp.}, the Supreme Court affirmed the general principle of comity that legislators should consider the legitimate sovereign interests of other nations when drafting American laws and limit the scope of U.S. patent law to U.S. territory.\textsuperscript{48}

IV. Extraterritoriality and U.S. Economic Interests

Among the major objectives propounded by patent law advocates is increased commercialization of innovation and economic advancement.\textsuperscript{49}

\textsuperscript{44} See id. at 549-50; see also Pellegrini v. Analog Devices, 375 F.3d 1113 (Fed. Cir. 2004) (limiting liability for patent infringement to activities occurring within the United States); Jason R. Dinges, Note, Extraterritorial Patent Infringement Liability After NTP, Inc. v. Research in Motion, Ltd., 32 J. CORP. L. 217, 221 (2006) ("One of the purposes of TRIPs is to provide 'effective and appropriate means for enforcement of trade-related intellectual property rights, taking into account differences in national legal systems.'" (citing Agreement on Trade-Related Aspects of Intellectual Property Rights pmbl., Apr. 15, 1994, 33 I.L.M. 81)).


\textsuperscript{46} Cf \textit{Restatement (Third) of Foreign Relations Law of the United States} § 102(2) (1987).


\textsuperscript{49} See generally Rebecca S. Eisenberg, \textit{Patents and the Progress of Science: Exclusive Rights and Experimental Use}, 56 U. CHI. L. REV. 1017, 1025-26 (1989) (citing Fritz
Many proponents of patents and strong patent rights argue that patents play an important role in advancing the economy. Three policy goals have been attributed to Section 271(f): "(1) to promote confidence in U.S. patents, thereby fostering U.S. innovation; (2) to reduce U.S. unemployment caused by foreign competition; and (3) to avoid encouraging the outsourcing of manufacturing operations to foreign countries." There is no evidence, however, that Section 271(f) has ever advanced any of these goals; in fact, there is evidence that the current form of Section 271(f) goes against these very economic objectives.

There is significant debate as to whether patents effectively advance any of their purported policy objectives or to what extent they advance a nation's economy. For the purposes of this discussion, however, this Article takes the position that patent law provides incentives for innovation and contributes to the commercialization of inventions and economic advancement. Scholars, particularly from the law and economics discipline, have considered the issue in terms of what geographic scope of patent rights would best serve the economic interests of the United States.

From a utilitarian or economic perspective, the patent holder's quid pro quo for disclosure is a market advantage in the form of a legal monopoly for a limited time to commercialize the subject matter of the invention within the United States. This disclosure and incentive is believed to increase domestic innovation and commercialization of the innovation and thereby advance the domestic economy. Under this model, the extension of U.S. patent law to activities occurring outside the United States would damage the U.S. economy, as it would create an incentive for U.S. companies to move their research, development, and manufacturing outside of the United States. Because the extraterritorial application of domestic patent law conflicts with the laws of other competing industrialized countries such as Japan, Germany, and Canada, this economic market asymmetry would lead to an exodus of U.S. companies and jobs.


51. See generally id.

52. See generally Eisenberg, supra note 49.

53. See, e.g., Mov, supra note 9 § 14.12.

54. See generally Eisenberg, supra note 49.


56. See, e.g., Holbrook, supra note 1, at 2135-36.

American courts and commentators have applied and forwarded various proposals to address multi-jurisdictional patent infringement. As discussed above, traditionally, most courts have followed a strict territorial approach to patent law in multi-jurisdictional infringement. One commentator proposes a balancing of interests approach weighing the United States' interest against the interest of the other countries where the allegedly infringing activities may have occurred. Under this approach, if the U.S. interest is believed to be greater, courts would find infringement even if some or all of the infringing acts occurred outside the United States.\(^{58}\)

On its face, this appears to be a reasonable approach. Nevertheless, as a practical matter, how simple will it be to weigh the interests of the United States against the interests of another country in a particular dispute? How subjective will this standard be, and will it bring more predictability to rights of parties?

Other commentators propose that courts should assert jurisdiction over parallel foreign patents to address the issue of multi-jurisdictional infringement and enforcement.\(^{59}\) Some countries have used this approach at times; nevertheless, this proposal does not address situations where there are no parallel patents in the foreign country. As a practical matter, how simple is it for the average American lawyer to research and reasonably interpret the laws of other countries and the decisions of their courts, all of which involve foreign languages and different legal systems, as well as different modes of interpretation and application of laws? For example, most countries in the world have civil law legal traditions; one cannot look up Korean law on inequitable conduct before the Korean Patent Intellectual Property Office on WESTLAW. Further, this proposal does not address a set of scenarios typified by cases such as *NTP, Inc. v. Research In Motion, Ltd.*\(^{60}\) where a patented invention's claim(s) may be practiced through activities in more than one jurisdiction. Finally, the proposal does not address the issue of the geographic scope of U.S. law.

There are some commentators who suggest applying antitrust, securities, and/or trademark law theories of extraterritoriality to patent infringement disputes, but those scholars have not provided the details on how application of those theories would be framed.\(^{61}\) Moreover, as this Article

\(^{58}\) See, e.g., Holbrook, *supra* note 1, at 2162-63. Holbrook rejects the strict territorial and the broad effects-based approaches to the extraterritorial application of U.S. patent law. See *id.* Instead, Holbrook advocates for a balanced approach that would consider not only whether the patent would be infringed under U.S. law, but also whether the acts would constitute infringement in the relevant foreign countries. *See id.* at 2185-91.


\(^{60}\) 418 F.3d 1282 (Fed. Cir. 2005).

\(^{61}\) See Holbrook, *supra* note 1, at 2154 (discussing antitrust law, securities law, and their extraterritorial application). For a discussion of the Supreme Court's
has argued, any extraterritorial application of U.S. patent law would have negative consequences that may be of greater significance than any value that may be obtained from such approaches. Recently, the Supreme Court in AT&T interpreted Section 271(f) to be limited to tangible components, and applied a technology-centered approach to the determination of liability under Section 271(f). This approach is not only contrary to invention/technology non-discrimination principles of all major international intellectual property treaties; it is arbitrary and inconsistent with advancing the underlying public policy objectives of U.S. patent law.

The Federal Circuit in NTP and In re Kollar drew a distinction between one category of devices and systems, as distinct from another category of process or method claims, in deciding whether to apply U.S. patent law extraterritorially. In In re Kollar, the federal circuit court held that all steps of a process patent claim would need to occur in the United States for there to be infringement. In contrast, the court in NTP held that not all parts of a device or system must necessarily take place in the United States in order to find infringement liability under the Patent Act. Again, this approach of different treatment based on patent claim form is problematic in the same manner as invention/technology discrimination.

VI. AN ALTERNATIVE PROPOSAL

The infringement provisions of the Patent Act should not be interpreted to override the territorial presumption, and should be amended to explicitly establish the territorial limitation. U.S. patentees are legitimately entitled to enjoy the full commercial value of their invention within the territorial boundaries of the United States for the life of their patents, but they are not entitled to enjoy any value from their invention outside of the U.S. territory. That protection should be determined by the law of the country where infringing activities in fact take place.

Application of U.S. law to activities occurring outside the United States will interfere with the sovereignty of other nations, will harm U.S. foreign relations, and will move the world away from achieving an international system for protection of innovation. Some time ago, the Supreme Court in Brown v. Duchesne cautioned against imposition of U.S. patent law over activities occurring outside of U.S. territory. The Brown Court


63. 286 F.3d 1326 (Fed. Cir. 2002).
64. See id. at 1332-34.
65. See NTP, Inc., 418 F.3d at 1317-18.
66. See, e.g., Giordano-Coltart, supra note 47.
67. 60 U.S. 183 (1856).
68. See id. at 197.
held, "The construction claimed by the plaintiff would confer on patentees . . . political power, and enable them to embarrass the treaty-making power in its negotiations with foreign nations, and also to interfere with the legislation of Congress when exercising its constitutional power to regulate commerce."\(^{69}\)

Regardless of whether the infringing activity is a step of a process or method, part of a system or apparatus, and regardless of the technology at issue, where infringing acts occur both within the U.S. territory and without, courts should apply a uniform paradigm consistent with advancing the fundamental policy objectives underlying U.S. patent law—i.e., incentive for innovation, domestic commercialization of innovation, and economic prosperity. Congress and United States courts should limit their jurisdiction over patent infringement liability to activities occurring within the U.S. territory, and should limit damages to specific economic impact on the U.S. market for the patented invention. Contrary to what some commentators advocate,\(^{70}\) liability for patent infringement under U.S. law now requires—and must continue to require—the practice of all elements of the patent claims within the U.S. territory: the all-elements rule.\(^{71}\)

There is no such thing as "divided infringement"; either there is or there is not infringement within the United States. Otherwise, we are left with a sliding scale where it could then be argued that all elements need not be within the same system, method, product, or device. Such a sliding scale departs from the very basic principles of U.S. patent rights and infringement doctrine that have existed since its inception.

United States law should award damages for all infringing activities occurring within U.S. territory and should assess damages limited to those activities/incidences of infringing acts—making, using, selling, offering for sale, etc.—that actually occur within U.S. territory. Moreover, United States law should limit application of damages for patent infringement activities only where impact to the U.S. market for the patented invention can be proven. If an infringing product or information that implements an infringing product is exported for mass production, then liability should be limited to those infringing products that enter the United States. The legitimate interest of a patentee is to hold a market advantage for a limited time over the patented invention within U.S. territory, not anywhere else.


\(^{71}\) See, e.g., Wegner, supra note 47, at 671-72. "It is of course axiomatic that '[e]ach element contained in a patent claim is deemed material to determining the scope of the patented invention.'" See id. at 672 n. 68 (quoting Odetics, Inc. v. Storage Tech. Corp., 185 F.3d 1259, 1268 (Fed. Cir. 1999)).
In the *Deepsouth* factual scenario, U.S. law should award damages for each and every product kit shipped out of the United States that made its way back into the country; liability and the scope of damages must be limited to activities occurring within U.S. territory. In the *Eolas* and *AT&T* factual scenarios, law should create infringement liability for making, using, selling, and/or offering for sale a master disk, and should assess damages limited to infringing activities occurring within the territorial sales. The law, however, should not assess damages for copies made outside of U.S. territory; liability and damages for those activities should be determined by the laws of foreign nations.

The plaintiffs/inventors in these cases could have applied for a patent in foreign countries and brought suit there if they wished to obtain damages for patent infringement in those countries. Foreign countries' legislatures and courts must then decide whether the plaintiffs/inventors were entitled to patent rights and whether those rights were infringed under their laws. Of course, if the infringing products made their way back into U.S. territory, then U.S. law and courts should have the power and jurisdiction to issue injunctions and assess damages for each and every product entering U.S. territory.\(^{72}\)

Although the Supreme Court in *AT&T* pulled back on the Federal Circuit's trend of overreaching by narrowly interpreting Section 271(f) of the Patent Act, legislative amendments to the Act are necessary to effectively harmonize patent policy with the advancement of American economic interests and the evolution of technologies. Congress must repeal Section 271(f) in its entirety, as it does not serve the economic interest of the United States. Rather, it expands the patentee's rights beyond their legitimate interest and interferes with the sovereignty of other nations.

Further, Congress should amend Sections 271(b), (c), and (g) of the Act to increase the scope of third-party liability for domestic activities, and expand the technological scope of the provisions to protect all technologies (including software and object/source code), consistent with TRIPS equal treatment provisions. Nevertheless, the provisions should simultaneously limit infringement liability to domestic infringement activities, and damages under these provisions should be strictly assessed on the basis of economic impact to the U.S. market for the infringed subject matter.

To implement the policy interest outlined above, I propose that Sections 271(b) and (c) of the Act could read as follows:

(b) Whoever, located anywhere, knowingly induces or participates in acts that constitute direct infringement under Section 271(a) of the Patent Act shall be liable as an infringer and pay damages to the full extent of the patent holder’s economic loss in the U.S. market relating to the infringement.

(c) Whoever offers to sell or sells within the United States or imports into the United States anything knowing the same to be especially made or adapted for use in infringement of any claims of a U.S. patent within the United States and with which infringement of such claims occurs or is enabled, shall be held liable as a contributory infringer and pay damages to the full extent of the patent holder's economic loss in the U.S. market relating to the infringement.

Section 271(g) should also be amended to explicitly include importation of any "product" of a patent claim—whether a process, method or system—for any technology including software into the United States, and could read as follows:

Whoever without authority imports into the United States or offers for sale, sells, or uses within the United States a product of a U.S. patent process or a product or an embodiment implementing a method or system of a U.S. patent claim shall be liable as an infringer, if the importation, offer to sell, sale, or use of the product occurs during the term of the patent. A product will not be subject to liability under this section if:

(1) it is materially changed by subsequent processes; or

(2) it becomes a trivial and nonessential component of another product.

By broadening the third-party liability doctrine for activities within the United States, Congress can address the legitimate interest of the U.S. patent holder without the extraterritorial application of U.S. patent law. U.S. patent liability would be based on activities occurring within the United States and damages caused to the U.S. market for the patented invention within the United States. Information about activities abroad will only be used by an economist, as other information regarding markets, supply/demand, etc., and used to assess domestic economic impact on the domestic market/value for the patented invention proximately caused by the domestic illegal activities.

If we are to apply the proposed amended provisions of the Patent Act to the facts in the recent trilogy of cases before the Federal Circuit and the Supreme Court that have presented new conceptual challenges to patent infringement doctrine, we would arrive at more predictable results consistent with the underlying policy objective of U.S. patent laws and the legitimate interest of patent holders.73 The information economy has

73. See Wegner, supra note 57, at 680 (referring to Eolas Tech. Inc. v. Microsoft Corp., 399 F.3d 1325 (Fed. Cir. 2005); AT&T Corp. v. Microsoft Corp., 414 F.3d 1366 (Fed. Cir. 2005), rev'd, 550 U.S. 437 (2007); Union Carbide Chem. & Plastics Tech. Corp. v. Shell Oil Co., 425 F.3d 1366 (Fed. Cir. 2005) (holding that catalyst is "component" of patented chemical process)). Wegner argues that these cases have challenged the traditional contours of the scope of U.S. patent law
presented inventions and technologies in dispute that are not the components of the industrial age, but rather more abstract elements of the information economy. These elements include embodiments or vectors of information that bring together other elements at once, a system, or in a sequence of steps, a process or method, that practice the invention and the claim(s) of the patents. In order to fully protect the legitimate interest of patent holders—i.e., the commercial value of their inventions within the U.S. market—the law must not discriminate on the basis of technology or the form of patent claims, whether process, systems, or method. Rather, the law must reach and create liability to stop anyone who has the intention and opportunity to exploit the commercial value of the U.S. patented invention within the U.S. market. The proposed contributory provisions of Sections 271(b) and (c) would create liability for just that, and would also encompass anyone who intentionally participated in exporting out of or importing into the U.S. any elements of innovation that practice the U.S. patented invention, so long as there are acts of direct patent infringement within the territory. These provisions are also consistent with the principle of proscriptive jurisdiction in international law; under the "effects principle," the United States can enact laws imposing liability for non-residents/entities who attempt to capitalize on the domestic U.S. market for U.S. patented inventions by intentionally engaging in activities that result in direct infringement within U.S. territory.

Further, the proposed provisions are consistent with the principles of comity and conflict of laws, and do not create market asymmetries that would damage the U.S. economy. For example, in the AT&T and Eolas type of fact scenarios, the party exporting the master disks abroad would be held liable under Section 271(b) for inducing infringement if any of the infringing products would make their way back into U.S. territory. In addition, parties outside the U.S. who knowingly participate in the introduction of an infringing product into the U.S. would be within the reach of this provision. Further, any party importing the infringing products, such as incorporating the software, would be held liable under the proposed amended Section 271(c). At the same time, under the proposed provisions, there would be no incentive to move companies and/or manufacturing outside of the United States, because companies located inside U.S. territory and those located outside of the United States would compete on equal grounds with respect to the U.S. market for the U.S. patented invention.

In the NTP fact scenario, where some elements of the patented claims were practiced in the United States and others abroad, there would be no infringement liability under the proposed amended provisions of the Act where infringing products are only being sold outside of the United

by presenting technological inventions and patents with intangible elements that have defied traditional conceptions of infringement and national territorial boundaries. See id.
States, because there would necessarily be no practicing of the invention in the United States nor any product of a method or system being imported into the United States. Where products such as Blackberries are being sold in the United States, however, there would be liability under Section 271(g) to the extent that these devices are "products of patented methods or systems." Damages for infringement would be assessed based on sales (such as a reasonable royalty metric) or lost profits resulting from the infringing sales within the U.S. market alone.

Again, the patentee's legitimate interest and rights in the U.S. market for the patented invention continues to be protected under the proposed amended provision. In contrast with existing provisions, the law is not interfering in how or to what extent other countries wish to create laws protecting innovation in their society, economic, and social policy objectives they hope to forward, or how they may choose to enforce these rights. All of those concerns should be within the domain of the sovereign and their laws.

U.S. patentees also have the right to obtain patents in other countries in which they wish to protect their intellectual property. The United States government and other countries share an interest in greater global protection of patent rights. The countries of the world can better serve that shared interest through further development of already existing international intellectual property treaties.

VII. Conclusion

The application of United States patent law to activities occurring outside of the U.S. territory is inconsistent with basic principles reflected in all major international intellectual property treaties. Moreover, such application interferes with the sovereignty of other nations, and is contrary to the well-recognized principles of comity. Further, such an approach undermines American foreign relations and global efforts at creating an effective international system for intellectual property protection and enforcement.

Perhaps even more compelling is that extraterritorial application of U.S. law damages the U.S. economy by giving companies located outside of the U.S. an advantage in the American market for U.S. patented subject matter. Such application creates asymmetries in patent rights, which provides incentives for U.S.-based companies (or domestic divisions thereof) to move abroad. Rather than applying U.S. patent law to activities occurring abroad, the underlying policy interest of U.S. patent law—i.e., incentive for innovation and commercialization of innovation within the United States—can be best accomplished by expanding third-party liability with respect to activities occurring within the United States and by limiting damages for infringement to domestic infringing activities as proposed in the amended provisions of the Patent Act.