

U.S. Patent Law and Extraterritorial Reach*

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I. INTRODUCTION

Historically, U.S. patent law limited direct infringement liability to activity in the United States for the unauthorized making, using, and selling of patented inventions.¹ In the controversial *Deepsouth* case, the United States Supreme Court upheld the strict territorial presumption limiting direct infringement liability to activities taking place in the United States. In that case, a manufacturer made all the components of a patented shrimp deveining machine in the United States and then

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1. See 35 U.S.C. § 271(a) (2000); see also *Deepsouth Packing Co. v. Laitram Corp.*, 406 U.S. 518, 527 (1972); *Dowagiac Mfg. Co. v. Minn. Moline Plow Co.*, 235 U.S. 641, 650 (1915); *Brown v. Duchesne*, 60 U.S. 182, 192 (1856).

exported the components for assembly by foreign buyers.² In a five-four decision, the Supreme Court held that the “making” term in § 271(a) of the Patent Act requires an “operable assembly of the whole and not the manufacture of the parts.”³ Because the manufacturer did not combine components into an operable assembly within the United States, according to the Court, there was no “making” within the meaning of § 271(a) and thus, no direct infringement.⁴

In what would seem to undermine a predominant policy objective of the Patent Act, i.e., incentive for innovation in the United States, the Court in *Deepsouth* failed to extend the reach of the Patent Act to a situation where the intent and the means of infringement had been provided, and the extraterritorial export simply served as a way to technically bypass the law for what was otherwise clearly an act of deliberate infringement.⁵

With the globalization of the marketplace and the growing significance of intellectual property rights in the world economy, there has been an increased interest, particularly among the developed countries, in protecting intellectual property rights beyond national borders. In recent years, the U.S. legislature and courts have expanded the extraterritorial scope of U.S. law to accommodate the growing economic importance of intellectual property. This Article looks at key areas of U.S. legal doctrine that have served as focal points for this expansion.

II. INDIRECT INFRINGEMENT AND EXTRATERRITORIAL REACH

The doctrine of indirect infringement was developed judicially over a century ago.⁶ However, it was not until after its codification in the 1952

2. *Deepsouth*, 406 U.S. at 523.

3. *Id.* at 528-29.

4. *See id.* at 527.

5. The defendant set up a scheme whereby all parts were shipped in a three-box “kit” with instructions for assembly in less than an hour. *Id.* at 532 (Blackmun, J., dissenting) (stating the operation was “iniquitous and invasive”).

6. *See Dawson Chem. Co. v. Rohm & Hass Co.*, 448 U.S. 176, 187-88 (1980). The United States Supreme Court explained the rationale for the indirect infringement doctrine:

[T]he doctrine of contributory infringement has its genesis in an era of simpler and less subtle technology. Its basic elements are perhaps best explained with a classic example drawn from that era. In *Wallace v. Holmes*, 29 F. Cas. 74 (No. 17,100) (C.C. Conn. 1871), the patentee had invented a new burner for an oil lamp. In compliance with the technical rules of patent claiming, this invention was patented in a combination that also included the standard fuel reservoir, wick tube, and chimney necessary for a properly functioning lamp. After the patent issued, a competitor began to market a rival product including the novel burner but not the chimney. Under the sometimes scholastic law of patents, this conduct did not amount to direct infringement, because

Patent Act that the extraterritorial aspects of the doctrine began to develop. Subsequently, indirect infringement became the only “hook” for the extraterritorial reach of U.S. patent law.⁷ Sections 271(b) and (c) of the Patent Act provide the statutory framework for indirect infringement:

- (b) Whoever actively induces infringement of a patent shall be liable as an infringer.
- (c) Whoever offers to sell or sells within the United States or imports into the United States 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 noninfringing use, shall be liable as a contributory infringer.⁸

These subsections impose liability when defendants’ actions by themselves do not infringe the patent, but have facilitated infringement by others.⁹ As an additional requirement, contributory infringement also requires that the alleged infringing component not be “a staple article . . . of commerce suitable for substantial non-infringing use.”¹⁰ Inducement is the residual of an act of contributory infringement.¹¹ It is important to

the competitor had not replicated every single element of the patentee’s claimed combination. Yet the court held that there had been “palpable interference” with the patentee’s legal rights, because purchasers would be certain to complete the combination, and hence the infringement, by adding the glass chimney. The court permitted the patentee to enforce his rights against the competitor who brought about the infringement, rather than requiring the patentee to undertake the almost insuperable task of finding and suing all the innocent purchasers who technically were responsible for completing the infringement. The *Wallace* case demonstrates, in a readily comprehensible setting, the reason for the contributory infringement doctrine. It exists to protect patent rights from subversion by those who, without directly infringing the patent themselves, engage in acts designed to facilitate infringement by others.

Id. (internal citations omitted).

7. See, e.g., *Spindelfabrik Suessen-Schurr v. Schubert & Salzer Maschine Aktiengesellschaft*, 903 F.2d 1568, 1577-78 (Fed. Cir. 1990); *Honeywell, Inc. v. Metz Apparatewerke*, 509 F.2d 1137, 1141 (7th Cir. 1975); *Kabushiki Kaisa Hattori Seiko v. Refac Tech. Dev. Corp.*, 690 F. Supp. 1339, 1440 (S.D.N.Y. 1988); *Engineered Sports Prods. v. Brunswick Corp.*, 362 F. Supp. 722, 727 (D. Utah. 1973).

8. 35 U.S.C. § 271(b)-(c) (2000).

9. See *Dawson Chem.*, 448 U.S. at 188.

10. 35 U.S.C. § 271(c).

11. See *Hewlett-Packard Co. v. Bausch & Lomb Inc.*, 909 F.2d 1464, 1468-70 (Fed. Cir. 1990), *cert. denied*, 493 U.S. 1076. Judge Rich distinguished the requirements under § 271(b) and (c). 909 F.2d at 1468-70.

note that there must be an act of direct infringement in order for there to be an action for indirect infringement under § 271 (b) and (c).¹²

In *Honeywell, Inc. v. Metz Apparatewerke*, the plaintiff, Honeywell, Inc., (Honeywell) brought suit against Metz Apparatewerke, (Metz) the manufacturer, two U.S. distributors, and a U.S. retailer for infringing its patents on a photographic flash unit.¹³ In this case, the alien defendant's U.S. distributor sold infringing goods in the United States.¹⁴ The United States Court of Appeals for the Seventh Circuit held that the foreign defendant Metz had, by its "intention to invade the United States market [with foreign infringing products] at a time when Metz was fully aware of Honeywell's United States patents," actively induced infringement of Honeywell's product claims.¹⁵ Thus, a few courts have held that "inducement" of patent infringement could occur even if "inducing" activities occur outside the United States.¹⁶

III. PATENT ACT AMENDMENTS AND EXTRATERRITORIAL IMPLICATIONS

A. Amendments to § 271(a)

The 1994 Amendments to § 271(a) added two new infringing acts for liability under this section: "importation" of and "offers to sell" patented inventions would also constitute acts of direct infringement. Section 271(a) of the Patent Act provides the basic framework for infringement in the United States: "[e]xcept 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 therefore, infringes the patent."¹⁷

In one of the leading cases in the field, the United States Court of Appeals for the Federal Circuit in *Rotec Industries, Inc. v. Mitsubishi Corp.*¹⁸ seemed to imply that "offers to sell" could possibly include offers to sell patented inventions outside of the United States.¹⁹ However, post-

12. See *id.* at 1469.

13. 509 F.2d 1137, 1139 (7th Cir. 1975).

14. *Id.*

15. *Id.* at 1142.

16. See, e.g., *id.*; *Endress & Hauser Inc. v. Hawk Measurement Sys. Pty. Ltd.*, 32 U.S.P.Q.2d 1768, 1777 (S.D. Ind. 1994) (finding an Australian company to have contributorily infringed a product patent when it sold devices to its American subsidiary, knowing that the subsidiary would resell them in the United States); *Knoll Int'l Inc. v. Cont'l Imps. Inc.*, 192 U.S.P.Q. 644, 646 (E.D. Pa. 1976).

17. 35 U.S.C. § 271(a) (2000) (emphasis added).

18. 215 F.3d 1246 (Fed. Cir. 2000).

19. See *id.* at 1254-57.

Rotec, district court cases have generally followed Judge Newman's approach limiting this section's extraterritorial reach.²⁰

B. A Summary of Rotec

In 1995, the government of China (People's Republic of China) solicited proposals for a contract to supply five concrete-conveyor tower cranes to be used to construct the Three Gorges Dam project on the Yangtze River.²¹ Three companies, including a Japanese Company, Mitsubishi Corp.; a French company, Potain; and Johnson, a U.S. company, formed a "team" to bid jointly for the Chinese contract.²² Johnson hired a consultant, Tucker, who represented the team and attended a bidding conference in Yichang, China, to supply the conveyer systems for the Chinese government; soon after, Johnson began work on the design of the system in his offices in Oregon.²³ The arrangement between the team provided that Potain would build the tower crane components, Johnson would construct the conveyor components, and Mitsubishi would provide the financing.²⁴ After a year of negotiations, the Chinese government awarded a contract for two of the complete concrete conveying systems, and the parties signed a contract in Yichang on December 16, 1996.²⁵ At the end, all the parts of the system were manufactured outside of the United States.²⁶

Rotec Industries, Inc., (Rotec) is a U.S. company and maintains a valid U.S. patent for the type of tower crane system (system) that the team ultimately manufactured in China.²⁷ Once Rotec discovered this, it filed suit against the team for several causes of action including patent infringement.²⁸ In its complaint, Rotec alleged that the team had infringed its patented system by "offer[ing] to sell"²⁹ equipment covered by the claims of its patent.³⁰ Rotec pointed to specific activities by the

20. *Id.* at 1258 (Newman, J., concurring); *see, e.g.*, *Cybiotronics, Ltd. v. Golden Source Elecs., Ltd.*, 130 F. Supp. 2d 1152, 1163 (C.D. Cal. 2001); *Star Scientific, Inc. v. R.J. Reynolds Tobacco Co.*, 174 F. Supp. 2d 388, 393 (D. Md. 2001); *Recycling Scis. Int'l, Inc. v. Soil Restoration & Recycling, L.L.C.*, No. 00 C 031, 2001 WL 969040, at *2 (N.D. Ill. Aug. 24, 2001).

21. *See Rotec*, 215 F.3d at 1249.

22. *Id.*

23. *Id.*

24. *Id.*

25. *Id.*

26. *Id.* at 1250.

27. *Id.* at 1248-49.

28. *Id.* at 1249.

29. 35 U.S.C. § 271(a) (2000).

30. *Rotec*, 215 F.3d at 1249.

team which Rotec alleged to have constituted an “offer to sell” under § 271(a):

- 1) The offering parties met several times in the United States;
- 2) A delegation from China visited Johnson’s headquarters in Champaign, Illinois during the week of December 8, 1996;
- 3) Tucker prepared pricing information and worked on finalizing design and financial aspects of the bid proposal at his offices in Oregon and at Johnson’s Champaign, Illinois headquarters;
- 4) Johnson provided relevant technical and financial documents to Potain to be used in the preparation of the project of the bid; and
- 5) The offer provided that non-staple components were to be made in the United States by a designated U.S. supplier.³¹

The team countered by proffering evidence that the bid proposal for the system was finalized at a meeting in Hong Kong and that the contract was negotiated, presented, and ultimately signed in China.³² The court found that none of these actions taken by the team, individually or in aggregate, were sufficient to meet the legal requirement of an “offer to sell” under § 271(a) of the Patent Act.³³

In interpreting § 271(a), the Federal Circuit in *Rotec* explained that the statutory history of § 271 may be divided into two distinct periods: before and after the GATT Uruguay Round Trade Related Aspects of Intellectual Property (TRIPS) agreements.³⁴ Before the TRIPS agreements, the court explained that § 271(a) was limited to granting patent holders the right to exclude others from “making, using, or selling the patented invention throughout the United States.”³⁵ After the TRIPS agreement, the term “offer to sell” was added to this section but no further explanation as to how it would be interpreted was provided.³⁶ The court also made it clear that it “construed this [patent] grant strictly, so that neither intent nor preparation [to sell] constitute[d] infringement,”³⁷ and that a party could not be held liable for “threatening to infringe, contracting to make infringing devices, or even beginning construction of infringing devices.”³⁸ The court clarified that “§ 271(a) did not cover acts other than an actual making, using, or selling of the patented invention in

31. *Id.*

32. *Id.*

33. *Id.* at 1257.

34. *Id.* at 1261.

35. *Id.* at 1251-52.

36. *Id.* at 1252.

37. *Id.* at 1251 (citing *Laitram Corp. v. Cambridge Wire Cloth Co.*, 919 F.2d 1579, 1583 (Fed. Cir. 1990)).

38. *Id.* (citing *Eli Lilly & Co. v. Medtronic, Inc.*, 915 F.2d 670, 673 (Fed. Cir. 1990)).

its completed form.”³⁹ In support of its noninfringement holding, the court pointed out that the Supreme Court in *Deepsouth* had held that “sales rhetoric and related indicia such as price” could not infringe a patent unless the patentee proved the defendant was “selling the patented invention.”⁴⁰

C. Section 271(f)

To a large extent, as a result of the loopholes in the doctrine revealed in *Deepsouth*, Congress, in 1984, added § 271(f) as an additional ground for patent infringement liability.⁴¹ This section provides a separate cause of action for direct infringement. With this amendment, Congress effectively overruled much of the holding in *Deepsouth* and made component exporters liable for direct infringement for “supplying” or “causing to supply” components of a patented invention for assembly outside of the United States; however, unlike § 271(b) and (c), § 271(f) does not require a *separate act of direct infringement*. Subsection 271(f) of the Patent Act provides:

- (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 non-infringing 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 United States in a manner that would infringe the patent if such combination occurred within the United States, shall be liable as an infringer.⁴²

The legislative history of § 271(f) indicates that it is directed at deterring both U.S. companies like *Deepsouth* from working around a U.S. patent holder’s rights by foreign export of components, as well as foreign manufacturers who wish to implement copying of U.S. patent

39. *Id.*

40. *Id.* (citing *Deepsouth Packing Co. v. Laitram*, 406 U.S. 518, 527 (1972)).

41. *Id.* at 1252-53.

42. 35 U.S.C. § 271(f) (2000).

inventions by importing the necessary parts from outlets in the United States.⁴³ Patentees may claim infringement under § 271(f)(1) or (f)(2), depending on whether the components are staple articles (i.e., basic articles that may also be used in noninfringing products) or “especially made or adapted for use in the [patented] invention,” respectively.⁴⁴ Courts have interpreted “supply components of a patented invention” to apply to shipping components from the United States, as in *Deepsouth*, but not to “offering to sell” components for foreign assembly.⁴⁵ In the case of § 271(f)(2) “especially made” components, supplying a single component especially made or adapted for the patented invention could trigger liability.⁴⁶ In the case of § 271(f)(1) “staple” products, however, infringement would only be found for supplying or causing to supply all or a “substantial portion” of the staple components in a manner that would infringe the patent if such a combination were put together within the United States.⁴⁷ The courts have interpreted a “substantial portion” not to be represented where the components being supplied were only minimal.⁴⁸ However, where the majority of the components were supplied, the courts found there to be a “substantial portion.”⁴⁹

Under § 271(f) the components may be staple articles or commodities of commerce which may also be suitable for substantial noninfringing use; by contrast, under § 271(f)(2) the accused components must be especially made or especially adapted for use in the invention (not staple articles) and not suitable for noninfringing use. Further, for infringement liability, § 271(f)(2) requires the accused infringer to have specific knowledge that the components are especially made or adapted for the use in the patented invention. Under this subsection, in order to be liable an accused infringer must also have the intent that the components will be combined outside of the United States in a manner that would infringe if the combination occurred within the

43. See Patent Law Amendments Act of 1984, Pub. L. No. 98-622, § 101, 98 Stat. 3383, 3383 (codified at 35 U.S.C. § 271(f)).

44. 35 U.S.C. § 271(f)(2).

45. See *Kabushiki Kaisha Hattori Seiko v. Refac Tech. Dev. Corp.*, 690 F. Supp. 1339 (S.D.N.Y. 1988).

46. 35 U.S.C. § 271(f)(2).

47. *Id.* § 271(f)(1).

48. See *Rothschild v. Ford Motor Co.*, 2 F. Supp. 2d 941, 947 (E.D. Mich. 1998) (finding no infringement by shipping two burners and a cooling mechanism from the United States when the patented sand reclamation system had other components, including furnace, retention well, conveyor, grids, and chute—the court explained that “any rational juror would find these three components contribute minimally to the accused device and therefore § 271(f)(1) is wholly inapplicable”).

49. See, e.g., *T.D. Williamson, Inc. v. Laymon*, 723 F. Supp. 587, 591 (N.D. Okla. 1989), *aff'd*, 923 F.2d 871 (Fed. Cir. 1990).

United States. In sum, § 271(f) is in many ways broader in scope than § 271(b) and (c), which provide causes of action for indirect infringement only upon a showing of an act of direct infringement first; § 271(f) provides a cause of action for direct infringement and is not dependent on a separate act of infringement.

In a recent decision by the Federal Circuit, § 271(f)(2) was broadly interpreted.⁵⁰ *Waymark* involved a battery monitoring system that sounds an alarm if any battery in a string is in danger of falling below an acceptable capacity.⁵¹ The inventor, Ronald Caravello, assigned his rights to Fibercorp.⁵² Fibercorp employed Porta Systems to develop a battery monitoring system called Battscan.⁵³ After Fibercorp went out of business, Porta Systems continued to develop Battscan without a license.⁵⁴ Caravello Family LP obtained Fibercorp's patent rights in Battscan and with licensee Waymark Corp. sued Porta Systems for patent infringement of Battscan.⁵⁵ The Federal Circuit held that Fibercorp's testing of Battscan's components did not constitute patent infringement under § 271(a) because this section requires unauthorized use of the entire assembled patented invention.⁵⁶ The Federal Circuit, however, did find the possibility of infringement under § 271(f)(2).⁵⁷

The court held that liability for shipping key components of a patented product for foreign assembly under this section requires "intended" assembly—not necessarily actual assembly—and the court supported this interpretation with statutory and policy based rationales.⁵⁸ The court explained that § 271(f) requires the infringer only intend that such components will be combined, and the statutory language does not require or suggest that the infringer need actually combine or assemble the components.⁵⁹ Further, the court opined that the district court erred in reading contributory infringement under § 271(c) into § 271(f); the court explained that while contributory infringement depends on a separate act of direct infringement, § 271(f) solely requires that the infringer "supply," "cause to supply," or intend to supply components of a patented invention for foreign assembly.⁶⁰ *Thus, under § 271(f) a foreign manufacturer of a*

50. *Waymark Corp. v. Porta Sys. Corp.*, 245 F.3d 1364, 1365 (Fed. Cir. 2001).

51. *Id.*

52. *Id.*

53. *Id.*

54. *Id.*

55. *Id.*

56. *Id.* at 1366.

57. *Id.* at 1369.

58. *Id.* at 1368.

59. *Id.*

60. *Id.*

U.S. patented invention could be found liable for infringement if it exports (or induces someone to export or contributes to the export) the components of a U.S. patented invention abroad for assembly, even if such assembly never occurs.

D. Section 271(g)

Four years after enacting § 271(f), Congress passed the Process Patent Amendments Act of 1988.⁶¹ Section 271(g) was also enacted in response to the type of patent infringement doctrine loopholes revealed in *Deepsouth*. Foreign manufacturers could use U.S. process patents to make products abroad and then import and sell the products in the United States without incurring infringement liability.⁶² Section 271(g) provides:

Whoever without authority imports into the United States or offers to sell, sells, or uses within the United States a product which is made by a process patented in the United States 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 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.⁶³

Section 271(g) generally makes the import, sale, or use of products of U.S. process patents within the United States a new ground for liability for direct infringement; however, this section does not preclude importing goods made by processes when the imported product has been “materially changed by subsequent processes” or has become “a trivial

61. 102 Stat. 1564. The new rule codified at § 271(g) grants U.S. process patent holders the right to exclude products made overseas by their patented processes from the U.S. market. See Glenn Law, Note, *Liability Under the Process Patent Amendment Act of 1988 for Use of a Patented Process Outside the United States*, 60 GEO. WASH. L. REV. 245, 248 (1991).

62. Note, however, that patent law has not been the only legal regime providing legal remedy for patent infringing imports. In addition to the remedies provided in patent infringement doctrine, a patentee may also obtain orders from the International Trade Commission (ITC) to exclude from the United States any infringing import, including imports made by a patented process. See 19 U.S.C. § 1337 (2000); Kenneth E. Krosin & Holly D. Kozlowski, *Patent-Based Suits at the International Trade Commission Following the 1988 Amendments to Section 337*, 17 AM. INTELL. PROP. L. ASS'N Q. J. 47 (1989); see also *In re Amtorg Trading Corp.*, 75 F.2d 826 (C.C.P.A.), cert. denied, 296 U.S. 576 (1935) (holding that ITC provided remedies different from infringement doctrine suits, but the rights protected are substantially equivalent).

63. 35 U.S.C. § 271(g) (2000).

and nonessential component of another product.”⁶⁴ A number of recent Federal Circuit decisions have interpreted the limits on the applicability of § 271(g).⁶⁵

In *Eli Lilly*, the court held that Eli Lilly had failed to show a likelihood of success on their claim that by importing the antibiotic cefaclor, which is made by using the product of Eli Lilly’s patented process called “compound 6,” American Cyanamid infringed the patent.⁶⁶ The court therefore denied the plaintiff’s request for a preliminary injunction.⁶⁷ Compound 6, after being used to make cefaclor, had significantly different biological characteristics than when it was in its isolated form (i.e., it was “materially changed by subsequent processes” to make cefaclor).⁶⁸

In *Bio-Tech*, the Federal Circuit, applying the “materially changed” limitation of § 271(g), held that the holder of a process patent for creating a genetically modified plasmid had a cause of action against importers of the human growth hormone (hGH) produced by the plasmid.⁶⁹ According to the court:

There is little doubt that the plasmid product of the claimed process and hGH are entirely different materials, one being more than materially changed in relation to the other. hGH is not a mere modification of the plasmid. . . . Congress’s intent that infringement of a process for making a plasmid is not to be avoided by using it to express its intended protein [hGH]. . . . Thus, it cannot be said as a matter of law that the production of hGH is too remote from the claimed process.⁷⁰

In *Bayer*, the Federal Circuit interpreted § 271(g) in the context of patents directed to methods of screening for new drugs.⁷¹ In this case, the plaintiff, Housey Pharmaceuticals, alleged that Bayer infringed its patented methods of screening compounds for the ability to inhibit or activate proteins in a cell.⁷² No dispute was raised as to whether Bayer’s screening methods were covered by the claims of the Housey patents.⁷³ The question before the court was whether Bayer’s screening of

64. *Id.*

65. *See, e.g.,* *Bayer v. Housey Pharms.*, 340 F.3d 1367, 1378 (Fed. Cir. 2003); *Eli Lilly & Co. v. Am. Cyanamid Co.*, 82 F.3d 1568, 1570 (Fed. Cir. 1996); *Bio-Tech. Gen. Corp. v. Genentech, Inc.*, 80 F.3d 1553, 1556 (Fed. Cir. 1996).

66. 82 F.3d at 1569-70.

67. *Id.*

68. *Id.* at 1573.

69. *Bio-Tech.*, 80 F.3d at 1556.

70. *Id.* at 1561.

71. *See Bayer*, 340 F.3d at 1367.

72. *Id.*

73. *Id.*

compounds with assays outside the United States and importing information derived from these assays into the United States for drug candidates' selection and manufacturing constituted direct infringement under § 271(g).⁷⁴ The issue before the Federal Circuit was therefore the meaning of the phrase "a product which is made by a process."⁷⁵ Bayer argued that § 271(g) applied only to manufacturing processes in which a physical product is made, and since Bayer was importing only information, it could not infringe the Housey patent claims.⁷⁶ Housey argued that § 271(g) should be broadly interpreted and should cover any patented method, whether or not the method produces a physical product.⁷⁷

After reviewing the language of § 271(g) and the legislative history of the Process Patent Amendments Act, the Federal Circuit determined that the law applied only to importation of physical objects derived from manufacturing processes.⁷⁸ Thus, Bayer's importation of information derived from its screening activities was not an infringement of the Housey patents.

As a result of this decision, owners of U.S. patents claiming screening methods should be aware that these patents cannot be used to stop competitors from using the patented methods outside the United States. These patents can be obtained and enforced in other countries, though it may not be feasible to apply for patents in every country where the screening could be carried out. Inventors of new screening methods should consider adding claims that identify a compound(s) being screened for in the process. These claims have a better chance of being considered methods of manufacturing with their products being protected under § 271(g).

E. Applying § 271(g) in Conjunction with Indirect Infringement

Some district courts have interpreted § 271(g) in conjunction with § 271(b) and (c), recognizing a cause of action for indirect infringement for acts committed outside the United States.⁷⁹ Others have been unwilling to read these sections together.⁸⁰

74. *Id.* at 1371.

75. *Id.*

76. *Id.*

77. *Id.* at 1373.

78. *Id.* at 1374.

79. *See, e.g.,* Budd Co. v. Complax Co., No. 90-cv-70622-DT (E.D. Mich. Oct. 29, 1990); Hughes Aircraft Co. v. Nat'l Semiconductor Corp., 857 F. Supp. 691, 698-700 (N.D. Cal. 1994).

80. Pfizer Inc. v. Aceto Corp., 853 F. Supp. 104, 104 (S.D.N.Y. 1994).

In *Pfizer*, the United States District Court for the Southern District of New York held that a foreign manufacturer that does not itself import the product into the United States is not liable under § 271(f).⁸¹ The court explained that there would be no liability under this section even if the manufacturer could foresee such importation.⁸² The *Pfizer* court granted a summary judgment motion to dismiss in favor of the defendant, Anhui Hefel Flavour Factory.⁸³ Anhui, who was located and did business in China, manufactured the flavor enhancer maltol by a process that Pfizer alleged was within the scope of Pfizer's process patent claims.⁸⁴ Anhui sold the maltol in China to Sinochem which in turn sold it to F & S Alloys and Minerals Corporation, a Delaware corporation, which imported the maltol into the United States.⁸⁵ Pfizer argued that Anhui was the kind of foreign manufacturer that § 271(g) sought to stop and Pfizer argued that "importer" should be read broadly to include a foreign manufacturer who knows that the buyer of its products is importing the products into the United States.⁸⁶ However, the court declined to accept Pfizer's arguments and reasoned that U.S. patent law applies only within its territory and that the infringing act must occur within the United States.⁸⁷ The court reasoned that § 271(g) limits liability to "importers" and sellers of infringing products within the United States, and the legislative history does not justify expanding this interpretation.⁸⁸

In *Hughes Aircraft Co. v. National Semiconductor Corp.*, the United States District Court for the Northern District of California in granted summary judgment in favor of an auto manufacturer.⁸⁹ The court found that the defendant did not infringe a U.S. patent for computer chip production by incorporating the resulting computer chips from the patented process into its automobiles.⁹⁰ The auto manufacturer had indirectly purchased the computer chips from a third party supplier that had incorporated them into another product purchased by the auto manufacturer.⁹¹ The auto manufacturer asserted that they did not infringe the process patents because the computer chips were "trivial and non-

81. *Id.*

82. *Id.* at 105.

83. *Id.* at 106.

84. *Id.* at 105.

85. *Id.*

86. *Id.*

87. *Id.*

88. *Id.*

89. 857 F. Supp. 691, 700-01 (N.D. Cal. 1994).

90. *Id.*

91. *Id.* at 695.

essential” components of its automobiles.⁹² In interpreting § 271(g), the court looked at the legislative history and the committee reports where the congressional committee described an example of how this section was contemplated to be applied.⁹³ According to the drafters, even a shock absorber manufactured by a patented process and incorporated into an automobile would be enough to impose liability for infringement on the automobile manufacturer.⁹⁴ Thus, the court determined that the automobile manufacturer would have to find grounds other than the “trivial and non-essential component” argument to escape liability.⁹⁵

The court ultimately did conclude that § 271(g) did not appear to have been designed to hold downstream sellers of goods (such as the auto manufacturer in the instant case) liable for infringement.⁹⁶ It reached this conclusion by again looking to the legislative history of § 271(g) and finding that the main goal of Congress in enacting the statute was to attach infringement liability to the manufacturers of the goods covered by patented processes and their direct customers only.⁹⁷ Congress did not intend to make downstream domestic users of such goods liable for infringement.⁹⁸ Thus, the auto manufacturer in *Hughes Aircraft* was found not liable because there had been several links in the chain between them and the manufacturer of the specific part in question.⁹⁹

The court in *Hughes Aircraft* went on to evaluate the plaintiffs’ claim that the car manufacturer induced the infringement of the patented process for manufacturing the product under § 271(b) (with the direct infringement that occurred under § 271(g)) through their incorporation of the chips into its manufactured cars.¹⁰⁰ The court, in effect, gave credence to the plaintiffs’ argument for finding indirect infringement, i.e., inducement, based on a claim of direct infringement under § 271(g).¹⁰¹ However, in conclusion the court found that the defendant was not liable for inducing infringement (and granted the defendant’s motion to dismiss) because the plaintiffs failed to prove that the defendant manufacturer had the specific intent and interest as to four issues:

92. *Id.* at 697 (citing 35 U.S.C. § 271(c) (1994)).

93. *Id.*

94. *Id.* (citing S. REP. NO. 83 at 49-52 (1987)).

95. *Id.*

96. *Id.* at 697-98.

97. *Id.* at 698 (citing S. REP. NO. 83, at 29-30 (1987)).

98. *Id.*

99. *Id.* at 698-99.

100. *Id.* at 699.

101. *See id.* at 700.

(1) prior knowledge, before being sued, of the process patent for chips at issue, (2) knowledge of whether the manufacturer's foreign subsidiaries or suppliers used the claimed patented process in making the chips at issue, (3) intent for its subsidiaries to infringe the patents at issue, and (4) that the defendant car manufacturer had any interest in how the products purchased from its suppliers were manufactured.¹⁰²

IV. EXTRATERRITORIAL JURISDICTION

In most extraterritorial legal disputes, jurisdiction is a formidable barrier to enforcing domestic intellectual property rights. This Part will look at some of the salient principles of law controlling the jurisdiction of U.S. courts over patent disputes where there has not been consent to a specific legal forum.

A. *National Sovereignty, General Considerations*

Simply put, the norms of international law provide each country with the power to control its own affairs and activities within its territorial borders. As a corollary, it is incumbent upon each state not to interfere with the affairs of another. Within international law, various principles of jurisdiction exist for the justification of extraterritorial reach of national courts, notably: the "territorial principle," the "effects principle," and the "protective principle."¹⁰³

Under the "territorial principle," a state may not impose its laws on activities that occur outside of its territory, and such an imposition would constitute a violation of the sovereignty of the foreign nation.¹⁰⁴ Under the "effects principle," when activities in one state have a "substantial effect" on another state, then the forum state may exercise jurisdiction over a party or entity responsible for the conduct; in the United States, the effects test has been interpreted to require both the intent to affect as well as the actual effect.¹⁰⁵ Under the "protective principle," a state may exercise extraterritorial jurisdiction where its "security interest" is at stake; such interests have also been interpreted to include foreign activities that impact currency, immigration, and economic interests.¹⁰⁶

The "territorial principle" cannot be applied in the multinational Internet context because it would require the application of a country's

102. *Id.*

103. RESTATEMENT (THIRD) OF FOREIGN RELATIONS LAW OF THE UNITED STATES § 102(2) (1987).

104. *Id.*

105. *Id.*

106. *Id.*

domestic laws on citizens of other states.¹⁰⁷ The “protective principle” is also of limited effect because it is often difficult to argue that some regulation over an Internet activity is related to a “crucial state interest.” Thus, countries wishing to assert extraterritorial jurisdiction most often apply the “effects principle” to justify their jurisdiction.

B. Personal Jurisdiction of U.S. Courts in Patent Cases

In the United States, a court cannot assert jurisdiction over a potential defendant unless the defendant has sufficient “minimum contacts” with the forum state (the place where legal action is being brought) so as to satisfy “traditional notions of fair play and substantial justice.”¹⁰⁸ These contacts may consist of either some type of “systematic and continuous contact” within the forum (known as general jurisdiction), or isolated or occasional contacts purposefully directed toward the forum (specific jurisdiction).¹⁰⁹

In no place has the doctrine of international jurisdiction been more challenged than in disputes involving the Internet, and this is no different in the intellectual property law context. Courts have modified the traditional approach to accommodate this new forum and applied what has been called the “sliding scale” test to determine jurisdiction:

At one end of this spectrum are situations where a defendant clearly does business over the Internet. If the defendant enters into contracts with residents of a foreign jurisdiction that involve the knowing and repeated transmission of computer files over the Internet, personal jurisdiction is proper. At the opposite end are situations where a defendant has simply posted information on an Internet Web site which is accessible to users in foreign jurisdictions. A passive Web site that does little more than make information available to those who are interested in it is not grounds for the exercise of personal jurisdiction.¹¹⁰

In recent decisions, the courts in some circuits have refined the analysis by describing the types of contacts that would constitute “purposeful availment.”¹¹¹

The middle of the spectrum involves situations where a user can exchange information with the host computer. In such situations, jurisdiction is determined by examining the “level of interactivity and

107. *Id.*

108. *See, e.g.,* Int'l Shoe Co. v. Wash. Office of Unemployment, 326 U.S. 310, 316 (1945) (citations omitted).

109. *See, e.g.,* Helicopteros Nacionales de Columbia, S.A. v. Hall, 466 U.S. 408 (1984).

110. *Zippo Mfg. Co. v. Zippo Dot Com, Inc.*, 952 F. Supp. 1119, 1124 (W.D. Pa. 1997).

111. *See, e.g.,* Toys “R” Us, Inc. v. Step Two, 318 F.3d 446, 452-53 (3d Cir. 2003).

commercial nature of the exchange of information.”¹¹² Generally, for a Web site owner to be subjected to the jurisdiction of a U.S. court, the site must be aimed specifically at the citizens of the forum state.¹¹³

Finally, for a U.S. court to exercise jurisdiction over a party from a different state or country, it must also satisfy the jurisdictional constraints placed on it by the United States Constitution, principally the Due Process Clause of the Fourteenth Amendment. This clause has been used in these cases to determine whether the defendant, by its actions, could have reasonably anticipated the possibility of defending a suit in the forum where jurisdiction is being sought.¹¹⁴ In the case of a non-U.S. defendant, there has been a split in authority over whether a forum court can consider the aggregate of contacts with various states in the United States or whether it must consider only the contacts with a particular state.¹¹⁵ In the 1993 amendment of Federal Rule of Civil Procedure 4(k),¹¹⁶ it was established that the new Rule 4(k)(2) also applied to “jurisdiction over foreign defendants for claims arising under federal law when the defendant has sufficient contacts with the nation as a whole but is without sufficient contacts with a state to satisfy the ‘due process’ concerns of the long-arm statute of any one state.”¹¹⁷

The basic test for personal jurisdiction in the patent context came out of the Federal Circuit case of *Akro Corp. v. Luker*.¹¹⁸ The “*Akro* test” requires three conditions for the establishment of personal jurisdiction:

1. Activities purposefully directed at the forum state;
2. Relationship of these activities to the cause of action; and
3. Constitutional reasonableness of jurisdiction.¹¹⁹

In *3D Systems Inc. v. Aarotech Laboratories, Inc.*, 3D Systems, a California corporation, brought a patent infringement suit in the United States District Court for the Central District of California against Aarotech Laboratories, Inc., Aaroflex Inc., and CEO Albert C. Young.¹²⁰ Aarotech is incorporated in Oklahoma and has its principle place of

112. *Id.*

113. *See, e.g.*, *Cybersell, Inc. v. Cybersell, Inc.*, 130 F.3d 414, 416 (9th Cir. 1997).

114. *See, e.g.*, *World-Wide Volkswagen v. Woodson*, 444 U.S. 286, 295-99 (1980).

115. DONALD S. CHISUM, CHISUM ON PATENTS § 21.02[3] (Supp. June 1999).

116. FED. R. CIV. P. 4(k) (2002).

117. *Agar Corp. Inc. v. Multi-Fluid Inc.*, 45 U.S.P.Q.2d 1444, 1451 (S.D. Tex. 1997); *see also* Fritz Blumer, *Jurisdiction and Recognition in Transatlantic Patent Litigation*, 9 TEX. INTELL. PROP. L.J. 329, 347-49 (2001) (outlining the requirements to acquire personal jurisdiction over a foreign defendant).

118. 45 F.3d 1541 (Fed. Cir. 1995).

119. *Id.* at 1546-49.

120. 160 F.3d 1373, 1378 (Fed. Cir. 1994).

business in Virginia.¹²¹ Aaroflex, a subsidiary of Aarotech, is incorporated in West Virginia and has its principle place of business in Virginia.¹²² Aaroflex sent price quotations and descriptions of merchandise to certain California residents with the stipulation that they were not “offers for sale” until they are executed by recipient and returned to Aaroflex.¹²³ Aaroflex also sent promotional materials to certain California residents.¹²⁴ In the district court, all defendants moved to have the suit dismissed for lack of personal jurisdiction and the district court granted the motion.¹²⁵

On appeal, the Federal Circuit reviewed the personal jurisdiction issue de novo and applied the “*Akro* test” for minimum contacts to each of the defendants.¹²⁶ The Federal Circuit concluded that Aaroflex’s activities justifiably subjected it to the personal jurisdiction of the court; however, the court found the activities of CEO Young at Aarotech did not.¹²⁷ In finding personal jurisdiction over Aaroflex, the court applied the first prong of the “*Akro* test,” i.e., whether defendant Aaroflex purposefully directed its activities at the residents of California.¹²⁸ It concluded that the promotional letters, solicited orders for models, videos sent, sample parts, and issued priced quotes to residents of California represented sufficient contacts to satisfy this prong of the test.¹²⁹

As part of the second prong, the court analyzed whether the materials sent by Aaroflex were actually “offers to sell.”¹³⁰ The court decided that the price quotation letters were “offers to sell” under § 271 and that the statute was created, “to prevent exactly the type of activity Aaroflex has engaged in, i.e., generating interest in a potential infringing product to the commercial detriment of the rightful patentee.”¹³¹

Finally, in addressing the third prong of the test, the court quoted *Akro*: “[w]here a defendant who purposefully has directed his activities at forum residents seeks to defeat jurisdiction, he must present a compelling case that the presence of some other considerations would

121. *Id.* at 1376.

122. *Id.*

123. *Id.*

124. *Id.*

125. *Id.* at 1377.

126. *Id.* at 1376-78.

127. *Id.* at 1380.

128. *Id.* at 1378.

129. *Id.*

130. *Id.* at 1379.

131. *Id.*

render jurisdiction unreasonable.”¹³² The court then concluded that Aaroflex had not presented a compelling case as to defeat the court’s assertion of jurisdiction on unreasonableness grounds.¹³³ Based on the “*Akro* test,” Aaroflex was found to have established the sufficient “minimum contacts” with the residents of California to be subjected to jurisdiction of its courts.¹³⁴

V. CONCLUSION

Over the years, the U.S. legal system and patent doctrine in general have begun to recognize the realities of the global economy; by creating new frameworks for extraterritorial reach it has sought to protect the basic premise of patent policy, i.e., the incentive for innovation. However, with this evolution the U.S. legal system, as other national patent law systems, continues to struggle with balancing domestic economic interest against foreign relations concerns, as well as its own fundamental notions of fairness and reasonableness mandated under its Constitution.

132. *Akro Corp. v. Ken Luker*, 45 F.3d 1541, 1545-46 (Fed. Cir. 1995) (quoting *Burger King Corp. v. Rudzewicz*, 471 U.S. 462, 467-77 (1985)).

133. 160 F.3d at 1378.

134. *Id.*