

**Patent Law**—Patented System Infringes Under 35 U.S.C. § 271 When Control and Beneficial Use Occurs Within United States—*NTP, Inc. v. Research In Motion, Ltd.*, 418 F.3d 1282 (Fed. Cir. 2005)

Research in Motion (RIM), a high-technology company located in Ontario, Canada, sells the popular BlackBerry wireless electronic mail (email) service to consumers in the United States and abroad.<sup>1</sup> Yet when the company first deployed the BlackBerry system in Canada back in the late 1990s, it had no idea that its service might some day be shut down for infringing an invention patented in the United States.<sup>2</sup> RIM, like many other high-technology companies who sell products and services to a global marketplace, is discovering that its conduct outside the United States could violate United States patent law under 35 U.S.C. § 271.<sup>3</sup> Congress enacted § 271 to proscribe extraterritorial conduct that affects commerce and patented rights within the United States.<sup>4</sup> In *NTP, Inc. v. Research in Motion, Ltd.*,<sup>5</sup> the Court of Appeals

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1. Yuki Noguchi, *Ruling Puts BlackBerry Maker at Crossroads*, WASHINGTON POST, Dec. 1, 2005, at D01. There are an estimated 4.5 million BlackBerry users, seventy percent of whom are within the United States. *Id.*

2. Barrie McKenna, Paul Waldie & Simon Avery, *Patently Absurd*, GLOBE AND MAIL, Jan. 28, 2006, at B4, available at <http://www.theglobeandmail.com>; see also Noguchi, *supra* note 1, at D01.

3. Daniel P. Homiller, *From DeepSouth to the Great White North: The Extraterritorial Reach of United States Patent Law After Research in Motion*, 2005 DUKE L. & TECH. REV. 17 (2005) (noting high-technology systems often deployed with little attention for jurisdictional borders); see also Mark A. Lemley, David O'Brien, Ryan M. Kent, Ashok Ramani & Robert Van Nest, *Divided Infringement Claims*, 6 SEDONA CONF. J. 117, 117 (2005) (noting patents covering modern technologies bring global conduct under territorial law); cf. Motion of The Canadian Chamber of Commerce and The Information Technology Association of Canada for Leave to File Brief as Amicus Curiae And Brief of Amicus Curiae In Support of Petitioner at 23, *NTP, Inc. v. Research in Motion, Ltd.*, 418 F.3d 1282 (Fed. Cir. 2005) (No. 05-763), 2006 WL 34604 [hereinafter CA Commerce brief] (stating international character of high-technology businesses in Canada).

4. See Elizabeth M. N. Morris, *Territorial Impact Factors: An Argument for Determining Patent Infringement Based Upon Impact of the U.S. Market*, 22 SANTA CLARA COMPUTER & HIGH TECH. L.J. 351, 353-54 (2006) (stating purpose behind § 271 and its interpretation). The courts have had the difficult task of determining whether certain activities outside the United States are those Congress intended to proscribe under § 271. See, e.g., *DeepSouth Packing Co. v. Laitram Corp.*, 406 U.S. 518, 528 (1972) (holding no infringement when exporting components of patented invention for assembly and use outside United States); *Eolas Techs., Inc. v. Microsoft Corp.*, 399 F.3d 1325, 1338-41 (Fed. Cir. 2005) (finding patented computer system infringed when software components assembled and used abroad to run program); *Bayer AG v. Housey Pharms., Inc.*, 340 F.3d 1367, 1372 (Fed. Cir. 2003) (finding no infringement when importing data obtained from a patented method); *Decca Ltd. v. United States*, 544 F.2d 1070, 1083 (Ct. Cl. 1976) (holding infringement when patented system used and controlled within United States). Section 271 defines infringement as making, using, and selling patented inventions within the United States, importing into the United States a product made by patented process outside the United States, and exporting components of patented invention from United States for assembly and use abroad. 35 U.S.C. § 271(a), (f)-(g) (2000) (defining infringement under United States patent law). As technology continues to evolve and erode national boundaries, infringing activity under § 271 has become increasingly difficult to determine. Yar Chaikovsky & Adrian Percer, *Globalization, Technology Without Boundaries & the Scope of U.S. Patent Law*, 9 INTELL. PROP. L. BULL. 95, 95 (2005) (explaining

for the Federal Circuit (CAFC) considered whether RIM's BlackBerry system, a major component of which was deployed in Canada, infringed NTP, Inc.'s (NTP) patents on a wireless email system.<sup>6</sup> The court held that RIM was liable for infringement because its users controlled and benefited from the system within the United States in violation of 35 U.S.C. § 271.<sup>7</sup>

A group of inventors patented a wireless email system integrated with handheld mobile devices.<sup>8</sup> The user views the message on a handheld device and wirelessly connects to a destination processor to transmit stored messages.<sup>9</sup> The email system can automatically transfer email messages without any user action.<sup>10</sup> NTP owns the patents but does not make or sell the patented inventions.<sup>11</sup>

RIM sells the BlackBerry system, which allows customers to send and receive email messages remotely on a wireless, mobile, handheld device.<sup>12</sup> On

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perplexities of cross-border patent infringement).

5. 418 F.3d 1282 (Fed. Cir. 2005), *cert. denied*, 126 S. Ct. 1174 (2006).

6. 418 F.3d at 1315 (stating issue before court).

7. 418 F.3d at 1317 (holding patent infringed because system placed into service within United States).

8. 418 F.3d at 1288-89 (explaining patented inventions at issue). Inventors Thomas J. Campana, Jr., Michael P. Ponschke, and Gary F. Thelen developed the email system claimed in five separate patents. *Id.* The earliest patent is U.S. 5,436,960, titled "Electronic Mail System with RF Communications to Mobile Processors and Method of Operation Thereof," [hereinafter '960 Patent], filed on May 20, 1991. U.S. Patent No. 5,436,960 (issued July 25, 1995). Patent 5,625,670, titled "Electronic Mail System with RF Communications to Mobile Processors," [hereinafter '670 Patent], filed on May 18, 1995, is a continuation of the '960 Patent. U.S. Patent No. 5,625,670 (issued Apr. 29, 1997). Patent 5,819,172, titled "Electronic Mail System with RF Communications to Mobile Radios," [hereinafter '172 Patent], filed on April 23, 1997, is, in turn, a continuation of the '670 Patent. U.S. Patent No. 5,819,172 (issued Oct. 6, 1998). Patent 6,067,451, titled "Electronic Mail System with RF Communications to Mobile Processors," [hereinafter '451 Patent], filed on September 28, 1998, is, in turn, a continuation of the '172 Patent. U.S. Patent No. 6,067,451 (issued May 23, 2000). Patent 6,317,592, titled "Electronic Mail System with RF Communications to Mobile Processors," [hereinafter '592 Patent], filed on December 6, 1999, is, in turn, a continuation of the '451 Patent. U.S. Patent No. 6,317,592 (issued Nov. 13, 2001).

9. See '960 Patent, *supra* note 8, at col.49 ll.2-45 (describing claimed email system).

10. See '960 Patent, *supra* note 8, col.18 ll.32-39 (discussing patent's innovative qualities). The patent specification describes how system users can send and receive email messages on a portable device while in the field, and how the system executes processes which automatically alert users of incoming messages, called "push" technology. *Id.*

11. 418 F.3d at 1289 (stating NTP's ownership of patents). NTP, or New Technologies Products, was a small Northern Virginia company jointly owned by patent holder/electronics whiz/inventor Tom Campana, Jr. and Attorney Donald Stout. McKenna et al., *supra* note 2, at B4 (explaining origins of NTP). Companies like NTP, who own patents on inventions but do not practice the inventions, are called non-practicing entities (NPE). See FEDERAL TRADE COMMISSION, TO PROMOTE INNOVATION: THE PROPER BALANCE OF COMPETITION AND PATENT LAW AND POLICY, A REPORT BY THE FEDERAL TRADE COMMISSION, at 38 (Oct. 2003), available at <http://www.ftc.gov/os/2003/10/innovationrpt.pdf>. Others in the industry have dubbed them "patent trolls," claiming they exist merely to extract unfair money settlements from unsuspecting companies who bring inventions to market as real-world goods and services, often at high cost and risk. *Id.* at 31, n.220 (defining patent trolls).

12. 418 F.3d at 1289 (describing BlackBerry capabilities). RIM's BlackBerry system is composed of a handheld unit, email redirector software, and mobile access to a wireless, nationwide communications network. *Id.* RIM manufactures wireless solutions for the worldwide mobile communications market. See Research in Motion, <http://www.rim.com> (last visited Mar. 4, 2006).

November 13, 2001, NTP filed suit in United States district court alleging that RIM's BlackBerry system infringed over forty system and method claims from NTP's patents.<sup>13</sup> After a *Markman* hearing, the district court granted NTP's motion for partial summary judgment of infringement on two patent claims and the case proceeded to trial on the issue of infringement on fourteen remaining patent claims.<sup>14</sup> The jury found that RIM infringed on all fourteen patented system and method claims, and the court awarded damages to NTP.<sup>15</sup> Furthermore, the court enjoined RIM from further use, sale, import, and manufacture of the BlackBerry system in the United States.<sup>16</sup>

RIM appealed the district court's finding of infringement and sought to reverse the injunction on BlackBerry sales in the United States.<sup>17</sup> The CAFC considered whether RIM's BlackBerry system, which was substantially deployed in Canada but used and enjoyed within the United States, violated 35 U.S.C. § 271.<sup>18</sup> The court found that RIM infringed NTP's patented systems claims under § 271(a), reasoning that users infringe a United States patent when they use and enjoy the patented system within the United States.<sup>19</sup> In contrast, the court found that RIM did not infringe NTP's patented method claims under § 271(a), reasoning that infringement of method claims only occurs when a person performs *every* step of the method within the United States.<sup>20</sup> The court found that RIM did not infringe under § 271(f), reasoning that § 271(f) covers only patented system or product claims, not patented processes claims.<sup>21</sup> Furthermore, the court found that RIM did not infringe under § 271(g), reasoning that RIM did not manufacture a product as required

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13. 418 F.3d at 1290 (explaining NTP's suit alleging infringement); *see also supra* note 11 (describing NTP).

14. 418 F.3d at 1290-92 (explaining *Markman* decision, parties' motions for summary judgment, and court's findings). In the *Markman* hearing, the district court construed thirty-one disputed claim terms according to their plain meaning, the patent specification, and the patent prosecution history. *Id.*; *see also* *Markman v. Westview Instruments*, 52 F.3d 967, 979 (Fed. Cir. 1995) (finding claim construction question of law). RIM filed motions for summary judgment for patent non-infringement and invalidity, which the district court denied. 418 F.3d at 1291. NTP filed a motion for partial summary judgment of infringement on four patent claims and RIM cross-moved for summary judgment of non-infringement. *Id.* The district court granted summary judgment for NTP on two of the four claims, and reserved the issue of infringement on the remaining two claims for the jury. *Id.* The jury found that RIM infringed on all disputed patent claims and awarded NTP damages in the amount of approximately \$23 million. *Id.* at 1291.

15. 418 F.3d at 1291-92 (explaining jury verdict and court's final judgment). RIM moved for judgment as a matter of law, which the court denied, and on August 5, 2003, the district court issued a final judgment, awarding NTP approximately \$53 million in damages. *Id.* at 1292.

16. *Id.* The court stayed the injunction pending RIM's appeal to the CAFC. *Id.* The injunction would have applied to email services only, not text messaging or phone service. *Id.*; *see supra* notes 8-10 and accompanying text (explaining patented invention covers email messaging system).

17. 418 F.3d at 1287 (discussing RIM's appeal).

18. *Id.* at 1315 (explaining issue before CAFC). Section 271 protects patent holders against unauthorized uses of their patented inventions in the United States. 35 U.S.C. § 271 (2000).

19. 418 F.3d at 1315 (holding RIM liable for infringement of system claims under § 271(a)).

20. *Id.* at 1318 (holding RIM not liable for infringement of method claims under § 271(a)).

21. *See infra* notes 45-46 and accompanying text (explaining RIM did not infringe under § 271(f)).

by § 271(g).<sup>22</sup> The Supreme Court denied RIM's petition for certiorari in which RIM asked the Court to reconsider the CAFC's finding of infringement under § 271(a).<sup>23</sup> A few weeks later, after a district court judge delayed his decision on whether to enjoin BlackBerry sales, RIM and NTP finally reached a settlement.<sup>24</sup>

22. See *infra* notes 47-48 and accompanying text (explaining RIM did not infringe under § 271(g)).

23. Research In Motion Ltd. v. NTP, Inc., 126 S. Ct. 1174 (2006) (denying RIM's petition for certiorari). After the CAFC decision, RIM petitioned the CAFC to reconsider the § 271(a) finding of infringement or, in the alternative, for an en banc hearing on the issue. Combined Petition by Research in Motion, Ltd., for Panel Rehearing and Rehearing En Banc at 1, NTP, Inc. v. Research in Motion, Ltd., 418 F.3d 1282 (Fed. Cir. 2005) (No. 03-1615) (urging CAFC for rehearing). RIM argued that the CAFC misconstrued the term "use" in § 271(a) when it found that its customers used the BlackBerry system. *Id.* at 4. Instead, RIM argued that the patented claims are directed toward use by originating and destination processors, not customers. *Id.* RIM argued that the CAFC mistakenly relied on the *Decca* case, which addressed United States government infringement under 28 U.S.C. § 1498(a), not § 271(a). *Id.* at 6; see also *infra* note 28 (explaining *Decca* case). Furthermore, the Norwegian tower in *Decca* was assembled in the United States and used by the United States, whereas RIM's Canadian relay was assembled, installed, and owned by RIM and never left Canada. Combined Petition by Research in Motion, Ltd. for Panel Rehearing and Rehearing En Banc at 6, NTP, Inc. v. Research in Motion, Ltd., 418 F.3d 1282 (Fed. Cir. 2005) (No. 03-1615) (urging CAFC for rehearing). RIM noted the *Decca* exception, which held that if *Decca's* claims were directed toward how the towers generated the signals, then operation of the Norwegian tower would have been irrelevant and beyond the reach of United States patent law. *Id.* at 7. According to RIM, NTP's claims were similarly directed toward the operation of the relay and other system components. *Id.* In RIM's petition for certiorari to the Supreme Court, it contended that "within the United States" in § 271(a) did not mean where the system was put into service as a whole as the CAFC found, but "in the limits of" and "not beyond" the United States. On Petition for a Writ of Certiorari to the United States Court of Appeals for the Federal Circuit at 15, Research In Motion, Ltd. v. NTP, Inc., 126 S. Ct. 1174, (No. 05-763), 2005 WL 3438374 (urging Supreme Court to grant certiorari). RIM argued that its customers only used the individual handheld devices within the United States and exercised no control over the system. *Id.* at 16-18. Furthermore, RIM argued that under the CAFC's control and beneficial use test, every cross-border technology would have to be painstakingly analyzed on a case-by-case basis to determine whether the systems were used within the United States, producing unpredictable and inconsistent results. *Id.* at 19. The Government of Canada stated that the CAFC's decision would have a chilling effect on Canada's high-technology industry and could spark private disputes on intellectual property rights on burgeoning cross-border trade. Motion for Leave to File Brief as Amicus Curiae and Brief for the Government of Canada as Amicus Curiae in Support of the Petition at 2, NTP, Inc. v. Research In Motion, Ltd., 418 F.3d 1282 (Fed. Cir. 2005) (No. 05-763) (supporting RIM's petition for certiorari). The Canadian Chamber of Commerce (CCC) filed a brief in favor of RIM's petition, arguing that the CAFC's decision clashed with a country's right to control patent laws within its borders as stated in the Agreement on Trade-Related Aspects of Intellectual Property Rights. See CA Commerce Brief, *supra* note 3, at 9 (supporting RIM's petition for certiorari); Agreement on Trade-Related Aspects of Intellectual Property Rights, art. 27, ¶ 2 (stating member country's right to exclude certain types of inventions from patentability). The CCC noted a reluctance among the courts to expand laws beyond United States jurisdiction without a clear mandate from Congress. See CA Commerce Brief, *supra* note 3, at 5. Intel filed a brief in favor of RIM's petition for certiorari arguing that it made no sense for the CAFC to hold that RIM infringed NTP's patented system claims, but not its patented process claims, merely because of differences in workmanship of the claim language. Intel Corporation's Motion for Leave to File and Brief as Amicus Curiae in Support of the Petition for Certiorari at 5, NTP, Inc. v. Research in Motion, Ltd., 418 F.3d 1282 (Fed. Cir. 2005) (No. 05-763) (supporting RIM's petition for certiorari). Intel asserted that Congress and the President were far better equipped to weigh policy issues implicated by extraterritorial activities. *Id.* at 6. The Department of Justice filed a brief urging the district court to "white list" government users against any BlackBerry injunction, stating that the devices were an essential tool of the government. Grant Gross, *DOJ Asks Court to Keep BlackBerry Service on for Federal Workers*, COMPUTERWORLD, Nov. 14, 2005, available at <http://www.computerworld.com> (describing DOJ's brief).

24. Ian Austen, *BlackBerry Service to Continue*, N.Y. TIMES, Mar. 4, 2006, at C1 (headlining RIM and

Under 35 U.S.C. § 271(a), whoever makes, uses, sells, or imports into the United States a patented invention without the authority of the patent holder directly infringes that patent.<sup>25</sup> This provision is limited to infringement that occurs within the United States and its territories.<sup>26</sup> The analysis of whether infringement occurs within the United States will depend on whether the patented claim is for a “system” or a “method.”<sup>27</sup> Infringement of a patented system occurs within the United States when the infringer controls and obtains the beneficial use of the system within the United States.<sup>28</sup> Alternatively,

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NTP settlement). In February 2006, the district court (J. Spencer) considered whether to issue a permanent injunction on BlackBerry service in the United States. Barrie McKenna & Paul Waldie, *Judge Gives RIM One Last Chance, Berates Parties for Not Settling Dispute*, GLOBE AND MAIL, Feb. 25, 2006, at B5 (summarizing district court hearing). Judge Spencer delayed his decision, urging the parties to settle outside of court. *Id.* A few days later, RIM agreed to pay NTP \$612.5 million. Austen, *supra*, at C1 (summarizing settlement). RIM agreed that it would not seek reimbursement if NTP’s patents were later found invalid by the USPTO or in court. *Id.* In return, NTP agreed not to pursue infringement against wireless carriers and other companies providing BlackBerry service in the United States. *Id.* Starting in 2003, the USPTO initiated expedited reexaminations of NTP’s patents and by early 2006 had invalidated all patent claims at issue in the litigation. Marisa Conway, *RIM Provides Update on Patent Reexamination Proceeding*, WEBWIRE, Feb. 24, 2006, available at <http://www.webwire.com>. An issue left unresolved by the BlackBerry dispute is whether the USPTO or the court is the final arbiter of patent invalidity. McKenna & Waldie, *supra*, at B5 (noting judge’s statements suggesting jury verdict of invalidity despite reexaminations).

25. 35 U.S.C. § 271(a) (2000) (stating requirements for direct infringement of patent).

26. 418 F.3d at 1318 (stating territorial limits of § 271(a)); see also *Rotec Indus., Inc. v. Mitsubishi Corp.*, 215 F.3d 1246, 1251 (Fed. Cir. 2005) (citing *Dowagiac Mfg. Co. v. Minn. Moline Plow Co.*, 235 U.S. 641, 650 (1915)) (stating patent infringement confined to acts wholly performed in United States); *Pellegrini v. Analog Devices, Inc.*, 375 F.3d 1113, 1117 (Fed. Cir. 2004) (citing *Brown v. Duchesne*, 60 U.S. 183, 196 (1856)) (holding United States patent laws do not operate beyond United States and its territories).

27. See *Minton v. Nat’l Ass’n of Sec. Dealers, Inc.*, 336 F.3d 1373, 1378 (Fed. Cir. 2003) (stating type of patent claim informs analysis in patent law); *In Re Kollar*, 286 F.3d 1326, 1332 (Fed. Cir. 2002) (explaining distinction between process invention and product or system inventions). The *Minton* court defined a process or method as a series of steps or acts. *Minton v. Nat’l Ass’n of Sec. Dealers, Inc.*, 336 F.3d 1373, 1378 (Fed. Cir. 2003). The court noted the differences between products and processes to help determine whether a process for interactive security trading was offered for sale. *Id.* The *In Re Kollar* court defined a process as a series of acts for doing or performing something. *In Re Kollar*, 286 F.3d 1326, 1332 (Fed. Cir. 2002).

28. *Decca Ltd. v. United States*, 544 F.2d 1070, 1083 (Ct. Cl. 1976) (holding control and beneficial use of system within the United States established infringement under § 271(a)). The invention in *Decca* was a hyperbolic radio navigation system that included separate radio towers for transmitting and receiving signals from a remote receiver. *Id.* at 1076. The system recorded the receiver’s signal arrival time at each tower and calculated hyperbolic lines-of-position to obtain the receiver’s location at the intersection point. *Id.* The system as implemented included three towers, two located in the United States (Hawaii and North Dakota), and the third located in Norway. *Id.* at 1077. The issue in *Decca* was whether the system, which contained a component outside the United States, was used within the United States in violation of § 271. *Id.*; see also 35 U.S.C. § 271(a). The court held that the system infringed the patented invention because the control of the system and the actual beneficial use of the system occurred within the United States. *Decca Ltd. v. United States*, 544 F.2d 1070, 1083 (Ct. Cl. 1976). The court limited the decision, stating that if an invention involved the generation of the signals themselves, rather than coordination of separate signals from spaced sources received and utilized at a remote position, then the system would not be used within the United States in violation of the patent statute. *Id.*; see also *Menashe Bus. Merch., Ltd. v. William Hill Org., Ltd.*, [2002] EWCA (Civ) 1702, ¶¶ 32-33 [2003] All E.R. 279 (A.C. 2002) (use of European patent occurs where customer puts invention into service). The English Court of Appeal in *Menashe* ruled that the customer’s locale determines where the networked system is used and it is of no consequence if the system server is located and operated in, for example, Antigua. *Id.* at ¶ 33.

infringement of a patented method occurs when the infringer performs each step of the method within the United States.<sup>29</sup>

Congress enacted 35 U.S.C. § 271(f) to close a loophole in the patent laws that allowed companies to avoid infringing a patent by exporting components of the invention for assembly and use of the invention abroad.<sup>30</sup> Under § 271(f), whoever supplies components of a patented invention from the United States to actively encourage combining of the components outside the United States infringes that patent.<sup>31</sup> Congress enacted § 271(f) in response to *Deepsouth Packing Co. v. Laitram Corp.*,<sup>32</sup> in which the Court held that § 271 did not bar Deepsouth, a shrimp farming company, from supplying the components of a patented, improved shrimp deveiner for assembly and use outside of the United States.<sup>33</sup> Consequently, the CAFC has held that § 271(f) bars persons from shipping software components of patented inventions for assembly and use outside the United States.<sup>34</sup> Nevertheless, even though §

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29. *Zoltek Corp. v. United States*, 51 Fed. Cl. 829, 836 (Fed. Cl. 2002) (stating infringement only occurs when every step of patented process performed within United States); *Joy Techs., Inc. v. Flakt, Inc.*, 6 F.3d 770, 773 (Fed. Cir. 1993) (stating sale of device to perform process not sale of process within meaning of § 271(a)); *see also* *Eli Lilly & Co. v. Am. Cyanamid Co.*, 82 F.3d 1568, 1571 (Fed. Cir. 1996) (holding § 271 does not proscribe use of patented process outside United States). In *Eli Lilly*, the court noted that Congress enacted the Process Patents Amendments Act of 1988, codified in § 271(g), to allow patent holders to sue for infringement if persons used their patented process to manufacture a product outside the United States and then imported that product into the United States. *Eli Lilly & Co. v. Am. Cyanamid Co.*, 82 F.3d 1568, 1571-72 (Fed. Cir. 1996); *cf.* *Roberts Dairy Co. v. United States*, 530 F.2d 1342, 1354 (Cl. Ct. 1976) (establishing patented method infringed only if all steps for method utilized).

30. *See* *Morris*, *supra* note 4, at 359-60 (explaining congressional intent behind § 271(f)). Congress enacted § 271(f) to allow patent holders to get the full economic benefit from their patent. Donald S. Chisum, *Normative and Empirical Territoriality in Intellectual Property: Lessons from Patent Law*, 37 VA. J. INT'L L. 603, 607 (1997) (explaining purpose of § 271(f) as protecting economic rights to patent). Although it proscribes assembly and use outside the United States, it is tied to the domestic act of supplying components from within the United States. *Id.*

31. 35 U.S.C. § 271(f) (2000) (stating bar on exports of components of patented invention). Subsections (1) and (2) of § 271(f) proscribe people from supplying or especially adapting components of a patented invention for export to actively induce or with the knowledge or intent to combine the components in a manner that would infringe the patent if combined within the United States. *Id.*

32. 406 U.S. 518 (1972).

33. *Deepsouth Packing Co. v. Laitram Corp.*, 406 U.S. 518, 519-20 (1972). The patent in *Deepsouth* combined slitters, knives, water sprays, tumblers, and other machinery that, when assembled, resulted in an improved shrimp deveiner. *Id.* at 520-21. The novelty of the invention was not the individual parts themselves, but the way in which the invention combined the parts in the improved deveiner assembly. *Id.* at 521. Patent holder Laitram Corporation argued § 271 should apply because Deepsouth, by supplying the deveiner's parts from the United States for assembly and use in Brazil, unlawfully violated Laitram's protective rights in the invention. *Id.* at 523. Although Deepsouth's behavior would have clearly violated Laitram's patent rights if performed in the United States, the Court held that § 271 did not go so far as to proscribe assembly and use of a patented invention in a foreign country. *Id.* at 525-26.

34. *See* *Eolas Techs. Inc. v. Microsoft Corp.*, 399 F.3d 1325, 1339 (Fed. Cir. 2005) (holding § 271(f) applies to intangible software components as well as physical components of patented invention). The invention in *Eolas* was a software browser for embedding applications. *Id.* at 1328. The court considered whether Microsoft's exporting of software components of the browser on gold master disks for compilation and sale outside the United States violated § 271(f). *Id.* at 1338. Microsoft argued that § 271(f) only applied to components of a physical machine, such as those referred to in the *Deepsouth* case, and that software was not a

271(f) proscribes persons from shipping from the United States the components of a patented product for assembly and use outside the United States, it does not proscribe such conduct for components of a patented process.<sup>35</sup>

Congress enacted 35 U.S.C. § 271(g) to protect patent holders against persons importing products produced by a patented process outside the United States.<sup>36</sup> Under 35 U.S.C. § 271(g), whoever imports into, or sells within, the United States a product made by a patented process abroad infringes that patent.<sup>37</sup> In *Bayer AG v. Housey Pharmaceuticals, Inc.*,<sup>38</sup> the court held that importing data or information from a patented process executed outside the United States does not violate § 271(g) because data is not a product made by a process.<sup>39</sup> The court interpreted the term “made” in § 271(g) to cover only processes which manufacture physical articles, not those which produce data or information.<sup>40</sup> Moreover, the court reasoned that interpreting § 271(g) to include data or information could lead to unintended results because a person

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physical product. *Id.* at 1340. The court reasoned that software, without question, is a patentable invention. *Id.* at 1338; *see also* AT&T Corp. v. Excel Commc'ns, Inc., 172 F.3d 1352, 1359 (Fed. Cir. 1999) (finding process of taking discrete data and producing useful result patentable); *In Re Alappat*, 33 F.3d 1526, 1545 (Fed. Cir. 1994) (holding computer software for performing particular functions patentable subject matter). The court flatly rejected Microsoft's argument, finding that every form of patented invention, from physical products to software, fell within § 271(f)'s protective scope. *Eolas Techs. Inc. v. Microsoft Corp.*, 399 F.3d 1325, 1339 (Fed. Cir. 2005).

35. *Eolas Techs. Inc., v. Microsoft Corp.*, 399 F.3d 1325, 1340 (Fed. Cir. 2005) (citing Congressional testimony on § 271(f) referring to patented products but not processes); *see also* Chisum, *supra* note 30, at 607 (explaining § 271(f) applies only to patented products).

36. *See* Morris, *supra* note 4, at 359-60 (explaining congressional intent behind § 271(g)). Although § 271(g) prohibits use of a patented process to produce a product outside the United States, it does not attach to the conduct until the product is imported into the United States. *Id.*

37. 35 U.S.C. § 271(g) (2000) (stating ban on import of product made by patented process abroad).

38. 340 F.3d 1367 (Fed. Cir. 2003).

39. *Bayer AG v. Housey Pharms., Inc.*, 340 F.3d 1367, 1377 (Fed. Cir. 2003). In *Bayer*, the invention was a process for identifying substances which activate or inhibit proteins. *Id.* at 1369. Bayer used the process to produce research data which it imported into the United States. *Id.* The issue before the court was whether research data was a product made by a process and, if so, whether a person importing that data into the United States infringed the patent under § 271(g). *Id.*

40. *Bayer AG v. Housey Pharms., Inc.*, 340 F.3d 1367, 1377 (Fed. Cir. 2003) (explaining inapplicability of imported intangible data to § 271(g)). The court delved into a detailed statutory interpretation of the term “made” in § 271(a) and whether it was limited to processes which produced tangible objects. *Id.* at 1372. Infringer Bayer argued that “made” in § 271(g) means “manufactured” and that information is not a manufactured product. *Id.* The court relied on dictionary definitions to determine that “manufacture” refers to tangible objects manufactured by hand and that because information is intangible, it is not manufactured. *Id.* at 1372-73. The court determined that “made,” the past tense of “make,” means to create by shaping material or combining parts to produce. *Id.* Patent holder Housey argued that “made by” in § 271(g) did not mean manufacture because Congress used the term manufacture in 35 U.S.C. § 101 (2000) to refer specifically to manufacturing, and thus, “made by” had a different meaning. *Id.* at 1373. The court disagreed with Housey, holding that manufacture was used as a noun in § 101, not a verb, and that it was unrealistic to suggest that Congress had such a level of clarity when writing statutes. *Id.* Thus, the court found no reason to construe the term “made” beyond “manufacture” and held that importing data did not violate § 271(g). *Id.* Because the patented process in *Bayer* only identified drugs to manufacture, the *Bayer* result may not apply to processes which produce information packaged and sent to physical locations for consumption such as text messages, video, and audio. *Id.* at 1378.

with knowledge learned from a patented process could infringe that patent merely by entering the country.<sup>41</sup>

In *NTP, Inc. v. Research in Motion, Ltd.*, the Federal Circuit Court of Appeals considered whether the use of RIM's BlackBerry system infringed NTP's patents under § 271(a) if RIM partially deployed the system and executed system services for outputting email in Canada.<sup>42</sup> The court upheld the district court's finding that RIM infringed NTP's patented system claims under § 271(a) because BlackBerry customers *controlled* and *benefited* from the system, as a whole, within the United States.<sup>43</sup> In contrast, the court reversed the district court's finding that RIM infringed NTP's patented process claims because RIM executed the BlackBerry email processes on the individual relay located in Canada.<sup>44</sup>

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41. Bayer AG v. Housey Pharms., Inc., 340 F.3d 1367, 1376 (Fed. Cir. 2003) (reasoning abstract information imported into United States within one's head difficult to control).

42. 418 F.3d at 1315. RIM's BlackBerry system included a relay station in Waterloo, Ontario, where the system performed significant steps in executing its email service. *Id.* at 1313-15. In the initial stages of the litigation, the parties contended the existence of a relay station in Virginia; however, the court eventually dropped the issue and considered only the Canadian relay. *Id.* at 1314.

43. 418 F.3d at 1317 (holding RIM infringed NTP's patented system claims under § 271(a)); *see also* 35 U.S.C. § 271(a); *NTP, Inc. v. Research in Motion, Ltd.*, No. 3:01CV767, 2003 WL 23325540 at \*2 (E.D. Va. Aug. 5, 2003) (upholding jury verdict of infringement of system claims), *aff'd*, 418 F.3d 1282 (Fed. Cir. 2005); *supra* notes 25-29 and accompanying text (describing infringement under § 271(a)); '960 Patent, *supra* note 8, at claim 15 (defining patented system claim); '670 Patent, *supra* note 8, at claim 8 (defining patented system claim); '451 Patent, *supra* note 8, at claims 28, 248 (defining patented system claims). The court noted the difficulty in determining whether infringing use of the invention occurred within the United States because the system included multiple distinct components and processes whose function and use could be physically separated from their location. 418 F.3d at 1313. RIM argued that its system could only infringe under § 271(a) if RIM located and executed the *entire* BlackBerry system and service within the United States. *Id.* at 1313-14. According to RIM, because of the relay component and steps performed in Canada, it did not infringe. *Id.* RIM relied on the *Deepsouth* case to buttress its non-infringement argument, where the Court held that *complete* manufacture and operable assembly of the system must occur within United States to infringe under § 271(a). *See Deepsouth Packing Co. v. Laitram Corp.*, 406 U.S. 518, 528 (1972); *supra* note 33 (explaining holding in *Deepsouth* case). The court disagreed with RIM's comparison of this case with *Deepsouth*, noting that this case involved the operation and use of a system partially within and partially outside the United States, not the manufacture of components within the United States for export and assembly outside the United States. 418 F.3d at 1315 (explaining differences between case-at-bar and *Deepsouth* case). Instead, the court found the *Decca* case to be on point because it involved a system with components placed within and outside the United States, and a receiver that put the system into service within the United States. *Id.* at 1315. In *Decca*, the court interpreted the term "use" in § 271(a) as the place where the system as a whole is put into service and thus found that United States' users of the system infringed because they controlled and benefited from the system within the United States. *Decca Ltd. V. United States*, 544 F.2d 1070, 1083 (Ct. Cl. 1976) (explaining case holding); *see also supra* note 28 and accompanying text (explaining holding in *Decca* case). Likewise, in the case-at-bar, the court found that RIM's users put the system as a whole into service within the United States when they sent and received email messages on their handheld BlackBerry units while on United States soil, even though RIM implemented and deployed much of the system in Canada. 418 F.3d at 1317.

44. 418 F.3d at 1318 (holding RIM did not infringe NTP's patented process claims under § 271(a)); *see also NTP, Inc. v. Research in Motion, Ltd.*, No. 3:01CV767, 2003 WL 23325540 at \*2 (E.D. Va. Aug. 5, 2003) (upholding jury verdict of infringement of process claims), *rev'd*, 418 F.3d 1282 (Fed. Cir. 2005); '960 Patent, *supra* note 8, at claims 32, 34; '172 Patent, *supra* note 8, at claim 199; '451 Patent, *supra* note 8, at claims 309, 313, 317. The court noted the fundamental difference between the use of a patented system and a patented

The court held that RIM did not infringe NTP's patented process claim under § 271(f) because RIM did not supply the components of a patented process from the United States for assembly and use outside the United States.<sup>45</sup> The court reasoned that it was difficult to imagine how one might cause the components of a patented process to be supplied from the United States to a foreign country and that § 271(f) applied only to articles of manufacture.<sup>46</sup> Furthermore, the court considered whether RIM violated § 271(g) when it imported email messages made by a patented process running on BlackBerry's relay station located in Canada.<sup>47</sup> The court held that under the *Bayer* rule, § 271(g) covered only *tangible* articles of manufacture, not intangible email messages transmitted from the relay to customers within the United States.<sup>48</sup>

The court's finding that RIM infringed NTP's patented system claims under § 271(a), but not its patented process claims, is an untenable and confusing

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method, and that these differences inform the analysis of infringement. 418 F.3d at 1317; *see also supra* note 27 and accompanying text (explaining analytical differences in determining infringement of system and method claims). The court relied on the *Roberts Dairy* case to state that a process claim is infringed only if the infringer performs all the steps of the process. *Id.* at 1318 (explaining requirement to find infringement of patented process claims) (citing *Roberts Dairy Co. v. United States*, 530 F.2d 1342, 1354 (1976)); *see also* *Zoltek Corp. v. United States*, 51 Fed. Cl. 829, 836 (2002) (holding process infringed even if one step practiced outside United States). The court concluded that to infringe a process under § 271(a), the infringer must perform all the steps of the patented process within the United States. *Id.* The court held that the BlackBerry system did not infringe NTP's patented process inventions because the BlackBerry performed all of the process steps on the Canadian relay. *Id.*

45. 418 F.3d at 1322; *see also supra* notes 30-35 and accompanying text (explaining infringement under § 271(f)). The court did not consider whether RIM infringed NTP's system claims under § 271(f) because it already held that RIM infringed these claims under § 271(a). 418 F.3d at 1321. RIM argued that it did not violate § 271(f) because it did not ship components from the United States to Canada and because it did not induce their combination outside the United States. *Id.* The court agreed, holding that RIM only supplied products to United States and it did not supply parts of a patented process from the United States for assembly and use within Canada. *Id.* at 1322-23.

46. 418 F.3d at 1322 (reasoning processes by their very nature cannot be supplied); *see also supra* note 35 and accompanying text (explaining § 271(f) covers only patented products, not processes).

47. 418 F.3d at 1323 (stating issue regarding RIM's possible infringement under § 271(g)); *see also supra* notes 36-40 and accompanying text (explaining infringement under § 271(g)). The district court found that RIM's process running on the Canadian relay produced wireless email text, which can be a type of product under § 271(g). 418 F.3d at 1323.

48. 418 F.3d at 1323 (holding no infringement under § 271(g)); *see also supra* note 40 and accompanying text (discussing holding of *Bayer* case). RIM argued that under the *Bayer* rule, § 271(g) covered only articles of manufacture, and that because BlackBerry produced email text, it did not infringe NTP's process claims. 418 F.3d at 1323. NTP countered that the email packets had tangible structure, including physical addresses and inputted text, and that RIM infringed under § 271(g) because it manufactured email messages on the Canadian system and imported the messages into the United States. 418 F.3d at 1323. RIM reiterated that the *Bayer* rule included only manufactured *physical* goods, not intangible email messages. *Id.* The court agreed with RIM and reversed the district court's finding of infringement under § 271(g). *Id.* at 1324. It held that § 271(g) covered only manufactured, physical goods created by a patented process abroad and imported into the United States. *Id.* at 1323-24. The court reasoned that RIM's production and transmission of non-physical data messages across the airwaves into the United States did not meet the *Bayer* standard requiring importation of physical goods. *Id.*; *see supra* note 40 and accompanying text (explaining *Bayer* rule and inapplicability of email messages to § 271(g)).

result.<sup>49</sup> The court incorrectly reasoned that because RIM executed the process on the relay in Canada, its customers could not have used the process within the United States.<sup>50</sup> Viewed in light of the “control and beneficial use” test the court applied in analyzing the patented system, the court should have found that, like the patented system, RIM’s customers controlled and benefited from the patented process within the United States when they accessed and read email produced by the process.<sup>51</sup> The court’s finding contravenes congressional intent to protect patent holders’ full economic rights to their patented invention within the United States.<sup>52</sup>

The court’s decision that RIM’s email service did not infringe NTP’s patented process claims under § 271(f) is not without merit.<sup>53</sup> Congress enacted § 271(f) to prevent persons from supplying from the United States the components of patented inventions for assembly and use abroad.<sup>54</sup> The court found that Congress did not intend § 271(f) to apply to the components of a patented process, only to components of a patented product.<sup>55</sup> Furthermore, it found that § 271(f) proscribed the supply of components from the United States, whereas RIM supplied its customers’ handhelds and software from Canada.<sup>56</sup> Moreover, the court correctly reasoned that under § 271(f) it was hard to imagine how one might “supply” the steps of a patented process.<sup>57</sup>

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49. See 418 F.3d at 1318 (holding RIM did not infringe NTP’s patented method claims).

50. See *supra* note 44 and accompanying text (explaining court’s reasoning for holding RIM did not infringe NTP’s patented process claims).

51. See *supra* note 43 and accompanying text (explaining infringement occurs where customers controlled and obtained beneficial use of invention).

52. See On Petition for a Writ of Certiorari to the United States Court of Appeals for the Federal Circuit at 18-19, *Research In Motion, Ltd. v. NTP, Inc.*, 126 S. Ct. 1174, (No. 05-763), 2005 WL 3438374 (explaining origins of §§ 271(f) and (g)). Congress enacted § 271(f) to close a loophole exposed by the *Deepsouth* case that allowed companies to avoid infringing a patent by supplying components of a patented product from the United States and assembling them abroad. *Id.* Congress passed § 271(g) to close a loophole that allowed companies to avoid infringing a patented process by executing the process abroad to produce products for import into the United States. *Id.* at 19 n.8. Congress proposed H.R. 4208, the Informatics Act of 2005, to overrule the *Bayer* case in which the CAFC decided that § 271(g) did not proscribe importing intangible information or data from a patented process executed abroad. See The Informatics Act of 2005, H.R. 4208, 109th Cong. (2005); see also *Bayer AG v. Housey Pharms., Inc.*, 340 F.3d 1367, 1372 (Fed. Cir. 2003) (finding no infringement when importing data obtained from a patented method). The Informatics Act reverses *Bayer* by proscribing import of information in a fixed format produced by a patented process abroad. See The Informatics Act of 2005, H.R. 4208, 109th Cong. (2005).

53. See 418 F.3d at 1322-23 (holding RIM did not infringe under § 271(f)).

54. See *supra* note 34 and accompanying text (explaining Congress enacted § 271(f) in response to *Deepsouth* ruling).

55. 418 F.3d at 1322 (explaining Congressional debates discussed only supply of components of product for assembly abroad).

56. *Id.* (explaining RIM’s supply of handheld devices and Redirector products not supplied from United States).

57. See *id.* (stating difficult to conceive how one might supply steps of process). The court reasoned that a process is a series of steps, not an article of manufacture with separate components that can be supplied from one place to another. *Id.* The court surmised that § 271(f) applied only where a person supplied components of a system. *Id.*; see also *supra* notes 34-35 (explaining supply of physical articles or software from United States).

The court's decision with regard to § 271(g), however, is problematic because it misapplied the limited *Bayer* standard to the patented process at issue in this case.<sup>58</sup> Unlike the process for identifying candidate drugs in *Bayer*, RIM's email service process manufactures messages which possess tangible structure including physical device addresses and the manually inputted text.<sup>59</sup> Thus, the court should have held that RIM violated § 271(g) by executing NTP's patented processes in Canada to manufacture and import email used by customers within the United States.<sup>60</sup>

Congress, through the enactment of 35 U.S.C. § 271 and the proposed Informatics Act, has clearly indicated that United States patent law should apply to conduct outside the United States if it affects commerce and protective rights within the United States.<sup>61</sup> In *NTP, Inc. v. Research in Motion, Ltd.*, the CAFC faced the difficult challenge of how to apply United States patent law to a patented system deployed in Canada but used within the United States. The court held that RIM violated § 271(a) when its customers controlled and obtained the benefit of a patented system within the United States, even though the system included a Canadian relay. Unfortunately, the court failed to apply the same standard when considering whether a process, executed in Canada but producing a product used within the United States, violated § 271(a). Thus, the court created an untenable, bifurcated standard that protects patented systems, but not patented processes. Finally, although the court correctly found that § 271(f) does not cover patented processes, it failed to recognize that RIM violated § 271(g) when it executed a patented process outside the United States to import and provide its customers email within the United States.

*Steven M. Cohen*

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for combination abroad violates § 271(f)). Although the court in *Eolas* found that Microsoft violated § 271(f) when supplying software on gold discs for compilation and use abroad, it stated that the software modules at issue were the components of a virtual machine, not steps of a process. *Eolas Tech. v. Microsoft, Inc.*, 399 F.3d 1325, 1338-41 (holding infringement under § 271(f)).

58. 418 F.3d at 1324 (reversing district court's finding RIM infringed under § 271(g)); *see also supra* note 48 (explaining court's reasoning in finding RIM did not infringe under § 271(g)).

59. 418 F.3d at 1323 (explaining NTP's argument why *Bayer* does not apply). The *Bayer* court limited its decision to processes which only identify and output information lacking physical structure. *Bayer AG v. Housey Pharms., Inc.*, 340 F.3d 1367, 1371-73 (Fed. Cir. 2003) (limiting court holding in *Bayer*); *see supra* note 40 (explaining *Bayer* inapplicable to processes referencing physical components).

60. *See supra* note 4 (explaining applicability of § 271(g) to conduct outside United States).

61. *See supra* note 4 (describing Congressional intent behind enacting § 271). Congress proposed H.R. 4208, the Informatics Act of 2005, to overrule *Bayer*, proscribing import of information in a fixed format produced by a patented process abroad. *See* The Informatics Act of 2005, H.R. 4208, 109th Cong. (2005).