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BOUNDARIES, EXTRATERRITORIALITY, AND PATENT INFRINGEMENT DAMAGES

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Abstract

Patents are generally considered to be the most territorial of all the various forms of intellectual property. Even patent law, however, has confronted issues involving the application of a U.S. patent to extraterritorial activity. The Supreme Court has expressed an interest in both issues – the extraterritorial application of U.S. law and patent law. At times, these interests have intersected. Notwithstanding the Court's recent elaborations on extraterritoriality, the approach by the U.S. Court of Appeals for the Federal Circuit has been, at best, inconsistent. At times the court has afforded extraterritorial protection, even in the face of strong territorial language in the patent statute itself. At other times, however, it has approached the issue of extraterritoriality more restrictively, even when the statute itself expressly contemplates the regulation of activities outside of the United States. This dynamic has been addressed by myself and other scholars.

More recently, however, the Federal Circuit has addressed the issue of patent damages for extraterritorial activities. These scenarios have arisen because there necessarily has been an act of domestic patent infringement. The damages theory advocated by the patent holder, however, has attempted to ensnare overseas sales, either under a lost-profits or reasonable-royalty theory. Additionally, the Federal Circuit has begun to address the appropriate scope of damages for infringement under section 271(f) of the Patent Act, a provision that defines infringement as the exportation of all the components of an invention, or a single component with no substantial noninfringing use, where it is to be assembled abroad. Necessarily, this provision contemplates the regulation of foreign markets through the domestic hook of acts of exportation. The Federal Circuit, nevertheless, rejected the patentee's requested remedy in this case.

This Article turns to the issue of the extraterritorial reach of patent damages. It analyzes the Federal Circuit's recent pronouncements using the two-step method articulated by the Supreme Court in RJR Nabisco, Inc. v. European Community. *This analysis suggests that damages for infringement under various aspects of the Patent Act can be treated differently with respect to extraterritoriality. This Article goes on to suggest that the Federal Circuit's approach lacks nuance to account for the particular economic and legal circumstances that differentiate the different infringement provisions at stake. It draws on earlier work where I advocated for a conflicts-based approach to extraterritorial application of U.S. patents, and extends that work to these scenarios, offering a more balanced approach to assessing whether damages are appropriate in these circumstances.*

Finally, this Article explores whether the various damages theories involved in these cases, regardless of the territorial limits, suggest it is time to revisit the foreseeability/proximate cause aspect of Rite-Hite. *The theories of damages seem quite far removed from the actual acts of infringement, even if they occurred within the United States. Some scholars have begun work on this enterprise, and these cases suggest such consideration is ripe.*

Introduction

Two areas of interest at the Supreme Court in recent years have been patent law and extraterritoriality. As to the former, after nearly two decades of relatively little involvement in patent law,[1] the Supreme Court turned its attention to the patent system, and this interest has continued to the present.[2] As to the latter, the Supreme Court has addressed the presumption against extraterritoriality four times since 2007,[3] following a dearth of nearly fourteen years.[4] The Court appeared poised to address the presumption

1 *See generally* Mark D. Janis, *Patent Law in the Age of the Invisible Supreme Court*, 2001 U. Ill. L. Rev. 387.

2 *See* Timothy R. Holbrook, *Explaining the Supreme Court's Interest in Patent Law*, 3 IP Theory 62, 64 (2013) (noting that the Supreme Court took twenty-four patent cases from its October 2000 through October 2012 terms). The Court took six patent cases its 2013 term: Alice Corp. Pty. Ltd. v. CLS Bank Int'l, 134 S. Ct. 2347 (2014); Nautilus, Inc. v. Biosig Instruments, Inc., 134 S. Ct. 2120 (2014), Limelight Networks, Inc. v. Akamai Techs., Inc., 134 S. Ct. 2111 (2014); Highmark Inc. v. Allcare Health Mgmt. Sys., Inc., 134 S. Ct. 1744 (2014); Octane Fitness, LLC v. Icon Health & Fitness, Inc., 134 S. Ct. 1749 (2014); Medtronic, Inc. v. Mirowski Family Ventures, LLC, 134 S. Ct. 843 (2013); three in its 2014 term: Teva Pharms. USA, Inc. v. Sandoz, Inc., 135 S. Ct. 831 (2014); Commil USA, LLC v. Cisco Sys., Inc., 135 S. Ct. 1920 (2015); Kimble v. Marvel Entm't, LLC, 135 S. Ct. 2401 (2015); two cases in its 2015 term: Halo Elecs., Inc. v. Pulse Elecs., Inc., 136 S. Ct. 1923 (2016); Cuozzo Speed Techs., LLC v. Lee, 136 S. Ct. 2131 (2016); and took six cases in its 2016 term: Samsung Elecs. Co. v. Apple Inc., 137 S. Ct. 429 (2016) (mem.); SCA Hygiene Prod. Aktiebolag v. First Quality Baby Prods., LLC, 137 S. Ct. 954 (2017); Life Techs. Corp. v. Promega Corp., 136 S. Ct. 2505 (2016) (mem.); Impression Prods., Inc. v. Lexmark Int'l, Inc., 137 S Ct. 546 (2016) (mem.); TC Heartland LLC v. Kraft Food Brands Grp., LLC, 137 S. Ct. 614 (2016) (mem.); Amgen Inc. v. Sandoz Inc., 137 S. Ct. 808 (2017) (mem.).

3 The Supreme Court addressed the presumption in *Rasul v. Bush* dealing with the habeas statute but concluded that it had "no application to the operation of the habeas statute with respect to persons detained within 'the territorial jurisdiction' of the United States." 542 U.S. 466, 480 (2004) (quoting Foley Bros. v. Filardo, 336 U.S. 281, 285 (1949)). Some Justices have discussed extraterritoriality in concurrences or dissents. *See, e.g.*, Pasquantino v. United States, 544 U.S. 349, 373 (2005) (Ginsburg, J., dissenting) (using presumption to argue that the wire fraud statute does not cover defrauding a foreign government of tax revenue). Justice Ginsburg discussed extraterritoriality in her dissent in *Kirtsaeng v. John Wiley & Sons, Inc.* in the context of the Copyright Act. 133 S. Ct. 1351, 1376 (2013) (Ginsburg, J., dissenting). *Kirtsaeng* answered the question of whether the United States had a domestic or international rule of copyright exhaustion, and the Court adopted the latter. *Id.* at 1355–56 (majority opinion). The issue was whether an authorized foreign sale of a copyrighted work exhausted the U.S. copyright. *Id.* The Court concluded that it did. *Id.* This dynamic is not a typical "extraterritorial" application of U.S. law because copyright exhaustion is not an attempt to regulate foreign activity; instead, the foreign activity impacts rights within the United States. Exhaustion territoriality operates in a manner akin to prior art: foreign activities can preclude a United States patent applicant from receiving a patent. 35 U.S.C. § 102(a) (2012). This dynamic is not the extraterritorial reach of United States patent law but instead a determination that some acts outside of the United States have consequences on the validity of a U.S. patent application. *See generally* Timothy R. Holbrook, *Should Foreign Patent Law Matter?*, 34 Campbell L. Rev. 581, 583–88 (2012) [hereinafter Holbrook, *Foreign Patent Law*]; Timothy R. Holbrook, *Territoriality Waning? Patent Infringement for Offering in the United States to Sell an Invention Abroad*, 37 U.C. Davis L. Rev. 701, 707 (2004) [hereinafter Holbrook, *Territoriality Waning*].

4 *See, e.g.*, Hartford Fire Ins. Co. v. California, 509 U.S. 764, 769 (1993); Sale v. Haitian Ctrs. Council, Inc., 509 U.S. 155, 174 (1993) (applying presumption); Smith v. United States, 507 U.S. 197, 203–04 (1993); EEOC v. Arabian Am. Oil Co. (*Aramco*), 499 U.S. 244,

twice more in its October 2016 term,[5] although it ultimately did not address the presumption in one of those cases.

The Court's review of the presumption in a variety of contexts is not surprising given the confusion surrounding its applicability among the lower courts.[6] The Court's cases have considered the extraterritorial reach of U.S. laws in a variety of contexts, such as the Racketeer Influenced and Corrupt Organizations Act (RICO),[7] the Alien Tort Statute,[8] and United States securities laws.[9] Given the Court's interest in both patent law and extraterritoriality, it should come as no surprise that the Supreme Court has considered the intersection of these concerns, addressing the presumption in the context of patent law.[10] The Court has noted that "[t]he presumption that United States law governs domestically but does not rule the world applies with particular force in patent law."[11]

The strength of the presumption in the patent context has its roots in the lengthy history recognizing the domestic nature of patent law.[12] The Patent Act also contains very explicit territorial limits. For example, 35 U.S.C. § 271(a)—the basic infringement provision of the Patent Act—specifically notes that all of the acts of infringement must take place "within the

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248 (1991). The Court addressed the extraterritorial reach of the Foreign Trade Antitrust Improvements Act, which modified the Sherman Act to "exclude[ ] . . . much anticompetitive conduct that causes only foreign injury." F. Hoffmann-La Roche Ltd. v. Empagran S.A., 542 U.S. 155, 158 (2004). The Act created some exceptions to that general prohibition where generally conduct "significantly harms imports, domestic commerce, or American exporters." *Id.* The Court never expressly addressed the presumption, however. The Court permitted a cause of action by domestic purchasers for a global price-fixing scheme that impacted prices in the United States. *Id.* at 159.

5 *See* Hernandez v. Mesa, 137 S. Ct. 291 (2016) (mem.) (granting petition for writ of certiorari); Life Techs. Corp. v. Promega Corp., 136 S. Ct. 2505 (2016) (mem.) (granting petition for writ of certiorari as to the second question presented).

6 *See, e.g.*, Morrison v. Nat'l Austl. Bank Ltd., 561 U.S. 247, 261 (2010) ("The criticisms seem to us justified. The results of judicial-speculation-made-law—divining what Congress would have wanted if it had thought of the situation before the court—demonstrate the wisdom of the presumption against extraterritoriality. Rather than guess anew in each case, we apply the presumption in all cases, preserving a stable background against which Congress can legislate with predictable effects." (footnote omitted)).

7 RJR Nabisco, Inc. v. European Cmty., 136 S. Ct. 2090, 2096 (2016).

8 Kiobel v. Royal Dutch Petroleum Co., 133 S. Ct. 1659, 1662 (2013).

9 *Morrison*, 561 U.S. at 250–51.

10 Microsoft Corp. v. AT&T Corp., 550 U.S. 437, 441, 454–55 (2007). The Court interpreted the provision at issue in *Microsoft* in its October 2016 term, though it did not address the presumption. *See* Life Techs. Corp. v. Promega Corp., No. 14-1538, 2017 WL 685531 (U.S. Feb. 22, 2017).

11 *Microsoft*, 550 U.S. at 454–55.

12 *See, e.g.*, Dowagiac Mfg. Co. v. Minn. Moline Plow Co., 235 U.S. 641, 650 (1915) ("The right conferred by a patent under our law is confined to the United States and its Territories and infringement of this right cannot be predicated of acts wholly done in a foreign country." (citations omitted)); Brown v. Duchesne, 60 U.S. (19 How.) 183, 195 (1857) ("The power thus granted is domestic in its character, and necessarily confined within the limits of the United States.").

United States."[13] Donald Chisum, author of the influential multi-volume patent law treatise *Chisum on Patents*, has stated that "[o]f the three principal forms of intellectual property, patent rights are most explicitly territorial."[14]

Notwithstanding the "particular force" of the presumption and the express language in the statute, the U.S. Court of Appeals for the Federal Circuit has been rather inconsistent in assessing the extraterritorial reach of U.S. patents.[15] At times, the court expressly has applied the presumption, giving it forceful effect.[16] Other times, the court mentions the presumption yet dismisses its application.[17] And yet at other times, the court fails to mention the presumption explicitly, ignoring the significant body of law that that underlies it.[18] The court has at times afforded extraterritorial reach in the face of seemingly clear language, while other times rejecting such scope.

With a global market place, issues of extraterritoriality have become more pressing in patent law. A significant literature has developed addressing the extraterritorial scope of U.S. patent law in a variety of contexts.[19]

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13 35 U.S.C. § 271(a) (2012).

14 Donald S. Chisum, *Normative and Empirical Territoriality in Intellectual Property: Lessons From Patent Law*, 37 VA. J. INT'L L. 603, 605 (1997).

15 Timothy R. Holbrook, *Extraterritoriality in U.S. Patent Law*, 49 WM. & MARY L. REV. 2119, 2136 (2008) ("The Federal Circuit's exploration of the issue of extraterritoriality has given, at best, inconsistent results. One can discern two strands of the court's jurisprudence: a strict territorial approach on the one hand, and a willingness to provide extraterritorial relief on the other.").

16 *See, e.g.*, Carnegie Mellon Univ. v. Marvell Tech. Grp., Ltd., 807 F.3d 1283, 1307 (Fed. Cir. 2015).

17 *See, e.g.*, Transocean Offshore Deepwater Drilling, Inc. v. Maersk Contractors USA, Inc., 617 F.3d 1296, 1309 (Fed. Cir. 2010) ("We are mindful of the presumption against extraterritoriality."); *see also* Timothy R. Holbrook, *Territoriality and Tangibility After* Transocean, 61 EMORY L.J. 1087, 1098 (2012) (noting that the Federal Circuit "recognized the extraterritorial reach of its holding and even acknowledged that the presumption against the extraterritorial application of U.S. laws suggests a narrower construction of the statute" but ultimately "the court dismissed this concern").

18 *See, e.g.*, Promega Corp. v. Life Techs. Corp., 773 F.3d 1338 (Fed. Cir. 2014), *cert. granted in part*, 136 S. Ct. 2505 (2016) (mem); NTP, Inc. v. Research in Motion, Ltd., 418 F.3d 1282, 1313 (Fed. Cir. 2005) (discussing the territorial limits of U.S. patents but not discussing the presumption). The majority in *Promega* did state that "[w]e are mindful of the fact that the Supreme Court has cautioned against the extraterritorial application of United States laws," but then dismissed such concerns because "Congress' chosen language assigns liability to LifeTech's conduct within the United States, based on its extraterritorial effect." *Promega*, 773 F.3d at 1353 n.10. The majority, however, did not mention the presumption nor engage with the caselaw discussing its application. Chief Judge Prost's dissent in *Promega* alludes to the presumption, although she did not use that terminology. *Id.* at 1360 (Prost, C.J., dissenting in part) (noting that "the Supreme Court has cautioned against employing a policy-oriented approach to judicial decision making when it would cause law to have extraterritorial application").

19 *See, e.g.*, J. Jonas Anderson, *Hiding Behind Nationality: The Temporary Presence Exception and Patent Infringement Avoidance*, 15 MICH. TELECOMM. & TECH. L. REV. 1 (2008); Dan L. Burk, *Patents in Cyberspace: Territoriality and Infringement on Global Computer Networks*, 68 TUL. L. REV. 1 (1993); Dan L. Burk, *Transborder Intellectual Property Issues on the Electronic Frontier*, 6 STAN. L. & POL'Y REV. 9 (1994); Eric W. Guttag, *When Offshore Activities Become Infringing:*

Typically these issues have addressed liability: whether a party should be considered an infringer in light of extraterritorial activity. More recently, however, the Federal Circuit has addressed extraterritoriality in the context of patent damages.[20] In these latter contexts, the court did apply the presumption against extraterritoriality forcefully, refusing to allow the patent owner damages for overseas sales even in the face of a domestic nexus for such damages.[21]

This Article will explore the Federal Circuit's approach to, and reasoning in, these cases in light of the Supreme Court's recent elaboration of the presumption. It will assess whether the two sets of cases—those from infringement under § 271(a) and those under the expressly extraterritorial provision of § 271(f)—merit similar or different treatment. It ultimately concludes that the Federal Circuit's analysis as to these provisions is inconsistent with Supreme Court precedent. These provisions should not necessarily be treated similarly under current law. The Article then provides an approach that would look to various comity factors in determining whether such dam-

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Applying § 271 to Technologies That "Straddle" Territorial Borders, 14 RICH. J.L. & TECH. 1 (2007); Timothy R. Holbrook, *The Potential Extraterritorial Consequences of* Akamai, 26 EMORY INT'L L. REV. 499 (2012); Amy L. Landers, *U.S. Patent Extraterritoriality Within the International Context*, 36 REV. LITIG. 28 (2016); Mark A. Lemley et al., *Divided Infringement Claims*, 6 SEDONA CONF. J. 117, 120–23 (2005); Marketa Trimble, *Cross-Border Injunctions in U.S. Patent Cases and Their Enforcement Abroad*, 13 MARQ. INTELL. PROP. L. REV. 331 (2009); Scott A. Cromar, Note, *The Location of the Contemplated Sale as the Ultimate Guide in "Offer to Sell" Transnational U.S. Patent Infringement Cases*, 2012 U. ILL. L. REV. 1755; James Ernstmeyer, Note, *Does Strict Territoriality Toll the End of Software Patents?*, 89 B.U. L. REV. 1267 (2009); Melissa Y. Lerner, Note, *You Can Run, But You Can't Hide: The Expansion of Direct Infringement and the Evisceration of Preventive Contracting in* Maersk, 93 J. PAT. & TRADEMARK OFF. SOC'Y 207 (2011); Rex W. Miller, II, Note, *Construing "Offers to Sell" Patent Infringement: Why Economic Interests Rather than Territoriality Should Guide the Construction*, 70 OHIO ST. L.J. 403 (2009); Elizabeth M.N. Morris, Comment, *Territorial Impact Factors: An Argument for Determining Patent Infringement Based Upon Impact on the U.S. Market*, 22 SANTA CLARA COMPUTER & HIGH TECH. L.J. 351 (2006); Craig E. Walter, Comment, *Extraterritorial Software Protection Under § 271(f): A Call to Congress to Fix a Statute That Was Not Broken*, 48 HOUS. L. REV. 129 (2011); Melissa Feeney Wasserman, Note, *Divided Infringement: Expanding the Extraterritorial Scope of Patent Law*, 82 N.Y.U. L. REV. 281 (2007).

20 *See, e.g.*, *Carnegie Mellon*, 807 F.3d at 1308, *reh'g en banc denied in part*, 805 F.3d 1382 (Fed. Cir. 2015); WesternGeco L.L.C. v. ION Geophysical Corp., 791 F.3d 1340, 1349–52 (Fed. Cir. 2015), *cert. granted and judgment vacated*, 136 S. Ct. 2486 (2016) (mem.), *remanded to* 837 F.3d 1358, 1360 (Fed. Cir. 2016) (reinstating opinion in relevant part); Power Integrations, Inc. v. Fairchild Semiconductor Int'l, Inc., 711 F.3d 1348, 1369 (Fed. Cir. 2013). For commentary on these cases, see Bernard Chao, *Patent Law's Domestic Sales Trap*, 93 DENV. L. REV. ONLINE 87 (2016) [hereinafter Chao, *Patent Law's Domestic Sales Trap*]; Bernard Chao, *Patent Imperialism*, 109 NW. U. L. REV. ONLINE 77 (2014) [hereinafter Chao, *Patent Imperialism*]; Sapna Kumar, *Patent Damages Without Borders*, 25 TEX. INTELL. PROP. L.J. (forthcoming 2017).

21 *See, e.g.*, *Carnegie Mellon*, 807 F.3d at1307, *reh'g en banc denied in part*, 805 F.3d 1382; *WesternGeco L.L.C.*, 791 F.3d at 1352, *cert. granted and judgment vacated*, 136 S. Ct. 2486, *remanded to* 837 F.3d at 1360 (reinstating opinion in relevant part); *Power Integrations, Inc.*, 711 F.3d at 1369–70.

ages are appropriate. It then addresses a concern beyond extraterritorial damages: whether the law needs to develop a more coherent theory of the harm from patent infringement that should be redressable, even for domestic acts of infringement.

The Article proceeds as follows. Part I explores the presumption against extraterritoriality generally and its particular application in patent law. It begins with an overview of the Supreme Court's recent caselaw that has resulted in a formalized, two-step methodology for assessing the extraterritorial reach of U.S. law. It then reviews the Federal Circuit's inconsistent approach to determining the extraterritorial reach of U.S. patents. Part III then looks at the Federal Circuit's treatment of extraterritorial damages. Turning to the *RJR Nabisco* two-step process, it evaluates the appropriateness of the Federal Circuit's application of a strict territorial rule. Part IV offers an alternative, harmonized approach for these issues. Part V suggests that, beyond territorial concerns, the recent caselaw on damages shows a considerable lack of an appropriate theory for damages. The foreseeability prong of *Rite-Hite* seems to have been stretched beyond its proper contour, suggesting the need for courts and commentators to begin to rethink the proximate cause aspect of damages. Part VI concludes.

I. The Presumption Against Extraterritoriality and Patent Law

Although Congress can only exercise the powers delegated to it by the Constitution, there is no dispute that Congress has the power to regulate activity outside of the boundaries of the United States.[22] Minimally, Congress has the authority to regulate its citizens wherever they are in the world.[23] Congress also has the power to regulate commerce with foreign countries, which provides the necessary authority for Congress to regulate noncitizens abroad.[24]

There are reasons, however, to be concerned about whether Congress has exercised, and should have exercised, such power. This Part begins by exploring the justifications for presuming that Congress did not intend domestic laws to regulate activities outside of the United States. It then turns to the Supreme Court's recent reengagement with the presumption and its efforts seemingly to clarify the presumption's applicability. Finally, this Part details the interaction between the presumption and patent law, focusing on

22 EEOC v. Arabian Am. Oil Co. (*Aramco*), 499 U.S. 244, 248 (1991) ("Congress has the authority to enforce its laws beyond the territorial boundaries of the United States.").

23 Steele v. Bulova Watch Co., 344 U.S. 280, 285–86 (1952) ("[T]he United States is not debarred by any rule of international law from governing the conduct of its own citizens upon the high seas or even in foreign countries when the rights of other nations or their nationals are not infringed." (quoting Skiriotes v. Florida, 313 U.S. 69, 73 (1941))); McBee v. Delica Co., 417 F.3d 107, 118 (1st Cir. 2005) ("This doctrine is based on an idea that Congressional power over American citizens is a matter of domestic law that raises no serious international concerns, even when the citizen is located abroad.").

24 *McBee*, 417 F.3d at 119.

the somewhat inconsistent treatment afforded to the presumption by the Federal Circuit.

A. The Policies Underlying the Presumption Against Extraterritorial Application of U.S. Law

Although Congress has the power to regulate activities outside of the United States, the Supreme Court has made clear that, as a matter of statutory interpretation, courts should presume that laws do not have such reach absent a clear signal from Congress.[25] Courts and commentators have offered a variety of justifications for the presumption. The courts have suggested that using domestic laws extraterritorially could violate international law.[26] Comity and the potential for creating conflicts with the laws of foreign countries both loom large in this calculus.[27] Courts have identified concerns with separation of powers—the usurpation of the executive by acts of Congress—as also supporting the presumption.[28] The reality is that no single theory justifies the presumption. Needless to say, the presumption has also been criticized, particularly for its inconsistent application.[29]

B. The Supreme Court's Recent Reinvigoration of the Presumption

The Supreme Court is apparently aware of these criticisms. The presumption basically had remained dormant at the Supreme Court from the 1940s until the 1990s.[30] Aside from a brief mention of the presumption, the Court had not applied the presumption from 1949 until 1991.[31] The Roberts

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25 *Aramco*, 499 U.S. at 248.

26 Weinberger v. Rossi, 456 U.S. 25, 32 (1982); Curtis A. Bradley, *Territorial Intellectual Property Rights in an Age of Globalism*, 37 VA. J. INT'L L. 505, 514–15 (1997).

27 *See, e.g.*, *Aramco*, 499 U.S. at 256 ("It is also reasonable to conclude that had Congress intended Title VII to apply overseas, it would have addressed the subject of conflicts with foreign laws and procedures."); *see also* Microsoft Corp. v. AT&T Corp., 550 U.S. 437, 455 (2007) ("[F]oreign law 'may embody different policy judgments about the relative rights of inventors, competitors, and the public in patented inventions.'" (quoting Brief for the United States as Amicus Curiae Supporting Petitioner at 28, *id.* (No. 05-1056))).

28 McCulloch v. Sociedad Nacional de Marineros de Honduras, 372 U.S. 10, 19 (1963) (stating that allowing the National Labor Relations Board to reach foreign-flag vessels "would inevitably lead to embarrassment in foreign affairs and be entirely infeasible in actual practice"); *see also* NLRB v. The Catholic Bishop of Chi., 440 U.S. 490, 500 (1979) (characterizing *McCulloch* as raising a "serious question of separation of powers which in turn would have implicated sensitive issues of the authority of the Executive over relations with foreign nations").

29 *See, e.g.*, Jonathan Turley, *"When in Rome": Multinational Misconduct and the Presumption Against Extraterritoriality*, 84 NW. U. L. REV. 598, 601 (1990) ("[C]ourts appear to be using outcome-determinative tests to consistently grant or deny extraterritorial claims according to the type of statute involved in the dispute.").

30 Maggie Gardner, Essay, RJR Nabisco *and the Runaway Canon*, 102 VA. L. REV. ONLINE 134, 136 (2016).

31 William S. Dodge, *The Presumption Against Extraterritoriality in Two Steps*, AJIL UNBOUND 45, 45 n.1 (2016).

Court has picked the issue back up since the 1990s. Since 2007, the Court has decided four cases dealing with the presumption. The Court also heard two cases in its October 2016 term that appeared to deal with the presumption, although the Court ultimately (and surprisingly) did not rely on the presumption in one of them.[32] The Court undoubtedly wants to reduce the confusion surrounding the presumption.[33]

The Court's reengagement with the presumption coincided to some extent with its reengagement with patent law.[34] In *Microsoft v. AT&T*, the Supreme Court addressed for the first time 35 U.S.C. § 271(f) of the Patent Act.[35] Congress adopted § 271(f) to legislatively overrule *Deepsouth Packing Co. v. Laitram*,[36] an earlier Supreme Court decision that relied upon concerns of the extraterritorial reach of U.S. patents.[37] In *Deepsouth*, the accused infringer had manufactured all of the components of the patented shrimp deveining machine; the accused infringer then sent those parts outside of the United States to be assembled abroad.[38] The Supreme Court concluded there was no infringement for making or selling the patented invention in the United States under this fact pattern,[39] noting that "[o]ur patent system makes no claim to extraterritorial effect."[40]

Congress ultimately disagreed, adopting § 271(f)(1), which directly overruled *Deepsouth* by making it an act of infringement to export the unassembled components of the patented invention abroad with an intent to assemble them.[41] Congress went beyond the *Deepsouth* scenario in two ways.

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32 Life Techs. Corp. v. Promega Corp., No. 14-1538, 2017 WL 685531 (U.S. Feb. 22, 2017); *see* Timothy R. Holbrook, Life Technologies Corp. v. Promega Corp. *and the Absent Presumption Against Extraterritoriality*, PATENTLYO (Feb. 26, 2017), https://patentlyo.com/patent/2017/02/technologies-presumption-extraterritoriality.html (discussing the absence of any mention of the presumption in the case dealing with the extraterritorial provision of 35 U.S.C. § 271(f) (2012)).

33 *But see* Gardner, *supra* note 30, at 135 ("[T]he Court missed an opportunity to provide much-needed guidance to judges on how to interpret statutes that rebut the presumption."). Other commentators have suggested that the Court has "jettisoned decades of settled law, casting doubt on long-accepted practices of statutory construction and instructing the lower courts to turn a deaf ear to indications of congressional intent any subtler than the proverbial meat axe." Lea Brilmayer, *The New Extraterritoriality:* Morrison v. National Australia Bank, *Legislative Supremacy, and the Presumption Against Extraterritorial Application of American Law*, 40 SW. L. REV. 655, 655 (2011).

34 *See* Peter Lee, *The Supreme Assimilation of Patent Law*, 114 MICH. L. REV. 1413, 1421–25 (2016) (discussing the Supreme Court's reengagement with patent law over the last fifteen years).

35 550 U.S. 437 (2007).

36 406 U.S. 518 (1972).

37 *Microsoft*, 550 U.S. at 444; *see also* Holbrook, *Territoriality Waning*, *supra* note 3, at 720–21.

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

39 *Id.* at 527 (framing the issue as follows: "[D]id Deepsouth 'make' (and then sell) something cognizable under the patent law as the patented invention, or did it 'make' (and then sell) something that fell short of infringement?").

40 *Id.* at 531.

41 The specific statutory language is:

First, § 271(f)(1) applies when "all or a substantial portion of the components" are manufactured in the United States and exported for assembly. In *Deepsouth*, the accused infringer had manufactured all of the components. The language of "a substantial portion" broadens § 271(f)(1) beyond the facts of *Deepsouth*.[42] Second, Congress went even further beyond *Deepsouth* by adopting § 271(f)(2). This provision defines as infringement the exportation of a component with no substantial noninfringing use when that component is intended to be assembled abroad into the patented invention.[43]

The ultimate impact of this provision is to regulate foreign markets for the patent. Consequently, § 271(f) provides extraterritorial protection to the patent owner. Although there is a domestic nexus, the provision targets foreign markets, those where the component or components have been exported for assembly. If these items return to the United States, they would infringe under other statutory provisions, such as § 271(a)'s prohibition on the importation, use, or sale of the patented invention.[44] Section 271(f) is solely about using a United States patent to regulate foreign markets.

Given this express extraterritorial reach, it was not surprising that the Supreme Court agreed to review this provision in *Microsoft*. The Court confronted two issues in the case: whether computer software could constitute a "component" and whether the copying of such software constituted "supplying" under § 271(f).[45] AT&T's patent covered "an apparatus for digitally encoding and compressing recorded speech," which Microsoft's software infringed when installed on a computer.[46] Microsoft sent the software abroad, where copies were made to install the software on computers

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> 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.

35 U.S.C. § 271(f)(1) (2012).

42 Life Techs. Corp. v. Promega Corp., No. 14-1538, 2017 WL 685531, at *10 (U.S. Feb. 22, 2017) (Alito, J., concurring in part and concurring in the judgment) ("It is clear from the text of 35 U.S.C. § 271(f) that Congress intended not only to fill the gap created by *Deepsouth* . . . but to go at least a little further.").

43 Specifically:

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

35 U.S.C. § 271(f)(2).

44 *Id.* § 271(a).

45 *See* Microsoft Corp. v. AT&T Corp., 550 U.S. 437, 441 (2007).

46 *Id.*

abroad.[47] The Court concluded that software in the abstract was not a component—though software in a substantiated form could be[48]—and that copying did not constitute supplying of the component.[49] Importantly, in reaching this conclusion, the Court expressly relied on the presumption against extraterritoriality in construing the statute.[50] The presumption applied even though § 271(f) is an extraterritorial provision.[51] The Court noted that the presumption "applies with particular force in patent law."[52] *Microsoft*, therefore, was a tea leaf as to what was to follow.[53]

Microsoft dealt with a fairly narrow issue regarding a specialized infringement provision of the Patent Act. In particular, it dealt with a provision designed to provide extraterritorial relief to patent holders. As such, the decision had a limited ability to afford broader, more general guidance as to the presumption. The Supreme Court did not wait long to address the presumption against extraterritoriality more broadly, doing so in the context of securities regulation in *Morrison v. National Australia Bank Ltd.*[54] In *Morrison*, the issue was whether section 10(b) of the Securities and Exchange Act applied to activity taking place in Australia.[55] The Court concluded that section 10(b) did not reach extraterritorial activities.[56] The Court recognized that, in the securities regulation context, the various tests the courts developed "were not easy to administer."[57] The Court acknowledged that "[c]ommentators have criticized the unpredictable and inconsistent application of § 10(b) to transnational cases."[58] The Court bolstered the strength and general applicability of the presumption in reaching its conclusion:

47 *Id.* at 442; *see also* Timothy R. Holbrook & Lucas S. Osborn, *Digital Patent Infringement in an Era of 3D Printing*, 48 U.C. DAVIS L. REV. 1319, 1348–50 (2015) (discussing the facts of the case).

48 *Microsoft*, 550 U.S. at 449 ("Until it is expressed as a computer-readable 'copy,' e.g., on a CD–ROM, Windows software—indeed any software detached from an activating medium—remains uncombinable. . . . Abstract software code is an idea without physical embodiment, and as such, it does not match § 271(f)'s categorization . . . .").

49 *Id.* at 454 ("The absence of anything addressing copying in the statutory text weighs against a judicial determination that replication abroad of a master dispatched from the United States 'supplies' the foreign-made copies from the United States within the intendment of § 271(f).").

50 *Id.* ("Any doubt that Microsoft's conduct falls outside § 271(f)'s compass would be resolved by the presumption against extraterritoriality . . . .")

51 *Id.* at 455–56.

52 *Id.* at 454–55.

53 *Cf.* Holbrook, *supra* note 2, at 72 (discussing the Supreme Court's use of patent law to explore legal issues in other areas).

54 561 U.S. 247 (2010). For a general discussion of *Morrison*'s potential applicability to patent law and the International Trade Commission, see Holbrook, *Foreign Patent Law*, *supra* note 3, at 602–07.

55 *Morrison*, 561 U.S. at 250–51.

56 *Id.* at 265.

57 *Id.* at 258.

58 *Id.* at 260.

> The results of judicial-speculation-made-law—divining what Congress would have wanted if it had thought of the situation before the court—demonstrate the wisdom of the presumption against extraterritoriality. Rather than guess anew in each case, we apply the presumption in all cases, preserving a stable background against which Congress can legislate with predictable effects.[59]

The Court, in a bit of hyperbole, went on to note that, "[w]hen a statute gives no clear indication of an extraterritorial application, it has none."[60] The Court gave the presumption some legal and figurative teeth by noting "the presumption against extraterritorial application would be a craven watchdog indeed if it retreated to its kennel whenever *some* domestic activity is involved in the case."[61] The Court emphasized that the presumption is not a "clear statement" rule.[62] The Court did acknowledge, though, that if the focus of the statute is domestic, then the conduct may fall within the ambit of the statute regardless of the presumption.[63] The Court concluded, though, that the focus of the statute at issue was domestic and did not ensnare the conduct in the case.[64]

As with *Microsoft*, it was not clear if the Supreme Court meant to alter the landscape of the presumption across all fields or whether this decision was specific only to securities law.[65] The Supreme Court was not yet done addressing the presumption, however, and expanding its application. In *Kiobel v. Royal Dutch Petroleum Co.*, the Court addressed whether a party could sue Dutch, British, and Nigerian corporations under the Alien Tort Statute (ATS) for acts occurring outside of the United States.[66] The ATS is different than most statutes, however, because "[i]t does not directly regulate conduct or afford relief," instead "allow[ing] federal courts to recognize certain causes of action based on sufficiently definite norms of international law."[67] The Court nevertheless concluded that the presumption should inform the

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59 *Id.* at 261 (footnote omitted).

60 *Id.* at 255.

61 *Id.* at 266.

62 *Id.* at 265 ("But we do not say, as the concurrence seems to think, that the presumption against extraterritoriality is a 'clear statement rule,' if by that is meant a requirement that a statute say 'this law applies abroad.' Assuredly context can be consulted as well." (internal citation omitted) (quoting *id.* at 278 (Stevens, J., concurring))). *But see id.* at 278 (Stevens, J., concurring) ("First, the Court seeks to transform the presumption from a flexible rule of thumb into something more like a clear statement rule.").

63 *Id.* at 266; *see also* Brilmayer, *supra* note 33, at 663 (describing this "focus" analysis as "a major loophole").

64 *Morrison*, 561 U.S. at 266 ("[W]e think that the focus of the Exchange Act is not upon the place where the deception originated, but upon purchases and sales of securities in the United States.").

65 *See, e.g.*, Holbrook, *Foreign Patent Law*, *supra* note 3, at 604 ("The question arises, then, as to how broadly applicable the language of *Morrison* is. Does *Morrison* represent a sweeping alteration to the presumption, creating close to a 'clear statement' rule requirement, or is it limited to the context of § 10(b) of the securities law?").

66 133 S. Ct. 1659, 1662, 1664 (2013).

67 *Id.* at 1664.

scope of the ATS.[68] Ultimately, the Court held that these claims could not be brought under the ATS due to the presumption because these foreign acts did not "touch and concern the territory of the United States" with "sufficient force to displace the presumption."[69]

The Court was not yet finished refining its jurisprudence regarding the presumption against extraterritoriality. In *RJR Nabisco, Inc. v. European Community*, the Court confronted the extraterritorial scope of RICO.[70] The plaintiffs alleged "RJR Nabisco and numerous related entities . . . participated in a global money-laundering scheme in association with various organized crime groups."[71]

In assessing the extraterritorial reach of RICO, the Court formalized a general, two-step methodology for assessing the application of the presumption.[72] First, a court should assess "whether the presumption against extraterritoriality has been rebutted—that is, whether the statute gives a clear, affirmative indication that it applies extraterritorially."[73] If the presumption has been rebutted, then the statute is afforded extraterritorial reach. If after step one, however, a court concludes "the statute is not extraterritorial," then the statute may yet afford protection.[74] Step two is to "determine whether the case involves a domestic application of the statute . . . by looking to the statute's 'focus.'"[75] Under step two,

> If the conduct relevant to the statute's focus occurred in the United States, then the case involves a permissible domestic application even if other conduct occurred abroad; but if the conduct relevant to the focus occurred in a foreign country, then the case involves an impermissible extraterritorial application regardless of any other conduct that occurred in U.S. territory.[76]

In other words, if the key acts relevant to the statute occur in the United States, then other, extraterritorial conduct will not be enough to preclude the statute's application. In contrast, if the key conduct vis-à-vis the statute's focus is abroad, then the statute will not reach that conduct. The Court thus elaborated "the" test for assessing the extraterritorial reach of any statute, be it a statute that "regulates conduct, affords relief, or merely confers jurisdiction."[77]

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68 *Id.* ("But we think the principles underlying the canon of interpretation similarly constrain courts considering causes of action that may be brought under the ATS.").

69 *Id.* at 1669.

70 RJR Nabisco, Inc. v. European Cmty. (*RJR*), 136 S. Ct. 2090, 2096 (2016).

71 *Id.* at 2098.

72 Dodge, *supra* note 31, at 46 (noting that *RJR* "formalizes *Morrison*'s approach" by adopting the two-step approach).

73 *RJR*, 136 S. Ct. at 2101.

74 *Id.*

75 *Id.*

76 *Id.*

77 *Id.*

Applying this methodology to the facts before it yielded mixed results; the Court assessed the extraterritorial reach of two provisions.[78] First, it analyzed whether "RICO's substantive prohibitions, contained in [18 U.S.C.] § 1962, apply to conduct that occurs in foreign countries."[79] It then assessed whether "RICO's private right of action, contained in § 1964(c), appl[ies] to injuries that are suffered in foreign countries."[80] As to the former, the Court unanimously concluded that the presumption was rebutted and thus § 1962 does apply to some foreign conduct.[81] Interestingly, in contrast with the previous cases, the Court afforded some extraterritorial reach. As to the latter, however, a divided Court, in a 4-3 decision, held that § 1964(c) does not reach injuries suffered outside of the United States, limiting RICO to domestic injuries.[82]

Many believed that the Supreme Court would revisit the presumption in the context of patent law again during its October 2016 term. The Court heard the case *Life Technologies v. Promega*, which presented the question of whether a "single, commodity component" can nevertheless constitute "a substantial portion of the components of a patented invention."[83] The Court rejected the Federal Circuit's interpretation of that provision, noting that "substantial" denoted a quantitative assessment of the invention's components, not a qualitative one as posited by the Federal Circuit.[84] As a result, there was no infringement in the case because the accused infringer had supplied only one component of the patented invention.[85]

Surprisingly, however, the Court did not rely upon, nor even mention, the presumption against extraterritoriality. Such omission is surprising. The briefing in the case generally engaged with the presumption.[86] During oral argument, the Court and the litigants had a variety of exchanges regarding

78 The Court thus applied the presumption on a provision-by-provision basis. Dodge, *supra* note 31, at 48. Some commentators have called this move "consistent with what the Supreme Court has done in past cases," *id.*, whereas others have decried this move as a "new requirement," Gardner, *supra* note 30, at 139.

79 *RJR*, 136 S. Ct. at 2099.

80 *Id.*

81 *Id.* at 2101.

82 *Id.* at 2106.

83 *See* Petition for Writ of Certiorari at i, Life Techs. Corp. v. Promega Corp., 2017 WL 685531 (U.S. Feb. 22, 2017) (No. 14-1538) (quoting 35 U.S.C. 271(f)(1) (2012)) (Question 2); *see also* Life Techs. Corp. v. Promega Corp., 136 S. Ct. 2505 (2016) (mem.) (granting writ of certiorari as to the second question only).

84 *Life Techs.*, 2017 WL 685531, at *6 ("[W]e conclude that a quantitative interpretation hews most closely to the text of the statute and provides an administrable construction.").

85 *Id.*

86 *See, e.g.*, Brief for Petitioner at 24–33, *Life Techs. Corp.*, 2017 WL 685531 (No. 14-1538); Brief for the United States as Amicus Curiae Supporting Petitioners at 28–30, *Life Techs.*, 2017 WL 685531 (No. 14-1538); Brief for Respondent at 44–51, *Life Techs.*, 2017 WL 685531 (No. 14-1538).

the presumption.[87] In fact, the Chief Justice (although he ultimately recused himself) engaged in an exchange with petitioner's counsel on the topic. He seemed to be suggesting that *RJR* removed consideration of the presumption against extraterritoriality in that case:

> I'm not sure I agree with your understanding of the extraterritorial principle. I don't—I mean, do you really take that down into the minutiae of every little clause? It seems to me it's once the law applies, then you apply normal principles of statutory interpretation. I think we have cases about that in other—in other areas, which is sort of what is the reach, I think, may be the presumption against infringements in sovereign immunity, is—a case I can't recall right away that said, well, once you get over it, you know, it's over, and then you apply normal principles.[88]

The case to which the Chief Justice referred likely was *RJR*. As petitioner's counsel quickly noted, however, the Supreme Court specifically noted the role of the presumption in statutory construction "into the minutiae" in *Microsoft*.[89]

The Court's silence may be more telling than it appears. Given the Chief Justice's questions, the failure to mention the presumption could reflect *sub silentio* a shift in the Court's extraterritoriality jurisprudence post-*RJR*.[90] Applying the *RJR* methodology to § 271(f) would appear to end at step one: the statute clearly contemplates extraterritorial application of U.S. law with the hook of domestic manufacture of the components. The silence in *Life Technologies* may reflect this shift.

Finally, the Supreme Court granted certiorari in a case that explores the extraterritorial reach of the Fourth Amendment's prohibition on unjustified force.[91] The case involved the cross-border killing of a Mexican national by a

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87 Holbrook, *supra* note 32 ("At oral argument, the questions from the justices suggested that [the case was about the presumption]. The term was used over twelve times in the argument, with the Chief Justice engaging in a colloquy with Carter Phillips about whether this case truly involved extraterritoriality.").

88 Transcript of Oral Argument at 12, *Life Techs.*, 2017 WL 685531 (No. 14-1538).

89 Id. at 12–13 ("[T]hat's exactly the opposite of what the Court said in *Microsoft*. In *Microsoft*, the Court said that the issue is not simply, is this extraterritorial, because there's no question that 271(f) operates extraterritorially. The question is the sweep of 271(f)." (statement of Carter Phillips)).

90 *See supra* note 33 (discussing the importance of the Supreme Court's silence on the presumption).

91 *See* Hernandez v. Mesa, 137 S. Ct. 291 (2016) (mem.) (granting petition for writ of certiorari); *see also* Petition for Writ of Certiorari, *id.* (No 15-118), 2015 WL 4537883, at *i (U.S. July 23, 2015) (formulating the first question presented as "Does a formalist or functionalist analysis govern the extraterritorial application of the Fourth Amendment's prohibition on unjustified deadly force . . . ?").

U.S. Border Patrol agent.[92] The Court heard oral argument on February 21, 2017, and a decision is expected by the end of June 2017.[93]

C. *Application to Patent Law Generally*

The courts have long recognized the territorial limits to U.S. patents and patent law.[94] With the creation of the Federal Circuit in 1982, primary responsibility for the development of patent law, and necessarily its territorial limits and exceptions, fell on that court's shoulders. Unfortunately, the court's analysis of these territorial limits, and its invocation of the presumption, have been inconsistent at best.

1. Examples of the Federal Circuit Limiting the Extraterritorial Reach of Patents

At times, the Federal Circuit has relied upon the presumption, using generally a strict approach to issues of extraterritoriality.[95] For example, the court has made clear that infringement of a patented method requires the infringer to perform all of the steps of the method within the United States.[96] For some methods, such as those performed over the Internet, the various steps of the method may be performed in different geographic locations.[97] Such methods would not be infringed by a United States patent, and

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92 Hernandez v. United States, 757 F.3d 249, 255 (5th Cir. 2014), *reh'g en banc granted*, 771 F.3d 818 (5th Cir. 2014), *aff'd in part*, 785 F.3d 117 (5th Cir. 2015) (en banc) (per curiam), *cert. granted sub nom.* Hernandez v. Mesa, 137 S. Ct. 291 (2016) (mem.).

93 *No. 15-118*, SUP. CT. OF THE U.S., https://www.supremecourt.gov/Search.aspx?FileName=/docketfiles/15-118.htm (last visited Mar. 10, 2017).

94 *See, e.g.*, 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) ("The right conferred by a patent under our law is confined to the United States and its Territories and infringement of this right cannot be predicated of acts wholly done in a foreign country." (internal citation omitted)); Brown v. Duchesne, 60 U.S. (19 How.) 183, 195 (1857) ("But these acts of Congress do not, and were not intended to, operate beyond the limits of the United States; and as the patentee's right of property and exclusive use is derived from them, they cannot extend beyond the limits to which the law itself is confined.").

95 *See generally* Holbrook, *supra* note 17, at 2130–42 (discussing the Federal Circuit's sometimes strict approach to extraterritoriality).

96 NTP, Inc. v. Research In Motion, Ltd., 418 F.3d 1282, 1318 (Fed. Cir. 2005) ("We therefore hold that a process cannot be used 'within' the United States as required by section 271(a) unless each of the steps is performed within this country.").

97 *See, e.g.*, Akamai Techs., Inc. v. Limelight Networks, Inc., 614 F. Supp. 2d 90, 96 (D. Mass. 2009) ("Content service providers Akamai and Limelight both maintain their own content delivery network . . . consisting of hundreds or thousands of servers located in multiple locations across the United States and around the world."), *aff'd*, 629 F.3d 1311 (Fed. Cir. 2010). This case has a lengthy, complicated procedural history. After the Supreme Court rejected the Federal Circuit's en banc interpretation of § 271(b), 134 S. Ct. 2111 (2014), the en banc Federal Circuit ultimately upheld the jury's verdict of infringement and reversed the district court's grant of judgment as a matter of law, Akamai Techs., Inc. v. Limelight Networks, Inc., 797 F.3d 1020 (Fed. Cir. 2015) (en banc).

it is not entirely clear that they would infringe the patent of any country, given such territorial limits.

The court at times has interpreted the infringement provisions that expressly deal with extraterritoriality in a narrow fashion. For example, the Federal Circuit interpreted § 271(f)'s prohibition on the exportation of the components of a patented invention to exclude method claims.[98] By restricting this provision to only nonmethod patents, the court necessarily restricted its extraterritorial reach.[99] Indeed, it expressly relied upon the presumption in reaching its conclusion: "In light of the near complete absence of any Congressional intent to protect patented methods under Section 271(f) and the explicit Congressional purpose of overruling *Deepsouth*'s holding, the presumption compels us not to extend the reach of Section 271(f) to method patents."[100]

The court also narrowly construed a second extraterritorially-related provision, § 271(g). This provision defines as infringement the importation, offer to sell, sale, or use of the product of a patented process, regardless of where the process was performed.[101] The Federal Circuit narrowly interpreted this provision to include only tangible items produced by such processes, and not intangible things like data.[102] The court did not expressly rely upon the presumption against extraterritoriality, although it noted the legislative history that discussed such territorial limits.[103] As such, the scope of the provision is limited to certain types of methods: a patent holder cannot regulate the use of her method outside of the United States if it merely produces information.[104]

Similarly, the Federal Circuit recently refused to extend the jurisdiction of the International Trade Commission (ITC) to cover digital files, such as files for 3D printing objects.[105] The ITC has *in rem* jurisdiction over articles

98 Cardiac Pacemakers, Inc. v. St. Jude Med., Inc., 576 F.3d 1348, 1359 (Fed. Cir. 2009) (en banc). The Federal Circuit originally had concluded this provision did apply to method claims. *See* Union Carbide Chems. & Plastics Tech. Corp. v. Shell Oil Co., 425 F.3d 1366, 1380 (Fed. Cir. 2005).

99 For an argument against restricting § 271(f) to method claims, see Timothy R. Holbrook, *Method Patent Exceptionalism*, 102 Iowa L. Rev. 1001, 1056 (2017).

100 *Cardiac Pacemakers*, 576 F.3d at 1365.

101 35 U.S.C. § 271(g) (2012).

102 Bayer AG v. Housey Pharm., Inc., 340 F.3d 1367, 1377 (Fed. Cir. 2003) ("We, therefore, hold that in order for a product to have been 'made by a process patented in the United States' it must have been a physical article that was 'manufactured' and that the production of information is not covered." (quoting 35 U.S.C. § 271(g))).

103 *Id.* at 1375.

104 Lower courts have distinguished *Bayer*, however, when a process produces an electronic product, such as a 3D digital model or an electronic directory, as opposed to simply information. *See, e.g.*, Ormco Corp. v. Align Tech., Inc., 609 F. Supp. 2d 1057, 1076 (C.D. Cal. 2009); CNET Networks, Inc. v. Etilize, Inc., 528 F. Supp. 2d 985, 995 (N.D. Cal. 2007).

105 *See* ClearCorrect Operating, LLC v. Int'l Trade Comm'n, 810 F.3d 1283, 1286–87 (Fed. Cir. 2015). For a discussion of how CAD files for 3D printing could constitute direct "digital" patent infringement, see Daniel Harris Brean, *Patenting Physibles: A Fresh Perspective*

entering the United States that would infringe a U.S. patent.[106] If the ITC concludes the article infringes, it can issue an exclusion order that prevents the article from being brought into the United States.[107] Although the court did not rely on the presumption, it concluded that the term "articles" in 19 U.S.C. § 337 is limited to tangible things and not intangible data.[108] Arguably the ITC is not entirely extraterritorial as its jurisdiction is triggered by an act of importation; nevertheless, this interpretation does narrow the ability of the ITC to regulate acts outside of the United States that may infringe upon importation.

The presumption has also come into play in the Federal Circuit's evaluation of injunctions. For example, the Federal Circuit concluded it was inappropriate to require the return of infringing goods from overseas.[109] The court similarly rejected a contempt finding when parties engaged in activity outside of the United States that would have been infringing within the United States, drawing a sharp territorial line.[110]

2. Examples Where the Federal Circuit Extends the Extraterritorial Reach of Patents

The Federal Circuit has not been consistent in its application of the presumption, however. For example, § 271(a) requires that the various acts of infringement take place "within the United States."[111] Even in the face of this strong statutory language, however, the Federal Circuit has afforded extraterritorial scope to this infringement provision. A patented system can be used in an infringing manner even if part of the system is outside of the United States, so long as "the place where control of the system is exercised and beneficial use of the system obtained" is within the United States.[112] The court thus created a sharp divide between the extraterritorial reach

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for Claiming 3D-Printable Products, 55 SANTA CLARA L. REV. 837 (2015); and Holbrook & Osborn, *supra* note 47, at 1353–70.

106 *ClearCorrect*, 810 F.3d at 1289; *see also* 19 U.S.C. § 1337 (2012).

107 19 U.S.C. § 1337(d).

108 *ClearCorrect*, 810 F.3d at 1286–87. After requesting numerous extensions, the ITC ultimately did not file a petition for writ of certiorari in the case. *See No. 15A1262*, SUP. CT. OF THE U.S., https://www.supremecourt.gov/search.aspx?filename=/docketfiles/15a1262.htm (last visited Mar. 10, 2017); Theresa Pablos, *ClearCorrect: Align, ITC Won't Appeal to U.S. Supreme Court*, DRBICUSPID.COM (Sept.1, 2016), http://www.drbicuspid.com/index.aspx?sec=ser&sub=def&pag=dis&ItemID=320278.

109 Johns Hopkins Univ. v. CellPro, Inc., 152 F.3d 1342, 1366–67 (Fed. Cir. 1998).

110 Int'l Rectifier Corp. v. Samsung Elecs. Co., 361 F.3d 1355, 1361 (Fed. Cir. 2004). For a general discussion of extraterritoriality and injunctions in intellectual property cases, see generally Trimble, *supra* note 19.

111 35 U.S.C. § 271(a) (2012).

112 NTP, Inc. v. Research In Motion, Ltd., 418 F.3d 1282, 1317 (Fed. Circ. 2005); *see also* Decca Ltd. v. United States, 544 F.2d 1070, 1074 (Ct. Cl. 1976) (finding infringement even where part of the system was in Norway).

afforded to patented methods and systems that straddle international borders.[113]

The Federal Circuit has also held that offers to sell patented inventions are infringing, even if all of the negotiations take place outside of the United States, so long as the contemplated sale is to take place within the United States.[114] Because the offer need not be accepted for there to be an infringing offer, it is possible for there to be infringement of a U.S. patent even if no activity has ever taken place within the United States.[115] In reaching this conclusion in *Transocean Offshore Deepwater Drilling, Inc. v. Maersk Contractors USA, Inc.*, the court acknowledged the presumption; nevertheless it adopted a rule that greatly expanded the extraterritorial reach of § 271(a).[116] Somewhat oddly, under the *Transocean* rule, domestic negotiations to sell an invention abroad are not infringing under this rule.[117]

The Federal Circuit has also held that overseas acts of inducement that result in domestic infringement are cognizable under § 271(b).[118] The court recognized that, in contrast to § 271(a)'s express territorial restrictions, § 271(b) lacks a similar territorial limit.[119] As such, the court concluded that

113 *See* Holbrook, *supra* note 99, at 1057 (criticizing this dichotomy and arguing that methods and systems should be treated the same).

114 Transocean Offshore Deepwater Drilling, Inc. v. Maersk Contractors USA, Inc., 617 F.3d 1296, 1309 (Fed. Cir. 2010) ("In order for an offer to sell to constitute infringement, the offer must be to sell a patented invention within the United States. The focus should not be on the location of the offer, but rather the location of the future sale that would occur pursuant to the offer.").

115 Holbrook, *supra* note 17, at 1111–12 ("As a result, under the *Transocean* rule, two parties negotiating, but not reaching an agreement, to potentially sell something in the United States could be liable for infringement of a U.S. patent notwithstanding that no actual commercial activity would take place within the United States.").

116 *Transocean*, 617 F.3d at 1309 ("We are mindful of the presumption against extraterritoriality. . . . This presumption has guided other courts to conclude that the contemplated sale would occur within the United States in order for an offer to sell to constitute infringement. We agree that the location of the contemplated sale controls whether there is an offer to sell within the United States." (internal citations omitted)).

117 Halo Elecs., Inc. v. Pulse Elecs., Inc., 831 F.3d 1369, 1379–80 (Fed. Cir. 2016). *But see* Holbrook, *supra* note 19, at 1104 ("The traditional territorial rule is that Congress can clearly regulate activity that occurs within the United States; thus, regulation of such domestic negotiations would be within congressional power." (footnote omitted)).

118 Merial Ltd. v. Cipla Ltd., 681 F.3d 1283, 1302–03 (Fed. Cir. 2012) ("In short, where a foreign party, with the requisite knowledge and intent, employs extraterritorial means to actively induce acts of direct infringement that occur within the United States, such conduct is not categorically exempt from redress under § 271(b).").

119 *Id.* at 1302; *see also* Bernard Chao, *Reconciling Foreign and Domestic Infringement*, 80 UMKC L. REV. 607, 616–28 (2012) (discussing the extraterritorial expansion of induced infringement, particularly at the district court level). Interestingly, Congress added a territorial limitation to the related provision, § 271(c). *See* Chisum, *supra* note 14, at 615. Chisum argues that "[t]here appears to be no policy reason for restricting section 271(c) in this fashion" and "[t]he change may have been a grammatical indiscretion." *Id.*

the provision can cover some acts outside of the United States that result in infringing acts within the United States.[120]

The Federal Circuit has also offered broad interpretations of § 271(f) that afford greater extraterritorial protection. The Federal Circuit has held that there can be infringement under this provision even if the patented invention is not assembled overseas.[121] The court based its decision in part on the fear of "the appearance of 'giving extraterritorial effect to United States patent protection.'"[122] Of course, contrary to the court's suggestion, permitting infringement regardless of whether the invention has been assembled *expands* the extraterritorial reach of the provision, rather than contracting it.[123] In addition to this interpretation, the court also afforded expansive interpretations of other aspects of § 271(f), such as noting that a component can be intangible software[124] and that copying of software can constitute "supplying" the software.[125] The Supreme Court, of course, rejected both of these interpretations.[126]

The Federal Circuit nevertheless has continued to offer expansive interpretations of § 271(f). The court has held that liability can attach even when the party induced to make the device abroad is actually the same entity as the exporter, thus permitting a party to "induce itself."[127] The court also held that a single component can constitute a "substantial portion of the components" of the claimed invention.[128] Both of these holdings provide greater extraterritorial protection under § 271(f). The former expands the class of activity covered by the provision to include both inducement of third parties and self-inducement. The latter, of course, expands § 271(f)(1) to include scenarios where only one component is exported, potentially swallowing § 271(f)(2) and its important safety valve of the component having no sub-

120 *Merial*, 681 F.3d at 1302–03; *see also* Holbrook, *supra* note 19, at 506 ("As a result, parties can be liable for inducing infringement if their affirmative acts occurred outside of the United States, so long as the acts of infringement themselves occurred within the United States." (footnote omitted) (citing *Merial*, 681 F.3d at 1302)).

121 Waymark Corp. v. Porta Sys. Corp., 245 F.3d 1364, 1368 (Fed. Cir. 2001).

122 *Id.* (quoting Paper Converting Mach. Co. v. Magna-Graphics Corp., 745 F.2d 11, 17 (Fed. Cir. 1984)).

123 *See* Holbrook, *supra* note 15, at 2146–47.

124 Eolas Techs. Inc. v. Microsoft Corp., 399 F.3d 1325, 1339 (Fed. Cir. 2005).

125 AT&T Corp. v. Microsoft Corp., 414 F.3d 1366, 1369–70 (Fed. Cir. 2005), *rev'd*, 550 U.S. 437 (2007).

126 *See Microsoft*, 550 U.S. 437.

127 Promega Corp. v. Life Techs. Corp., 773 F.3d 1338, 1345, 1351 (Fed. Cir. 2014) ("We first address whether 'to actively induce the combination' requires involvement of a third party or merely the specific intent to cause the combination of the components of a patented invention outside the United States. We conclude that no third party is required." (quoting 35 U.S.C. § 271(f)(1))), *cert. granted in part*, 136 S. Ct. 2505 (2016) (mem.).

128 *Id.* at 1353 (internal quotation marks omitted).

stantial noninfringing uses.[129] The issue of whether exporting a single component can infringe under § 271(f)(1) is currently before the Supreme Court, although the Court declined to take the "self-inducement" issue.[130]

The Federal Circuit has also viewed the ITC's jurisdiction broadly at times. For example, the court recently held en banc that the ITC's jurisdiction includes the importation of goods that are not infringing as of the moment of importation.[131] Instead, the ITC can exclude objects that will be infringing once in the United States if the importer is inducing that subsequent infringement.[132] In the court's view, this holding prevented the complete exclusion of § 271(b) from the purview of the ITC.[133] As such, the reach of the ITC over activities outside of the United States is broader.

Finally, the Federal Circuit has permitted some injunctions to have extraterritorial reach, in contrast with its strict approach in some cases. In the face of a recalcitrant infringer, one district court extended its injunction to cover goods "destined for delivery" into the United States and to require labels disclaiming any uses within the United States.[134] The injunction thus reached extraterritorial activity, but the Federal Circuit nevertheless found the injunction's requirements reasonable in attempting to prevent infringement within the United States.[135]

In terms of the presumption against the extraterritorial reach of U.S. patents, the Federal Circuit's caselaw is at best a mixed bag. Notwithstanding the Supreme Court's emphasis that the presumption has "particular force" in patent law, the Federal Circuit has been inconsistent in its application to the infringement provisions and for injunctive relief. Interestingly, however, the Federal Circuit has used a strict view of territoriality in policing damages for

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129 35 U.S.C. § 271(f)(2); *see also* Brief Amicus Curiae of Intellectual Property Professors in Support of Petitioners at 11–12, Life Techs. Corp. v. Promega Corp., 2017 WL 685531 (U.S. Feb. 22, 2017) (No. 14-1538).

130 *Life Techs.*, 136 S. Ct. 2505 (mem.) (granting certiorai as to second question only).

131 Suprema, Inc. v. Int'l Trade Comm'n, 796 F.3d 1338, 1340 (Fed. Cir. 2015) (en banc).

132 *Id.* at 1352–53.

133 *Id.* at 1340 ("A majority panel . . . reason[ed] that there are no 'articles that infringe' at the time of importation when direct infringement does not occur until after importation. In doing so, the panel effectively eliminated trade relief under Section 337 for induced infringement and potentially for all types of infringement of method claims." (internal citation omitted) (quoting 19 U.S.C. § 1337(a)(1)(B)(1))). Interestingly, the Federal Circuit is now confronting whether a good faith belief in noninfringement should not be a defense at the ITC because the relief there is entirely prospective. *See* Non-Confidential Brief for Appellants at 46–49, Navico Inc. v. Int'l Trade Comm'n, No. 2016-1533, (Fed. Cir. June 9, 2016) (relying for argument upon Timothy R. Holbrook, *The Supreme Court's Quiet Revolution in Induced Patent Infringement*, 91 NOTRE DAME L. REV. 1007, 1039–44 (2016); Timothy R. Holbrook, *The Intent Element of Induced Infringement*, 22 SANTA CLARA COMPUT. & HIGH TECH L.J. 399, 405–07 (2006); Jason A. Rantanen, *An Objective View of Fault in Patent Infringement*, 60 AM. U. L. REV. 1575, 1603–04 n.162 (2011)).

134 Spindelfabrik Suessen-Schurr v. Schubert & Salzer Maschinenfabrik Aktiengesellschaft, 903 F.2d 1568, 1577–78 (Fed. Cir. 1990).

135 *Id.* at 1578.

patent infringement, even in a context where such restriction may not be appropriate. The next Part explores this aspect of Federal Circuit doctrine.

II. Damages and Extraterritoriality

Although the Federal Circuit's decisions have explored the extraterritoriality of patent infringement in terms of liability—and to a lesser extent injunctive relief—it only recently has explored the issue of damages that could flow from activities outside of the United States. In this context, the courts have encountered two areas of law that arguably conflict with each other. Under Federal Circuit law, damages are generally tied to the economic harm to the patentee by the act of infringement. For example, lost profits are permitted if infringement is the but-for cause of the lost sales and if such losses are foreseeable.[136] Overseas pecuniary losses likely can satisfy these conditions at times.[137] Yet, the presumption against extraterritoriality would suggest that, absent some statement from Congress, such damages should be unavailable, cutting off recovery to the patent holder notwithstanding the actual economic harm incurred. This Part explores the intersection of compensatory damages and territorial limits. It first offers an overview of the law of damages and then explores damages for foreign conduct under § 271(a) and § 271(f).

A. *The Law of Patent Damages Generally*

The Patent Act provides that damages are to be compensatory in nature. The statute specifically requires that "the court shall award the claimant damages adequate to compensate for the infringement, but in no event less than a reasonable royalty for the use made of the invention by the infringer, together with interest and costs as fixed by the court."[138] The Supreme Court has explained the compensatory nature of patent damages under this provision.[139] In *General Motors Corp. v. Devex Corp.*, the Court was technically addressing the appropriate standard for the award of pre-judgment interest under § 284.[140] The Court nevertheless offered an exposition on the nature of patent damages to inform its assessment of the pre-judgment interest standard. As the Court noted, prior to § 284, patent holders could receive the infringer's profits as a remedy for infringement.[141] In 1946, Congress eliminated the recovery of the infringer's profits as a remedy; instead the patentee

136 Rite-Hite Corp. v. Kelley Co., 56 F.3d 1538, 1542–46 (Fed. Cir. 1995) (en banc).

137 *See* WesternGeco L.L.C. v. ION Geophysical Corp., 837 F.3d 1358, 1367 (Fed. Cir. 2016) (Wallach, J., dissenting in part) ("So long as there is a sufficient connection between the infringement and the foreign activity, plaintiffs who successfully establish infringement under United States law should be able to rely on foreign activities to measure those damages . . . .").

138 35 U.S.C. § 284 (2012).

139 *See* Gen. Motors Corp. v. Devex Corp., 461 U.S. 648 (1983).

140 *Id.* at 649 ("This case concerns the proper standard governing the award of prejudgment interest in a patent infringement suit under 35 U.S.C. § 284.").

141 *Id.* at 654.

is to receive "full compensation for 'any damages' he suffered as a result of the infringement."[142] Congress's "overriding purpose" was to "afford[ ] patent owners complete compensation."[143]

Somewhat surprisingly, the Supreme Court has never squarely addressed the proper measure of compensatory damages under section 284 of the 1952 Patent Act, for either lost profits, price erosion, or reasonable royalties, leaving the development of the law exclusively to the Federal Circuit.[144] The seminal case at the Federal Circuit dealing with damages, and particularly lost profits, is its en banc decision in *Rite-Hite Corp. v. Kelley Co.*[145] The issue in *Rite-Hite* was whether a patentee could recover the profits for lost sales of a device not covered by the patent-at-issue.[146] The court was faced with one methodology that focused on the patent claims themselves, which would limit lost profits only to forgone sales of the patented invention. The other would focus on the economics of the market, allowing for profits for any sale displaced by the infringer's device. The court adopted the latter, thus embracing an economic, market-driven approach to compensatory damages.[147] The court thus rejected an approach that drew a somewhat arbitrary line based on the patent's scope and instead adopted one focused on the real-world consequences of the infringing act. The Federal Circuit has continued to elaborate on the required hypothetical market reconstruction necessary to allow lost profits.[148]

142 *Id.* at 654–55 (quoting H.R. Rep. No. 1587, at 1 (1946)).

143 *Id.* at 655. The Court therefore concluded that courts should ordinarily (although not automatically) award prejudgment interest to patent owners. *Id.*

144 The Supreme Court has addressed patent damages before the 1952 Patent Act, but not recently. *See, e.g.*, Yale Lock Mfg. Co. v. Sargent, 117 U.S. 536 (1886). The Supreme Court has reviewed the standard for enhancing damages under 35 U.S.C. § 284. *See* Halo Elecs., Inc. v. Pulse Elecs., Inc., 136 S. Ct. 1923 (2016). A plurality of Justices discussed damages and concerns with a patentee's potential double recovery under § 284 in the context of contributory infringement, but this part of the Court's opinion is not precedent. Aro Mfg. Co. v. Convertible Top Replacement Co., 377 U.S. 476, 502–14 (1964) (plurality opinion). The Supreme Court reviewed damages for infringement of design patents in its October 2016 term, but the review was specific to the unique design patent statute permitting a patent holder to recover the infringer's lost profits on the article of manufacture. *See* Samsung Elecs. Co., Ltd. v. Apple Inc., 137 S. Ct. 429, 436 (2016) (holding that the article of manufacture need not be the entire product); *see also* 35 U.S.C. § 289 (2012) (stating that the infringer "shall be liable to the owner to the extent of his total profit").

145 56 F.3d 1538, 1542 (Fed. Cir. 1995) (en banc).

146 *Id.*; *see also id.* at 1556 (Nies, J., dissenting in part) ("The patentee's property rights do not extend to its market in other goods unprotected by the litigated patent.").

147 *Id.* at 1546 (majority opinion) ("Being responsible for lost sales of a competitive product is surely foreseeable; such losses constitute the full compensation set forth by Congress, as interpreted by the Supreme Court, while staying well within the traditional meaning of proximate cause. Such lost sales should therefore clearly be compensable.").

148 Grain Processing Corp. v. Am. Maize-Prods. Co., 185 F.3d 1341, 1350–51 (Fed. Cir. 1999) (discussing the reconstruction of the market to determine if noninfringing alternative was "available").

The Supreme Court has also recognized price erosion as a form of compensable harm for patent infringement.[149] The Federal Circuit has extended such protections to the 1952 Patent Act.[150] Price erosion technically is a variation of lost profits: instead of losing profits from a lost sale of the patented invention, the patentee has lost profits on its own sale of the patented device because it had to reduce its price in the face of competition by infringers.[151]

While it would seem that price erosion would be fairly common,[152] in fact it is rarely asserted in litigation. First, the patentee would have to prove that it lowered price due to the infringement and not due to other market conditions, which can be difficult to do.[153] Arguing that the patentee has reduced price in the face of infringement alters the calculus for possible lost profits from lost sales: if the patentee's price would have been higher, then she can no longer argue that she would have made the sales of the infringer. The higher price could have resulted in a purchaser simply not buying the product. As the Federal Circuit has explained:

> [I]n a credible economic analysis, the patentee cannot show entitlement to a higher price divorced from the effect of that higher price on demand for the product. In other words, the patentee must also present evidence of the (presumably reduced) amount of product the patentee would have sold at the higher price. Thus, in harmony with the Supreme Court's requirement in *Yale Lock*, the patentee's price erosion theory must account for the nature, or definition, of the market, similarities between any benchmark market and the market in which price erosion is alleged, and the effect of the hypothetically increased price on the likely number of sales at that price in that market.[154]

A proper price erosion analysis also must account for the risk that, in light of the higher price, a purchaser would simply not purchase the item at

149 *Yale Lock Mfg. Co.*, 117 U.S. at 552 (holding that an "enforced reduction of price . . . caused by the infringement . . . is a proper item of damages").

150 *See, e.g.*, Power Integrations, Inc. v. Fairchild Semiconductor Int'l, Inc., 711 F.3d 1348, 1378 (Fed. Cir. 2013) ("Lost revenue caused by a reduction in the market price of a patented good due to infringement is a legitimate element of compensatory damages."); Crystal Semiconductor Corp. v. TriTech Microelectronics Int'l, Inc., 246 F.3d 1336, 1357–61 (Fed. Cir. 2001); BIC Leisure Prods., Inc. v. Windsurfing Int'l, Inc., 1 F.3d 1214, 1220 (Fed. Cir. 1993).

151 *See* Minn. Mining & Mfg. Co. v. Johnson & Johnson Orthopaedics, Inc., 976 F.2d 1559, 1578–79 (Fed. Cir. 1992) (discussing "lost profits due to price erosion").

152 *See* Roy J. Epstein, State Industries *and Economics: Rethinking Patent Infringement Damages*, 9 FED. CIR. B.J. 367, 368 (2000) ("Economics predicts that price erosion should be endemic in infringements, yet such claims are rarely awarded."); Gregory J. Werden et al., *Quantity Accretion: Mirror Image of Price Erosion from Patent Infringement*, 81 J. PAT. & TRADEMARK OFF. SOC'Y 479, 480 (1999) ("[A]wards of price erosion should be more routine.").

153 *See, e.g.*, Minco, Inc. v. Combustion Eng'g, Inc., 95 F.3d 1109, 1120 (Fed. Cir. 1996) ("This evidence permits the inference that market forces other than infringement influenced the price of fused silica."); *BIC Leisure*, F.3d at 1220 ("The record shows that other market forces, not BIC, forced Windsurfing to lower its prices.").

154 *Crystal Semiconductor Corp.*, 246 F.3d at 1357.

all or switch to a noninfringing alternative.[155] One area where price erosion would be the sole measure of damages is infringement for merely offering to sell the invention, where the patentee lowers price in the face of potential competition even when no infringing sales are made.[156] But, in the main, it is unsurprising that claims for price erosion damages are infrequently asserted and not frequently successful.[157]

Finally, the statute guarantees at least a reasonable royalty for the infringer's use of the patented invention.[158] The Federal Circuit has even noted that a reasonable royalty is required unless the evidence is that a reasonable royalty is zero, seemingly a rare occurrence.[159] To evaluate a reasonable royalty, the Federal Circuit has utilized two different methodologies. The first is an analytical method that "focuses on the infringer's projections of profit for the infringing product."[160] The second, "more common"[161] approach is a "hypothetical negotiation" where the court imagines a negotiation as of the first date of infringement.[162] There are a myriad of factors involved in assessing what sort of royalty is reasonable.[163] This fact-intensive analysis of course depends on the circumstances of a given case.[164]

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155 SynQor, Inc. v. Artesyn Techs., Inc., 709 F.3d 1365, 1381 (Fed. Cir. 2013).

156 Timothy R. Holbrook, *Liability for the "Threat of a Sale": Assessing Patent Infringement for Offering to Sell an Invention and Implications for the On-Sale Patentability Bar and Other Forms of Infringement*, 43 SANTA CLARA L. REV. 751, 791–92 (2003).

157 For successful cases, see *SynQor*, 709 F.3d at 1382; Fiskars, Inc. v. Hunt Mfg. Co., 221 F.3d 1318, 1325 (Fed. Cir. 2000); Minn. Mining & Mfg. Co. v. Johnson & Johnson Orthopaedics, Inc., 976 F.2d 1559, 1578 (Fed. Cir. 1992).

158 35 U.S.C. § 284 (2012) (guaranteeing "damages adequate to compensate for the infringement, but in no event less than a reasonable royalty for the use made of the invention by the infringer").

159 Apple Inc. v. Motorola, Inc., 757 F.3d 1286, 1327–28 (Fed. Cir. 2014) ("Because no less than a reasonable royalty is required, the fact finder must determine what royalty is supported by the record. . . . If a patentee's evidence fails to support its specific royalty estimate, the fact finder is still required to determine what royalty is supported by the record. . . . Thus, a fact finder may award no damages only when the record supports a zero royalty award." (internal citations omitted)), *overruled on other grounds by* Williamson v. Citrix Online, LLC, 792 F.3d 1339 (Fed. Cir. 2015) (en banc).

160 Lucent Techs., Inc. v. Gateway, Inc., 580 F.3d 1301, 1324 (Fed. Cir. 2009); *see also* TWM Mfg. Co. v. Dura Corp., 789 F.2d 895, 899 (Fed. Cir. 1986) (discussing the use of the "'analytical approach', in which [the magistrate judge] subtracted the infringer's usual or acceptable net profit from its anticipated net profit realized from sales of infringing devices").

161 *Lucent*, 580 F.3d at 1324.

162 Wang Labs., Inc. v. Toshiba Corp., 993 F.2d 858, 870 (Fed. Cir. 1993) ("[T]he court confused limitation on damages due to lack of notice with determination of the time when damages first began to accrue, and it is the latter which is controlling in a hypothetical royalty determination.").

163 *See* Georgia-Pacific Corp. v. U.S. Plywood Corp., 318 F. Supp. 1116, 1120 (S.D.N.Y. 1970) (listing fifteen factors); *see also Lucent*, 580 F.3d at 1325 (using the *Georgia-Pacific* factors).

164 *See, e.g.*, Commonwealth Sci. & Indus. Research Org. v. Cisco Sys., Inc., 809 F.3d 1295, 1297, 1305 (Fed. Cir. 2015) (finding the district court erred by failing to take into

Of course, any measure of damages is necessarily tied to the act of infringement. Different acts of infringement may harm a patent holder in different ways, which require the damages to be tailored to those acts of infringement. Moreover, in an increasingly global world, domestic acts of infringement may impact overseas markets. Whether these overseas harms to the patent holder should be compensable, even if the infringement is the but-for cause of such harm and the harm is foreseeable, has been the subject of a trio of Federal Circuit decisions. Here, the Federal Circuit has drawn a sharp territorial line, creating an interesting (if not perplexing) contrast with its approach in other circumstances.

B. *Damages for Infringement Under § 271(a)*

Section 271(a) defines infringement as the use, making, offering to sell, or sale of the patented invention within the United States, or the importation of the invention into the United States.[165] Any damages to the patentee must flow from one or more of these acts. The Federal Circuit has encountered cases where the domestic act of infringement under this provision triggered, on an economic level, harm to the patentee outside of the United States. The question presented in these cases was whether such harm was compensable.[166]

The first case in the Federal Circuit's trilogy addressed whether a patentee could recover lost profits for the infringer's overseas sales that resulted from domestic acts of infringement. Specifically, in *Power Integrations, Inc. v. Fairchild Semiconductor International, Inc.*, the court confronted patents directed to alleviating electromagnetic interferences and current flow problems for various power supplies.[167] Fairchild was found to infringe, and its infringement undeniably impacted Power Integrations's overseas sales, particularly to Samsung, which were valued at over $500 million.[168] The Federal Circuit, however, declined to award Power Integrations lost profits for these sales, although the reason for such denial is not entirely clear.[169] Any

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account that the patent was "standard-essential" and subject to reasonable and nondiscriminatory (RAND) commitment), *cert. denied*, 136 S. Ct. 2530, 2530 (2016) (mem.).

165 35 U.S.C. § 271(a).

166 For excellent discussions of these cases, see Chao, *Patent Imperialism*, *supra* note 20; Chao, *Patent Law's Domestic Sales Trap*, *supra* note 20.

167 Power Integrations, Inc. v. Fairchild Semiconductor Int'l, Inc., 711 F.3d 1348, 1357 (Fed. Cir. 2013).

168 Petition for Writ of Certiorari, *Power Integrations*, 711 F.3d 1348 (No. 13-269), 2013 WL 4585328, at *8 ("Fairchild sold the chips manufactured in Maine to Samsung and its subcontractors overseas—in Korea—for a total revenue of $547,724, and Fairchild also made direct imports and sales of infringing chips to U.S.-based customers for a total revenue of $218,000.").

169 For example, the court suggested at one point that some of the allegedly infringing acts took place outside of the United States, which means there is no infringement and thus no damages, regardless of foreseeability. *Power Integrations*, 711 F.3d at 1371 ("Regardless of how the argument is framed under the facts of this case, the underlying question here remains whether Power Integrations is entitled to compensatory damages for injury

sales to Samsung in South Korea would not be infringing because they would not be sales or offers to sell within the United States.[170]

Nevertheless, the court's analysis suggests that some of the overseas lost profits were a direct result of domestic acts of infringement under § 271(a). Even if Fairchild's infringement was the but-for and foreseeable cause of Power Integrations's lost sales worldwide, such damages were not recoverable due to the territorial limits of U.S. patent law.[171] Notwithstanding the factual ambiguities in the case,[172] the court reasoned that "the entirely extraterritorial production, use, or sale of an invention patented in the United States is an independent, intervening act that, under almost all circumstances, cuts off the chain of causation initiated by an act of domestic infringement."[173] The holding is clear, however: even if the lost foreign sales were the direct result of domestic infringement, the patent holder cannot recover lost profits for them.

Power Integrations dealt expressly with lost profits, both through lost sales and price erosion.[174] Unsurprisingly, a later case presented the issue of reasonable royalties for overseas losses that were the foreseeable result of domestic infringement. In *Carnegie Mellon University v. Marvell Technology Group, Ltd.*, the court confronted patents directed to a method "for improved accuracy in the detection of recorded data when certain types of errors are likely due to the recording medium and reading mechanism."[175] The jury found that Marvell infringed Carnegie Mellon University's patents, and awarded a reasonable royalty for Marvell's worldwide sales of the infringing technology.[176]

The facts with respect to extraterritoriality in this case were clearer than in *Power Integrations*. Marvell had used the patented method within the United States in an effort to sell the custom-made chips that performed the patented method to various customers.[177] Many of these customers were outside of the United States, and many of the purchased chips were manufac-

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caused by infringing activity that occurred outside the territory of the United States. The answer is no.").

170 *See* Halo Elecs., Inc. v. Pulse Elecs., Inc., 831 F.3d 1369, 1379–80 (Fed. Cir. 2016); Transocean Offshore Deepwater Drilling, Inc. v. Maersk Contractors USA, Inc., 617 F.3d 1296, 1310 (Fed. Cir. 2010).

171 *Power Integrations*, 711 F.3d at 1371–72.

172 *See* WesternGeco L.L.C. v. ION Geophysical Corp., 791 F.3d 1340, 1360 (Fed. Cir. 2015) (Wallach, J., dissenting in part) ("Although the record in *Power Integrations* does not clearly describe the nature of the infringing conduct . . . what is clear is that both the district court and this court found the connection insufficient." (internal citation omitted)).

173 *Power Integrations*, 711 F.3d at 1371–72.

174 *Id.* at 1376.

175 807 F.3d 1283, 1289 (Fed. Cir. 2015); *see also id.* at 1291 (identifying claim four, a method claim, as representative).

176 *Id.* at 1291–92.

177 Carnegie Mellon Univ. v. Marvell Tech. Grp., Ltd., 986 F. Supp. 2d 574, 593–94 (W.D. Pa. 2013), *aff'd in part, vacated and remanded in part, rev'd in part*, 807 F.3d 1283 (Fed. Cir. 2015); *see also* Chao, *Patent Law's Domestic Sales Trap*, *supra* note 20, at 88.

tured abroad and never entered the United States.[178] Nevertheless, the only reason customers purchased the chips was the performance of the method within the United States. Thus, there was a predicate act of infringement in the United States that was both the but-for cause of the foreign sales and a reasonably foreseeable consequence of the domestic acts of infringement.

Under the economically-based rationale of *Rite-Hite*, seemingly compensation would be appropriate. Undoubtedly, the infringer was liable for any domestic sales or importation of the chips.[179] Indeed, part of the ingenuity of the patentee's damages theory was that it did, in essence, create an end-run of the territorial limits. Those foreign sales alone would not generate liability; the patent holder could not have brought a claim in the United States if only the foreign sales were at issue. Yet the foreseeability prong of *Rite-Hite* arguably makes these foreign sales a cognizable harm.

The Federal Circuit nevertheless rejected awarding damages for chips manufactured and sold outside of the United States.[180] Drawing on the territorial limits of § 271(a), the Federal Circuit offered the following legal rule:

> Where a physical product is being employed to measure damages for the infringing use of patented methods, we conclude, territoriality is satisfied when and only when any one of those domestic actions for that unit (e.g., sale) is proved to be present, even if others of the listed activities for that unit (e.g., making, using) take place abroad.[181]

By this reasoning, for damages to be recoverable for infringement, one of the infringing acts delineated in the Patent Act must occur domestically,

178 *Carnegie Mellon*, 986 F. Supp. 2d at 594 ("As noted, the chips are manufactured by TSMC foundry in Taiwan, and then sent to the customers' manufacturing sites in Asia to be put into their HDDs. These HDDs are then sold primarily to laptop manufacturers, which incorporate the HDDs into their products at their own factories. A portion of the laptops are then imported back into the United States." (internal citations omitted)).

179 *Carnegie Mellon*, 807 F.3d at 1308 ("We therefore affirm the judgment insofar as the royalty rests on imported chips."); *see also id.* ("[A] new trial is needed to determine whether the sales are properly said to have been in the United States.").

180 *Id.* at 1307 ("Although all of Marvell's sales are strongly enough tied to its domestic infringement as a causation matter to have been part of the hypothetical-negotiation agreement, that conclusion is not enough to use the sales as a direct measure of the royalty except as to sales that are domestic (where there is no domestic making or using and no importing)."). The court permitted damages for those chips that entered back into the United States. *Id.* at 1305 ("Marvell makes no meaningful extraterritoriality argument against—and we see no problem with—applying the royalty rate to chips that do enter the United States."). Interestingly, the court left open the potential for damages for "chips made and delivered abroad, and never imported into the United States": there could be damages if "those chips can fairly be said to have been sold here." *Id.* at 1305–06. For a critique of this dynamic, see Chao, *Patent Law's Domestic Sales Trap*, *supra* note 20, at 92 (arguing for a bright-line rule that location of sale is where delivery takes place).

181 *Carnegie Mellon*, 807 F.3d at 1306. It is somewhat odd, however, that the claim infringed here is a method, yet the measure of damages is a device for performing the method. Typically methods can only be infringed through use, so one would think the measure of damages would be a royalty for use of the method. *See* Holbrook, *supra* note 99, at 1041–42.

even if others do not. The court believed this rule to be in line with the one articulated in *Power Integrations*.[182]

Consequently, the court has embraced a bright-line rule against affording relief for extraterritorial damages under § 271(a), even if those harms would satisfy the economically-based test of *Rite-Hite*. In some regards, this is similar to the other holding in *Rite-Hite* regarding the ability of a patent holder to recover lost profits from convoyed sales.[183] A patent holder can recover damages for lost sales of complementary articles but only if particular requirements are met. The patentee must show that the invention and the other article operate as a functional unit.[184] Bundling of goods simply for marketing purposes is not sufficient to allow recovery, even though, economically speaking, the patentee may have lost those sales due to infringement.[185] This rule thus places a legal, noneconomic restriction on the economically driven causation rule for damages.[186] Under *Power Integrations* and *Carnegie Mellon*, territorial limits place a similar, noneconomic limit on infringement damages under § 271(a).

C. Damages Under § 271(f)

Of course, § 271(a) is not the only infringement provision in the Patent Act where issues of damages for extraterritorial conduct has arisen. The Federal Circuit has faced a similar dynamic in determining what damages should be appropriate under § 271(f). In *WesternGeco L.L.C. v. ION Geophysical Corp.*,[187] the technology involved systems "used to search for oil and gas

182 *See Carnegie Mellon*, 807 F.3d at 1307 ("In the lost-profits context, this court indicated in *Power Integrations* that, where the direct measure of damages was foreign activity . . . it was not enough, given the required strength of the presumption against extraterritoriality, that the damages-measuring foreign activity have been factually caused, in the ordinary sense, by domestic activity constituting infringement under § 271(a). We think that the presumption against extraterritoriality, to be given its due, requires something similar in the present royalty setting." (internal citation omitted) (citing Power Integrations, Inc. v. Fairchild Semiconductor Int'l, Inc., 711 F.3d 1348, 1371–72 (Fed. Cir. 2013))).

183 *Cf.* WesternGeco L.L.C. v. ION Geophysical Corp., 791 F.3d 1340, 1358 (Fed. Cir. 2015) (Wallach, J., dissenting in part) (using the entire market value rule to argue against a strict territorial rule because profits can be awarded for noninfringing articles).

184 Rite-Hite Corp. v. Kelley Co., 56 F.3d 1538, 1550 (Fed. Cir. 1995) (en banc) ("All the components together must be analogous to components of a single assembly or be parts of a complete machine, or they must constitute a functional unit.").

185 *Id.* ("Our precedent has not extended liability to include items that have essentially no functional relationship to the patented invention and that may have been sold with an infringing device only as a matter of convenience or business advantage.").

186 *Cf. id.* at 1578 (Newman, J., concurring in part and dissenting in part) ("Yet the court draws a new bright line, . . . declining to make the injured claimants whole. The majority now restricts . . . the patentee's previously existing, already limited right to prove damages for lost sales of collateral items—the so-called 'convoyed' sales. Such remedy is now eliminated entirely unless the convoyed item is 'functionally' inseparable from the patented item.").

187 *WesternGeco*, 791 F.3d 1340. Technically, the Supreme Court granted certiorari, vacated, and remanded the case to reconsider the issue of enhanced damages in light of

beneath the ocean floor."[188] The infringer ION sold components to its customers, who then used the components in an infringing system to compete with WesternGeco.[189] The infringer did not challenge the reasonable royalty award, but it did challenge the award of lost profits for the lost sales of services to ION's customers.[190] These competitors used the patented system on the high seas, which is outside of the United States and indeed subject to no particular country's laws.[191] The majority refused to permit these lost profits due to their extraterritorial nature.[192]

The court recognized that § 271(f) provides extraterritorial protection but nevertheless concluded that Congress gave "no indication" that it "intended to extend the United States patent law to cover uses abroad of the articles created from the exported components."[193] The court drew upon the presumption against extraterritoriality to support its holding limiting damages, although it failed to consider *Morrison* in its analysis.[194] The court also relied upon *Power Integrations*,[195] notwithstanding the ambiguity of its facts.[196] The court specifically held that "[u]nder *Power Integrations*, WesternGeco cannot recover lost profits resulting from its failure to win foreign service contracts, the failure of which allegedly resulted from ION's supplying infringing products to WesternGeco's competitors."[197] The court faulted the patentee for "misunderstand[ing] the role of § 271(f) in our patent law."[198] Specifically, the court warned:

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the Court's decision in *Halo Electronics, Inc. v. Pulse Electronics, Inc.*, 136 S. Ct. 1923 (2016). *See* WesternGeco LLC v. ION Geophysical Corp., 136 S. Ct. 2486 (2016) (mem.). The Federal Circuit's decision on remand reinstated its earlier holding regarding territoriality verbatim, WesternGeco L.L.C. v. ION Geophysical Corp., 837 F.3d 1358 (Fed. Cir. 2016), so I will be citing to the 2015 decision even though, as a technical matter, it has been vacated. Judge Wallach dissented in the original decision and authored another, slightly different dissent in the post-*Halo* case. When discussing Judge Wallach's views, I will refer to both dissents separately.

188 *WesternGeco*, 791 F.3d at 1343.

189 *Id.* at 1349 ("ION makes the DigiFINs domestically and then ships them overseas to its customers, who, in competition with WesternGeco, perform surveys abroad on behalf of oil companies.").

190 *Id.* ("Although ION does not challenge the reasonable royalty award, ION challenges the award of lost profits resulting from lost contracts for services to be performed abroad.").

191 *Id.* ("ION argues that WesternGeco cannot receive lost profits resulting from the failure to win these contracts. The service contracts were all to be performed on the high seas, outside the jurisdictional reach of U.S. patent law."); *see* Elizabeth I. Winston, *Patent Boundaries*, 87 TEMP. L. REV. 501, 516–19 (2015) (discussing infringement on the high seas).

192 *WesternGeco*, 791 F.3d at 1349 ("We hold that lost profits cannot be awarded for damages resulting from these lost contracts.").

193 *Id.* at 1350.

194 *See id.* at 1349–50.

195 *Id.* at 1350–51.

196 *See supra* notes 168–73 and accompanying text.

197 *WesternGeco*, 791 F.3d at 1351.

198 *Id.*

> A construction that would allow recovery of foreign profits would make § 271(f), relating to components, broader than § 271(a), which covers finished products. In fact, § 271(f) was designed to put domestic entities who export components to be assembled into a final product in a similar position to domestic manufacturers who sell the final product domestically or export the final product. Just as the United States seller or exporter of a final product cannot be liable for use abroad, so too the United States exporter of the component parts cannot be liable for use of the infringing article abroad.[199]

This analysis ignores the significant differences between § 271(a) and § 271(f). First, it fails to account for the fact that Congress intended § 271(f) to have extraterritorial effect. Second, it ignores the intent requirements found in § 271(f) that dramatically limit its scope relative to the intent-neutral, strict liability regime of § 271(a). The infringer must have the intent to induce the combination of components abroad into the claimed invention.[200] More importantly, as the dissent notes, the majority's analysis conflates infringement liability with infringement damages. The concerns with similar treatment between § 271(a) and (f) are more about what acts are captured under those provisions as infringing rather than the damages to be awarded once a court has found infringement.

Arguably there are other problems with the majority decision, as highlighted by Judge Wallach's dissent.[201] Judge Wallach faulted the majority for impermissibly conflating liability for infringement with the damages that flow from such liability.[202] Judge Wallach noted that Supreme Court and Federal Circuit precedent has permitted recovery for lost profits arising from overseas sales in other contexts in order to provide full compensation to the patentee.[203] Indeed, he viewed *Power Integrations*, if taken at its word, as

199 *Id. But see id.* at 1359 n.2 (Wallach, J., dissenting in part) ("[T]he majority's statement ignores the critical distinction between *whether* a defendant is liable and *the amount for which* a defendant is liable.").

200 35 U.S.C. § 271(f)(1) (2012) (requiring a party to "actively induce the combination"); *id.* § 271(f)(2) (requiring that a party be "intending that such component will be combined outside of the United States"); *see also* Promega Corp. v. Life Techs. Corp., 773 F.3d 1338, 1351 (Fed. Cir. 2014), *cert. granted on other grounds*, 136 S. Ct. 2505 (2016) ("We first address whether 'to actively induce the combination' requires involvement of a third party or merely the specific intent to cause the combination of the components of a patented invention outside the United States. We conclude that no third party is required." (quoting 35 U.S.C. § 271(f)(1))); Waymark Corp. v. Porta Sys. Corp., 245 F.3d 1364, 1367–68 (Fed. Cir. 2001) ("On its face, 271(f)(2) requires that the infringer only intend[ ] that such component will be combined.").

201 *See also infra* Section III.B and accompanying text (offering other critiques in light of *RJR*).

202 *WesternGeco*, 791 F.3d at 1356–57 (Wallach, J., dissenting in part).

203 *Id.* (discussing *Goulds' Manfacturing Co. v. Cowing*, 105 U.S. 253, 254–58 (1881); *Dowagiac Manufacturing Co. v. Minnesota Moline Plow Co.*, 235 U.S. 641, 642–43, 650 (1915); and *Railroad Dynamics, Inc. v. A. Stucki Co.*, 727 F.2d 1506, 1510 n.1, 1519 (Fed. Cir. 1984)); *see also* Kumar, *supra* note 20, at 16–17 (discussing *Goulds'* and *Dowagiac*).

inconsistent with this earlier precedent.[204] Judge Wallach recognized that there were factual differences that arguably could distinguish those cases, but he found those differences to be inapposite (unlike the majority).[205] Moreover, because the use of the patented invention took place on the high seas, the risks of double recovery and conflicts of law were mitigated; instead, the greater risk was one of under-recovery for the patent holder.[206]

Additionally, Judge Wallach highlighted an inconsistency in the caselaw and the majority's reasoning. The majority agreed that precedent permits the consideration of lost foreign sales as relevant to a reasonable royalty calculation,[207] though it rejected the use of them for an assessment of lost profits.[208] As Judge Wallach noted, there is no legitimate reason to permit consideration of lost sales in the reasonable royalty context and not in the lost profits one.

Moreover, *WesternGeco* and *Carnegie Mellon* seem at odds with each other, although admittedly *Carnegie Mellon* was decided after the original decision in *WesternGeco*. But, after the Supreme Court vacated the earlier decision in *WesternGeco*, the Federal Circuit failed to revisit its reasoning in light of *Carnegie Mellon*.[209] To be fair, the issue of reasonable royalties was not technically before the court: the infringer had not appealed that issue.[210] The Supreme Court also vacated the judgment in light of the Federal Circuit's determination as to willfulness, not damages.[211] Nevertheless, the language embracing such royalties in *WesternGeco* is at best in tension with *Carnegie Mellon*'s general refusal to provide reasonable royalties on foreign sales absent some other domestic nexus.

Ultimately, Judge Wallach attempted to reconcile the precedent in this area related both to damages (à la *Rite-Hite*) and territoriality. As he noted in his dissent on remand from the Supreme Court: "The key issue left unaddressed in the now-reinstated opinion's analysis is: When a patent holder successfully demonstrates both patent infringement under United States law and

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204 *WesternGeco*, 791 F.3d at 1359 (Wallach, J., dissenting in part) ("Read in isolation, this statement is inconsistent with *Goulds'*, *Dowagiac*, and *Railroad Dynamics*."); *see also* WesternGeco L.L.C. v. ION Geophysical Corp., 837 F.3d 1358, 1366 (Fed. Cir. 2016) (Wallach, J., dissenting in part) ("If the statement [in *Power Integrations*] is read too broadly, such that it prohibits any consideration of foreign activities when measuring damages, it conflicts with Supreme Court precedent holding that ordinary sales abroad can in some cases be used to measure damages resulting from domestic infringement.").

205 *WesternGeco*, 791 F.3d at 1357–58 (Wallach, J., dissenting in part).

206 *Id.* at 1360–61.

207 *Id.* at 1362–63.

208 *Id.* at 1363 n.5.

209 Judge Wallach did consider the impact of *Carnegie Mellon* in his dissent, viewing it as a "guidepost[ ]" for determining where to draw the line for damages. *WesternGeco*, 837 F.3d at 1367–68 (Wallach, J., dissenting in part).

210 *WesternGeco*, 791 F.3d at 1349 ("ION does not challenge the reasonable royalty award."), *cert. granted, judgment vacated*, WesternGeco LLC. v. ION Geophysical Corp., 136 S. Ct. 2486 (2016) (mem.).

211 *WesternGeco*, 136 S. Ct. 2486 (vacating in light of *Halo Electronics, Inc. v. Pulse Electronics, Inc.*, 136 S. Ct. 1923 (2016), which addressed willful infringement).

foreign lost profits, what degree of connection must exist between the two before the foreign activity may be used to measure the plaintiff's damages?"[212] The majority did answer that question, however, consistent, in its view, with *Power Integrations* and *Carnegie Mellon*: never. There are no damages for such extraterritorial conduct.

III. Should These Provisions Be Treated the Same? Rethinking These Outcomes in Light of *RJR Nabisco*

In *Power Integrations*, *Carnegie Mellon*, and *WesternGeco*, the Federal Circuit has articulated a fairly bright-line rule against awarding damages for extraterritorial consequences that flow from domestic infringement. In this way, the court has stepped away from its more economically-driven analysis for compensatory damages. Moreover, the court seems to approach the issue similarly for the different infringement provisions at issue. The majority in *WesternGeco* embraced the reasoning of *Power Integrations* to support its conclusion.

It is not clear, however, that such uniformity is merited. Indeed, the Supreme Court's methodology—suggested in *Morrison* but elaborated with particularity in *RJR*—suggests an analysis that differs from the Federal Circuit's. Of course, *RJR* was issued after *Power Integrations* and *Carnegie Mellon*. *WesternGeco* on remand was decided after *RJR* and could have taken the new methodology into account, although neither the majority nor the dissent did. Judge Taranto in *Carnegie Mellon* did recognize aspects of the *Morrison* analysis and indeed offered a more nuanced analysis of these issues.[213] Nevertheless, taking *RJR* to heart affords a different analysis regarding the issue of the territorial limits of patent damages, and it suggests that § 271(a) and § 271(f) should be treated differently. As this Part elaborates, the strict territorial language of § 271(a) suggests its reach should be similarly narrowly tailored. In contrast, § 271(f) is designed to allow patent holders to regulate foreign markets; given this focus of the statute, it should be given far wider berth in assessing damages.

RJR provides a two-step methodology for assessing the extraterritorial reach of a statute.[214] Specifically, a court first should determine "whether the presumption against extraterritoriality has been rebutted—that is, whether the statute gives a clear, affirmative indication that it applies extraterritorially."[215] An affirmative response to step one is sufficient, and a court

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212 *WesternGeco*, 837 F.3d at 1365 (Wallach, J., dissenting).

213 Carnegie Mellon Univ. v. Marvell Tech. Grp., Ltd., 807 F.3d 1283, 1306 (Fed. Cir. 2015) ("What constitutes a territorial connection that brings an action within the reach of a United States statute must ultimately be determined by examining the '"focus" of congressional concern' in the particular statute. For the present context, we think that § 271(a) provides the basis for drawing the needed line." (citation omitted) (quoting Morrison v. Nat'l Austl. Bank Ltd., 561 U.S. 247, 266–67 (2010))).

214 *See supra* notes 72–77 and accompanying text.

215 RJR Nabisco, Inc. v. European Cmty., 136 S. Ct. 2090, 2101 (2016).

need not go to step two.[216] But a negative answer to step one does not end the inquiry.[217] If the presumption is not rebutted under step one, then a court next must "determine whether the case involves a domestic application of the statute . . . by looking to the statute's 'focus.'"[218] In particular,

> [i]f the conduct relevant to the statute's focus occurred in the United States, then the case involves a permissible domestic application even if other conduct occurred abroad; but if the conduct relevant to the focus occurred in a foreign country, then the case involves an impermissible extraterritorial application regardless of any other conduct that occurred in U.S. territory.[219]

The Court applied the presumption to individual provisions of a given statute, not merely globally to the entire statute.[220] Under *RJR*, the presumption applies to various types of provisions, including substantive, jurisdictional, and remedial aspects of a statute.[221]

Unlike the Federal Circuit's analysis in *Power Integrations*, *Carnegie Mellon*, and *WesternGeco*, the use of the *RJR* methodology provides different results for the two provisions at issue. Technically, the provision at issue is § 284, which of course contains no territorial limitations at all.[222] The statute requires "damages adequate to compensate for the infringement," thus rendering the provision entirely dependent on the Patent Act's various definitions of infringement under § 271.[223]

The various infringement provisions in § 271 differ significantly in their scope and purpose, with many subsequent provisions adopted to address various policy concerns that arose over time. Section 271(e), for example, is part of the Hatch-Waxman Act, creating a new form of infringement for filing an Abbreviated New Drug Application while also providing a safe harbor from infringement for using the invention to prepare such materials.[224] More apt to this Article, Congress specifically enacted § 271(f) and (g) to close perceived "loopholes" in patent protection due to the various territorial limits of

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216 *Id.* at 2103 ("Here, however, there is a clear indication at step one that RICO applies extraterritorially. We therefore do not proceed to the 'focus' step.").

217 *Id.* at 2101 ("What if we find at step one that a statute clearly *does* have extraterritorial effect? Neither *Morrison* nor *Kiobel* involved such a finding. But we addressed this issue in *Morrison*, explaining that it was necessary to consider § 10(b)'s 'focus' only because we found that the statute does not apply extraterritorially.").

218 *Id.*

219 *Id.*

220 *Id.* at 2099 (applying the presumption to 18 U.S.C. § 1962 and § 1964(c) individually).

221 *Id.* at 2108; *see also* Gardner, *supra* note 30, at 139 (noting that the presumption is to "be applied separately to every statutory provision, whether substantive, remedial, or jurisdictional").

222 35 U.S.C. § 284 (2012).

223 *Id.*; *see also id.* § 271 (defining "infringement of patent").

224 *Id.* § 271(e). *See generally* Eli Lilly & Co. v. Medtronic, Inc., 496 U.S. 661, 669–74 (1990) (discussing various "distortions" that § 271(e) is designed to correct).

§ 271(a).[225] Thus, it is inappropriate to "lump and dump" all of the infringement provisions together, as the Federal Circuit appears to have done, for purposes of assessing the appropriate extraterritorial scope of damages. Indeed, *RJR* made clear "that one statutory provision may take its geographic scope from another," suggesting that damages pursuant to § 284 for violations of § 271(a) and § 271(f) could be, and should be, different given their explicitly different territorial scopes.[226]

A. *Applying the* RJR *Framework to § 284 Damages for Infringement Under § 271(a)*

Section 271(a) has very explicit territorial restrictions.[227] Any remedy under § 284 would be linked to these territorial limits.[228] Applying the *RJR* test, step one clearly is not satisfied. The statute is specifically limited to acts "within the United States" and importation of the invention "into the United States."[229] It is hard to imagine a starker expression of territorial limits, perhaps short of an additional sentence saying "We really mean it!" This language is also pregnant with historical interpretations of the territorial limits of patent law, where the Supreme Court has noted that U.S. patents have no effect outside of the United States.[230] *Brown v. Duchesne* is particularly illuminating as to the relationship between infringement and damages, as the Supreme Court noted that "the use of [the patented invention] outside of the jurisdiction of the United States is not an infringement of his rights, and he has *no claim to any compensation for the profit or advantage the party may derive from it.*"[231]

Concluding that the presumption has not been rebutted under step one of the *RJR* framework does not end the inquiry into the potential extraterritorial reach of damages under § 271(a), however. Step two requires an analysis of the "focus" of the provision.[232] As the Supreme Court explained,

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225 *See* Holbrook, *Territoriality Waning*, *supra* note 3, at 719–23.

226 Dodge, *supra* note 31, at 48.

227 35 U.S.C. § 271(a).

228 Dodge, *supra* note 31, at 48 ("*RJR* indirectly supports this line of cases by holding that one statutory provision may take its geographic scope from another."). Here, damages under § 284 would take the territorial limits of § 271(a).

229 35 U.S.C. § 271(a).

230 Deepsouth Packing Co. v. Laitram Corp., 406 U.S. 518, 527 (1972) ("The statute makes it clear that it is not an infringement to make or use a patented product outside of the United States."), *abrogated by* 35 U.S.C. § 271(f); *see also* Dowagiac Mfg. Co. v. Minn. Moline Plow Co., 235 U.S. 641, 650 (1915) ("The right conferred by a patent under our law is confined to the United States and its Territories and infringement of this right cannot be predicated of acts wholly done in a foreign country." (citation omitted)); Brown v. Duchesne, 60 U.S. (19 How.) 183, 195 (1857) ("But these acts of Congress do not, and were not intended to, operate beyond the limits of the United States; and as the patentee's right of property and exclusive use is derived from them, they cannot extend beyond the limits to which the law itself is confined.").

231 *Brown*, 60 U.S. at 195–96 (emphasis added).

232 RJR Nabisco, Inc. v. European Cmty., 136 S. Ct. 2090, 2101 (2016).

> If the conduct relevant to the statute's focus occurred in the United States, then the case involves a permissible domestic application even if other conduct occurred abroad; but if the conduct relevant to the focus occurred in a foreign country, then the case involves an impermissible extraterritorial application regardless of any other conduct that occurred in U.S. territory.[233]

By considering the "conduct relevant to the statute's focus," necessarily this step requires consideration of the particular facts of any case and its relationship to the statutory provision at issue. Generalization, therefore, can be difficult because a given fact scenario may implicate the focus differently.

In some ways, this language regarding the statute's focus requires an inquiry as to whether the relevant behavior has a sufficient domestic nexus such that is it is appropriate to apply U.S. law.[234] Although the Federal Circuit has not yet had occasion to apply the *RJR* framework to its analysis of extraterritoriality for patent infringement liability, one could rationalize their holdings on this basis. The "focus" of § 271(a) is on acts of using, making, or selling the invention within the United States. In *NTP*, the court effectively determined that the "use" of the patented system fell within the United States, notwithstanding that part of the system was in Canada.[235] As such, the facts in *NTP* would satisfy step two of *RJR*. The same can be said of *Transocean*'s ruling that the location of the contemplated sale of the invention determines the locus of infringement, even if all negotiations take place outside of the United States and the sale is never consummated.[236] The act of economic appropriation—the focus of the statute—is within the United States, satisfying step two.[237]

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233 *Id.*

234 *Cf.* Holbrook, *supra* note 15, at 2170–71; *see also* Gardner, *supra* note 30, at 138 ("[A]t step two, judges get to decide what domestic contracts count in which cases (determining the 'focus' of a statute, after all, is a rather mushy directive).").

235 NTP, Inc. v. Research In Motion, Ltd., 418 F.3d 1282, 1317 (Fed. Cir. 2005) ("When RIM's United States customers send and receive messages by manipulating the handheld devices in their possession in the United States, the location of the use of the communication system as a whole occurs in the United States."). Of course, the analysis of the focus of § 271(a) does not explain why method claims are not afforded similar treatment. *See* Holbrook, *supra* note 99, at 31–32.

236 Transocean Offshore Deepwater Drilling, Inc. v. Maersk Contractors USA, Inc., 617 F.3d 1296, 1309 (Fed. Cir. 2010) ("This company would generate interest in its product in the U.S. to the detriment of the U.S. patent owner, the type of harm that offer to sell within the U.S. liability is meant to remedy. These acts create a real harm in the U.S. to a U.S. patentee." (internal citation omitted)). Of course, the odd consequence of this reasoning is that there can be infringement of a U.S. patent for offering to sell the invention even if no actual activity takes place in the United States, likely contrary to the "focus" analysis of *RJR*. *See* Holbrook, *supra* note 19, at 1112 ("[U]nder the *Transocean* rule, two parties negotiating, but not reaching an agreement, to potentially sell something in the United States could be liable for infringement of a U.S. patent notwithstanding that no actual commercial activity would take place within the United States.").

237 *See* Lemley et al., *supra* note 19, at 123 ("We think that the case is better understood as reinvigorating the dormant line of 'locus of infringement' cases, and that the court

The analyses with respect to step two's application to *Power Integrations* and *Carnegie Mellon* depend on the facts of those cases. It is unclear where the acts of infringement took place in *Power Integrations*, as is the relationship between any infringing acts within the United States and possible extraterritorial losses of sales. As such, it is hard to say whether the "focus" analysis of step two of the *RJR* framework would be satisfied. Given the territorial limits of § 271(a), though, it would seem appropriate to reject such extraterritorial damages in the face of ambiguous facts. If the sales for which lost profits were sought all took place outside of the United States, then the focus of the statute does not contemplate such sales, particularly absent a clear antecedent act of domestic infringement.

In *Carnegie Mellon*, in assessing the availability of a reasonable royalty for foreign activity, Judge Taranto appropriately picked up on the "focus" language of *Morrison*,[238] which became step two of the *RJR* test. Consistent with my view of the appropriate analysis for damages, the court turned to § 271(a) to assess the "focus" for damages purposes.[239] The court noted that having a domestic act of infringement should be sufficient to trigger damages.[240] The court then noted that one of those infringing acts must occur relative to some physical instantiation of the invention, which, in this case, was a method claim.[241] The method, therefore, had to be performed entirely within the United States.[242] The court recognized, of course, that the basis for measuring damages may not be the same infringing act: the claim was a method claim, requiring practice of the method for infringement, yet damages were measured by sales of something that performs the method.[243]

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would limit its holding to cases in which the acts that collectively constitute infringement occurred primarily, though not exclusively, in the United States.").

238 Carnegie Mellon Univ. v. Marvell Tech. Grp., Ltd., 807 F.3d 1283, 1306 (Fed. Cir. 2015) ("What constitutes a territorial connection that brings an action within the reach of a United States statute must ultimately be determined by examining the '"focus" of congressional concern' in the particular statute." (quoting Morrison v. Nat'l Austl. Bank Ltd., 561 U.S. 247, 266–67 (2010))).

239 *Id.* ("For the present context, we think that § 271(a) provides the basis for drawing the needed line.").

240 *Id.* ("It [§ 271(a)] states a clear definition of what conduct Congress intended to reach—making *or* using *or* selling in the United States *or* importing into the United States, even if one or more of those activities also occur abroad.").

241 *Id.* ("Where a physical product is being employed to measure damages for the infringing use of patented methods, we conclude, territoriality is satisfied when and only when any one of those domestic actions for that unit (*e.g.*, sale) is proved to be present, even if others of the listed activities for that unit (*e.g.*, making, using) take place abroad.").

242 As the Federal Circuit made clear in *NTP*, for method claims, all of the steps of the method must be performed within the United States for there to be infringement. NTP, Inc. v. Research In Motion, Ltd., 418 F.3d 1282, 1318 (Fed. Cir. 2005).

243 *Carnegie Mellon*, 807 F.3d at 1306–07 ("Significantly, once one extends the extraterritoriality principle to confining how *damages* are calculated, it makes no sense to insist that the action respecting the product being used for measurement itself be an *infringing* action. Thus, here the claim is a method claim, but the damages-measuring product practices the method in its normal intended use and the hypothetical negotiation would have

Such reasoning gestures towards providing relief for these extraterritorial sales, yet the court pivoted to *Power Integrations* and a sharper limit on extraterritorial damages:

> We think that the presumption against extraterritoriality, to be given its due, requires something similar in the present royalty setting. Although all of Marvell's sales *are strongly enough tied to its domestic infringement as a causation matter* to have been part of the hypothetical-negotiation agreement, that conclusion is not enough to use the sales as a direct measure of the royalty except as to sales that are domestic (where there is no domestic making or using and no importing).[244]

Aside from ignoring the relationship between the nature of infringement—the use of a method—and the damages for chip sales, the court's analysis suddenly shifted from a focus on the nature of the infringement to simply embracing a bright-line proscription on a reasonable royalty for foreign sales. In this way, the court's focus is too much on § 271(a) without appropriately considering the need to provide compensatory damages under § 284. Under the court's own reasoning, there seems to be a sufficient domestic act (the use of the method) that is closely tied to the requested damages (a reasonable royalty that accounts for foreign sales). There is nothing, other than the presumption, to suggest that the link between infringement and extraterritorial damages is not strong enough. To the contrary, the court makes clear that such extraterritorial conduct would be reasonably foreseeable as part of a hypothetical negotiation, yet the court concludes that such relief is not available to the patent holder.

This is not to suggest the ultimate outcome is incorrect, and there may be strong policy reasons to agree with the court's conclusion.[245] The court's analysis, however, diverges from the Supreme Court's "focus" analysis in *Morrison* and *RJR*. When one considers the Supreme Court's call for compensatory damages for infringement, the first part of the Federal Circuit's analysis would lend itself to recovery for foreign activity: there is a prefatory act of domestic infringement, and the damages that flow from that act would be foreseeable enough to be part of a reasonable royalty analysis. Yet the court draws a bright, fairly arbitrary territorial line. A more appropriate analysis under *RJR* would likely stop at the textual analysis in § 271(a): infringement must be within the United States for using the method, and the appropriate measure of damages should be tied to that injury. The other injuries that flow from the infringement are beyond the focus of the statute, as would be

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employed the number of units sold to measure the value of the method's domestic use (before production and after), as discussed above. In these circumstances, the inquiry is whether any of the § 271(a)-listed activities with respect to that product occur domestically." (internal citation omitted)).

244 *Id.* at 1307 (emphasis added).

245 *See* Chao, *Patent Imperialism*, *supra* note 20, at 86–90.

any commensurate remedy. Thus, the result would be the same, but the analysis would be narrower and more consistent.[246]

B. Applying the RJR *Framework to § 284 Damages for Infringement Under § 271(f)*

The error of the majority's analysis in *Carnegie Mellon* can be seen more readily when the *RJR* framework is applied to damages for infringement under § 271(f). Step one under *RJR* is clearly satisfied: the purpose Congress had in passing this provision was to overrule *Deepsouth* and provide a remedy for patent holders, which has the effect of allowing them control over foreign markets.[247] Although there is a domestic act—the supplying of components from the United States—necessarily the market implicated by the provision is one outside of the United States.[248] Thus, the provision is intended to have extraterritorial reach.[249]

Considering this reach in conjunction with damages under § 284 strongly suggests that extraterritorial damages are appropriate. As such, *WesternGeco* is simply wrong. The court's reasoning shows this error. The court noted that "[s]ection 271(f) does not eliminate the presumption against extraterritoriality. Instead, it creates a limited exception."[250] This statement is true and, as the Supreme Court has noted, "when a statute provides for some extraterritorial application, the presumption against extraterritoriality operates to limit that provision to its terms."[251] In the case of § 271(f), however, the terms are clear: patentees are protected against exportation of the components of the invention in circumstances where the exporter could compete with the inventor in foreign markets.[252] Those are the terms of the provision. The Court's more recent decision in *Life Technologies*, where it fails to mention the presumption, is consistent with this view of § 271(f).[253] The presumption is rebutted at step one.

Technically, there is no reason to consider step two of the *RJR* analysis at this point, even though *RJR* does not truly explain what should happen if step one is satisfied.[254] Nevertheless, in the interest of thoroughness,[255] step

246 Part of the issue here may also be how far removed these damages are from the actual acts of infringement. *See infra* Part V (suggesting a need to reevaluate *Rite-Hite*'s foreseeability limitation on patent damages).

247 *See* Kumar, *supra* note 20, at 26–27.

248 *See* 35 U.S.C. § 271(f)(1)–(2) (2012).

249 Part of the problem with *RJR*, however, is that the "Court has not provided similar guidance on what to do when the presumption is rebutted." Gardner, *supra* note 30, at 138.

250 WesternGeco L.L.C. v. ION Geophysical Corp., 791 F.3d 1340, 1351 (Fed. Cir. 2015) (citing Microsoft Corp. v. AT&T Corp., 550 U.S. 437, 442, 455–56 (2007)).

251 Morrison v. Nat'l Austl. Bank Ltd., 561 U.S. 247, 265 (2010) (citing *Microsoft*, 550 U.S. at 455–56).

252 *WesternGeco*, 791 F.3d at 1351.

253 *See supra* notes 86–90 and accompanying text.

254 Gardner, *supra* note 30, at 138.

255 And recognizing that I could be wrong about step one . . . .

two's consideration of § 271(f)'s "focus," in conjunction § 284's remedial purpose, further supports affording damages for extraterritorial acts.[256] Congress designed the statute to protect patent owners against the territorial arbitrage present in *Deepsouth*. Although § 271(f)(1) contemplates domestic manufacture of components of the invention, the real impact of the statute is to protect the patentee's ability to sell the invention *in foreign markets*.[257] Similarly, § 271(f)(2) provides even greater protection to patentees by affording similar protection when a party exports a component with no substantial noninfringing uses.[258]

The Federal Circuit's statement in *WesternGeco* that "[t]here is no indication that in [passing § 271(f)], Congress intended to extend the United States patent law to cover uses abroad of the articles created from the exported components" is flatly contrary to the clear language of the statute and ignores the compensatory nature of damages.[259] The focus of the statute is the foreign markets in which the patentee may operate. As such, to be compensatory under § 284, the full panoply of damages would seem appropriate even if the harm arose in a foreign jurisdiction. If the lost sales of services in *WesternGeco* would be appropriate damages if it had occurred within the United States, then they should be appropriate if outside.

In this regard, *WesternGeco* is wrongly decided on a number of levels. To begin, in its initial decision, the Federal Circuit failed even to cite *Morrison*, let alone perform a proper analysis of the statute's focus, in contrast to the court's analysis in *Carnegie Mellon*.[260] Next, the court failed to cure this oversight on remand after *Halo*. While *Halo* technically related only to the enhanced damages aspect of the decision, the Supreme Court had decided *RJR* at that point. The Federal Circuit, in reconsidering its judgment, should have taken into account *Morrison*, *Kiobel*, and particularly *RJR* in its post-*Halo* decision. The law arguably had changed, which would merit reconsideration by the court. Moreover, the court erred in relying on *Power Integrations*.[261] That case dealt with § 271(a), a different statutory provision with a different focus in terms of territoriality.[262]

The court's reasoning is flawed in other ways, as well. The court suggested that "§ 271(f) was designed to put domestic entities who export components to be assembled into a final product in a similar position to domestic manufacturers who sell the final product domestically or export the final product."[263] That is true, at one level, but it ignores that there is no protec-

256 Kumar, *supra* note 20, at 26–27.

257 *Id.* at 27.

258 35 U.S.C. § 271(a) (2012).

259 *WesternGeco*, 791 F.3d at 1350.

260 *See* Carnegie Mellon Univ. v. Marvell Tech. Grp., Ltd., 807 F.3d 1283, 1306 (Fed. Cir. 2015).

261 *See WesternGeco*, 791 F.3d at 1350.

262 Power Integrations, Inc. v. Fairchild Semiconductor Int'l, Inc., 711 F.3d 1348, 1379 (Fed. Cir. 2013).

263 *WesternGeco*, 791 F.3d. at 1351.

tion afforded patent holders against exportation, with the exception of § 271(f).[264] To export the invention, the exporter would infringe by making the claimed invention within the United States; the sale in connection with the exportation would be one outside of the United States that would not be infringing.[265] Moreover, § 271(f) is not coextensive with § 271(a) given the knowledge requirements present in § 271(f).[266] So, the concern that "[a] construction that would allow recovery of foreign profits would make § 271(f), relating to components, broader than § 271(a), which covers finished products"[267] is overblown and ignores the purpose underlying § 271(f). An application of *RJR*, therefore, suggests that the Federal Circuit was wrong to deny the lost profits in *WesternGeco*, assuming such sales were foreseeable under *Rite-Hite*.

C. *Application of* RJR *to These Cases Demonstrates a "One-Size-Fits-All" Approach Is Not Appropriate*

The above application of the *RJR* framework demonstrates that damages for extraterritorial conduct will depend both on the infringement provision involved and the nature of the damages sought. *RJR* reflects a fairly case-specific analysis, a nuance not present in the Federal Circuit's analyses in *Power Integrations* and *WesternGeco*. *Carnegie Mellon*, with its discussion of *Morrison* and the focus of the statute,[268] is more consistent with *RJR*, though arguably the court's analysis is flawed. It appears, though, that *WesternGeco*'s failure to account for either step of *RJR* impermissibly limited the damages available to the patentee in that case. The Federal Circuit did err, however, by treating the territorial limits as to damages under § 271(a) and (f) as related. *RJR* makes clear that the reasoning for territorial damages under § 271(a) need not, and should not, inform § 271(f), and vice versa.

IV. An Alternative Approach—Considering Conflicts with Foreign Law

All of the above analysis treats the issue of the territorial limits on patent damages as binary: either damages will be permitted or not. Of course, courts could—and should—provide a more nuanced analysis that expressly

264 *See* 35 U.S.C. § 271(a) (2012) (limiting infringement to making, selling, offering to sell, or exporting).

265 Deepsouth Packing Co., Inc. v. Laitram Corp., 406 U.S. 518, 527 (1972) ("Its argument that Deepsouth sells the machines . . . cannot carry the day unless it can be shown that Deepsouth is selling the 'patented invention.' The sales question thus resolves itself into the question of manufacture: did Deepsouth 'make' (and then sell) something cognizable under the patent law as the patented invention, or did it 'make' (and then sell) something that fell short of infringement?" (footnote omitted)), *abrogated by* 35 U.S.C. § 271(f).

266 *See* 35 U.S.C. § 271(f)(2).

267 *WesternGeco*, 791 F.3d at 1351.

268 Carnegie Mellon Univ. v. Marvell Tech. Grp., Ltd., 807 F.3d 1283, 1306 (Fed. Cir. 2015).

considers one of the key policies that underlie the presumption: potential conflicts with foreign law and sovereigns.[269]

All of the Supreme Court cases addressing the presumption specifically recognize that one reason for the presumption is to avoid such conflicts.[270] At times, this concern is articulated as aspects of comity.[271] At others, it is couched in terms of separation of powers, because the executive branch, not the courts, is in the best position to address issues involving foreign relations.[272] Thus, concern for conflicts with other sovereigns drives much of the justification for the presumption.

Nevertheless, the Supreme Court in *Morrison* made clear that the presence or absence of a conflict is irrelevant to the application of the presumption. The Court stated, "The canon or presumption applies regardless of whether there is a risk of conflict between the American statute and a foreign law."[273] Taking this rhetoric to the extreme, the Court explained that "[w]hen a statute gives no clear indication of an extraterritorial application, it has none."[274] The latter statement is hyperbole because the Court also made clear that the presumption is not a clear statement rule.[275] The former statement, however, is arguably inconsistent with the Court's own precedent.

The Court actually has considered potential conflicts with foreign law expressly under the particular facts of the various cases. For example, in *Benz v. Compania Naviera Hidalgo, S.A.*, the Court looked at the particular choice of law within the contract at issue: "The seamen agreed in Germany to work on the foreign ship under British articles. We cannot read into the Labor Man-

269 The Court has noted that "the presumption has a foundation broader than the desire to avoid conflict with the laws of other nations." Sale v. Haitian Ctrs. Council, Inc., 509 U.S. 155, 174 (1993). But such conflicts drive much of the analysis, and the Court failed to address what other such concerns could be. *See* Smith v. United States, 507 U.S. 197, 204 n.5 (1993) ("But the presumption is rooted in a number of considerations, not the least of which is the commonsense notion that Congress generally legislates with domestic concerns in mind.").

270 EEOC v. Arabian Am. Oil Co. (*Aramco*), 499 U.S. 244, 248 (1991) (noting that the presumption "serves to protect against unintended clashes between our laws and those of other nations which could result in international discord").

271 Hartford Fire Ins. Co. v. California, 509 U.S. 764, 817 (1993) (Scalia, J., dissenting) ("More recent lower court precedent has also tempered the extraterritorial application of the Sherman Act with considerations of 'international comity.'").

272 Kiobel v. Royal Dutch Petroleum Co., 133 S. Ct. 1659, 1664 (2013) ("The presumption against extraterritorial application helps ensure that the Judiciary does not erroneously adopt an interpretation of U.S. law that carries foreign policy consequences not clearly intended by the political branches."); Benz v. Compania Naviera Hidalgo, S.A., 353 U.S. 138, 147 (1957) ("For us to run interference in . . . a delicate field of international relations there must be present the affirmative intention of the Congress clearly expressed. It alone has the facilities necessary to make fairly such an important policy decision where the possibilities of international discord are so evident and retaliative action so certain.").

273 Morrison v. Nat'l Austl. Bank Ltd., 561 U.S. 247, 255 (2010) (citing *Sale*, 509 U.S. at 173–74).

274 *Id.*

275 *See* Holbrook, *Foreign Patent Law*, *supra* note 3, at 602–07.

agement Relations Act an intent to change the contractual provisions made by these parties."[276]

In *Kiobel*, the Court was concerned with what courts may do given the discretion afforded to the courts under the Alien Tort Statute, which "allows federal courts to recognize certain causes of action based on sufficiently definite norms of international law."[277] In this context, the Court applied the presumption, recognizing that "the danger of unwarranted judicial interference in the conduct of foreign policy is magnified in the context of the ATS, because the question is not what Congress has done but instead what courts may do."[278]

Even in *RJR* itself, the Court's analysis noted that "providing a private civil remedy for foreign conduct creates a potential for international friction beyond that presented by merely applying U.S. substantive law to that foreign conduct."[279] The Court seemed to limit the language in *Morrison* by noting, "Although 'a risk of conflict between the American statute and a foreign law' is not a prerequisite for applying the presumption against extraterritoriality, where such a risk is evident, the need to enforce the presumption is at its apex."[280] Of course, *Morrison* made no reference to conflicts being a prerequisite; instead the Court noted that the "presumption applies *regardless of whether there is a risk of conflict* between the American statute and a foreign law."[281] The Court nevertheless considered the risk of "nongovernmental plaintiffs that are not so sensitive to foreign sovereigns' dignity."[282]

Even more apt to the intellectual property context, the Supreme Court expressly considered potential conflicts of law in assessing whether the Lanham Act,[283] the federal trademark statute, should have extraterritorial reach. In *Steele v. Bulova Watch Co., Inc.*, the accused trademark infringer was a U.S. citizen selling arguably infringing counterfeit watches in Mexico.[284] In reaching its conclusion that U.S. trademark law could apply to this activity, the Court considered that the accused infringer no longer owned the mark in Mexico, eliminating a potential conflict.[285] The Supreme Court cited *Bul-*

276 353 U.S. at 146–47.

277 *Kiobel*, 133 S. Ct. at 1664.

278 *Id.*

279 RJR Nabisco, Inc. v. European Cmty., 136 S. Ct. 2090, 2106 (2016) (citing *Kiobel*, 133 S. Ct. at 1665).

280 *Id.* at 2107 (internal citation omitted) (quoting Morrison v. Nat'l Austl. Bank Ltd., 561 U.S. 247, 255 (2010)).

281 *Morrison*, 561 U.S. at 255 (emphasis added) (citing Sale v. Haitian Ctrs. Council, Inc., 509 U.S. 155, 173–74 (1993)).

282 *RJR*, 136 S. Ct. at 2108.

283 Pub. L. No. 79-489, 60 Stat. 427 (codified at 15 U.S.C § 1051 (2012)).

284 344 U.S. 280, 281 (1952).

285 *Id.* at 289 ("Mexico's courts have nullified the Mexican registration of 'Bulova'; there is thus no conflict which might afford petitioner a pretext that such relief would impugn foreign law. The question, therefore, whether a valid foreign registration would affect either the power to enjoin or the propriety of its exercise is not before us.").

ova in *Morrison*[286] and did not overrule it, even though *Bulova*'s consideration of conflicts with Mexican law is in tension with *Morrison*'s suggestion that conflicts are irrelevant. The courts of appeals have varied in their applications of *Bulova*, but all of their various formulations include an express consideration of potential conflicts with foreign law.[287]

Tellingly, the Ninth Circuit recently had occasion to reconsider the extraterritorial reach of the Lanham Act subsequent to the Supreme Court's decision in *RJR*.[288] Applying *RJR*'s two-step framework, the Ninth Circuit concluded that, under *Bulova*, the Lanham Act has extraterritorial reach.[289] In assessing whether such protection was appropriate, the court expressly considered seven comity factors, including conflicts with foreign law.[290] The Ninth Circuit, therefore, viewed *Bulova* as consistent with the *RJR* framework; *RJR* therefore would permit an express consideration of potential conflicts of law in assessing whether, under the facts of the case, U.S. law should extend extraterritorially. Indeed, such analysis could even arise after step one has been satisfied as a check on overreaching by U.S. law, even where Congress has intended the law to cover extraterritorial conduct.[291]

I have previously articulated the view that, to determine whether U.S. patent law should apply to extraterritorial conduct, courts should expressly consider foreign patent law and various conflicts that could arise.[292] In its most formal articulation, my approach reduces to this test: any U.S. patent should only cover extraterritorial conduct if there would also be infringement in the foreign jurisdiction. The variety of potential conflicts of law could include whether there is a patent in the foreign jurisdiction, ownership of the patent, the validity of the patent, and infringement of the patent.[293] One could also consider whether the case is "foreign cubed," involving foreign plaintiffs, foreign defendants, and foreign conduct. [294] The courts would expressly engage with these dynamics instead of shying away from them or pretending that they don't actually consider them.[295] This analysis

286 *Morrison*, 561 U.S. at 271 n.11.

287 *See, e.g.*, McBee v. Delica Co., 417 F.3d 107, 121 (1st Cir. 2005) (looking at conflict of laws as a jurisdictional consideration); Vanity Fair Mills, Inc. v. T. Eaton Co., 234 F.2d 633, 639–40, 642 (2d Cir. 1956) (articulating conflicts as one of three factors).

288 Trader Joe's Co. v. Hallatt, 835 F.3d 960 (9th Cir. 2016).

289 *Id.* at 966.

290 *Id.* at 972–75.

291 Gardner, *supra* note 30, at 149 ("Once a judge has determined that Congress intended a statute to apply extraterritorially, she should assume it does apply extraterritorially, at least up to the limits of international law.").

292 *See* Holbrook, *supra* note 15, at 2163–85; Holbrook, *supra* note 17, at 1115–21; Holbrook, *Territoriality Waning*, *supra* note 3, at 748–58.

293 *See* Holbrook, *supra* note 15, at 2169 fig. 1 (delineating flow chart for conflicts analysis).

294 Gardner, *supra* note 30, at 149.

295 *Id.* at 150 ("The solution to that remaining [post-step one] uncertainty, however, is not avoidance, but engagement and reasoned elaboration.").

generally addressed concerns with infringement liability. There is no reason its logic could not be, nor should not be, extended to the issue of damages.

Indeed, drawing on this literature, Sapna Kumar recently has advocated for an approach to damages under § 271(f) that would consider potential conflicts of law.[296] Under her approach, a court would assess whether another country's laws could apply.[297] If no, such as on the high seas, then awarding damages would be appropriate.[298] If another country's law could apply, then the court would consider the potential conflict with the law of that country.[299]

As my previous work has demonstrated, there is no reason to limit this methodology to any particular provision of § 271, either for liability or for damages purposes. Indeed, given the albeit soft harmonization that the Agreement on Trade-Related Aspects of Intellectual Property (TRIPS) has achieved, many of the patent concepts across the world are similar, although of course not identical.[300] United States courts therefore should be able to more readily wrestle with the variations in the law across countries with less difficulty than other areas.

The various potential conflicts that I previously identified would also be applicable in the damages context. Indeed, a methodology that would use a conflicts methodology at the liability stage of litigation likely would address many of the concerns with affording damages for foreign conduct. For example, if the patent is owned by someone else in the foreign country, then damages should not be available. Similarly, if the defendant can avail itself of some sort of defense in the foreign jurisdiction, such as a prior user right, then permitting recovery would create a conflict with foreign law. In that context, damages should not be available for the foreign conduct. Nevertheless, a few additional issues merit additional attention.

For example, allowing damages for extraterritorial conduct creates a greater risk for a patentee to obtain double recovery, once through the United States and again through another country whose laws could also govern the infringing conduct. The facts in *WesternGeco* provide an example. If the court had permitted recovery, the patentee would have obtained damages from ION for the service contracts that WesternGeco lost to ION's *clients*. In theory, if WesternGeco had a patent in a foreign jurisdiction where those customers operated,[301] then WesternGeco could have sued those competitors directly for patent infringement in that country. The patentee thus

296 *See* Kumar, *supra* note 20, at 35–36.

297 *Id.* at 35.

298 *Id.*

299 *Id.*

300 *But see* Landers, *supra* note 19, at 31 (arguing for territorial limits to damages under TRIPS and other international agreements).

301 The customers operated in the high seas, so technically this was not actually an issue in the case. *See* WesternGeco L.L.C. v. ION Geophysical Corp., 791 F.3d 1340 (Fed. Cir. 2015).

could receive payment twice for the same infringing conduct.[302] A U.S. court could take account of any foreign judgments in this regard and, indeed, should recognize such judgments so as to avoid double recovery.[303]

Another dynamic that a U.S. court would need to consider is the risk of double exposure to liability for the accused infringer. If the patent is owned by a different entity in the foreign jurisdiction, then in theory the accused infringer could be obligated to pay infringement damages to two different parties. Thus, instead of double recovery for the patent holder, the concern here is double exposure to the infringer due to potential differences in ownership. Some may view this as a nonissue: the same acts can trigger different liability concerns in different countries. Nevertheless, as a matter of fairness, it would seem odd to hold a party liable for infringement twice based on the same activity mainly due to some sort of difference in ownership of the patent rights in the various jurisdictions.

Finally, courts may need to take into account truly innocent infringers if there is no patent that operates in an area outside of the United States. For example, one could view the high seas as a quintessential patent-free space where no damages should be available. Another approach, however, would suggest that the high seas represents a place where there is no potential conflict of laws.[304] Then again, even the high seas could present conflict problems if *other* nations decide to extend the reach of their patent laws into that space. Thus, even the high seas may not ultimately be patent-free. Moreover, it may be that someone infringing the U.S. patent is engaged in foreign conduct in a jurisdiction for which no one has obtained a patent. Given that patent holders must obtain patents in various countries, it is possible that an inventor may not obtain a patent in a given country. They may thus have a patchwork of protection around the world. If there is no patent in the jurisdiction where the foreign conduct at issue arises, it may seem unfair to hold liable a truly innocent infringer, who is operating in what generally is viewed as a patent-free area.

Ultimately, the consideration of potential conflicts would provide a more nuanced analysis. Issues of comity could be addressed expressly on a case-by-case basis. Such consideration would of course add complexity to litigation, but patentees should be prepared for such added costs if they anticipate obtaining the exceptional remedy of damages for foreign conduct. Finally, express consideration of foreign laws could have the laudable effect of educating U.S. courts about foreign law, potentially providing ways for informal harmonization and cross-fertilization of approaches to patent law that may help various countries achieve more optimal protection.

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302 *See also* Landers, *supra* note 19, at 44–45 (noting the double recovery problem).

303 *Cf.* Rochelle C. Dreyfuss & Jane C. Ginsburg, *Draft Convention on Jurisdiction and Recognition of Judgments in Intellectual Property Matters*, 77 CHI.-KENT L. REV. 1065 (2002) (advocating for and proposing an intellectual property-specific law to address the recognition of foreign judgments in intellectual property litigation).

304 Kumar, *supra* note 20, at 35–36.

V. Is It Time to Revisit *Rite-Hite*'s Proximate Cause/Foreseeability Principle?

The facts of *Power Integrations*, *WesternGeco*, and *Carnegie Mellon* also present an issue beyond the territorial limits of patent damages. When one looks at the acts for which damages are sought, they are fairly removed from the initial infringing act, regardless of territorial lines.

For example, in *Carnegie Mellon*, the infringed patent was for a method.[305] The law strongly suggests that the only way to infringe a patented method is by using it.[306] One could argue that the measure of damages, therefore, should be a royalty for the use of the method and not for the sales of the chips that perform the method. Likely a royalty rate for using the method would reflect the *potential* for those downstream sales, discounted appropriately to account for time and risk. But it isn't clear why the reasonable royalty should be based on the actual sales of the chips themselves, particularly because sales of the chips alone are not infringing; there would only be infringement when the chips are used to perform the method.[307] The court effectively permitted an end-run of the liability limits by providing damages for these sales of the chips themselves.[308] The courts have stretched the foreseeability principle of *Rite-Hite* quite far, perhaps too far.

A similar dynamic can be seen in the facts of *WesternGeco*. The damages in dispute were not for the sale of the patented invention; instead they were for lost *sales of services* that use the system.[309] While, in one sense, these lost sales of services were foreseeable, one could argue that they nevertheless are too far removed from the act of infringement to be recoverable.

The expansion of foreseeability can be seen in another case. In *Minco, Inc. v. Combustion Engineering, Inc.*, the Federal Circuit rejected a claim to damages for lost profits for the infringer's sale of its business to a third party due to the infringement.[310] The theory was in part that, absent the infringement, the purchaser of the infringer would have purchased the patentee

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305 Carnegie Mellon Univ. v. Marvell Tech. Grp., Ltd., 807 F.3d 1283, 1289 (Fed. Cir. 2015).

306 *See* Standard Havens Prods., Inc. v. Gencor Indus., Inc., 953 F.2d 1360, 1374 (Fed. Cir. 1991) ("The '938 patent claims a method for producing asphalt, not the apparatus for implementing that process. Thus, the sale in the United States of an unclaimed apparatus alone does not make Gencor a contributory infringer of the patented method."); Joy Techs., Inc. v. Flakt, Inc., 6 F.3d 770, 773 (Fed. Cir. 1993) (describing *Standard Havens* as follows: "the method claims of the patent at issue were held not directly infringed by the mere sale of an apparatus capable of performing the claimed process"). *See generally* Holbrook, *supra* note 99, at 26–34 (discussing inconsistent treatment of method claims in various contexts).

307 *Joy Techs.*, 6 F.3d at 773.

308 Holbrook, *supra* note 99, at 1042.

309 *See* WesternGeco L.L.C. v. ION Geophysical Corp., 791 F.3d 1340, 1351 (Fed. Cir. 2015).

310 95 F.3d 1109, 1120 (Fed. Cir. 1996).

instead, entitling it to some of the profits from the sale.[311] The Federal Circuit could have rejected this theory of damages as a legal matter because such damages were too remote from the infringing acts under *Rite-Hite*'s proximate cause prong. The court did no such thing. Instead, the court declined to provide such damages due to a lack of proof and fear of double recovery.[312] Had the court viewed these asserted damages as too remote, it could have simply rejected the theory outright in lieu of couching its reasoning on issues of proof. The *Minco* holding suggests that the Federal Circuit views *Rite-Hite*'s proximate cause as affording capacious recovery of damages. The foreseeability analysis should be the lever used to police such overreaching, yet it seems to have little bite in these cases.

Mark Lemley, in a forthcoming article, has addressed this issue more broadly in the context of intellectual property law generally.[313] His concern is where IP remedies permit the rights holder to control downstream, noninfringing product. He offers a number of factors that should inform the analysis of when such control is appropriate. In particular, he highlights the importance of willful acts of infringement and the extent to which an infringer adds value to a downstream product.[314]

Elsewhere, I have expressed concerns with assessing damages for downstream 3D printing of patented inventions once a computer-aided design (CAD) file has spread, permitting infinite reproduction of the invention.[315] Such concerns about the remedy are particularly valid if such CAD files themselves can be viewed as a form of infringement.[316] Similar concerns have arisen with self-replicating inventions such as genetically-modified crops.[317]

Some academics have begun to work on this front. Dmitry Karshtedt has started to shine a light on patent law from the perspective of tort law instead of the more typical lens of property law.[318] In particular, he has discussed the appropriate damages for indirect patent infringement using comparisons

311 *Id.* at 1120 ("According to Minco, had CE not infringed its patent, Imetal would have purchased Minco instead.").

312 *Id.* at 1121.

313 Mark A. Lemley, *The Fruit of the Poisonous Tree in IP Law* (Stanford Pub. Law, Working Paper No. 2867099, 2016), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2867099.

314 *Id.* at 29–31.

315 *See generally* Timothy R. Holbrook, *Remedies for Digital Patent Infringement in the 3D Printing Landscape: A View from the U.S.A.*, *in* 3D PRINTING, EMERGING TECHNOLOGIES, AND IP LAW (Mark A. Lemley & Dinusha Mendis eds., forthcoming 2017).

316 *See* Daniel Harris Brean, *Patenting Physibles: A Fresh Perspective for Claiming 3D-Printable Products*, 55 SANTA CLARA L. REV. 837, 848–60 (2015) (arguing that patent applicants should be able to claim CAD files); Holbrook & Osborn, *supra* note 47, at 1358–64 (arguing that selling or offering to sell a CAD file that prints the claimed invention is direct infringement).

317 *See, e.g.*, Monsanto Co. v. Ralph, 382 F.3d 1374, 1383 (Fed. Cir. 2004).

318 Dmitry Karshtedt, *Causal Responsibility and Patent Infringement*, 70 VAND. L. REV. 565 (2017) [hereinafter Karshtedt, *Causal*]; *see also* Dmitry Karshtedt, *Damages for Indirect Patent Infringement*, 91 WASH. U. L. REV. 911 (2014) [hereinafter Karshtedt, *Damages*] (noting the inconsistency of rules of damages from the perspective of tort law).

to tort law to explore when limiting damages in these contexts is appropriate.[319] Jason Rantanen has explored various aspects of patent law's views of fault.[320] I offered an alternative view of method claims that would permit infringement of sales of apparatuses that perform the process and have no substantial noninfringing uses.[321]

The issue of the appropriate link between the acts of infringement and the consequent damages is beyond the scope of this Article. The territorial issues addressed here highlight the need to revisit *Rite-Hite* and its formulation of foreseeability and proximate cause. It may be that the courts have unintentionally, and perhaps erroneously, grabbed onto the concept of foreseeability while failing to recognize its tie to proximate cause. The two ideas may not be coextensive, and courts may need to consider divorcing the two. For example, one could view the grafting of a territorial limit to damages not as a distinct doctrine that conflicts with *Rite-Hite* but instead as an appropriate limit within the proximate cause analysis.

It may be time to revisit the foreseeability/proximate cause aspect of *Rite-Hite*. While the Federal Circuit noted that "the reasonable limits of liability . . . can best be viewed in terms of reasonable, objective foreseeability," it also noted that "the question of legal compensability is one 'to be determined on the facts of each case upon mixed considerations of logic, common sense, justice, policy and precedent.'"[322] That was the primary point of one of the dissenters in *Rite-Hite*—the damages at issue there were too far removed from the act of infringement to be compensable.[323] Proximate cause gives courts a lever to use to rein in damages awards for activities too far removed from the act of infringement. It may well be time for courts and commentators to address this aspect of *Rite-Hite* and to reconsider whether the "foreseeability" analysis has gone too far. I leave that to future work.

Conclusion

The Supreme Court has taken a renewed interest in the extraterritorial reach of United States laws. Patent law is one part of that "tapestry," albeit an important one.[324] The Federal Circuit, however, has misapprehended the presumption in the context of patent damages. This Article suggests a more nuanced approach to addressing damages for extraterritorial conduct: an

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319 Karshtedt, *Damages*, *supra* note 318, at 955–76.

320 Rantanen, *supra* note 133.

321 *See* Holbrook, *supra* note 99, at 38–41.

322 Rite-Hite Corp. v. Kelley Co., 56 F.3d 1538, 1546 (Fed. Cir. 1995) (en banc) (quoting W. Page Keeton et al., Prosser and Keeton on the Law of Torts § 42, at 279 (5th ed. 1984) (citing 1 Thomas Atkins Street, The Foundations of Legal Liability 110 (1906))).

323 *Id.* at 1556 (Nies, J., dissenting in part) ("To constitute legal injury for which lost profits may be awarded, the infringer must interfere with the patentee's property right to an exclusive market in goods embodying the invention of the patent in suit.").

324 *See* Holbrook, *supra* note 2, at 71–72 (noting the Supreme Court's rejection of patent law exceptionalism, including in the area of extraterritoriality).

express consideration of foreign patent law to avoid any potential conflicts. This approach satisfies the Supreme Court's concerns that underlie the presumption, and it would be consistent with the Court's analysis in *Bulova*. It could also create an opportunity for cross-jurisdictional dialogue among courts to aid in understanding and potentially harmonizing our patent laws.