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RIPPLE EFFECTS IN THE LAW: THE BROADENING MEANING OF AN "OFFER TO SELL" IN PATENT LAW

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ABSTRACT

The law's complexity is such that even apparently minor changes can have numerous "ripple" effects. This Article examines the ripple effects from a potential broadening of patent law's definition of an infringing "offer to sell." Currently, courts limit "offers" to formal, contract-law offers; but a policy analysis suggests that "offers" should include advertisements and other promotions, which harm patentees via price erosion. Changing the offer definition to include advertisements and other promotions requires a careful consideration of the effects, including effects on patent litigation, innovation incentives, the extraterritorial reach of U.S. patent law, third-party liability, and Constitutional concerns. This Article performs that analysis and provides specific recommendations for crafting the definition of an infringing "offer" to sell.

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INTRODUCTION

Small changes in the law can sometimes have large downstream consequences. Such large consequences from small initial changes can be called "butterfly effects," a phrase associated with the Massachusetts Institute of Technology meteorologist who described how small changes in initial weather data may result in large differences in simulated weather conditions.[1] Much like weather forecasting, small changes in the law can have butterfly-like

1. *See* Edward N. Lorenz, *Deterministic Nonperiodic Flow*, 20 J. ATMOSPHERIC SCI. 130 (1963).

intended and unintended consequences.

This Article examines the likely consequences in a particular area of law undergoing recent refinement—specifically, patent infringement based on an "offer to sell."[2] While patent infringement for an offer to sell has been in the law since 1996,[3] it has received increased attention lately and is fast becoming an important tool for patent holders seeking to protect themselves from would-be infringers of patented technology.[4] In its 2010 decision in *Transocean Offshore Deepwater Drilling, Inc. v. Maersk Contractors USA, Inc.*,[5] the United States Court of Appeals for the Federal Circuit, which has exclusive jurisdiction of patent appeals,[6] announced that an offer to sell can be an act of infringement even if the offer is made outside of the United States, as long as the contemplated sale would have occurred in the United States.[7] The potential extraterritorial consequences of the *Transocean* opinion have generated much discussion.[8]

In addition to recent judicial activity in the area, scholars have analyzed the boundaries of infringement for an "offer to sell."[9] In an earlier work, I argued that the Federal Circuit's current standard for an infringing "offer" to sell—namely, a formal contract-law offer—is sub-optimal from a policy perspective.[10] I advocated for a broader definition of an "offer," which would

2. 35 U.S.C. § 271(a) (2012). Note that § 271(a) lists several acts that may constitute infringement, including making, using, selling, or offering to sell patented technology. Each act represents an independent occurrence of infringement. Thus, an offer to sell patented technology can infringe even if no sale is ever consummated.

3. Uruguay Round Agreements Act, Pub. L. No. 103-465, § 533, 108 Stat. 4809 (1994) (codified as amended at 35 U.S.C. § 271 (2012)) (approving a treaty that required, among other things, adding "offer to sell" as an independent ground of infringement).

4. *See* 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 (2003) [hereinafter Holbrook, *Threat of a Sale*]; Timothy R. Holbrook, *Territoriality and Tangibility After* Transocean, 61 EMORY L.J. 1087 (2012) [hereinafter Holbrook, *Transocean*]; Melissa Y. Lerner, *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); Lucas S. Osborn, *The Leaky Common Law: An "Offer to Sell" As A Policy Tool in Patent Law and Beyond*, 53 SANTA CLARA L. REV. 143 (2013) [hereinafter Osborn, *Offer as a Policy Tool*]; 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, 442 (2009); Na Zhu, *Patent Infringement Through Foreign Offer for Domestic Sale:* Transocean v. Maersk, 12 J. HIGH TECH. L. 566 (2012).

5. 617 F.3d 1296 (Fed. Cir. 2010). For further discussion of this case, see *infra* notes 16-20, 24, 31-32 and accompanying text.

6. 28 U.S.C. § 1295(a)(1) (2012).

7. *Transocean*, 617 F.3d at 1309.

8. *See* Holbrook, *Transocean*, *supra* note 4; Lerner *supra* note 4; Miller, *supra* note 4; Zhu *supra* note 4.

9. *See* Holbrook, *Threat of a Sale*, *supra* note 4, at 764-820; Osborn, *Offer as a Policy Tool*, *supra* note 4, at 169-94.

10. Osborn, *Offer as a Policy Tool*, *supra* note 4, at 172-80.

include not only formal contract-law offers, but also most advertisements and promotions.[11] In that work, I demonstrated that the primary policy underlying the prohibition of infringing "offers to sell," which is to prevent a competitor from generating commercial interest in infringing technology to the patentee's detriment,[12] differs from the policies behind the contract-law definition of an offer. I argued that this difference dictates interpreting the word "offer" to include advertisements and promotions because they generally will harm the patentee by causing price erosion.[13]

This Article picks up where my previous policy analysis left off, and analyzes the probable real world effects of a change from a narrow contract-law "offer" standard to a broader advertisements-and-promotion standard. To understand the effects of this potential change, one must understand the difference between the narrower and broader definitions of an "offer" contrasted in this Article. The narrow contract law definition can be defined as "the manifestation of willingness to enter into a bargain, so made as to justify another person in understanding that his assent to that bargain is invited and will conclude it."[14] This definition generally excludes advertisements and other promotions because they are not specific enough to warrant the recipient in understanding that she is empowered to close the deal.[15] On the other hand, broadening the "offer" definition to include advertisements and promotions would allow a patent holder to sue a competitor based solely on an advertisement promoting an infringing device.

This Article's analysis reveals not only the obvious intended consequences of the broader "offer" definition, but also some dramatic butterfly-like unintended consequences. More than simply identifying intended and unintended consequences of the change, the Article shows courts and lawmakers how to maximize beneficial consequences and minimize any harmful ones.

After an overview of the current law governing an infringing offer to sell in Part I, Part II of the Article discusses the most obvious effects of broadening the definition of an infringing offer, such as more patent litigation and litigation at an earlier time. Part III explores some less obvious ripple effects from the proposed law change, including the potential for a vastly expanded extraterritorial application of U.S. patent law. The upshot of this analysis is that courts must be careful only to impose liability for infringing advertisements that are likely to cause harm in the United States.

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11. *Id.* at 173-94.

12. *E.g.*, *Transocean*, 617 F.3d at 1309 (citing 3D Sys., Inc. v. Aarotech Labs., Inc., 160 F.3d 1373, 1379 (Fed. Cir. 1998)).

13. Osborn, *Offer as a Policy Tool*, *supra* note 4, at 173-76. For more about price erosion, see *infra* notes 134136 and accompanying text.

14. RESTATEMENT (SECOND) OF CONTRACTS § 24 (1981).

15. *E.g.*, 1 ARTHUR L. CORBIN, CORBIN ON CONTRACTS § 2.4 (Joseph M. Perillo, ed., rev. ed. 1993).

Part IV discusses the uncertainty that will accompany the proposed law change, and suggests a carefully crafted definition of an "offer" that includes advertisements and similar promotions, but excludes mere market investigations. Market investigations are often necessary before a competitor can decide whether to invest in a license to the patent or to attempt to design around (avoid) it. To emphasize further how even small changes in the law carry extended consequences, Part V briefly discusses some additional ripple effects. Finally, Part VI concludes by summarizing the proposed changes and tests developed throughout the Article.

I. A $15,000,000 QUESTION: WHAT IS AN INFRINGING "OFFER"?

In 2006, Maersk A/S, a Danish shipping company, offered Statoil ASA, a Norwegian oil company, the use of its offshore drilling rig for drilling in the U.S. waters of the Gulf of Mexico.[16] The rig cost hundreds of millions of dollars to build[17] and would cost the oil company about half-a-million dollars a *day* to lease.[18] Before the drilling rig reached U.S. waters and even before the rig had finished being built (in Singapore), Transocean[19] sued Maersk for infringing its U.S. patents covering aspects of the drilling rig.[20] How could Maersk have infringed U.S. patents before it built, sold, or used anything in the United States? The answer lies in a relatively new provision to U.S. patent law that makes "offering to sell" a patented invention in the United States an act of infringement.[21]

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16. *Transocean*, 617 F.3d at 1307.

17. The parties kept financial information filed under seal, but building cost estimates of similar ultra-deepwater drilling rigs demonstrate the immense investment. *See* Press Release, Maersk, Maersk Drilling Orders Ultra Deepwater Drillships (July 5, 2011), *available at* http://www.maersk.com/press/newsandpressreleases/pages/20110705-090137.aspx (reporting a "total project cost for . . . two drillships is approximately USD 1.3 billion").

18. Again, the parties kept financial information filed under seal, but estimates of lease rates for similar ultra-deepwater drilling rigs support this figure. *See* David Phillips, *Cost of Offshore Drilling Rising as Fast as Oil Prices*, CBS MONEY WATCH (May 8, 2008, 3:35 PM), http://www.cbsnews.com/news/cost-of-offshore-drilling-rising-as-fast-as-oil-prices/ (reporting that the "daily rate that operators pay to rent a high-end, deep-water drilling rig is now $500,000 to $550,000"); Marianne Stigset, *Maersk Drilling Puts Oil Rig Fleet Expansion on Hold as Build Costs Soar*, BLOOMBERG (Aug. 19, 2011, 3:55 AM), http://www.bloomberg.com/news/2011-08-18/maersk-drilling-puts-rig-expansion-on-hold-as-build-costs-soar.html (quoting Maersk's CEO as saying that daily rental rates for ultra-deepwater rigs have "had an average of about $450,000 for a while").

19. Transocean has recently become a familiar name since one of its rigs, the Deepwater Horizon, was involved in the explosion and subsequent oil spill on a project overseen by British Petroleum (BP). *See, e.g.*, Elizabeth Shogren, *Panel Spreads Blame For BP Oil Rig Explosion*, NPR (Jan. 6, 2011, 12:01 AM), http://www.npr.org/2011/01/06/132680706/panel-spreads-blame-for-bp-oil-rig-explosion.

20. *Transocean*, 617 F.3d at 1300, 1311.

21. 35 U.S.C. § 271(a) (2012).

As part of the international harmonization of intellectual property laws under the Agreement on Trade-Related Aspects of Intellectual Property ("TRIPS"),[22] in 1994 Congress added a provision to 35 U.S.C. § 271(a) making an "offer to sell" infringing technology an independent act of patent infringement.[23] Before this amendment, a mere offer to sell would not infringe, whereas an actual sale would.

Infringement based on an offer to sell initially did not generate an abundance of attention, but that is changing as patent owners realize they can obtain large monetary awards based on infringing offers. Recently, a jury found Maersk's offer to sell its rig infringed Transocean's patents and awarded Transocean $15,000,000.[24] Thus, the question of what constitutes an "offer" to sell represents a timely question. Uncertainty abounds in this area because despite this radical change in the law, Congress gave no instruction about the intent or meaning of the new language.[25]

The Federal Circuit has provided some contours of an infringing offer to sell under § 271(a),[26] and two of its cases are relevant to this Article's analysis. First, in *Rotec Industries, Inc. v. Mitsubishi Corp.*,[27] the Federal Circuit concluded that it should "define § 271(a)'s 'offer to sell' liability according to the norms of traditional contractual analysis."[28] Specifically, the court relied on the definition of an offer in the *Restatement (Second) of Contracts*.[29] Second, in *Transocean*,[30] the Federal Circuit held that an offer to sell can be an act of infringement even if the offer is made outside of the United States, as long as the contemplated sale was to occur in the United States.[31] The *Transocean*

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22. *See* Agreement on Trade-Related Aspects of Intellectual Property Rights, Annex 1C, art. 28, Apr. 15, 1994, 108 Stat. 4809, 1869 U.N.T.S. 299 (1994), *available at* http://www.wto.org/english/tratop_e/trips_e/t_agm3c_e.htm ("Article 28 . . . A patent shall confer on its owner the following exclusive rights: . . . to prevent third parties not having the owner's consent from the acts of: . . . offering for sale.").

23. 35 U.S.C. § 271(a) ("[W]hoever . . . offers to sell . . . within . . . the United States any patented invention . . . infringes."). The statute became effective January 1, 1996. *See also* Uruguay Round Agreements Act, Pub. L. No. 103-465, § 533, 108 Stat. 4809 (1994) (codified as amended at 35 U.S.C. § 271 (2012)) (approving TRIPS).

24. Transocean Offshore Deepwater Drilling, Inc. v. Maersk Drilling USA, Inc., 699 F.3d 1340, 1357-58 (Fed. Cir. 2012) (discussing jury award). Although the trial court vacated the verdict, the appeals court reinstated it. *Id.* at 1357-59.

25. *See* Rotec Indus., Inc. v. Mitsubishi Corp., 215 F.3d 1246, 1252 (Fed. Cir. 2000) ("Unfortunately, other than stating that an 'offer to sell' includes only those offers 'in which the sale will occur before the expiration of the term of the patent,' Congress offered no other guidance as to the meaning of the phrase . . . . [T]he legislative history of the statute offers little additional insight.") (citation omitted).

26. For a detailed analysis of the Federal Circuit's case law on this subject, see Osborn, *Offer as a Policy Tool*, *supra* note 4, at 195-99.

27. 215 F.3d 1246.

28. *Id.* at 1254-55.

29. *Id.* at 1257 (citing RESTATEMENT (SECOND) OF CONTRACTS § 24).

30. 617 F.3d 1296 (Fed. Cir. 2010).

31. *Id.* at 1309. In this case, the offeror was based in United States but made the offer

court also held that an infringing offer to sell may occur even if the device offered for sale was not built when the offer was made.[32]

As mentioned above, in an earlier work I criticized the *Rotec* decision from a policy perspective and argued that courts should broaden the definition an "offer" to include not only contract-law offers, but also advertisements and similar promotions.[33] This Article takes the analysis further by analyzing the practical effects of overruling the *Rotec* court's narrow definition of an offer,[34] including how such a change would interact with the *Transocean* court's extraterritorial reading of an "offer to sell." Whereas my former article discussed what the courts *should* do, this Article works through the practical consequences and provides details for *how* the courts should do it.

As we consider the effects of changing the definition of an infringing offer, one must keep in mind a fundamental tenet of proving patent infringement: a patentee must prove that the accused device includes each and every detail required in the patent's claim.[35] Applying this principle to the context of infringement based on an offer to sell, the offer to sell (be it an advertisement or formal contract law offer) must state, directly or indirectly, that the thing being offered includes each and every limitation of the patent claim.[36] Importantly, this Article will assume that the advertisements or promotions of interest disclose, directly or by context, each and every limitation of the patent claim. This assumption allows the analysis to focus on whether and what kinds of advertisements, promotions, or other potentially infringing activity actually infringe.[37]

The next Part begins the analysis of the real-world effects of a broader

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while outside the United States. Although the court did not explicitly rely on the fact that the offeror was a U.S. company, the holding might be limited to such scenarios in the future.

32. *Id.* at 1310 n.4 ("[T]he district court must determine what was offered for sale, not what was ultimately delivered."); *id.* at 1311 ("[W]e reject Maersk USA's claim that the entire apparatus must have been constructed and ready for use in order to have been sold.").

33. Osborn, *Offer as a Policy Tool*, *supra* note 4, at 196-201.

34. It is not unreasonable to think that either the Federal Circuit sitting en banc or the Supreme Court might broaden the *Rotec* court's narrow contract-law definition of an offer. *See id.* at 184-85, 195-202 (discussing pre-*Rotec* Federal Circuit decisions that suggest a broader definition of an "offer").

35. Presidio Components, Inc. v. Am. Tech. Ceramics Corp., 702 F.3d 1351, 1358 (Fed. Cir. 2012). Each claim limitation must be present either literally or under the doctrine of equivalents. Warner-Jenkinson Co. v. Hilton Davis Chem. Co., 520 U.S. 17, 29 (1997). The same is true for "method" claims, which recite steps for doing something instead of parts of a device or system, but for simplicity I refer to devices throughout.

36. *See Transocean*, 617 F.3d at 1310-11. For example, an offer to sell a "cell phone" would not be specific enough to infringe a patent claim requiring a smart phone that includes pinch-to-zoom software. But if the offer was to sell "cell phone model XYZ," and the patentee could prove that model XYZ was a smart phone that includes pinch-to-zoom software, the patentee could prove infringement.

37. For convenience, throughout this Article I will often use the term "advertisements" without mentioning "other promotions." Unless otherwise specified, I am using "advertisements" as a shorthand for "advertisements and other promotions."

definition of an offer under § 271(a).

II. OBVIOUS EFFECTS: A BROADER DEFINITION OF AN "OFFER" WILL LEAD TO EARLIER AND MORE PATENT LITIGATION

A. *Earlier Patent Litigation*

Consider first one obvious effect: if advertisements alone can infringe, patent holders will generally be able to sue at an earlier time than if they had to wait for a formal contract-law offer. Because advertisements are invitations for the recipient to make an offer, advertisements generally precede formal contract-law offers to sell. Rather than having to wait for the formal offer, the patent holder would be able to sue when the infringer advertises the infringing technology.[38]

Allowing infringement to occur at an earlier time does not seem especially controversial. Often, the difference in time between an advertisement and the corresponding offer to sell will be inconsequential. Even where the difference is lengthier, no strong objection to the timing presents itself. In fact, the accused infringer may benefit from becoming aware of the infringement claim sooner rather than later, because the accused can develop a strategy to avoid infringement (such as by stopping production, designing around the patent, or taking a license).

B. *More Patent Litigation*

Secondly, a broader "offer" definition would increase the amount of patent litigation. This effect is slightly less obvious, but is intuitive when one considers the realities of discovering infringing conduct. At first blush, it might appear that including advertisements and promotions in the definition of an offer would not greatly affect the amount of patent litigation. Since advertisements most often merely precede formal contract-law offers to sell, one would expect that all the litigation currently based on formal contract-law offers would simply shift and be based on the preceding advertisement.[39]

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38. The Federal Circuit made a similar point when it observed that contract-law offers to sell precede actual sales. *See* Rotec Indus., Inc. v. Mitsubishi Corp., 215 F.3d 1246, 1259-60 (Fed. Cir. 2000) (Newman, J., concurring) ("The purpose of § 271(a) was to permit a patentee to act against threatened infringing sale by establishing a cause of action before actual sale occurred. It is explained that the 'main consequence of requiring an actual sale during the patent term in order to make the offer for sale an act of infringement appears to be that the date of infringement will reach back to the date of the original offer.'" (quoting Thomas L. Irving & Stacy D. Lewis, *Proving a Date of Invention and Infringement After GATT/TRIPS*, 22 AIPLA Q.J. 309, 351-52. (1994))).

39. Of course, there would be a few (probably very few) cases where an advertisement is made and no formal offer follows. Such occurrences would indeed make possible additional patent infringement lawsuits under a broader definition of an offer.

Yet including advertising in the definition of an offer would likely increase patent litigation for at least two reasons. First, making an advertisement an infringing act would increase patent litigation because not all advertisements lead to offers or sales directed at the United States.[40] Theoretically, some advertisements will lead to no sales whatsoever (e.g., a completely failed advertisement). Other advertisements, especially on the Internet, may be directed at numerous countries but only lead to offers or sales in a subset of them. If an advertisement is directed at the United States as well as other countries, but only leads to formal offers or sales outside of the United States, those offers and sales would not infringe a U.S. patent because infringing acts must be tied to the country in which the patent was issued.[41]

Second, making an advertisement an infringing act would increase patent litigation because patent holders can usually learn about advertisements more easily than formal offers to sell. Anyone familiar with litigation will recognize that learning of infringement is a (sometimes difficult) precondition to bringing a suit. Advertisements by definition are sent to a wide audience to engender interest in the item advertised. Formal contract-law offers, in contrast, are often individualized in nature and may even be confidential, thus making them hard to discover.

Under the current standard, patentees may of course monitor competitors' advertisements, looking for hints of future infringement. But even if the patentee finds an advertisement that suggests a formal, infringing offer for sale may be forthcoming, the formal offer may be confidential and difficult to discover. Thus, including advertisements in the "offer" definition will likely lead to more patent litigation.[42] When coupled with the ease of advertising on (and searching for advertisements on) the Internet, one would expect a sizeable increase in patent litigation based on advertisements.

If defining "offer" to include advertisements indeed increases the amount of patent litigation, one may ask whether this is desirable. The answer likely depends on one's view of the patent system. Obviously, those who believe the patent system is generally undesirable or unnecessary to provide adequate innovation incentives[43] will view any accretion in patent rights negatively.

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40. As discussed *infra* in Part III, defining "offer" to include advertisements will also lead to more litigation because the advertisement may indicate a willingness to sell anywhere in the world (including the United States), whereas the eventual offer to sell may be only to sell outside of the United States. Part III also discusses that for an offer to sell to infringe a U.S. patent, it generally must contemplate an eventual sale *inside* the United States.

41. *See infra* Part III.

42. Additionally, under a broader definition of "offer," patent holders will devote additional resources to policing (i.e., searching) for infringing advertisements since the search can lead directly to a lawsuit against a competitor.

43. *See, e.g.*, Tom G. Palmer, *Are Patents and Copyrights Morally Justified? The Philosophy of Property Rights and Ideal Objects*, 13 HARV. J.L. & PUB. POL'Y 817, 849-50 (1990); Tom G. Palmer, *Intellectual Property: A Non-Posnerian Law and Economics Approach*, 12 HAMLINE L. REV. 261, 304 (1989) ("Patents . . . have no place in a regime

Similarly, those who argue patent incentives are not a net benefit in certain technology areas[44] will be averse to stronger patent rights in those fields. Likewise, those opining that there is simply too much patent litigation[45] might oppose broader patent rights that would increase litigation.

On the other hand, more nuanced criticisms of the patent system are likely to have little to say about how broadly courts should define an offer to sell. For example, many criticisms focus only on specific aspects of the patent system, such as the issuance of "bad" patents (i.e., undeserving under the current legal framework),[46] forum shopping,[47] lawsuits by certain non-practicing entities (*i.e.*, patent trolls),[48] and the lack of clarity in the law.[49] These specific

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based on individual rights and are insupportable on either the grounds of (utilitarian) efficiency or of a jurisprudence of law and economics."); Wesley M. Cohen et al., *Protecting Their Intellectual Assets: Appropriability Conditions and Why U.S. Manufacturing Firms Patent (Or Not)* (Nat'l Bureau of Econ. Research, Working Paper No. 7552, 2000), *available at* http://www.nber.org/papers/w7552 (suggesting that the majority of manufacturing industries may not need patents to incentivize innovation).

44. *See, e.g.*, Julie E. Cohen & Mark A. Lemley, *Patent Scope and Innovation in the Software Industry*, 89 CALIF. L. REV. 1, 5-6 (2001) (noting the inadequacy of current patent law practice to software issues); Jay Dratler, Jr., *Does Lord Darcy Yet Live? The Case Against Software and Business-Method Patents*, 43 SANTA CLARA L. REV. 823, 839-40 (2003) (arguing against the desirability of business and software patents); Stuart J.H. Graham et al., *High Technology Entrepreneurs and the Patent System: Results of the 2008 Berkeley Patent Survey*, 24 BERKELEY TECH. L.J. 1255, 1261 (2009) (finding that patents provide technology startups "relatively weak incentives for core activities in the innovation process"); Lucas Osborn, *Tax Strategy Patents: Why the Tax Community Should Not Exclude the Patent System*, 18 ALB. L.J. SCI. & TECH. 325, 349-79 (2008) (analyzing arguments for and against tax strategy patents and business method patents).

45. *See* Mark A. Lemley, *Reconceiving Patents in the Age of Venture Capital*, 4 J. SMALL & EMERGING BUS. L. 137, 140-42, 145-46 (2000) (discussing perceived problems and possible solutions to current patent litigation practices).

46. *See, e.g.*, Jay P. Kesan, *Carrots and Sticks to Create a Better Patent System*, 17 BERKELEY TECH. L.J. 763, 766 (2002) (discussing proposals to improve patent quality); Megan M. La Belle, *Patent Litigation, Personal Jurisdiction, and the Public Good*, 18 GEO. MASON L. REV. 43, 43 (2010) ("[T]here are 'bad' patents everywhere."); Mark A. Lemley, *Rational Ignorance at the Patent Office*, 95 NW. U. L. REV. 1495, 1496 (2001); Mark Lemley, Doug Lichtman & Bhaven Sampat, *What to Do About Bad Patents*?, REGULATION, Winter 2005, at 10.

47. *See, e.g.*, La Belle, *supra* note 46, *passim* (arguing that the inability for many accused infringers to bring declaratory relief actions in convenient and friendly forums significantly hinders the patent system from combating the issue of bad patents); Kimberly A. Moore, *Forum Shopping in Patent Cases: Does Geographic Choice Affect Innovation?*, 79 N.C. L. REV. 889, 933-37 (2001) (suggesting limiting venue by statute to decrease transaction costs incurred defending in inconvenient forums, thereby increasing certainty and predictability for parties).

48. *See, e.g.*, Colleen V. Chien, *From Arms Race to Marketplace: The Complex Patent Ecosystem and Its Implications for the Patent System*, 62 HASTINGS L.J. 297, 329-30 (2010); Robin Feldman & Tom Ewing, *The Giants Among Us*, 2012 STAN. TECH. L. REV. 1, 1-2 (2012); Jason Rantanen, *Slaying the Troll: Litigation as an Effective Strategy Against Patent Threats*, 23 SANTA CLARA COMPUTER & HIGH TECH. L.J. 159, 160-61 (2006).

49. *See, e.g.*, Timothy J. Le Duc, *Apples Are Not Common Sense in View of Oranges: Time to Reform KSR's Illusory Obviousness Standard?*, 21 DEPAUL J. ART, TECH. & INTELL.

criticisms, even if accurate, should not necessarily influence whether advertisements should count as offers under § 271(a). Rather, specific criticisms are best met by solutions specifically tailored to the problem, rather than by making broad changes that unnecessarily affect areas not tainted by the specific criticism.[50]

This Part has considered some of the most obvious effects of broadening the definition of an offer. In the remaining Parts, this Article considers some of the less obvious effects, beginning with the potential for a vast increase in the extraterritorial application of U.S. patent law.

III. RIPPLE EFFECTS: A BROADER DEFINITION OF "OFFER" WOULD LEAD TO MORE EXTRATERRITORIAL INFRINGEMENT SUITS

A less obvious effect of enlarging the scope of an offer to include advertisements concerns the potential for U.S. patent law to apply to acts performed outside of the United States. Patent law's territorial nature dictates that, in general, a person is only liable for infringement of a U.S. patent when the person performs infringing acts "within the United States."[51] Thus, if a company makes an infringing device but only makes it in Mexico, the U.S. patent holder has no power to sue the company in the United States.[52]

Applying this territorial concept to infringement for an offer to sell raises the question of what must occur within the United States: the offer only (i.e., an offer made in the United States to sell in another country)? Or the effect of the

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PROP. L. 49, 49-50 (2010) (criticizing the Supreme Court's approach to obviousness); Peter S. Menell et al., *Patent Claim Construction: A Modern Synthesis and Structured Framework*, 25 BERKELEY TECH. L.J. 711, 715 (2010) (noting that "scholars roundly criticize the jurisprudence of claim construction for lacking theoretical or practical coherence"); Kristen Osenga, *Ants, Elephant Guns, and Statutory Subject Matter*, 39 ARIZ. ST. L.J. 1087, 1092 (2007) ("[T]he question of subject-matter eligibility for any invention is essentially pro forma, and whether a patent is granted . . . should be based on the application meeting the requirements of patentability provided by 35 U.S.C. §§ 102, 103, and 112."); Michael Risch, *Everything Is Patentable*, 75 TENN. L. REV. 591, 658 (2008) ("[T]he PTO and courts should focus on answering specific questions about how to best apply rigorous standards of novelty, nonobviousness, utility, and specification with a scalpel rather than simply eliminating broad swaths of innovation with a machete.").

50. There are exceptions to this statement. One might change a law that is general in application because the benefit of the effect on the "problem area" (e.g., patent trolls) outweighs any detriment in the non-problem area (i.e., all other patents). Because the number of cases concerning infringement for offering to sell is relatively small compared to the vast total of patent infringement actions, and because it does not appear that infringement for offering to sell disproportionately involves specific problem areas of patent law, it is not obvious that the scope of an offer in patent law should depend on any such problem area.

51. 35 U.S.C. § 271(a) (2012). For a more robust discussion of the law's territorial nature, see *infra* notes 74-78.

52. Transocean Offshore Deepwater Drilling, Inc. v. Maersk Contractors USA, Inc., 617 F.3d 1296, 1308-10 (Fed. Cir. 2010). Of course, someone having the Mexican patent could sue the company in Mexico.

offer, which would be felt where the advertisement contemplated the future sales would occur (i.e., an offer made in another country to sell in the United States)? Both the offer and the effect? In *Transocean*, the Federal Circuit answered this question by holding that 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. . . . [T]he location of the contemplated sale controls whether there is an offer to sell within the United States."[53] Under its broadest interpretation, *Transocean* means that regardless of whether the offeror is located in the United States—and regardless of whether the offer was made in the United States—as long as the contemplated sale would occur in the United States, the offer can constitute infringement.

Extending the *Transocean* "contemplated sale" test to a broadened definition of an offer would create a scenario in which foreign entities could be liable for patent infringement for advertising infringing technology, regardless of where in the entire world they made the advertisements.[54] Just as the offer in *Transocean* constituted infringement even though it was made in Norway,[55] an advertisement made in a newspaper in China or Germany might constitute infringement of a U.S. patent if it contemplated a future sale in the United States! A moment's reflection should reveal that this could lead to a huge increase in claims of patent infringement against foreign entities and activities depending on how courts extend the *Transocean* case to advertisements.

But extending *Transocean*'s "contemplated sale" test to advertisements raises difficulties: do advertisements "contemplate" a location for future sales? While contract-law offers to sell must be relatively formal and thus likely to identify a specific location for the contemplated sale, advertisements often do not explicitly specify a location of contemplated sales. Indeed, advertisements, which by definition are broadcast to a wide audience, may "contemplate" (or at least hope for) future sales in many locations.[56]

Imagine that a company holds a U.S. patent on a certain widget and that the widget is not patented in any other country. A German competitor could thus make, use, and sell the widget in Germany without infringing the U.S. patent. But what if the German competitor ran an advertisement promoting the widget? When will such an advertisement "contemplate" a future sale in the United States? Does the answer change depending on whether the advertisement

53. *Id.* at 1309.

54. Recall the caveat that in the actual *Transocean* case, the accused infringer was a U.S. company making an offer while in a foreign country. *Supra* note 31 and accompanying text. The court did not explicitly rely on the fact that the company was based in the United States, but it may be grounds for future cases to limit the holding. *See Transocean*, 617 F.3d at 1309 ("This case presents the question whether an offer which is made in Norway by a U.S. company to a U.S. company to sell a product within the U.S., for delivery and use within the U.S. constitutes an offer to sell within the U.S. under § 271(a).").

55. *Id.* at 1308-09.

56. This discussion uses the term "advertisements," but analogies to other promotional activities, which might be less widespread or less formal, are readily possible.

appeared only in a German magazine? In a U.S. magazine? On the Internet, but only in the German language? On the Internet, in both German and English?

A. *Possible Tests for Whether an Advertisement "Contemplates" a Future Sale in the United States*

In applying *Transocean*'s "contemplated sale" test to advertisements, it must be emphasized that "contemplation" does not necessarily require intent for or awareness of eventual sales in the United States. The harm caused by advertisements, price erosion,[57] occurs regardless of the advertising party's intent or awareness. The contemplation test's purpose in the context of advertisements is to discern whether the advertisement will likely cause price erosion.[58] Rather than focusing on the advertiser's intent, the law must rely on surrounding circumstances to ascertain whether an advertisement contemplated a future sale in the United States. The following Subparts consider a few potential tests for whether an advertisement contemplates a future sale in the United States and recommends which test to adopt.

1. *The Text Test*

The law could presume that advertisements do not specifically contemplate sales in any country, and therefore do not infringe in any country, unless the text of the advertisement specifies the location(s) of the future sales. The main benefit of a text-based test is clarity; one simply reads or listens to the words of the advertisement to discern if the United States is mentioned as a place for future sales.

On the other hand, the test is arbitrary and would be easy for would-be infringers to get around. Common experience shows that most advertisements do not specifically state the location of future sales. A would-be infringer could avoid infringement by simply not mentioning the United States, while being free to use context and innuendo to make clear that he contemplates sales to the United States. Such a formalistic test would therefore reduce the number of advertisements that infringe, assuming the advertisers adapt to the law.

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57. Price erosion refers to the downward price pressure on patented goods when a competitor signals to the market that it will offer a competing (often infringing) good, since the market expects the patentee to lower its price to compete with the infringer. *See, e.g.*, *Transocean*, 617 F.3d at 1308 (citing Holbrook, *Threat of a Sale*, *supra* note 4, at 791-92). For additional discussion of price erosion, see *infra* notes 137-141 and accompanying text.

58. See sources cited *infra* note 139 for the proposition that price erosion can be difficult to prove with certainty and may not always occur even with formal, contract-law offers to sell. Rather than forcing a plaintiff to prove price erosion early in litigation, the contemplation test serves as a proxy for whether price erosion is likely to have occurred. The plaintiff will prove the amount of price erosion, if any, at a later stage in the litigation.

2. *The Origination Test*

As a second test, the law could presume that an advertisement only contemplates future sales in the country in which it originates, unless the content of the advertisement specifically includes or excludes the United States as a location for future sales.[59] As used here, an advertisement "originates" from the country in which it is developed. For print advertisements, an advertisement is often printed where it is developed. In the Internet context, the place where the advertisement originates is less clear because the advertisement will most likely be instantly accessible worldwide, but may be hosted on a server anywhere in the world. For simplicity, an Internet advertisement could be deemed to originate in the country from which the would-be infringer directed the advertisement's launch.

An origination test has some clarity, but it is exceedingly arbitrary because the location from which the advertisement originates may bear little relationship to where the impact of the advertisement will be felt or where the future sales are likely to occur. If a magazine with the advertisement is printed in Mexico, but all the magazines are shipped to the United States, the primary impact of the advertisement will almost certainly be in the United States. The test may also be easy to evade: a would-be infringer could simply orchestrate initial publication in a country where the technology is not patented. Indeed, an origination test would directly contravene the *Transocean* court's emphasis on the location of the contemplated sale, not the location of the offer.

3. *The Appearance Test*

The law could presume that an advertisement only contemplates future sales in the country/countries in which the advertisement appears, unless the content of the advertisement specifically includes or excludes the United States as a location for future sales. For example, if a magazine intended for U.S. distribution contains an advertisement of infringing technology and is actually distributed in the United States, the advertiser would be liable for infringement. Generally, the appearance test is likely to be a decent proxy for where the future sales are contemplated (excluding some website-based advertisements), since a company will generally strive to direct advertisements to its intended customers. This is especially true for print, radio, and television advertisements that often must specifically be directed to each country in which it appears.

At least one caveat must be included even with print, radio, and television advertisements: *de minimus* and accidental appearances in a country should not make the competitor liable. For example, it is possible for a magazine that is

59. The latter part of the proposed test (relating to the text of the advertisement) could be dropped, but fairness suggests leaving it in. If an advertisement specifically includes or excludes the United States, liability for infringement based on the advertisement should take account of the revealed intent, unless it is shown to be a sham to avoid liability.

sold only in China to be carried by an individual to the United States, or for a second-hand distributor to resell a few of the Chinese magazines in the United States, but this sort of minimal migration should not count as an "appearance" in the United States.

As with so many areas of the law, special attention must be given to internet-based advertisements. Some internet-based advertisements—such as banner and pop-up advertisements—may be specifically directed to a given country.[60] On the other hand, when a competitor advertises its technology via the text/media on its own web page, the appearance test may be less useful as a proxy for the advertiser's intent. This is because web pages automatically "appear" across the globe.

Internet domain names,[61] particularly top-level domains ("TLDs") (such as .edu, .com, or .it),[62] may give clues regarding where the web page is directed.[63] Some TLDs, such as .com, .net, and .org, are generic and may not tell much about geotargeting, but others (called country code TLDs, or "ccTLDs") are country specific, such as .de (Germany) and .jp (Japan).[64]

If an Italian company advertises on its company website on the .it domain and in the Italian language, it strongly suggests that no harm will occur in the United States,[65] even though a U.S.-based user could most likely access the website by typing the web address directly into a browser. On the other hand, especially for generic TLDs, it is improvident to assume that because websites appear everywhere, they therefore are targeted nowhere.[66] Website owners are

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60. *See* Rescuecom Corp. v. Google Inc., 562 F.3d 123, 125-126 (2d Cir. 2009) (describing Google's search results and its AdWords and Keyword Suggestion Tool programs); John Mueller, *Working with Multi-regional Websites*, GOOGLE WEBMASTER CENTRAL BLOG (Mar. 12, 2010, 7:50 AM), http://googlewebmastercentral.blogspot.com /2010/03/working-with-multi-regional-websites.html (discussing Google's ability to use geotargeting factors).

61. Internet domain names are the alphanumeric characters that appear after the two slashes in a World Wide Web address, e.g., http://law.campbell.edu.

62. In the address law.campbell.edu, the ".edu" is the top-level domain and "campbell" is the second-level domain. A. Michael Froomkin, *Wrong Turn in Cyberspace: Using ICANN to Route Around the APA and the Constitution*, 50 DUKE L.J. 17, 39 (2000).

63. *See* Mueller, *supra* note 60.

64. *Id.*

65. *See id.* ("Users and search engines use [ccTLDs] as a strong sign that your website is explicitly for a certain country. . . . Other signals can give us hints. This could be from local addresses & phone numbers on the pages, use of local language and currency . . . . ").

66. Commentators have highlighted the logical flaw in reasoning that because the Internet is ubiquitous, it is targeted nowhere. *See, e.g.*, Sarah H. Ludington, *Aiming at the Wrong Target: The "Audience Targeting" Test for Personal Jurisdiction in Internet Defamation Cases*, 73 OHIO ST. L.J. 541, 559 (2012) (noting in the defamation context that Internet publications are not directed "nowhere" and that publishers "use the medium precisely because of its scope"); A. Benjamin Spencer, *Jurisdiction and the Internet: Returning to Traditional Principles to Analyze Network-Mediated Contacts*, 2006 U. ILL. L. REV. 71, 88 ("A primary flaw of the prevailing approach is its rejection of the ubiquitous nature of Internet activity in favor of a fictitious presumption that Internet activity is targeted

often happy to have their sites available as widely as possible. In addition, although it can be expensive and imperfect, at least some website owners can take advantage of technology to limit the countries in which the website appears.[67] Given these concerns, the law should consider a more nuanced test than the appearance test.

4. *The Total Context Test*

In a complex, interconnected world, the law would do best by eschewing the above relatively simple tests. Instead, the law should determine where an advertisement contemplates future sales based on the entire context surrounding the advertisement. Such a test would consider the factors discussed in the previous proposed tests, as well as others. Factors would include:

- whether the content of the advertisement specifies or excludes future sales to the United States;
- the type of media used (print, television, internet banner ads, internet web pages, etc.);
- where the advertisement originated;
- the citizenship and/or physical location(s) of the entity making the advertisement;[68]
- where the advertisement appeared, including
  - the number of appearances in the United States, including number of U.S. views of a webpage;
  - the internet domain in which a website appears (*e.g.*, .it for Italy, versus .com);[69]
  - the use, or lack of, geo-location filters to direct or exclude internet web page advertisements to or from the United States;[70]
- the language (English versus non-English) and currency (U.S. dollars versus other currency) used in the advertisement;[71] and

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nowhere.").

67. Kevin F. King, *Personal Jurisdiction, Internet Commerce, and Privacy: The Pervasive Legal Consequences of Modern Geolocation Technologies*, 21 ALB. L.J. SCI. & TECH. 61, 66-78 (2011) (describing the technology that companies can, among other things, use to limit where their websites appear); Dan Jerker B. Svantesson, *Geo-location Technologies and Other Means of Placing Borders on the 'Borderless' Internet*, 23 J. MARSHALL J. COMPUTER & INFO. L. 101, 107-120 (2004) (noting same).

68. By "entity making the advertisement" I mean the company that intends to commercialize the allegedly infringing technology, not any third party intermediaries (advertising firms, Internet service providers, magazine companies, etc.) that might assist in creating or distributing the advertisement. For more on third-party intermediary liability, see *infra* Subpart V.A.

69. *See supra* notes 60-65 and accompanying text.

70. *See supra* note 67 and accompanying text.

71. Some of these factors are the same or analogous to factors used in cases deciding

- the intent of the accused infringer who made the advertisement.[72]

Under the total context test, a court should balance the above factors, and any other relevant facts, to ascertain whether the advertisement contemplates future sales in the United States. As stated, the test is an objective, not subjective one: courts should not be concerned with the actual intent of the parties. Rather, the goal of the test is to predict when harm from price-erosion is likely in the United States. Bright lines will be impossible to draw and courts will need to analyze the issue on a case-by-case basis. If the advertisement contemplates future sales in the United States, it should be actionable as infringement because it could harm the U.S. patent holder via price erosion in the United States.

Thus, infringing advertisements could include those made from within the United States[73] and those originating abroad, as long as they contemplate an eventual sale within the United States. The possibility that non-U.S. actors might be liable for acts committed outside of the United States should raise caution lest the extraterritorial application of U.S. law expands too greatly. The next Subpart discusses the concerns of extraterritorial application of U.S. patent law.

B. *Extraterritorial Application of U.S. Patent Law Based on Advertisements of Infringing Technology*

Using the total context test (discussed in the immediately preceding Subpart) to determine whether an advertisement contemplates future sales in the United States would sometimes lead courts to hold actors guilty of infringing U.S. patents even though the actions occurred outside of the United States. Even if an advertisement appears only in Germany, for instance, it may clearly contemplate future sales in the United States and thus be actionable. Further, given the global nature of the Internet, Internet advertisements will often appear in the United States and may contemplate future sales in the United States.

These and other scenarios may violate the U.S. legal system's presumption

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whether personal jurisdiction exists in Internet-based tort lawsuits. *See, e.g.*, Toys "R" Us, Inc., v. Step Two, S.A., 318 F.3d 446, 454 (3d Cir. 2003) (noting, among other facts, that the defendant's "web sites are entirely in Spanish; prices for its merchandise are in pesetas or Euros, and merchandise can be shipped only to addresses within Spain").

72. While the test is an objective test and intent should not control, the intent of the advertising party can help inform whether the advertisement is likely to cause price erosion. After all, if the accused infringer intended to sell into the United States, this suggests that price erosion in the United States is more likely.

73. Recall that the *Transocean* court's focus on the eventual sale rather than the location of the offer means that even if an advertisement is made in the United States, it would not be actionable as infringement unless it contemplated an eventual sale in the United States. *See* Transocean Offshore Deepwater Drilling, Inc. v. Maersk Contractors USA, Inc., 617 F.3d 1296, 1309 (Fed. Cir. 2010).

that the laws of the United States do not apply extraterritorially.[74] The presumption against extraterritoriality is a cannon of statutory construction with a long history, although the presumption's strength has varied over time.[75] The presumption is rooted in theories about international relationships and congressional intent,[76] though some have questioned whether courts should continue to recognize the presumption.[77]

The Supreme Court of the United States has recently invigorated the presumption against extraterritoriality. Indeed, just three years before the *Transocean* decision, the Supreme Court declared that the presumption "applies with particular force in patent law."[78] The Supreme Court's warning did not, however, appear to impress the *Transocean* panel of judges. The *Transocean* court cited the *Microsoft* case and noted that it was "mindful of the presumption against extraterritoriality," but proceeded to use broad language in the opinion that portends significant extraterritorial application[79] unless the case is limited to its facts.[80]

The *Transocean* decision may not be the rebellion against Supreme Court authority that it initially appears. The legal system has varying views about the

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74. *See, e.g.*, Curtis A. Bradley, *Extraterritorial Application of U.S. Intellectual Property Law: Principal Paper: Territorial Intellectual Property Rights in an Age of Globalism*, 37 VA. J. INT'L L. 505, 510-13 (1997); William S. Dodge, *Understanding the Presumption Against Extraterritoriality*, 16 BERKELEY J. INT'L L. 85, 91-112 (1998).

75. Bradley, *supra* note 74, at 507, 510-13. In the copyright context, which is often considered analogous to the patent context, the Supreme Court has recently expanded the extraterritorial reach of copyright law. *See* Kirtsaeng v. John Wiley & Sons, Inc., 133 S. Ct. 1351, 1355-56 (2013) (holding that the first sale doctrine extinguishes the U.S. copyright holder's right to prevent importation of a copy lawfully made outside of the United States).

76. Bradley, *supra* note 74, at 513-16 (discussing five justifications for the presumption: international law, international comity, choice-of-law principles, likely congressional intent, and separation-of-powers considerations).

77. *See, e.g.*, Gary B. Born, *A Reappraisal of the Extraterritorial Reach of U.S. Law*, 24 LAW & POL'Y INT'L BUS. 1, 1-2 (1992); Jonathan Turley, *"When in Rome": Multinational Misconduct and the Presumption Against Extraterritoriality*, 84 NW. U. L. REV. 598, 600-02 (1990).

78. Microsoft Corp. v. AT&T Corp., 550 U.S. 437, 454-55 (2007). Note that the *Kirtsaeng* case, discussed *supra* note 75, may by analogy portend an increase in the extraterritorial application of patent law. On the other hand, after *Kirtsaeng*, the Supreme Court applied a strong presumption against extraterritorial effects of the Alien Tort Statute. *See* Kiobel v. Royal Dutch Petro. Co., 133 S. Ct. 1659, 1664-69 (2013) (holding that the presumption against extraterritoriality applies to claims under the Alien Tort Statute, and that nothing in the statute rebuts the presumption); *see also* Morrison v. Nat'l Austl. Bank Ltd., 130 S. Ct. 2869, 2878 (2010) ("When a statute gives no clear indication of an extraterritorial application, it has none."); Timothy R. Holbrook, *Should Foreign Patent Law Matter?*, 34 CAMPBELL L. REV. 581, 597-607 (2012) (discussing the limits of extraterritoriality).

79. Transocean Offshore Deepwater Drilling, Inc. v. Maersk Contractors USA, Inc., 617 F.3d 1296, 1309 (Fed. Cir. 2010) (stating that "the location of the contemplated sale controls whether there is an offer to sell within the United States").

80. The companies in *Transocean* were U.S., not foreign, companies. *See id.*; *see also* Holbrook, *Transocean*, *supra* note 4, at 1117-18.

meaning of the presumption against extraterritoriality, which stem in part from the ability to distinguish between the location of *conduct* and the location of the *effects* of the conduct.[81] Professor Dodge outlines three possibilities for the meaning:

> First the presumption might mean that acts of Congress should apply only to conduct that *occurs* within the United States, unless a contrary intent appears, regardless of whether that conduct causes effects in the United States . . . . Second, the presumption might mean that acts of Congress apply only to conduct that causes *effects* within the United States, unless a contrary intent appears, regardless of where that conduct occurs . . . . Third, the presumption might mean that acts of Congress apply to conduct occurring within *or* having an effect within the United States, unless a contrary intent appears.[82]

While the *Transocean* court did not squarely address the extraterritoriality issue, the court's focus on the effects of the offer to the exclusion of the location of the offer demonstrates the court's affinity for the second meaning listed by Professor Dodge.[83]

The purpose of this Subpart of the Article is not to attack or defend the *Transocean* court's potentially broad holding. Rather, having shown that extending the holding to advertisements might likewise have significant extraterritorial effects, the remaining Subparts discuss how to limit those effects.

Two areas of law may limit (but by no means extinguish) the extraterritorial impact of U.S. patent law based on advertisements of infringing technology. First, the above-described "total context test" for determining when an advertisement contemplates future sales in the United States will limit lawsuits to those very likely to have an effect in the United States. Second, the principles of personal jurisdiction will further screen out unfair applications of U.S. patent law to foreign actors.

1. *The Total Context Test for Advertisements Limits the Unfair Extraterritorial Application of U.S. Patent Law*

The total context test, described in Subpart III.A.4 above, determines whether an advertisement contemplates future sales in the United States and thus whether it is actionable as infringement under an expanded definition of an offer to sell. A well-applied test will ensure that judicial interpretation of patent law's offer to sell provision is consistent with the view that U.S. laws may

81. Dodge, *supra* note 74, at 87-88.

82. *Id*. at 88-89 (emphasis added); *see also* Bradley, *supra* note 74, at 517 ("[T]here is now substantial agreement that nations may, under certain circumstances, regulate extraterritorial conduct that has effects within their territory.").

83. *See Transocean*, 617 F.3d at 1309 ("These acts create a real harm in the U.S. to a U.S. patentee."); Holbrook, *Transocean*, *supra* note 4, at 1104 ("In essence, the *Transocean* rule is a form of an effects-based test, where the exercise of U.S. law is justified because the act—the offer—will have effects within the United States.").

control foreign conduct that causes *effects* within the United States. Hence, the total context test's factors are designed to predict whether the advertisement is likely to cause price erosion in the United States.[84]

For example, if an advertisement specifies future sales to the United States, this is a strong indication that price erosion may occur in the United States. Similarly, if an advertisement makes clear that no sales will be made to the United States, price erosion in the United States is highly unlikely, unless the disclaimer is a sham and everyone knows it.

In addition, an English-language advertisement made by a U.S. company on its internet web page suggests (absent additional facts) it contemplates sales in the United States. Contrast that with a German-language advertisement made by a German company on its internet web page using the ".de" ccTLD, which suggests it contemplates sales in Germany. Absent additional facts, the German advertisement is unlikely to cause price erosion in the United States, and thus should not be actionable in the United States. Add an additional fact, however, that the advertisement specifically mentions that sales will be to the United States, and of course the analysis changes to predict effects in the United States.

These short examples demonstrate the total context test's role in limiting the extraterritorial application of U.S. patent law. Under an effects-based understanding of the law, an advertisement that will likely cause price erosion in the United States should be actionable in U.S. courts.

The total context test's role is not limited to validating a statutory construction that permits application of U.S. law to foreign actors. In addition, the test ensures that U.S. patent law—specifically § 271(a)'s offer to sell provision—comports with the requirements of the U.S. Constitution. Although the law continues to evolve in this area, courts and commentators increasingly understand that at least the Fifth Amendment[85] and the Foreign Commerce Clause[86] provide substantive constraints on the extraterritorial application of

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84. Of course, whether price erosion actually occurs will depend on market conditions, including the availability of non-infringing substitutes, see *infra* note 138, but the total context test does not seek to prove that price erosion actually occurred, only that the advertisement likely would have caused it assuming the additional market conditions exist. The patent holder would have to prove that price erosion actually occurred in the damages phase.

85. Lea Brilmayer & Charles Norchi, *Federal Extraterritoriality and Fifth Amendment Due Process*, 105 HARV. L. REV. 1217, 1223 (1992) ("When the Supreme Court finally *does* address this question, we believe the proper answer is clear: the Fifth Amendment limits extraterritorial application of substantive federal law.") (emphasis in original); Willis L. M. Reese, *Legislative Jurisdiction*, 78 COLUM. L. REV. 1587, 1587-88 (1978). *But see* A. Mark Weisburd, *Due Process Limits on Federal Extraterritorial Legislation?*, 35 COLUM. J. TRANSNAT'L L. 379, 384-417 (1997) (arguing that due process does not limit the territorial reach of federal law).

86. Anthony J. Colangelo, *Constitutional Limits on Extraterritorial Jurisdiction: Terrorism and the Intersection of National and International Law*, 48 HARV. INT'L L.J. 121, 146-51 (2007) (discussing the Foreign Commerce Clause in the context of laws concerning

U.S. laws.[87] By tying liability under § 271(a)'s offer-to-sell provision to the cases where U.S. patent holders will likely feel significant effects, the total context test brings § 271(a)'s extraterritorial applications within the Constitution's boundaries.

Besides corralling the reach of the total context test, the Constitution provides another important limitation on potentially unfair applications of U.S. laws to foreign actors: namely, the requirement that U.S. courts have personal jurisdiction over defendants. The next Subpart explores this limitation.

2. *The Requirement of Personal Jurisdiction Limits the Unfair Extraterritorial Application of U.S. Patent Law*

In addition to the substantive Constitutional constraints placed on laws having extraterritorial effects, the Constitution also collaterally limits extraterritorial application of U.S. laws via the requirement of personal jurisdiction. The purpose of this Subpart is not to provide a full exposition of the expansive and somewhat murky law regarding personal jurisdiction, but rather to highlight the ways in which the modern doctrine can limit the instances of unfair applications of U.S. laws to foreign defendants.

a. *Personal Jurisdiction Basics*

The Supreme Court has interpreted the Due Process Clause of the Constitution to place limits on a court's exercise of personal jurisdiction.[88] In the twentieth century, personal jurisdiction doctrine shifted from a view that required the defendant's presence within geographical boundaries[89] to one that emphasized reasonableness and fairness.[90] The Supreme Court's opinion in

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terrorism) [hereinafter, Colangelo, *Terrorism*]; Anthony J. Colangelo, *The Foreign Commerce Clause*, 96 VA. L. REV. 949, 951-58 (2010) (describing limits on extraterritorial application of U.S. laws imposed by the foreign commerce clause); Eugene Kontorovich, *Beyond the Article I Horizon, Congress's Enumerated Powers and Universal Jurisdiction Over Drug Crimes*, 93 MINN. L. REV. 1191, 1248-51 (2009) (discussing the Foreign Commerce Clause in the criminal law context).

87. Note that different aspects of the Constitution regulate the ability of states *within* the United States to regulate conduct outside their state borders, particularly the Fourteenth Amendment and the dormant Commerce Clause. *See, e.g.*, Colangelo, *Terrorism*, *supra* note 86, at 146-47 (comparing the Foreign and "Domestic" commerce clauses), 159 (comparing the Fifth and Fourteenth Amendments).

88. *See, e.g.*, J. McIntyre Mach., Ltd. v. Nicastro, 131 S. Ct. 2780, 2786 (2011). Where Federal law (such as patent law), as opposed to state law applies to a cause of action, there is some confusion as to whether the Due Process Clause is that of the Fifth or Fourteenth Amendment. *See* Red Wing Shoe Co. v. Hockerson-Halberstadt, Inc., 148 F.3d 1355, 1358 n.1 (Fed. Cir. 1998). The Federal Circuit has stated that the issue is "purely academic" because it applies the same test regardless which Amendment applies. *Id.*

89. Pennoyer v. Neff, 95 U.S. 714, 720 (1878) ("The authority of every tribunal is necessarily restricted by the territorial limits of the State in which it is established.").

90. Burger King Corp. v. Rudzewicz, 471 U.S. 462, 472-85 (1985); Int'l Shoe Co. v.

International Shoe Co. v. Washington[91] focused the test of personal jurisdiction around two concepts: first, the defendant's contacts with the forum state, and second, fairness.[92]

Courts distinguish between the concepts of "general personal jurisdiction" and "specific personal jurisdiction."[93] General personal jurisdiction in a forum exists over a defendant whose activities in the forum are "continuous and systematic" such that they may be considered "essentially at home in the forum."[94] An example would be an individual's domicile or a business's place of incorporation and principal place of business.[95] When a defendant is subject to general personal jurisdiction in a forum, the forum has personal jurisdiction over the defendant even where the actions giving rise to the lawsuit are wholly unrelated to the defendant's contacts with the forum.[96]

When the defendant's contacts are too sparse to create general personal jurisdiction, a court may exercise specific personal jurisdiction if the defendant's contacts with the forum state nonetheless meets a certain threshold and the claims at issue "arise out of or are connected with" those contacts.[97] To justify this "specific" personal jurisdiction, the defendant's claim-related contacts must demonstrate that it "purposefully avail[ed] itself of the privilege of conducting activities within the forum State, thus invoking the benefits and protections of its laws."[98]

One subtest for specific personal jurisdiction based on a specific fact pattern bears mention. In the intentional tort context, courts have found specific personal jurisdiction based on the effects of an intentional tort committed by a defendant who "expressly aimed" the tortuous conduct at the forum and the plaintiff felt the brunt of the harm in the forum.[99] Patent infringement is a tort,[100] and thus such tests may have some applicability where the patent

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Washington, 326 U.S. 310, 316 (1945).

91. 326 U.S. 310.

92. *Id.* at 316 ("[D]ue process requires only that in order to subject a defendant to a judgment *in personam*, if he be not present within the territory of the forum, he have certain minimum contacts with it such that the maintenance of the suit does not offend 'traditional notions of fair play and substantial justice.'") (citations omitted).

93. Goodyear Dunlop Tires Operations v. Brown, 131 S. Ct. 2846, 2853-54 (2011).

94. *Id.* at 2851.

95. *Id.* at 2853-54.

96. *Id.* at 2854.

97. J. McIntyre Mach., Ltd. v. Nicastro, 131 S. Ct. 2780, 2787-88 (2011).

98. *Id*. The Federal Circuit's application of Supreme Court law has led to a three-part test for whether specific personal jurisdiction exists: (1) the defendant "purposefully directed" its activities at residents of the forum state; (2) the claim "arises out of or relates to those activities;" and (3) personal jurisdiction can be fairly exercised while still comporting with "fair play and substantial justice." Akro Corp. v. Luker, 45 F.3d 1541, 1545-46 (Fed. Cir. 1995) (quoting Burger King Corp. v. Rudzewicz, 471 U.S. 462, 471-77 (1985)).

99. *See* Calder v. Jones, 465 U.S. 783, 789-90 (1984); Ludington, *supra* note 66, at 344.

100. Schillinger v. United States, 155 U.S. 163, 169 (1894) ("The transaction as stated

infringement is intentional. But whether or not patent infringement is an *intentional* tort is the subject of some confusion.[101] Perhaps this is because a plaintiff need not show the defendant intended to infringe,[102] but a plaintiff may obtain enhanced damages if he can show the infringement was "willful," which is somewhat like "intentional."[103] Where the patent infringement based on an advertisement is intentional, courts might find specific personal jurisdiction based on a *Calder*-like effects test. This would include cases where the U.S. patent holder felt the brunt of the harm in the United States and where the infringer expressly aimed the advertisement at the United States. Indeed, such a personal jurisdiction test mirrors some of the factors of the total context test.

Even where a defendant interacts with a forum extensively enough to meet the "contacts" requirement of jurisdiction, the court must also find that exercising jurisdiction is fair.[104] Factors for this murky analysis include the burden on the defendant of litigating in the forum, the interests of the forum State, and the plaintiff's interest in obtaining relief.[105] Where the case involves a non-U.S. defendant, the analysis should also include considerations of the policies of other nations and the Federal Government's interest in its foreign relations policies.[106]

Though the intricacies of personal jurisdiction jurisprudence are winding and unsettled, the upshot is that a non-U.S. defendant will not be subject to jurisdiction in the United States unless it has certain minimum contacts with the United States and the exercise of personal jurisdiction is fair.[107] Personal

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in the petition . . . was a tort pure and simple.").

101. *Compare* Bucklew v. Hawkins, Ash, Baptie & Co., LLP, 329 F.3d 923, 931 (7th Cir. 2003) ("Copyright infringement unlike patent infringement is an intentional tort . . . "), *with* Monsanto Co. v. Trantham (*In re* Trantham), 304 B.R. 298, 307 (B.A.P. 6th Cir. 2004) (stating in the bankruptcy context that patent infringement "has historically been viewed" as an intentional tort).

102. Hilton Davis Chem. Co. v. Warner-Jenkinson Co., 62 F.3d 1512, 1523 (Fed. Cir. 1995) (en banc) ("Intent becomes a requirement only if and when the patent owner seeks enhanced damages or attorneys fees for willful infringement . . . .").

103. Willful infringement contains separate objective and subjective inquiries. In re Seagate Tech., LLC, 497 F.3d 1360 (Fed. Cir. 2007). Under the objective inquiry, "a patentee must show by clear and convincing evidence that the infringer acted despite an objectively high likelihood that its actions constituted infringement of a valid patent . . . . The state of mind of the accused infringer is not relevant to this objective inquiry." *Id.* at 1371. If the objective inquiry is met, "the patentee must also demonstrate that this objectively-defined risk . . . was either known or so obvious that it should have been known to the accused infringer." *Id.*

104. *See* J. McIntyre Mach., Ltd. v. Nicastro, 131 S. Ct. 2780, 2787 (2011).

105. Asahi Metal Indus. Co. v. Super. Ct. of Cal., 480 U.S. 102, 113-14 (1987).

106. *Id.* at 115; *see also* Donald Earl Childress III, *Rethinking Legal Globalization: The Case of Transnational Personal Jurisdiction*, 54 WM. & MARY L. REV. 1489, 1518-25 (2013) (analyzing transnational personal jurisdiction).

107. *J. McIntyre Mach.*, 131 S. Ct. at 2787. It should be noted that even when jurisdiction is authorized, a court may resist imposition upon its jurisdiction under the

jurisdiction jurisprudence thus works alongside the proposed total context test for advertisements to safeguard against unfair applications of U.S. law against foreign actors.[108] Considering both tests, then, there are three scenarios where a patent infringement claim based on an advertisement would not be litigated in the United States: (1) where the advertisement fails the total context test *and* the defendant is not subject to personal jurisdiction anywhere in the United States; (2) where the advertisement fails the total context test *even though* the defendant is subject to personal jurisdiction somewhere in the United States; and (3) where the advertisement meets the total context test *but* the defendant is not subject to personal jurisdiction anywhere in the United States.

Thus, for example, even where a foreign defendant is subject to general personal jurisdiction based on extensive contacts with the United States, if the advertisement fails the total context test, the defendant will not need to litigate in the United States. Only when a claim for patent infringement satisfies both the total context test and personal jurisdiction requirements will the foreign defendant be forced to litigate in the United States.[109]

C. *Conclusion*

This Part demonstrates how a seemingly small change in the law (a broader definition of an offer in § 271(a)) can interact with other changes in the law (the *Transocean* decision) to produce far-ranging consequences. Permitting so many potential causes of action based on foreign activities might suggest that a broader definition of an offer is a bad idea. Rather than abandon the broader definition, however, courts instead must carefully craft a test for when an advertisement of infringing technology will be actionable in the United States. In addition, courts can rely on personal jurisdiction doctrine to protect many foreign actors from unfair applications of U.S. law.

Those who would compete with patent holders must structure their advertisements appropriately to avoid harming the U.S. patent holder. For advertisements that do contemplate an eventual sale in the United States, allowing a suit for patent infringement will often be fair: a person should often be held liable for attempting to generate commercial interest in infringing

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doctrine of forum non conveniens if the action can be brought in another forum. Sinochem Int'l Co. v. Malaysia Int'l Shipping Corp., 549 U.S. 422, 423 (2007). To simplify the analysis, this article does not address forum non conveniens, but it would provide an additional check against unfairness for a foreign litigant. *See* Childress, *supra* note 106, at 1528-43 (analyzing transnational forum non conveniens); Christopher A. Whytock & Cassandra Burke Robertson, *Forum Non Conveniens and the Enforcement of Foreign Judgments*, 111 COLUM. L. REV. 1444, 1452-62 (2011) (same).

108. *See* Childress, *supra* note 106, at 1525-28 (describing how both personal jurisdiction and forum non conveniens work as a proxy for choice of law).

109. Of course, the claim will have to cross additional hurdles, including that the patent is valid and infringed, that venue exists, and that the court should not exercise its discretionary power based on forum non conveniens.

technology when it harms the patent holder in the United States.[110]

IV. MORE EFFECTS: UNCERTAINTY (AND HOW TO MINIMIZE IT)

As discussed above in Part II, defining the term "offer" to include advertisements and similar commercializing activities would cause competitors to face more infringement suits, and those suits would occur at an earlier point in time. In addition, the broadened definition of an offer may have unintended consequences if competitors are unable to ascertain what activities constitute "advertisements and other promotions." Businesses prefer certainty and if they are unable to determine which activities will avoid infringement, they may err on the side of caution, thus foregoing beneficial economic activity.[111]

A. *Changing the "Offer" Definition Risks Creating Uncertainty; Clearer Rules Lessen the Impact*

The risk that broadening the definition of an infringing offer may result in uncertainty does not necessarily mean that lawmakers should simply maintain the current suboptimal definition.[112] Rather, the preferred solution should be to make the new definition as clear as possible. That is, courts should strive to make the test more rule-like, rather than standard-like.

1. *Rules Are Theoretically Preferable to Standards*

In the context of a test's clarity, room exists for a variety of tests falling along the familiar spectrum of rules versus standards. Scholars have analyzed rules and standards extensively[113] and recent literature has explored rules

110. Osborn, *Offer as a Policy Tool*, *supra* note 4, at 174-76.

111. *See, e.g.*, Douglas Baird & Thomas Jackson, *Information, Uncertainty, and the Transfer of Property*, 13 J. LEGAL STUD. 299, 303-06 (1984); Troy A. Paredes, *A Systems Approach to Corporate Governance Reform: Why Importing U.S. Corporate Law Isn't the Answer*, 45 WM. & MARY L. REV. 1055, 1133-34 (2004) (stating that certainty in law "is a valuable asset that facilitates business and investing"). *But see* Ian Ayres & Paul Klemperer, *Limiting Patentees' Market Power Without Reducing Innovation Incentives: The Perverse Benefits of Uncertainty and Non-Injunctive Remedies*, 97 MICH. L. REV. 985, 1000-01 (1999) (suggesting that uncertainty regarding patent law remedies may reduce the deadweight losses involved with patents).

112. *See* Lucas S. Osborn, *Instrumentalism at the Federal Circuit*, 56 ST. LOUIS U. L.J. 419, 461 (2012) [hereinafter Osborn, *Instrumentalism*] (discussing the difference between a precise test (i.e., reproducible) versus an accurate test (i.e., gives the "correct" answer)).

113. *See, e.g.*, Colin S. Diver, *The Optimal Precision of Administrative Rules*, 93 YALE L.J. 65 (1983); Ronald M. Dworkin, *The Model of Rules*, 35 U. CHI. L. REV. 14, 22-29 (1967); Frank H. Easterbrook, *The Supreme Court, 1983 Term—Foreword: The Court and the Economic System*, 98 HARV. L. REV. 4 (1984); Isaac Ehrlich & Richard A. Posner, *An Economic Analysis of Legal Rulemaking*, 3 J. LEGAL STUD. 257 (1974); Louis Kaplow, *Rules Versus Standards: An Economic Analysis*, 42 DUKE L.J. 557 (1992); Duncan Kennedy, *Form and Substance in Private Law Adjudication*, 89 HARV. L. REV. 1685 (1976); Carol M. Rose,

versus standards in relation to patent law.[114] A familiar example of a rule is a speed limit of "55 miles per hour," while a familiar corresponding standard is "drive at a reasonable speed."

Supporters of rules laud their ability to facilitate efficient allocation by providing ex ante certainty.[115] Certainty allows businesses to maximize their opportunities for economic advancement by organizing their activities around whatever legal test is adopted, even if it is imperfect.[116] Rule-like tests permit businesses to conduct their operations with precision, giving them clear signals about permissible behavior. To the extent that businesses perceive economic advantage by engineering their activities to approach the bright-line edge of the rule, companies will do so.

On the other hand, standard-like tests are flexible, which might have ex post benefits associated with fairness and pragmatism.[117] But that same flexibility generally yields less predictable results because standards may invite inconsistent judicial application[118] and leave parties uncertain ex ante as to permissible behavior.[119] Hence, parties may forego permissible activity in an effort to avoid the risk of incurring liability.

Since businesses desire certainty, lawmakers should strive for it in defining what sort of offer will infringe. An unclear definition would allow patent holders to threaten litigation against activity that probably does not fall within the definition of an offer. Such uncertainty and threats of litigation will lead to under-investment by competitors who will likely prefer to err on the side of caution (e.g., avoid activities that are close to, but not included in, the definition of an offer to sell) rather than risk exposure to infringement liability.[120] As a

Crystals and Mud in Property Law, 40 STAN. L. REV. 577 (1988); Justice Antonin Scalia, *The Rule of Law as a Law of Rules*, 56 U. CHI. L. REV. 1175 (1989); Kathleen M. Sullivan, *The Supreme Court, 1991 Term—Foreword: The Justices of Rules and Standards*, 106 HARV. L. REV. 22 (1992); Cass R. Sunstein, *Problems with Rules*, 83 CALIF. L. REV. 953 (1995).

114. *See, e.g.*, John F. Duffy, *Rules and Standards on the Forefront of Patentability*, 51 WM. & MARY L. REV. 609, 611 (2009); Osborn, *Instrumentalism*, *supra* note 112, at 424, 461; John R. Thomas, *Formalism at the Federal Circuit*, 52 AM. U. L. REV. 771 (2003).

115. *See, e.g.*, Baird & Jackson, *supra* note 111, at 312-14; Kaplow, *supra* note 113, at 575-76.

116. *See* Burnet v. Coronado Oil & Gas Co., 285 U.S. 393, 406 (1932) (Brandeis, J., dissenting) ("Stare decisis is usually the wise policy, because in most matters it is more important that the applicable rule of law be settled than that it be settled right."), *overruled in part by* Helvering v. Mountain Prods. Corp., 58 S. Ct. 623 (1938).

117. *See, e.g.*, Easterbrook, *supra* note 113, at 11-13 (criticizing the ex post considerations of standards and preferring to focus on the position of the parties before the dispute or deal); Rose, *supra* note 113, at 591-93.

118. *See* Kaplow, *supra* note 113, at 587-88.

119. *See, e.g.*, Rose, *supra* note 113, at 591.

120. Infringement results in damages of lost profits, or at a minimum, a reasonable royalty. 35 U.S.C. § 284 (2012) ("Upon finding for the claimant 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 . . . ."). The court has

result, the market will receive less technology and competition than if uncertainty did not exist. While this discussion only scratches the surface of the rules versus standards debate, it should be clear that a rule is theoretically preferable to a standard in the context of patent litigation.

While a rule may be *theoretically* preferable to a standard in patent litigation, an important consideration is whether lawmakers can, practically speaking, draft a workable rule. In general, where a test covers myriad actions and scenarios that do not share common facts or elements, it will be difficult to draft a workable, simple rule.[121] For instance, negligence applies to numerous acts, but those acts vary widely in terms of their particular key facts,[122] thus making a simple rule difficult to draft. On the other hand, basic income tax covers numerous acts, most of which share factually similar elements,[123] thus making a rule much more efficient and easy to draft.

2. *Lawmakers Will Have Trouble Drafting a Simple, Clear Rule*

Because offers and advertisements come in all shapes and sizes, lawmakers will have difficulty drafting a simple rule. Currently the definition of an offer includes contract-law offers but excludes most advertisements and other promotions. As discussed, the primary policy behind making an offer to sell an act of infringement is to prevent competitors from generating commercial interest in infringing technology to the detriment of the patentee.[124] Since advertisements and other promotions exist primarily to generate commercial interest,[125] they should be included within the definition of an offer.

Yet including "advertisements and other promotions" within the "offer" definition will create uncertainty unless lawmakers can define with some rule-like precision what constitutes "advertisements" and "promotions." On the other hand, creating clear, rule-like definitions of "advertisements" and "promotions" will be a difficult task. The terms are not defined in the patent statutes. Law dictionaries define "advertising" broadly to include any "action of

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discretion to increase the damages up to treble damages. *Id.* ("[T]he court may increase the damages up to three times the amount found or assessed."). Further, courts can issue injunctions. 35 U.S.C. § 283 (2012).

121. Kaplow, *supra* note 113, at 563-64, 573; Sunstein, *supra* note 113, at 1003. Theoretically, one could draft a complex rule to cover all anticipated fact patterns. Kaplow, *supra* note 113, at 590-96 (noting the difference between simple and complex rules and standards). Practically speaking, complex rules are rarely adopted by courts.

122. For example, driving, food handling, floor maintenance, surgery, etc.

123. For example, though peoples' earning amounts and sources may vary widely, they can be grouped together as "income."

124. Osborn, *Offer as a Policy Tool*, *supra* note 4, at 173.

125. *See, e.g.*, THE AMERICAN HERITAGE DICTIONARY OF THE ENGLISH LANGUAGE 25 (4th ed. 2000) (defining "advertisement" as "[a] notice, such as a poster or a paid announcement in the print, broadcast, or electronic media, designed to attract public attention or patronage").

drawing the public's attention to something to promote its sale."[126]

Other areas of the law may assist in crafting a definition. The terms appear in another intellectual property statute—the Lanham Act[127]—but it does not define them.[128] Case law interpreting the Lanham Act indicates that widely-distributed commercial promotion constitutes "advertising," but courts have struggled with how widely-distributed the promotional activities must be to constitute "advertising."[129] Furthermore, the Lanham Act distinguishes between "advertising" and "promotion" by listing them separately.[130] Courts note that a distinction exists between "advertising" and "promotion," but they seldom pinpoint it other than to note that "promotion" is more inclusive than traditional advertising, which must be disseminated widely.[131] The Second Circuit provided some assistance when it observed:

> [T]he distinction between advertising and promotion lies in the form of the representation. Although advertising is generally understood to consist of widespread communication through print or broadcast media, "promotion" may take other forms of publicity used in the relevant industry, such as displays at trade shows and sales presentations to buyers.[132]

Courts continue to vary widely regarding what communications constitute "advertising" or "promotion." Some courts define advertising and promotions as activities that reach more than a few individuals of the relevant purchasing public, while others allow even a single letter to suffice.[133]

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126. BLACK'S LAW DICTIONARY 55 (9th ed. 2009).

127. 15 U.S.C. §§ 1051 et seq. (2012).

128. *See* Lanham Act § 43(a)(1)(B), 15 U.S.C. § 1125(a)(1)(B) (2012).

129. *See* 1 JAMES B. ASTRACHAN ET AL., THE LAW OF ADVERTISING § 11.02 n.356 (Matthew Bender 2013) (collecting cases).

130. Lanham Act § 43(a)(1)(B), 15 U.S.C. § 1125(a)(1)(B) ("Any person who, on or in connection with any goods or services, or any container for goods, uses in commerce any word, term, name, symbol, or device, or any combination thereof, or any false designation of origin, false or misleading description of fact, or false or misleading representation of fact, which . . . in commercial *advertising* or *promotion*, misrepresents the nature, characteristics, qualities, or geographic origin of his or her or another person's goods, services, or commercial activities, shall be liable in a civil action by any person who believes that he or she is or is likely to be damaged by such act.") (emphasis added).

131. *See, e.g.*, Gmurzynska v. Hutton, 355 F.3d 206, 210 (2d Cir. 2004) ("[A]lthough representations less formal than those made as part of a classic advertising campaign may suffice, they must be disseminated sufficiently to the relevant purchasing public.") (quoting Fashion Boutique of Short Hills, Inc. v. Fendi USA, Inc., 314 F.3d 48, 56 (2d Cir. 2002)); Seven-Up Co. v. Coca-Cola Co., 86 F.3d 1379, 1384 (5th Cir. 1996) ("The courts are also in agreement, however, that 'the Act's reach is broader than merely the "classic advertising campaign."'") (quoting Gordon & Breach Sci. Publishers v. Am. Inst. of Physics, 859 F. Supp. 1521, 1534 (S.D.N.Y.1994)).

132. *Fashion Boutique of Short Hills*, 314 F.3d at 57.

133. *See* ASTRACHAN ET AL., *supra* note 129, at § 11.02 n.356 (collecting cases). *Compare* First Health Grp. Corp. v. BCE Emergis Corp., 269 F.3d 800, 803-04 (7th Cir. 2001) ("Advertising is a form of promotion to anonymous recipients, as distinguished from face-to-face communication. In normal usage, an advertisement read by millions (or even thousands in a trade magazine) is advertising, while a person-to-person pitch by an account

If many decades of interpretation of the Lanham Act have failed to reveal clear definitions of advertising and promotions, the task is likely not feasible. Yet lawmakers should not simply give up and fail to provide any guidance. Nor should lawmakers exclude "advertisements" and "promotions" from patent law's definition of an offer simply because clear rules are difficult to draft. Indeed, while defining "advertisements" with precision is difficult, the same is true with the definition of a contract-law offer. Contract law requires no particular words or actions to make an offer, and the same words can amount to an offer in one circumstance but not in another.[134] If decades of Lanham Act interpretation demonstrate the difficulty of defining an "advertisement," *centuries* of contract law demonstrate the difficulty of drafting a simple rule to cover the myriad acts that might constitute a formal offer to sell.

In many cases, actions that fall just short of constituting a contract-law offer will fall clearly within a definition of promotional activity.[135] To some extent then, if lawmakers broaden patent law's definition of an offer from the contract-law definition to one that includes advertisements and promotions, they will simply be trading one uncertain question for another. The net uncertainty may not increase much, if at all.

Hence, lawmakers should appreciate that a simple, clear rule may be difficult to create, but should strive to give as much guidance as possible. The next Subpart provides specific recommendations for a test that will provide clarity to the definition of "advertising and other promotions."

B. *Patent Law's Definition of an "Offer" Should Include an Objective "Commercialization" Test*

The Federal Circuit has established that the primary policy behind making an "offer to sell" an act of infringement is to prevent competitors from generating commercial interest in infringing technology to the detriment of the patentee.[136] To give competitors clarity, lawmakers should tie the definition of an offer to the concept of commercialization. Thus, lawmakers should be less

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executive is not."), *with Seven-Up Co.*, 86 F.3d at 1386 (presentation made to eleven bottlers is advertising or promotion), *and* Mobius Mgmt. Sys., Inc. v. Fourth Dimension Software, Inc., 880 F. Supp. 1005, 1021 (S.D.N.Y. 1994) (finding single letter actionable).

134. *See, e.g.*, CORBIN, *supra* note 15, at 108 ("[T]here is no magic formula to determine whether a particular communication is an offer . . . . [T]he ordinary meaning of language is influential, but never determinative. For example, the word 'quote' may be understood as making a commitment, while the word 'offer' may, in context be deemed a mere price quotation.") (footnote omitted).

135. A number of cases find language to fall just short of an offer, and instead to be merely quotations, proposals, invitations to treat, etc. *See, e.g.*, Cox v. Denton, 180 P. 261, 261 (Kan. 1919) (holding that a letter asking, "Do you want to buy 240 good 100 lb. (1,000 lb.) cattle at 8.25 must be sold by Friday" was a mere inquiry). While not an offer, the quoted language was clearly a commercial proposal.

136. Osborn, *Offer as a Policy Tool*, *supra* note 4, at 173.

concerned with the raw number of recipients of a competitor's communication and more about whether the communication generates commercial interest in an infringing product.

Advertisements and promotions should be defined as infringing offers when they objectively appear likely to generate commercial interest in an infringing product. As explained below, such a definition protects the patentee from price erosion and lost sales and provides clarity to competitors.

1. *An Objective "Commercialization" Test Protects Patentees From Price Erosion and Provides Clarity to Competitors*

When a business indicates to the relevant market an intent to compete against a patent holder, the competing business potentially causes downward price pressure on the patented goods, since the market expects the patentee to lower its price to compete with the infringer.[137] This downward price pressure, often termed price erosion, harms the patentee by causing it to lose profits.[138]

The mechanism of price erosion demonstrates that the law should not be greatly concerned simply with the number of recipients of a competitor's advertisement or promotion. A single communication evidencing an intent to compete may result in significant price erosion if it is directed to an entity with the ability to affect the market price of a patented good. For example, if an entity represents the primary (or only) end-buyer of a patented good, then a single solicitation to one of its high-level officers may result in price erosion. This suggests that, at least in some contexts, a single letter or phone call might constitute an advertisement or promotion.

On the other hand, if a competitor directs a single solicitation solely to an entity representing only a small portion of the end-buyers of a patented good, this is unlikely to cause much (if any) price erosion. The same could be true if a competitor sends multiple promotions but the total audience nonetheless represents only a small portion of the market. Should patent law exclude these actions from the definition of an offer?

One option is for patent law to define an offer (including advertisements and promotions) in terms of whether the communication causes harm. While the definition makes sense in terms of the theory behind price erosion, it carries with it significant uncertainty because calculating price erosion can be

137. *See, e.g.*, Yale Lock Mfg. Co. v. Sargent, 117 U.S. 536, 551-52 (1886); Transocean Offshore Deepwater Drilling, Inc. v. Maersk Contractors USA, Inc., 617 F.3d 1296, 1308 (Fed. Cir. 2010) (citing Holbrook, *Threat of a Sale*, *supra* note 4, at 791-92); Osborn, *Offer as a Policy Tool*, *supra* note 4, at 174-75.

138. Several articles explore the concept of price erosion in more depth. *See, e.g.*, David Bohrer et al., *The Shifting Sands of Price Erosion: Price Erosion Damages Shift by Tens of Millions of Dollars Depending Upon the Admissibility of Pre-Notice Eroded Prices*, 25 SANTA CLARA COMPUTER & HIGH TECH. L.J. 723 (2009).

complicated.[139] Furthermore, patent law currently does not define an offer in terms of harm, but rather in terms of whether it meets the requirements of a contract-law offer.[140] Not all contract-law offers will harm the patentee, such as where the offer is to a small portion of the relevant market and the offer is not accepted.

Instead of defining an offer in terms of whether it causes harm, a better option is to define it objectively in terms of whether the offer amounts to an apparent attempt to commercialize, regardless of the scale of the commercialization. By "apparent attempt" I mean an objective, not subjective, standard of whether the steps taken would appear to a reasonable person to be an attempt to commercialize the technology. Under this definition, a single promotion could constitute infringement, even if it did not cause provable price erosion, as long as it appears from the circumstances to have generated commercial interest in infringing technology. This test puts the initial onus on the competitor to avoid commercializing infringing technology.

One may object to a commercialization test because it is over-inclusive from the standpoint of harm to the patentee: first, as mentioned, the communication may not have been widely distributed enough to cause price erosion, and second, even if it had been more widely distributed, the market may be structured such that price erosion would not have resulted.[141] While this is true, there is reason to believe that in many instances patentees will not pursue infringement claims when they cannot prove harm because the tremendous cost of litigation[142] would deter them from bringing suit.[143] At the same time, the commercialization test respects the patent holder's right to exclude competitors.

Hence, an objective commercialization test gives a clearer rule than asking

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139. *See* Christopher S. Marchese, *Patent Infringement and Future Lost Profits Damages*, 26 ARIZ. ST. L.J. 747, 759-60 (1994) (describing price erosion calculations and stating that "[t]he interaction of elasticity of demand and claims for price erosion may be confusing in some instances"); Gregory J. Werden et al., *Economic Analysis of Lost Profits from Patent Infringement With and Without Noninfringing Substitutes*, 27 AIPLA Q.J. 305 *passim* (1999) (describing price erosion calculations in detail).

140. Rotec Indus., Inc. v. Mitsubishi Corp., 215 F.3d 1246, 1254-55 (Fed. Cir. 2000).

141. For example, the patentee may not have had market power, perhaps because there were acceptable non-infringing alternatives. In such a market, a widely distributed infringing offer to sell will not cause price erosion. *See* Werden et al., *supra* note 139, at 315 ("The less close a substitute the infringer's product is for the patentee's product, the less is the effect of the infringement on the patentee's price.").

142. The average litigation cost to take a small patent infringement suit (less than $1,000,000 at stake) through trial was almost $1,000,000. AM. INTELLECTUAL PROP. LAW ASS'N, REPORT OF THE ECONOMIC SURVEY I-153 (2011).

143. Patent law provides for recovery of damages to "compensate for the infringement, but in no event less than a reasonable royalty." 35 U.S.C. § 284 (2012). A reasonable royalty is calculated based on a hypothetical contractual negotiation that might have taken place between the patentee and the infringer at a time just before infringement occurred. *See* Rite-Hite Corp. v. Kelley Co., 56 F.3d 1538, 1554 (Fed. Cir. 1995). Where there is no provable harm to the patentee, the reasonable royalty should be very small.

whether price erosion is likely to occur. This is not to say that the rule is crystal clear; only that it is clearer than determining price erosion. While the test is broad, and sometimes over-inclusive, it provides more clarity, which efficient markets desire, and will force competitors to focus their efforts in areas other than drafting clever promotions that avoid causing significant price erosion.

2. *An Objective "Commercialization" Test Protects Patentees From Lost Sales*

In addition to harm from price erosion, a patentee who practices the invention might be able to show harm from lost sales. Obviously, if the infringing offer to sell culminated in an infringing sale, the patentee would generally be able to show a lost sale. But circumstances may exist where the competitor's eventual sale does not infringe and yet the patentee may be able to show a lost sale. The primary scenario for this kind of harm to the patentee is when a competitor engages in a bait-and-switch tactic.[144]

In a patent infringement context, the "bait" occurs when a competitor generates interest in an infringing technology without crossing the "offer" threshold, whatever that threshold happens to be. Under current patent law, since a general advertisement will not constitute infringement, a competitor can advertise infringing technology. Once the competitor generates market interest in the infringing technology, the competitor flips the "switch" by substituting alternate non-infringing technology. If the purchaser decides to purchase from the competitor despite the switch, it is likely that the patentee has lost a sale.

Some have questioned whether bait-and-switches would occur: since a successful switch implies a non-infringing substitute, the competitor would simply have offered the non-infringing substitute to begin with.[145] But a bait-and-switch scenario could occur in a market where the non-infringing substitute is imperfect, i.e., it is good but not as good as the patented technology. In this situation, the patented technology may be the attention-grabbing, state-of-the-art product that generates interest from purchasers.

Still, one might ask how a bait-and-switch could occur with an imperfect substitute—wouldn't the buyer simply leave and seek out the patentee's superior product? Not necessarily. Several factors relating to information and transaction costs may contribute to the customer staying with the competitor, such as where relationships between the buyer and seller are important, where

144. *See* Am. Seating Co. v. USSC Grp., Inc., 514 F.3d 1262 (Fed. Cir. 2008) (upholding a jury verdict that characterized defendant's offering to sell an infringing device but subsequently completing the sale with a non-infringing device as a bait-and-switch); Beloit Corp. v. Valmet Corp., 44 U.S.P.Q.2d (BNA) 1792, 1795 (W.D. Wis. 1997) ("[B]efore offers to sell were included in Section 271(a), a third party could employ 'bait and switch' tactics by offering for sale a patented invention and then switching the offered design to a non-infringing one before the sale was complete.").

145. *See* Holbrook, *Threat of a Sale*, *supra* note 4, at 795 n.273.

the buyer has already expended considerable transaction costs with the competitor and is unwilling to start over, and where information costs are high such that the competitor is unaware of the patentee.

Where information and transaction costs will cause some buyers to stay with a competitor even after it pulls the switch, competitors will sometimes divert a percentage of sales from the patentee. Such diverted sales contravene the policy of preventing a competitor from generating commercial interest in infringing technology to the detriment of the patentee. Hence, patent law should protect patentees against this type of activity.

A commercialization test would deter bait-and-switch scenarios by subjecting the competitor to an infringement suit based on the advertisement or promotions that generates the commercial interest. Obviously, if the "bait" (i.e., the advertisement or promotion) itself is actionable as infringement, the competitor will be unlikely to engage in the behavior. Further, under the objective test, the competitor cannot defend on the grounds that it subjectively never intended to infringe because its subjective intent is not determinative.

It might be argued, however, that patentees may be protected against intentional[146] bait-and-switch tactics through laws prohibiting false advertising. For example, the Federal Trade Commission Act ("FTC Act") prohibits any "false advertisement," which it defines as "an advertisement . . . which is misleading in a material respect."[147] Although apparently never litigated in the context of patent infringement, engaging in bait-and-switch advertising fits squarely within the FTC Act's prohibition against false advertising.[148]

In addition, any advertisement to sell a product that the advertiser knows may infringe a patent may constitute false advertising if the advertiser does not disclose the risk of infringement. In determining whether an advertisement is misleading under the FTC Act, courts shall consider "the extent to which the advertisement fails to reveal facts . . . [that are] material with respect to consequences which may result from the use of the [advertised product]."[149] Since a buyer who uses an infringing product in the United States commits patent infringement,[150] the buyer would be subject to patent infringement damages. Such damages would appear to fall under the natural meaning of the

146. A competitor may engage in an *intentional* bait-and-switch (as where the competitor never intended to sell the first-offered technology) or an *unintentional* bait-and-switch (as where the competitor modifies the offered technology after discovering, or in good faith more closely analyzing, a problematic patent).

147. 15 U.S.C. § 55(a)(1) (2012).

148. 16 C.F.R. § 238.1 (2006) ("No advertisement containing an offer to sell a product should be published when the offer is not a bona fide effort to sell the advertised product.").

149. 15 U.S.C. § 55(a)(1).

150. 35 U.S.C. § 271(a) (2012) (making the use of an infringing product within the United States an act of infringement). If the eventual contemplated sale were to occur outside the United States or for use outside the United States, materiality under the FTC Act would likely depend in part on whether the use would infringe in the country where the sale or use would occur.

phrase "material" consequences.

The FTC Act, however, may not provide adequate protection to patentees, because it does not create a private cause of action, but instead only empowers the FTC to bring actions.[151] The FTC may decide not to bring a suit for a variety of reasons, including limitations on resources and broader public interest concerns.[152] Further, since the focus of the FTC Act is on the consumer and not the patentee, even if a suit is brought, patentees will not receive a remedy.

Besides the federal FTC Act, various state laws may provide patentees some protection against bait-and-switch tactics. Each state has adopted similar statutes called "little FTC acts" and has adopted other consumer protection measures to prohibit other unfair or deceptive practices.[153] Unlike the federal FTC Act, many state acts give injured consumers the power to sue merchants who violate the statute and some provide for treble damages, punitive damages, minimum damages, and/or the award of attorney's fees to successful consumer plaintiffs.[154] While the state acts may disincentivize parties from engaging in bait-and-switch tactics, many allow only consumers to sue, as opposed to competitors (i.e., patentees) and thus do not adequately protect the patentee's interests.[155] Other state statutes, however, have been construed to allow competitors to sue.[156] In such states, a patentee may have some protection against intentional bait-and-switch tactics but would be required to prove: (1) that the competitor's communication constituted an "advertisement" under the state statute and (2) that the competitor had deceptive intent. Both of these proofs may be difficult.

In addition to the federal FTC Act and the various state actions, section 43

151. *See* Jeff Sovern, *Private Actions Under the Deceptive Trade Practices Acts: Reconsidering the FTC Act as Rule Model*, 52 OHIO ST. L.J. 437, 441 n.21 (1991) (citing cases for this proposition).

152. *Id.* at 441-43.

153. *Id.* at 446-52; *see also* Henry N. Butler & Joshua D. Wright, *Are State Consumer Protection Acts Really Little-FTC Acts?*, 63 FLA. L. REV. 163 (2011); Stewart Macaulay, *Bambi Meets Godzilla: Reflections on Contracts Scholarship and Teaching vs. State Unfair and Deceptive Trade Practices and Consumer Protection Statutes*, 26 HOUS. L. REV. 575, 582-89 (1989).

154. Sovern, *supra* note 151, at 448.

155. *See, e.g.*, MO. ANN. STAT. § 407.025.1 (West 2006); OHIO REV. CODE ANN. § 1345.02(a) (West 2007); R.I. GEN. LAWS § 6-13.1-1(5)(M) (2006); *see also* David L. Belt, *The Standard for Determining "Unfair Acts or Practices" Under State Unfair Trade Practices Acts*, 80 CONN. B.J. 247, 310-311 (2006) (discussing who has standing to sue under various state deceptive practices acts).

156. *See, e.g.*, Harrington Mfg. Co., Inc. v. Powell Mfg. Co., 248 S.E.2d 739, 742 (N.C. Ct. App. 1978) (holding that North Carolina's deceptive trade practices act, N.C. GEN. STAT. § 75-1.1(a), allows suits by competitors as well as consumers); *see also* Matthew W. Sawchak & Kip D. Nelson, *Defining Unfairness In "Unfair Trade Practices"*, 90 N.C. L. REV. 2033, 2078 n.242 (2012) (noting competitor-based suits under N.C. GEN. STAT. § 75-1.1(a)).

of the Lanham Act may provide patentees additional protection against bait-and-switch tactics. The Lanham Act prohibits a "false or misleading representation of fact, which . . . in commercial advertising or promotion, misrepresents the nature, characteristics, qualities, or geographic origin of his or her or another person's goods, services, or commercial activities."[157] Competitors can bring actions under the Lanham Act.[158] Though it has apparently never been litigated, it would appear that if a patentee could prove the competitor intentionally used bait-and-switch tactic and never intended to sell the infringing article, the patentee could bring a false advertising claim. Even if a patentee could convince a court to apply the Lanham Act in this novel manner, the patentee would still be put to the difficult process of proving a competitor's deceptive intent. In addition, the competitor's activity would have to fit into the Lanham Act's somewhat amorphous definition of "advertising or promotion."[159]

In sum, federal and state false advertising laws may not adequately protect patentees against intentional bait-and-switch tactics that use advertisements or promotions of infringing technology as the bait. Further, they would not appear to protect the patentee against unintentional bait-and-switch activities, even though such activities could divert sales from the patentee. Therefore, patent law could better protect patent holders by adopting an objective commercialization test.

This Subpart has discussed protecting patentees from the harms associated with price erosion and lost sales. The next Subpart shifts the focus to tailoring the definition of an offer so as to protect competitors that engage in beneficial competitive activity.

C. *Patent Law's Definition of an "Offer" Should Allow Good-Faith Market Inquiry by Competitors*

While the test for an offer in patent infringement law should encompass advertisements and promotions broadly defined, the law should leave room for competitors to explore whether it would be profitable either to obtain a license from the patent holder or to develop competing, but non-infringing technology. Purposefully configuring technology that avoids patent infringement is known as "designing around" a patent. The Federal Circuit[160] and writers[161] endorse

157. Lanham Act § 43(a)(1)(B), 15 U.S.C. § 1125(a)(1)(B) (2012).

158. *See, e.g.*, Am. Ass'n of Orthodontists v. Yellow Book USA, Inc., 434 F.3d 1100, 1103-04 (8th Cir. 2006); U.S. Healthcare, Inc. v. Blue Cross of Greater Phila., 898 F.2d 914 (3d Cir. 1990).

159. *See supra* notes 126-131 and accompanying text.

160. *See, e.g.*, Cross Med. Prods. v. Medtronic Sofamor Danek, Inc., 480 F.3d 1335, 1347 (Fed. Cir. 2007) (noting that designing around patented technology is something "that patent law encourages"); State Indus., Inc. v. A.O. Smith Corp., 751 F.2d 1226, 1236 (Fed. Cir. 1985) ("One of the benefits of a patent system is its so-called 'negative incentive' to

the practice of designing around patents in part because it disseminates technology and encourages further innovation—by studying a patent or patented technology, a competitor can devise improvements, simplifications, or other modifications more cheaply than without the knowledge acquired from the patented item.

Since the design-around process can benefit society, the law should be careful not to define an infringing "offer" so broadly as to unnecessarily chill commercial activity that would legitimately compete with the patented technology.[162] The law should not permit a competitor to commercialize infringing technology, but it should permit the competitor to gauge the market demand for technology similar to the infringing technology, as long as the competitor makes clear that it will not purposefully commercialize infringing technology. Competitors will generally need knowledge of market demand before deciding whether to invest resources in developing design-around technology. If competitors cannot gauge market demand, they will forego investing in design-around technology and society will be worse off.[163]

To break this impasse, the law should be clear that a competitor cannot promote infringing technology, but should allow a competitor to tell the market, in effect, "we hope to create technology that does not infringe but that accomplishes the same result as the patented technology." As long as the competitor is clear that it has no intent to offer infringing technology, the law should permit it to gauge marketability without having to spell out the details of its (yet-to-be-developed) design-around technology.

It is true that even where a competitor is clear that it intends to develop non-infringing (design-around) technology, such market testing may sometimes cause price erosion. Suppose for example that the competitor is a company known for its ingenuity and ability to design around patented technology. Such a company's mere announcement that it intends to design-around a patent may lead the market to believe the item is forthcoming and thus lower the price the patentee can charge. Even so, such price erosion should not be actionable

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'design around' a competitor's [patented] products, . . . thus bringing a steady flow of innovations to the marketplace.").

161. *See, e.g.*, Matthew J. Conigliaro et al., *Foreseeability in Patent Law*, 16 BERKELEY TECH. L.J. 1045, 1050 (2001) ("[T]hose who invent new devices by intentionally designing around a patent nonetheless advance the public welfare and fulfill the purpose of the Patent Clause."); Christopher A. Cotropia & Mark A. Lemley, *Copying in Patent Law*, 87 N.C. L. REV. 1421, 1434 (2009); Timothy R. Holbrook, *Possession in Patent Law*, 59 S.M.U. L. REV. 123 (2006); Paul N. Katz & Robert R. Riddle, *Designing Around A United States Patent*, 45 S. TEX. L. REV. 647 (2004).

162. *See* Holbrook, *Threat of a Sale*, *supra* note 4, at 779 ("An overly broad definition of offer to sell infringement could have a chilling effect on competitors, particularly attempts to design around the patent. If something short of a commercial offer could constitute infringement, a competitor's ability to assess the marketability of a device would be limited and would risk earlier exposure to an infringement suit.").

163. Note that defining "offer" so broadly as to preclude market assessment might impermissibly restrict free speech. *See infra* note 192 and accompanying text.

because the harm to the patentee is not from an expected infringement, but rather from an expected non-infringing activity.

All of this may seem overly complex to those unfamiliar with patent law. One might wonder: if the competitor's technology is going to be non-infringing, then it should not matter whether the competitor "offers" it for sale—exposure to liability will depend on whether the device infringes or not. In essence, this discussion might appear to conflate the issue of offer with the issue of infringement. The conflation of offer and infringement is justifiable, however, because despite competitors' desire to predict accurately whether their technology will infringe, they find predicting infringement difficult.[164]

To develop non-infringing technology, the competitor must guess how a court will construe a patent's claims and then determine a technological solution that avoids the claims while delivering the same or a similar result.[165] But construing patent claims is famously difficult.[166] The ex ante uncertainty regarding whether a given technology infringes a patent's claims can be heightened by the unpredictable application of the doctrine of equivalents, which states that even if the accused technology does not literally meet the requirements of the patent claims, it may be "equivalent."[167] To make matters worse, the law regarding the doctrine of equivalents is in a state of flux.[168]

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164. *See, e.g.*, Knorr-Bremse Systeme Fuer Nutzfahrzeuge GmbH v. Dana Corp., 383 F.3d 1337, 1351 (Fed. Cir. 2004) (Dyk, J., concurring in part and dissenting in part) (stating that patent law is an area "where ultimate outcomes are difficult to predict"); Colleen V. Chien, *Predicting Patent Litigation*, 90 TEX. L. REV. 283, 285 (2011) ("It is popular to characterize patent litigation as uncertain and unpredictable.").

165. Literal infringement of a patent claim requires that the accused technology contain each and every limitation of the patent claim. *E.g.*, Enercon GmbH v. ITC, 151 F.3d 1376, 1384 (Fed. Cir. 1998).

166. The test for infringement, while easily stated, masks great uncertainty in part because the metes and bounds of each patent claim are not known until a court construes them, a process that is notoriously unpredictable. *See, e.g.*, Kimberly A. Moore, Markman *Eight Years Later: Is Claim Construction More Predictable?*, 9 LEWIS & CLARK L. REV. 231, 233 (2005) (reporting the reversal rate for appealed claim terms from 1996 to 2003 was 34.5%); Kimberly A. Moore, *Are District Court Judges Equipped To Resolve Patent Cases?*, 15 HARV. J.L. & TECH. 1, 2 (2001) ("[D]istrict court judges improperly construe patent claim terms in 33% of the cases appealed to the Federal Circuit."); David L. Schwartz, *Practice Makes Perfect? An Empirical Study of Claim Construction Reversal Rates in Patent Cases*, 107 MICH. L. REV. 223 (2008).

167. Under the doctrine of equivalents, the "scope of a patent is not limited to its literal terms but instead embraces all equivalents to the claims described" to prevent competitors from avoiding infringement by making unimportant and insubstantial differences to their technology. Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., 535 U.S. 722, 732 (2002). The doctrine of equivalents "renders the scope of patents less certain." *Id.*

168. Commentators have explored the doctrine of equivalents at length. *See, e.g.*, John R. Allison & Mark A. Lemley, *The (Unnoticed) Demise of the Doctrine of Equivalents*, 59 STAN. L. REV. 955, 962-63 (2007); Paul R. Michel, *The Role and Responsibility of Patent Attorneys in Improving the Doctrine of Equivalents*, 40 IDEA 123, 123 (2000); Lee Petherbridge, *On the Decline of the Doctrine of Equivalents*, 31 CARDOZO L. REV. 1371 (2010); R. Polk Wagner, *Reconsidering Estoppel: Patent Administration and the Failure of*

Because the issue of infringement is unpredictable, competitors should be free to explore the marketability of competing technology without exposure to patent infringement lawsuits. The law can give this freedom by defining an offer so as to exclude market-testing activity by competitors as long as it makes clear it intends to develop a non-infringing design-around. This will give competitors some breathing room to explore the market without generating expensive litigation. Only if the market indicates a receptiveness to design-around technology will the competitor need to decide whether to invest in trying to develop specific designs. By permitting relatively inexpensive market testing, the law allows competitors to devote more resources to developing the actual design-around technology.

The protection of early-stage market testing should cease, however, when the competitor indicates a present intent to commercialize a specific design. Once the competitor attempts to commercialize a specific design (as opposed to a generic and yet-to-be-developed design-around design), it should be open to an infringement suit that considers the specific design being commercialized.

By exposing the competitor to patent infringement liability, the law will protect the patentee from price erosion and will force the competitor to think hard before commercializing a specific design. Before the competitor commercializes the specific design-around technology, it should wisely expend resources analyzing the patent to determine (as best it can) whether its design will infringe or not. Depending on its infringement analysis, the competitor may decide to further tweak its design to avoid infringement or to give up on the design-around and approach the patentee for a license. But all this will be done before advertisement-based price erosion harms the patentee.

In summary, to encourage beneficial design-around technology, the law should define an offer to permit free but careful assessment of the market for design-around technology without fear of litigation. This will allow more resources first to assess the market and later to attempt to develop the specific design-around. Only if and after the competitor develops specific designs should it incur the costs of ascertaining the threat of patent infringement liability. But to be fair to the patentee, the competitor should be exposed to patent infringement liability once it commercializes one or more specific designs. The law can accomplish all these objectives while including "advertisements" and other "promotions" within the definition of an infringing offer.

V. EFFECTS FARTHER AFIELD

This Section briefly highlights a few more impacts of including advertisement and promotions in § 271(a)'s definition of an offer to emphasize

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Festo, 151 U. PA. L. REV. 159, 234-37 (2002).

the numerous downstream consequences of the law change.[169]

A. *Possible Liability for Third Party Intermediaries Such As Advertising Agencies*

Making the action of running an advertisement an act of infringement raises a question of who is liable for the advertisement (assuming it infringes). For simplicity, I identify two potential actors: the technology company that will eventually sell the technology and the advertising agency that helps design and distribute the advertisement.[170] In a basic scenario, the technology company will hire the advertising agency, but the technology company will supply the technical information included in the advertisement. Should only the technology be liable for patent infringement? Only the advertising agency? Or both?

If one defines the act of advertising to constitute infringement, an advertising agency would literally be liable as an infringer, just as a third party distributor is liable for "selling" items on behalf of a wholesaler. This would obviously be an unfortunate situation for advertisers, because direct infringement does not require intent or knowledge.[171] While advertising intermediaries could contract for indemnification against infringement, I think the better solution is to define the infringing "advertiser" exclusively as the underlying technology company that requests the advertisement. Holding advertising agencies and other intermediaries liable would either dramatically chill or significantly increase the costs of advertising for all technology, since the intermediary cannot be sure in advance what might infringe. To avoid these costs, advertising intermediaries should be exempt from direct infringement for advertisements created for or designed on behalf of third parties.

In addition to direct infringement, patent law imposes liability for inducing infringement and contributory infringement.[172] Outside the patent law context, contributory infringement has a broader definition,[173] but Congress defined contributory infringement in patent law narrowly to involve the supply of a

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169. The potential effects are legion. Broadening the definition of an "offer" under § 271(a) to include advertisements might cause a similar broadening of the definition of "on sale" under 35 U.S.C. § 102(b) (2012) (superseded by 35 U.S.C. § 102(a)(1) (effective Mar. 16, 2013)), setting off a whole new set of ripple effects.

170. Of course, a company may design and distribute its own advertisement without using an agency. In addition, more than one intermediary may be involved, for example a magazine publisher or an Internet service provider. My conclusions regarding the advertising agency would apply generally to other intermediaries.

171. Global-Tech Appliances, Inc. v. SEB S.A., 131 S. Ct. 2060, 2068 (2011).

172. 35 U.S.C. §§ 271(b)-(c) (2012).

173. *See* Alfred C. Yen, *Torts and the Construction of Inducement and Contributory Liability in* Amazon *and* Visa, 32 COLUM. J.L. & ARTS 513, 513 (2009) ("Contributory liability [traditionally] applied if a defendant had knowledge of infringement by another and materially contributed to the infringement.").

component or other product that can be used to infringe a patent.[174] Advertising agencies do not supply components so they will not be liable as contributory infringers. This may be a good thing for advertisers and other intermediaries who are often accused of contributory infringement under trademark and copyright law.[175]

Induced infringement, unlike direct infringement, requires the accused inducer to have knowledge that the induced acts constitute patent infringement.[176] Knowledge can include direct knowledge of infringement or "willful blindness," which the Supreme Court defines as having two requirements: "(1) the defendant must subjectively believe that there is a high probability that a fact exists and (2) the defendant must take deliberate actions to avoid learning of that fact."[177] Hence, under an inducement theory, an advertising agency might be liable if it knew or was willfully blind to the fact that the advertisement it ran constituted infringement.

In addition to the knowledge requirement, induced infringement requires "inducement." Although in common terminology inducement means to cause a person to do something he otherwise would not have done, it is not clear that patent law's definition is so narrow.[178] It is possible, though not clear, that "inducing" might include anything a defendant does to help a third party infringe.[179] If courts understand "inducement" under the broadest definition, advertising agencies could be liable because they literally help the infringement. But under any narrower definition, an advertising agency is unlikely to be liable even if it knew of the infringement, because advertising agencies are unlikely to *attempt* to get others to infringe. Though neither the Supreme Court nor the Federal Circuit has settled this issue, the most recent en banc Federal Circuit opinion on the issue indicates that "inducement" connotes a situation where a third party advises or encourages others to engage in infringing conduct.[180] If this is true, advertising agencies and other third party

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174. 35 U.S.C. § 271(c) ("Whoever offers to sell or sells within the United States or imports into the United States a component of a patented machine, manufacture, combination or composition, or a material or apparatus for use in practicing a patented process, constituting a material part of the invention, knowing the same to be especially made or especially adapted for use in an infringement of such patent, and not a staple article or commodity of commerce suitable for substantial noninfringing use, shall be liable as a contributory infringer.").

175. *See, e.g.*, Ellison v. Robertson, 357 F.3d 1072, 1077-1079 (9th Cir. 2004) (copyright case involving an Internet service provider); Tiffany, Inc. v. eBay, Inc., 576 F. Supp. 2d 463, 501-18 (S.D.N.Y. 2008) (trademark case involving an online retailer); Gillette Co. v. Wilkinson Sword, Inc., 795 F. Supp. 662, 663-65 (S.D.N.Y. 1992) (Lanham Act false advertising case involving an advertising agency).

176. *Global-Tech Appliances*, 131 S. Ct. at 2068.

177. *Id.* at 2068-71.

178. Mark A. Lemley, *Inducing Patent Infringement*, 39 U.C. DAVIS L. REV. 225, 228-29 (2005).

179. *Id.* at 229.

180. *See* Akamai Techs., Inc. v. Limelight Networks, Inc., 692 F.3d 1301, 1307 (Fed.

intermediaries can breathe easier.

B. *Increased Incentives to Innovate*

Including advertisements within the definition of an offer may increase net incentives to innovate. As we have seen, advertisements of infringing technology can lead to price erosion, thus harming patentees.[181] Under the current standard of an offer under § 271(a), patentees have no remedy against advertisement-induced price erosion.[182] Patent theory suggests that the more patent holders can profit from their patents (including by suing infringers), the more incentive and ability they have to innovate and commercialize their technology.[183]

Because patentees currently have no remedy for the harm of advertisement-induced price erosion, they profit less than they would under a broader definition of an offer. Accordingly, people and businesses will innovate and commercialize less than if they could seek a remedy for advertisement-induced price erosion. I do not mean to suggest that broadening the definition of an offer to include advertisements will result in a dramatic increase in incentives to innovate or commercialize technology. Rather, the effect is at the margins.

C. *First Amendment Concerns from Regulating Commercial Speech*

The First Amendment protects commercial speech that "does no more than propose a commercial transaction."[184] Contract-law offers and advertisements are forms of commercial speech, and thus this Subpart analyzes how the First Amendment impacts the definition of an offer under § 271(a).

Traditionally, the First Amendment did not protect commercial speech but rather focused on other forms of speech such as political speech.[185] Beginning in the mid-1970s, however, the Supreme Court began to protect commercial speech, noting that the free flow of commercial information is "indispensable" to the public so that its private economic decisions in a free enterprise economy

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Cir. 2012) ("[S]ection 271(b) extends liability to a party who advises, encourages, or otherwise induces others to engage in infringing conduct . . . ."). Of course, the phrase "otherwise induces" renders the meaning uncertain, but the doctrine of *noscitur a sociis* ("it is known by its associates") suggests that "induces" connotes advisement and encouragement.

181. *Supra* notes 137-138 and accompanying text.

182. *See supra* note 33 and accompanying text.

183. *E.g.*, F. Scott Kieff, *Property Rights and Property Rules for Commercializing Inventions*, 85 MINN. L. REV. 697, 707-12 (2001).

184. Va. State Bd. of Pharmacy v. Va. Citizens Consumer Council, Inc., 425 U.S. 748, 776 (1976).

185. *See, e.g.*, Valentine v. Chrestensen, 316 U.S. 52, 54 (1942) ("We are equally clear that the Constitution imposes no such restraint on government as respects purely commercial advertising.").

will be "intelligent and well informed."[186]

1. *Restricting the Definition of an Offer*

While the First Amendment may generally protect commercial speech, it does not prevent Congress from outlawing advertisements of infringing technology. The First Amendment does not protect commercial speech that advertises illegal activities.[187] Because patent law makes "selling" a device that infringes a patent an unlawful act,[188] an advertisement or other offer to sell an infringing device is an advertisement/offer for an illegal activity;[189] thus, the advertisement/offer is not protected by the First Amendment.[190] This is true whether one defines an offer as a formal, contract-law offer or as an advertisement/promotion, because both generally constitute commercial speech that does no more than propose a commercial transaction.[191] Broadening the definition of an offer to include advertisements and promotions would obviously increase the amount of protected speech, but it would not run afoul of the First Amendment.

Importantly, however, the First Amendment might limit how broadly courts can interpret the term "offer." Courts could not define an offer to sell so

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186. *Va. State Bd. of Pharmacy*, 425 U.S. at 765.

187. *Id.* at 770-72 (listing categories of commercial speech regulation that "are surely permissible," including regulating "advertisements [that] are themselves illegal in any way."); Cent. Hudson Gas & Elec. Corp. v. Pub. Serv. Comm'n of N.Y., 447 U.S. 557, 563-64 (1980) ("The government may ban . . . commercial speech related to illegal activity . . . .") (citations omitted); *Cent. Hudson*, 447 U.S. at 566 ("For commercial speech to [be protected by the First Amendment], it at least must concern lawful activity . . . .").

188. 35 U.S.C. § 271(a) (2012) ("[W]hoever without authority . . . sells any patented invention, within the United States, . . . during the term of the patent therefor, infringes the patent.").

189. There is one scenario where a court might have the power to restrain the "offer" but not the "sale," and that is when an "offer" is made in the United States, but the eventual sale would be consummated outside of the United States. If such an offer were held to infringe, it would not be an offer for illegal activity, and the restriction would need to be analyzed under the Supreme Court's commercial speech test set forth in *Central Hudson*. The most recent Federal Circuit interpretation of infringement for an "offer to sell," however, found that offers in the United States for sales abroad would not infringe; rather, offers made abroad for sales that would be in the United States do infringe. *See* Transocean Offshore Deepwater Drilling, Inc. v. Maersk Contractors USA, Inc., 617 F.3d 1296, 1309 (Fed. Cir. 2010) ("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.").

190. *See* Andrew Beckerman-Rodau, *Prior Restraints and Intellectual Property: The Clash Between Intellectual Property and the First Amendment from an Economic Perspective*, 12 FORDHAM INTELL. PROP. MEDIA & ENT. L.J. 1, 36 (2001); Mark A. Lemley & Eugene Volokh, *Freedom of Speech and Injunctions in Intellectual Property Cases*, 48 DUKE L.J. 147, 234 (1998).

191. *See* Bolger v. Youngs Drug Products Corp., 463 U.S. 60, 66 (1983) (noting that the "core notion of commercial speech" is "speech which does no more than propose a commercial transaction") (quotations and citations omitted).

broadly as to include mere market investigation (*e.g*., to discern whether to take a license from the patentee or to try to design around the patent), because such speech is far removed from selling an infringing device.[192]

2. *Restricting Preliminary Restraints*

In addition to restrictions on the definition of an offer, the First Amendment may also restrict whether and to what extent courts can preliminarily *enjoin* offers to sell allegedly infringing devices. Preliminary injunctions[193] against offers and advertisements constitute a "prior restraint" on speech, which is defined as a "governmental restriction on speech or publication before its actual expression."[194] The First Amendment strongly disfavors prior restraints.[195] It is not that speech can never be restrained before its utterance, but the presumption against prior restraint is most forceful when, as in the case of preliminary relief, the law abridges "expression prior to a full and fair determination of the constitutionally protected nature of the expression by an independent judicial forum."[196] As Professor Redish argues, a full and fair judicial assessment of the accused speech is the touchstone for whether restraint is permissible.[197]

In patent law, preliminary restraints against offers to sell allegedly infringing devices implicate prior restraint concerns: not only must a court make a determination that the speech is commercial (likely an easy determination), but also it must determine that the offer is to sell a device that *is actually infringing*. As discussed above, determining infringement is extremely difficult; it often involves ambitious study of the technology involved, the patent's claims, the patent's validity, and an analysis of whether the accused device infringes under the doctrine of equivalents.[198] If the device offered for sale does not infringe the patent, then no justification for restraining the speech exists. Yet in many cases a court is not likely to know whether the device

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192. Hence, it happens by chance that First Amendment concerns suggest a definition of offer that is consistent with the definition that would encourage design-around technology: one that permits investigation into market conditions. *See supra* notes 162-163 and accompanying text.

193. This Article refers to "preliminary injunctions," but the analysis is the same for temporary restraining orders. Permanent injunctions do not raise the same concern because at that stage a court can adequately assess all infringement aspects as discussed *infra* note 197 and accompanying text.

194. BLACK'S LAW DICTIONARY 1833 (9th ed. 2009).

195. *E.g.*, Org. for a Better Austin v. Keefe, 402 U.S. 415, 419 (1971) ("Any prior restraint on expression comes to this Court with a 'heavy presumption' against its constitutional validity.") (citations omitted).

196. Martin H. Redish, *The Proper Role of the Prior Restraint Doctrine in First Amendment Theory*, 70 VA. L. REV. 53, 57 (1984).

197. *See generally id.*; *see also* Lemley & Volokh, *supra* note 190, at 169-98 (analyzing the First Amendment's implications for preliminary relief in the copyright context).

198. *See supra* notes 164-168 and accompanying text.

infringes until it has devoted much time to the inquiry, making preliminary injunctions against offers to sell infringing devices suspect under the First Amendment.[199]

While the constitutional arguments against preliminary restrictions of offers to sell infringing devices suggest courts should be cautious in granting them, some have suggested that they may have little practical impact: Professors Lemley and Volokh argue that because patent law makes "selling" an infringing device an act of infringement, and "selling" is not speech and thus not protected by the First Amendment, a court could enjoin the sale of the device, making many offers for sale futile.[200] This is generally true, but it ignores the potential harm from price erosion.[201]

3. *Conclusion*

In conclusion, the First Amendment will prevent courts or Congress from defining the term "offer" so broadly as to include mere market investigations, but will not prevent a definition that includes advertisements and similar promotions. In addition, at the margins, the First Amendment will prevent a court from preliminarily restricting an advertisement or other offer unless and until the court determines whether the device offered actually infringes the patent.

SUMMARY OF PROPOSALS AND CONCLUSIONS

This Article has demonstrated how a relatively small change in the law—broadening the definition of an "offer" in § 271(a) of the Patent Act—can have far-reaching effects. The change will lead to more and earlier patent litigation (Part II), more extraterritorial application of U.S. patent law (Part III), a need for clear boundaries for the new definition of an offer (Part IV), and additional ripple effects such as third-party liability and free speech concerns (Part V).

In addition to exploring these effects carefully, this Article demonstrated how courts should manage the change by providing an optimal definition of an offer and a test for when such offers should bring about liability in the United States. Thus, for example, an "offer" should include advertisements and smaller-scale promotions, but should not include mere market investigations that make clear the investigating company will not commercialize an infringing

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199. *See* Beckerman-Rodau, *supra* note 190, at 34-39; Lemley & Volokh, *supra* note 190, at 234.

200. Lemley & Volokh, *supra* note 190, at 234. *But see supra* notes 53-55 and accompanying text (noting that the location of the offer is not determinative).

201. *See supra* notes 138-139 and accompanying text (discussing price erosion). A fully informed market would likely not react with downward price pressure based on an advertisement where the future sale was impossible (enjoined). But in some circumstances at least, the market will not be perfectly informed.

device.[202] Further, the test for what constitutes advertisements and promotions should be guided by an "objective commercialization" test, which asks not whether the promotion is sent to a certain number of people, but rather whether it would appear to a reasonable person as an attempt to commercialize infringing technology.[203] These tests protect a U.S. patent holder from price erosion without needlessly chilling the development of design-around technology[204] and without violating the First Amendment.[205]

To address concerns about unfair applications of U.S. patent law to foreign actors (e.g., non-U.S. persons advertising infringing technology), this Article recommends a multi-factor "total context test," which considers mainly objective indicia of whether the advertisement contemplates future sales in the United States.[206] Additionally, this Article recommends that courts utilize personal jurisdiction doctrines to limit unfair extraterritorial applications of the law.[207]

Taken together, these recommendations allow the law governing infringing offers to sell to fulfill its primary policy objective, which is preventing commercialization of infringing technology to the commercial detriment of the patentee,[208] without unnecessarily trampling on other rights or policies.

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202. Part IV.

203. Part IV.B.

204. Part IV.C.

205. Part V.C.

206. Part III.A.

207. Part III.B.

208. Transocean Offshore Deepwater Drilling, Inc. v. Maersk Contractors USA, Inc., 617 F.3d 1296, 1309 (Fed. Cir. 2010) (quoting 3D Sys., Inc. v. Aarotech Labs., Inc., 160 F.3d 1373, 1379 (Fed. Cir. 1998)).