THE PATENT AMBUSH: MISUSE OR *CAVEAT EMPTOR*?

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I. INTRODUCTION

Since the mid-1990s, patent owners have been scrutinized for what has been asserted as a new kind of antitrust claim: the "patent ambush."[1] The patent ambush, a particular iteration of the patent holdup problem,[2] is said to occur

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1 The earliest action predicated on the underlying theory was brought in 1996, but the earliest published use of the phrase itself, in the context of the conduct described, was in 1998 – in an article coauthored by two members of the Federal Trade Commission. William J. Baer & David A. Balto, *Antitrust Enforcement and High-Technology Markets*, 5 MICH. TELECOMM. & TECH. L. REV. 73, 82 (1998) ("If Dell had provided information on its patent claim up front, the participants could have made an informed choice on using the Dell technology. Because Dell instead resorted to its *patent ambush*, its actions were anticompetitive.") (emphasis added). The appellation has garnered some academic attention. *See, e.g.*, Thomas A. Hemphill, *Technology Standards Development, Patent Ambush, and US Antitrust Policy*, 27 TECH. SOC'Y 55, 56–57 (2005); Gil Ohana, Marc Hansen, & Omar Shah, *Disclosure and Negotiation of Licensing Terms Prior to Adoption of Industry Standards: Preventing Another Patent Ambush?*, 24 EUR. COMPETITION L. REV. 644, 645 (2003). Merges and Kuhn rather uncharitably designate the practitioner of the non-disclosure of technology under consideration by a standard-setting organization as a "snake-in-the-grass." Robert P. Merges & Jeffrey Kuhn, *An Estoppel Doctrine for Patented Standards*, 97 CALIF. L. REV. 1, 1 (2009). Joel Poppen, Deputy General Counsel for Micron Technologies, Inc., one of the original defendants in the *Rambus* cases discussed *infra* in Section III.E., referred to another common aspect of the tactic—amending a pending patent to encompass the standard under consideration—as "patent stalking." *Perspectives on Patents: Hearing Before the Subcomm. on Intellectual Property of the S. Comm. on the Judiciary*, 109th Cong. 156 (2005) (statement of Joel Poppen, Deputy General Counsel, Micron Technologies, Inc.).

2 *See* U.S. DEP'T OF JUSTICE & FED. TRADE COMM'N, ANTITRUST ENFORCEMENT AND INTELLECTUAL PROPERTY RIGHTS: PROMOTING INNOVATION AND COMPETITION, 35–53 (2007)

where a patent owner participates in the decision of a Standard Setting Organization ("SSO") to adopt a particular technology, while failing to disclose its ownership of patents governing that technology.[3] Once the standard has been adopted and SSO members and their constituents have adjusted their production to conform to the standard—or consumers have become comfortable with that standard—the patent owner asserts the patent and demands licensing fees far higher than the patent owner could have achieved had it sought to negotiate for a licensing fee prior to the adoption of the standard.[4] Such a practice stands to make the patent owner very wealthy,[5] but it will also lead to the SSO members understandably feeling slighted and forced to accept less revenue from their own products. For this reason, and because the ability to deny access to the standard itself is likely to grant the patent owner a measure of control over the market for the technology at issue, the practice has been raised as a possible violation of the antitrust laws.[6] If it were an antitrust violation, this would constitute patent misuse,[7] rendering the patent unenforceable.[8]

[hereinafter DOJ/FTC REPORT], *available at* http://www.ftc.gov/reports/innovation/P040101PromotingInnovationand Competitionrpt0704.pdf (discussing "the potential for 'hold up' by the owner of patented technology after its technology has been chosen by the [Standard Setting Organization] as a standard . . . ."). The report, as with other sources using that term, is unclear about the exact sense that the term "hold up" is intended to convey. Applicable senses of "hold up" include to "[t]o obstruct or delay" and, with a much more sinister connotation, "[t]o rob while armed, often at gunpoint." THE AMERICAN HERITAGE DICTIONARY OF THE ENGLISH LANGUAGE 837 (4th ed. 2000). The latter definition seems more consonant with the violent image brought to mind by the phrase, "patent ambush."

3 *See* AMERICAN BAR ASSOCIATION, HANDBOOK ON THE ANTITRUST ASPECTS OF STANDARDS SETTING 60 (2005) [hereinafter ABA HANDBOOK]; DOJ/FTC REPORT, *supra* note 2, at 43.

4 DOJ/FTC REPORT, *supra* note 2, at 37–38; Daniel G. Swanson & William J. Baumol, *Reasonable and Nondiscriminatory (RAND) Royalties, Standards Selection, and Control of Market Power*, 73 ANTITRUST L.J. 1, 5, 10–11 (2005).

5 *See* Joseph Kattan, *Disclosures and Commitments to Standard-Setting Organizations*, 16 ANTITRUST 22, 23 (2002). This is, of course, only one possibility. The SSO members may still change their standard, they may successfully challenge the patent, or they may be driven out of business, with no revenues directed to anyone. *See infra* Section II.B.

6 *See* Rambus, Inc. v. FTC, 522 F.3d 456, 461 (D.C. Cir. 2008); Research in Motion Ltd. v. Motorola, Inc., 644 F. Supp. 2d 788, 793 (N.D. Tex. 2008); *In re* Union Oil Co. of Cal., 140 F.T.C. 123, 126–27 (2005); *In re* Dell Computer Corp., 121 F.T.C. 616, *2–*5 (1996).

7 Dawson Chem. Co. v. Rohm & Haas Co., 448 U.S. 176, 180 (1980) (delineating the line between misuse by the patentee and contributory infringement by the alleged infringer, and discussing the idea that "a patentee should be denied relief against infringers if he has attempted illegally to extend the scope of his patent monopoly."); MARTIN J. ADELMAN ET AL., CASES AND MATERIALS ON PATENT LAW 1078–79 (2d ed. 2003) [hereinafter, ADELMAN PATENT LAW]. *See also* Martin J. Adelman, *The New World of Patents Created by the*

However, two considerations should prevent this combination of elements from raising an antitrust claim. First, in the types of standard-setting environments where a patent ambush is possible, it is the establishment of the standard itself—an activity which has been deemed generally permissible[9]—which creates the risk of vesting a monopoly in the owner of patents in the anointed technology. The successful execution of a patent ambush strategy diminishes competition no more than the diminishment that would be effected by assertion of a patent by a party which was completely removed from the standard-setting process, or even entirely unaware of it until after the fact. Second, "ambush" by an SSO member is a circumstance from which the allegedly injured parties, the other SSO members who adopted the technology, could have easily inoculated themselves through means less drastic and more predictable than the invocation of federal antitrust law. Other doctrines, such as estoppel,[10] implied license,[11] or even contract claims[12] may be deemed to inure to the benefit of SSO members that establish the procedures that will set up such defenses. Thus, no antitrust claim should survive on the facts of even the most blatant patent ambush scenario.

Court of Appeals for the Federal Circuit, 20 U. MICH. J.L. REFORM 979, 1003–04 (1987) [hereinafter, Adelman, *New World*] (stating that the doctrine of misuse "provides a special penalty for the commission of misuse: An infringer, by proving substantive misuse, can obtain a royalty-free license, even when unaffected by such misuse"); Mark A. Lemley, *Irrationality of the Patent Misuse Doctrine*, 78 CALIF. L. REV. 1599, 1610 (1990) ("since there is no requirement that the misuse have harmed the infringer using the defense, the patent misuse doctrine benefits any infringer whose patentee has committed misuse.").

8 *See infra* Section II.C.3.

9 *See infra* Section II.A.

10 *See* Merges & Kuhn, *supra* note 1, at 4 (arguing for establishment of a new "standards estoppel," which would apply in precisely this situation).

11 An implied license theory prevailed in *Wang Labs., Inc. v. Mitsubishi Elecs. Am., Inc.*, 103 F.3d 1571, 1582 (Fed. Cir. 1997), discussed subsequently in notes 118–128 and accompanying text. Wang's representations to the SSO discussed in that litigation were apparently given significant consideration by the court, although they were not the basis for the license thus implied.

12 *See generally* Joseph S. Miller, *Standard Setting, Patents, and Access Lock-In: RAND Licensing and the Theory of the Firm*, 40 IND. L. REV. 351, 376 (2007) (suggesting that the RAND licensing terms favored by SSOs can effectively bar a patent owner from seeking injunctive relief of exceptional damages, even though they may be unhelpful in determining the appropriate licensing fees).

II. THE PLAYING FIELD OF INVENTION AND ANTITRUST

A. Industry Standards and Standard Setting Organizations

Industry standards serve the valuable function of preventing conflicts arising from incompatibility.[13] A simple illustration is the light bulbs manufactured by some firms that fit into the sockets of electric lamps made by other firms—if the lamp makers made their sockets smaller than the bulb-makers made their bulbs, neither product would be of any particular use. Lamps that require bulbs of unusual sizes impose on consumers a higher cost of finding compatible bulbs, and create a concern about their future availability. The bulbs themselves are likely to be more expensive because each manufacturer can count on selling a smaller number, thus having less revenue to spread across fixed costs of operation. Absent some remarkable advantage, both the bulbs and the lamps are likely to do poorly in the market.

The advent of standards is surprisingly recent,[14] but standards have come or will come to exist in almost every industry, irrespective of whether they are set by concerted action.[15] If no organizing activity takes place, then the market will establish them, as companies "vigorously compete in a winner-take-all standards war to establish their own technology as the de facto standard."[16] Where the product that is central to the standard is one for which other manufacturers can make compatible peripheral products, the alignment of consumers with a preferred configuration will drive the makers of those peripheral products to accommodate the preferred configuration. This promotes network effects: the enhanced utility of a family of products due to increased consumer use of any member of the family.[17]

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13 DOJ/FTC REPORT, *supra* note 2, at 33; ABA HANDBOOK, *supra* note 3, at 2.

14 *See* Matthew J. Duane, *For the People and by the People: A New Proposal for Defining Industry Standards in Computer Software*, 7 WAKE FOREST INTELL. PROP. L.J. 95, 97 (2006) (citing *The Fortune of the Commons*, THE ECONOMIST, May 8, 2003, at 13) (stating with respect to the first goods for which standards were instituted that "until the late nineteenth century such standards never existed; instead, all screws, nuts, and bolts were custom-made and, probably to ensure repeat business, incompatible with others.").

15 ABA HANDBOOK, *supra* note 3, at 1.

16 DOJ/FTC REPORT, *supra* note 2, at 34.

17 ABA HANDBOOK, *supra* note 3, at 12–13; Herbert Hovenkamp, *Standards Ownership and Competition Policy*, 47 B.C. L. Rev. 87, 88–89 (2007). An excellent example of network effects in action is the telephone. If only one person owns a telephone, it is useless. If two people own a telephone, each can call only the other, which may be useless to both if they have nothing to talk about. If a million people each own a telephone, chances are that each owner will have at least one corresponding owner for whom the efficiency of contacting by

Although free-market competition would seem to be the most natural means by which a prevailing standard would be chosen, this approach presents significant drawbacks not only for competitors, but for consumers as well. The paradigmatic example is the fight for market supremacy between VHS and Betamax, two different and incompatible formats[18] used in the early days of recorded video cassettes.[19] The cost of making devices able to read both formats was prohibitive, and consumers had to choose a machine accommodating one format or the other. The peripheral goods most directly associated with the machines were the video recordings themselves.[20] Like the consumers, the makers of these peripherals had to weigh the cost of producing media in a particular format against the possibility that consumers would choose the other, thus dissolving the value of the investment in production. Ultimately the VHS format prevailed in the marketplace,[21] leaving consumers who had purchased Betamax systems with an obsolete technology for which they could no longer obtain new media, as it had become unprofitable for the manufacturers of that media to produce it for a shrinking market.

Betamax purchasers were not the only losers, however. Some consumers were savvy enough to realize that they might choose the losing format, and instead chose to sit out the purchase until the standard had been resolved. These consumers lost the benefit of enjoying the technology during this period of resolution, and the entire industry was retarded to the degree that potential consum-

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telephone outweighs the cost of the device. For every additional consumer who acquires a telephone, an incentive is created for several additional consumers to acquire one. When large numbers of consumers own telephones, the market is thereby stimulated for the development and manufacture of headsets, answering machines, and even such mundane appliances as outlet splitters and brackets for mounting a telephone on a wall. The ABA HANDBOOK uses the example of the fax machine, but modern technology allows a fax machine to be useful to a single person, while others send or receive faxes by computer.

18 *See* Penina Michlin, *The Broadcast Flag and the Scope of the FCC's Ancillary Jurisdiction: Protecting the Digital Futur*e, 20 BERKELEY TECH. L.J. 907, 929 ("The average consumer is not particularly distraught that she cannot play records on DVD players or that Betamax videos will not play on VHS tape players."); Jessica Litman, *Copyright and Personal Copying:* Sony v. Universal Studios *Twenty-One Years Later: The Sony Paradox*, 55 CASE W. RES. L. REV 917, 948 (2005) ("The Sony Betamax itself was soon superseded by a videorecorder using the different, and incompatible, VHS format.").

19 *See generally* Litman, *supra* note 18, at 948.

20 Other peripheral goods existed, notably devices designed to clean one machine or the other, or to rewind the tapes separately so that one tape could be rewound while the next was viewed or recorded.

21 Litman, *supra* note 18, at 948.

ers withheld their money while awaiting an outcome.[22] To avoid this waste and delay, some process must be arrived at where standards can be set without awaiting the results of a marketplace battle. One option is to have government-established standards,[23] which are particularly likely to arise where the technology at issue is required to conform with criteria established to protect public health or safety, or where the government is intended to be the primary customer for the technology—for example, military hardware.[24]

Companies dealing in a particular area of commerce may form an SSO, a kind of trade organization that operates within that area and, as the name suggests, establishes standards with respect to the technology within that area. In these SSOs, competitors in an industry sit down together to come up with standards that dispose of these issues before they reach consumers.[25] At one time, this sort of collusion itself raised antitrust concerns. The Supreme Court's first statement on these types of trade organizations was a condemnation in *American Column & Lumber Co. v. United States*.[26] The Court was initially hostile to the idea of competitors sharing information because it felt that this could result in unspoken price-fixing agreements.[27] However, the Court shortly came around to

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22 Alastair Jamieson, *Why Blu-ray is the New Black in High-Tech Homes*, THE SCOTSMAN, Feb. 19, 2008, at 10 ("The lesson from the Betamax versus VHS battle was that a protracted fight simply slows down the process of introducing new technology to the marketplace. Consumers have been waiting rather than buying.").

23 ABA HANDBOOK, *supra* note 3, at 4.

24 *Id.* ("[B]y 1991, the Department of Defense had adopted over five thousand private voluntary consensus standards."); Stacy Baird, *The Government at the Standards Bazaar*, 18 STAN. L. & POL'Y REV. 35, 35–36 (2007) (proposing categories of governmental interest which should guide the willingness of government to impose standards).

25 DOJ/FTC REPORT, *supra* note 2, at 33.

26 257 U.S. 377, 410–11 (1921); *see* Hovenkamp, *supra* note 17, at 88.

> The U.S. Supreme Court's first antitrust decision on the merits involved a joint running arrangement among railroads that included a significant standard-setting component. The Court condemned the arrangement as nothing more than a cartel, ignoring the lower courts' conclusions that the agreement was intended primarily to coordinate schedules and standardize freight classifications, cargo transfer protocols, and the like.

Id. (citing United States v. Trans-Mo. Freight Ass'n, 58 F. 58, 79–80 (8th Cir. 1893), *rev'd*, 166 U.S. 290 (1897)).

27 *Id.* at 410:

> This is not the conduct of competitors but is so clearly that of men united in an agreement, express or implied, to act together and pursue a common purpose under a common guide that, if it did not stand confessed a combination to restrict production and increase prices in interstate commerce and as, therefore,

reversing itself in *Maple Flooring Manufacturer's Ass'n v. United States*.[28] There, the Court ultimately found that:

> [T]rade associations or combinations of persons or corporations which openly and fairly gather and disseminate information as to the cost of their product, the volume of production, the actual price which the product has brought in past transactions, stocks of merchandise on hand, approximate cost of transportation from the principal point of shipment to the points of consumption, as did these defendants, and who, as they did, meet and discuss such information and statistics without however reaching or attempting to reach any agreement or any concerted action with respect to prices or production or restraining competition, do not thereby engage in unlawful restraint of commerce.[29]

Courts have now settled into a permissive stance with respect to SSOs, analyzing them under the Rule of Reason and giving broad allowance for the social benefits arrived at through imposition of any particular standard.[30]

However, manipulation of the SSO process has been held to give rise to an antitrust violation where the purpose of the manipulation was to lock a competitor out of the market.[31] For example, in *Allied Tube & Conduit Corp. v. Indian Head, Inc.*,[32] an antitrust violation was found where makers and sellers of steel conduit had other parties become members of a construction industry SSO for the purpose of voting down a proposed standard allowing the use of plastic conduit.[33] Other concerns arise with ownership of intellectual property by members of the organization.[34] It has been observed that these organizations "increasingly encounter situations in which one or more companies claim to own proprietary rights that cover a proposed industry standard."[35] Ownership of intellectual property rights "tends to concentrate in the areas of greater technical

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> a direct restraint upon that commerce, as we have seen that it is, that conclusion must inevitably have been inferred from the facts which were proved.

See also United States v. American Linseed Oil Co., 262 U.S. 371, 389-390 (1923) (reflecting the same result).

28 268 U.S. 563 (1925).

29 *Id.* at 586.

30 *See* ABA HANDBOOK, *supra* note 3, at 35–38 (discussing the evolution and application of modern court decisions and FTC positions on SSOs).

31 *Id.*

32 486 U.S. 492, 509–10 (1988).

33 *Id.* at 509–11.

34 DOJ/FTC REPORT, *supra* note 2, at 35 (focusing on "antitrust issues that may arise from collaborative standard setting when standards incorporate technologies that are protected by intellectual property ('IP') rights.").

35 Mark A. Lemley, *Intellectual Property Rights and Standard-Setting Organizations*, 90 CALIF. L. REV. 1889, 1893 (2002).

complexity,"[36] and it is exactly such areas that form the locus of the concern of SSOs dealing with information and communications technology.[37] It is, therefore, "virtually impossible to adopt a standard without incorporating proprietary material."[38]

B. The Power of the Patent: Lock-in and Holdup

Patent lock-in is said to occur because participants in an industry retool their operations in order to manufacture according to the standard, or consumers have become acclimated to them.[39] The Third Circuit described the phenomena in *Broadcom v. Qualcomm*,[40] stating, "Industry participants who have invested significant resources developing products and technologies that conform to the standard will find it prohibitively expensive to abandon their investment and switch to another standard. They will have become 'locked in' to the standard."[41] The lock-in, by itself, is not harmful, and in fact is necessary for the standards to have desired network effects. However, as the *Broadcom* court points out, it is the lock-in established by successful standardization that makes hold-up possible:

> An SDO may complete its lengthy process of evaluating technologies and adopting a new standard, only to discover that certain technologies essential to implementing the standard are patented. When this occurs, the patent holder is in a position to "hold up" industry participants from implementing the stan-

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36 Knut Blind & Nikolaus Thumm, *Intellectual Property Protection and Standardization*, 2 INT'L J. IT STANDARDS & STANDARDIZATION RES. 61, 63 (2004).

37 Damien Geradin, Anne Layne-Farrar, & A. Jorge Padilla, *The Complements Problem Within Standard Setting: Assessing the Evidence on Royalty Stacking*, 14 B.U. J. SCI. & TECH. L. 144, 146 (2008) (referring to "[i]nformation and communication technology (ICT) industries" as "a particular area of concern for royalty stacking"). The same factors that drive concerns about royalty stacking in standard setting would drive concerns about undisclosed patents controlling portions of the technology.

38 Blind & Thumm, *supra* note 36, at 63.

39 Krista S. Jacobsen, *Intellectual Property in Standards: Does Antitrust Law Impose A Duty to Disclose (Even If the Standards-Setting Organization Does Not)?*, 26 SANTA CLARA COMPUTER & HIGH TECH. L.J. 459, 477 (2010) (citing Rambus, Inc., No. 9302, at 4 (Fed. Trade Comm'n Aug. 2, 2006), 2006 WL 2330117, 4 (stating that "the industry commits greater levels of resources to developing products that comply with the standard, [and] the costs of switching to alternative technologies begin to rise").

40 501 F.3d 297, 310 (3d Cir. 2007).

41 *Id.*

> dard . . . . In this unique position of bargaining power, the patent holder may be able to extract supracompetitive royalties from the industry participants.[42]

While it is true that the patent owner who does not assert a patent until after the industry is locked in can charge a higher licensing fee than parties might accept prior to adopting the standard, this fee will be cabined by several important factors, which follow.

1. Desire to Maximize Royalties

Like most patent owners, the patent owner in the patent ambush scenario is motivated by that inestimable engine of capitalism: greed.[43] Royalties typically are based on a percentage of the income generated by products sold.[44] The patent owner cannot maximize its income if its royalty is so high that it will drive standard-users out of business, or out of production of products using the patent. Where the royalty depends on the ultimate market success of the product, the patent owner cannot drive up costs that will be passed on to consumers to the extent that they will depress the market.

It has been suggested that the cost of licensing put forth by the proponent of a successful patent ambush "chills development of the standard or makes it more expensive to implement."[45] But the goal of a patent owner is never to stamp out the market for its patents or prevent the implementation of network

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42 *Id.*

43 > The point is, ladies and gentlemen, that greed, for lack of a better word, is good. Greed is right. Greed works. Greed clarifies, cuts through, and captures the essence of the evolutionary spirit. Greed, in all of its forms—greed for life, for money, for love, knowledge—has marked the upward surge of mankind, and greed—you mark my words—will not only save Teldar Paper but that other malfunctioning corporation called the USA.
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> WALL STREET (20th Century Fox 1987). This speech is delivered by the character of Gordon Gecko, a ruthless Wall Street corporate raider portrayed by Michael Douglas. *Id.* The line, "greed, for lack of a better word, is good," was named the 57th best movie quote in American cinema by the American Film Institute. *See AFI's 100 Years . . . 100 Movie Quotes*, AM. FILM INST., http://www.afi.com/100years/quotes.aspx (last visited Jan. 1, 2009).

44 *See* BRIAN G. BRUNSVOLD & DENNIS P. O'REILLEY, DRAFTING PATENT LICENSE AGREEMENTS 112–13 (5th ed. 2004). Other royalty models exist. For example, royalties may assessed on a per-unit basis, based on the number of products sold which incorporate the patent, irrespective of the cost paid by consumers. On the other hand, royalties may be assessed as a flat fee, irrespective of both the number of units sold and the cost at which they are sold. More complicated agreements may incorporate different kinds of royalty payments triggered by thresholds in sales, income, or the occurrence of events.

45 Greg R. Vetter, *Open Source Licensing and Scattering Opportunism in Software Standards*, 47 B.C. L. REV. 225, 233 (2007).

effects.[46] Since the entire theory underlying ownership of patents is that the owner of the patent will be rewarded for innovation with profit, it makes little sense for a patent owner to take steps that have the effect of chilling the development of a standard that incorporates those patents.

2. Actual Cost of Retooling Away from the Patent-Controlled Standard

If the fee sought is higher than the cost of abandoning the standard, industry members will naturally prefer to abandon the patented standard. The cost of abandoning the standard, however, is not merely the cost of changing machinery to construct products in accordance with a different standard. Consumers may have grown accustomed to the standard, and may also face switching costs, which might chill their willingness to continue using the products at issue.[47] The industry members must repeat their process of investigating the available options and agreeing to the alternative standard. The investigation, at least, will likely be abbreviated because the organization will be able to call upon its experience in conducting this process the first time around.

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[46] *See* Stephen Lawson, *CSIRO Patent Threat to 802.11n May Be Overblown*, COMPUTERWORLD (Sept. 28, 2007), http://www.computerworld.com.au/index.php/id;2069830231 (contending that CSIRO will not block initiation of the standard because "the standard can create a bigger market and lead to more licensing revenue.").

[47] For an example of this argument made in a copyright scenario, see *Lotus Dev. Corp. v. Borland Int'l, Inc.*, 49 F.3d 807, 817–18 (1st Cir. 1995), *aff'd*, 516 U.S. 233 (1996), stating:

> Under Lotus's theory, if a user uses several different programs, he or she must learn how to perform the same operation in a different way for each program used. For example, if the user wanted the computer to print material, then the user would have to learn not just one method of operating the computer such that it prints, but many different methods. We find this absurd.

Id. This view is even more squarely expressed in the concurring opinion of Judge Boudin:

> If Lotus is granted a monopoly on this pattern, users who have learned the command structure of Lotus 1-2-3 or devised their own macros are locked into Lotus, just as a typist who has learned the QWERTY keyboard would be the captive of anyone who had a monopoly on the production of such a keyboard. Apparently, for a period Lotus 1-2-3 has had such sway in the market that it has represented the de facto standard for electronic spreadsheet commands. So long as Lotus is the superior spreadsheet — either in quality or in price— there may be nothing wrong with this advantage.

Id. at 821 (Boudin, J., concurring).

If an alternative is selected, patents will likely govern it.[48] If the members are unaware of the identity of the owner of this technology, they are in no better a position than they would be in sticking with the existing standard. The unknown patent holder could assert itself similarly once the revised standard had been implemented, and could demand licensing fees as high as or higher than the demand that drove the industry members to seek a different standard. Thus, the industry members may face the choice between retooling yet again or paying unpalatable royalties for the technology that was not even their initial preference. Alternately, if the owner of the technology is known, that party will be in a position to negotiate higher royalties than the industry members would have agreed to when the standard was first implemented, as the next patent owner may be aware of the exigency under which the new standard is being implemented, and of the unavailability of the "best" standard.

To avoid driving the industry members to a new standard, the patent owner for the technology included in the best standard must choose a licensing fee that is low enough to fall below the costs faced by the industry members in pursuing a second best standard, retool the technology to implement the new standard, and pay a licensing fee to the next patent owner.

3. Desire to Avoid Litigation

Where the technology is already in use and its continued use is particularly valuable, an excessive demand by the patent owner gives industry members a powerful incentive to challenge the patent. Indeed, the patent owner's own recourse against the continued use of its patented technology is an infringement suit,[49] an activity that is certain to invite challenges to the validity of the patent.[50] If the patent owner has any concerns about the strength of its pa-

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48 *See infra* Part IV.B.

49 *See* 35 U.S.C. § 281 (2006) ("A patentee shall have remedy by civil action for infringement of his patent.").

50 A common theme of patent ambush cases that have been brought to date is the assertion that the patent owner amended the claims of their pending patent applications in order to match up as closely as possible with the standards actually under consideration. *See* Rambus v. FTC, 522 F.3d 456, 460 (D.C. Cir. 2008) (noting that Rambus amended some of its applications); Complaint, *In re* Union Oil Co. of Cal., [2001–2005 Transfer Binder] Trade Reg. Rep. (CCH) ¶ 15,371 (F.T.C. Mar. 4, 2003); Herbert Hovenkamp, *Patent Continuations, Patent Deception, and Standard Setting: The Rambus and Broadcom Decisions*, University of Iowa Legal Studies Research Paper (2008) (on file with author), available at http://ssrn.com/abstract=1138002. This has been framed as a problem with the patent process, enabling submarine patents to be tailored to the activities of known infringers even before the patent is made public. It cannot be said with too fine a point that in order to re-

tent, it will be motivated to avoid litigation by demanding a license reasonable enough to reduce the possibility that the omnipresent threat of litigation will actually need to be carried out.

Patent litigation is notoriously expensive,[51] and no outcome is ever certain[52] given the vast array of doctrines under which a patent may be subverted, irrespective of the use to which its owner puts it.[53] As noted above, a patent

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ceive and later defend a patent for any invention, the applicant must still be able to demonstrate that they actually *invented* the thing. *See* 35 U.S.C. § 102(f) (providing that inventorship on the part of the applicant is a prerequisite to entitlement to a patent). No matter how closely crafted the claims are to the standard, if the party asserting infringement of the patent can survive any challenge to the validity of the patent itself, then it has adequately demonstrated that the rights it seeks to vindicate are those which fall within the purview of what that party has actually been the first to contribute to the advance of technology.

51 *See, e.g.*, Eon-Net, L.P. v. Flagstar Bancorp, Inc., No. C05-2129MJP, 2006 U.S. Dist LEXIS 91735, at *11–12 (W.D. Wash. Dec. 19, 2006) ("The exceedingly high cost of patent litigation provides an infringement defendant facing frivolous, baseless litigation with a strong incentive to settle; such defendants may be willing to pay a 'small' settlement to avoid hundreds of thousands, or millions, in legal fees."). The concern over the high cost of patent litigation has endured for decades. As far back as 1885, a Pennsylvania district court referred to a patent case before it as "a most tedious litigation, attended with great expense . . . ." Cary v. Lovell Mfg. Co., 24 F. 141, 143 (C.C.D. Pa. 1885). By 1935 it could be said that "[t]he great delay and expense attendant upon patent litigation are well known to all experienced persons . . . ." Hoeltke v. C. M. Kemp Mfg. Co., 80 F.2d 912, 925 (4th Cir. 1935) (Soper, J., dissenting). In 1946, Judge Jerome Frank wrote that "it is well known that the notoriously great cost of such a defense has often induced infringers to accept licenses on onerous terms rather than to engage in litigation, with the result that 'spurious' patents, uncontested, substantially reduce competition." Libbey-Owens-Ford Glass Co. v. Sylvania Indus. Corp., 154 F.2d 814, 824 (2d Cir. 1946) (Frank, J. dissenting).

52 *See* Merges & Kuhn, *supra* note 1, at 48 ("Whenever a firm adopts some technology, there is a risk that the firm infringes a patent, since actual infringement is indeterminate before suit.").

53 *See generally* Monsanto Co. v. Scruggs, 459 F.3d 1328, 1334 (Fed. Cir. 2006) ("Affirmative defenses to infringement include noninfringement, unenforceability, invalidity (e.g., failing to satisfy the written description or enablement requirements), patent misuse, and the existence of an implied license.") (internal citations omitted). Patent misuse includes "inequitable conduct," which basically translates to fraud on the patent office. *See, e.g.*, Molins PLC v. Textron, Inc., 48 F.3d 1172, 1178 (Fed. Cir. 1995). *Mollins* was extended to cover failure to report disconsonant experimental data in *Aventis Pharma S.A. v. Amphastar Pharms., Inc.*, 525 F.3d 1334, 1346 (Fed. Cir. 2008), and even extended to cover submitting a false affidavit in support of a claim of "small entity status" to obtain a $500 reduction in certain filing fees in *Nilssen v. Osram Sylvania, Inc.*, 504 F.3d 1223, 1231 (Fed. Cir. 2007). With no wrongdoing on the part of the patent owner, the patent may still be deemed invalid as ineligible subject matter, *see* Gottshalk v. Benson, 409 U.S. 63, 67 (1972) (excluding from patentability phenomena of nature, mental processes, and abstract ideas), or due to anticipation, *see* 35 U.S.C. § 102 (2006); Titanium Metals Corp. of Am. v. Banner, 778 F.2d 775, 781 (Fed. Cir.

found to be valid may nevertheless be deemed unenforceable if it is found to have been misused—and asserted misuse may stem from activities wholly unrelated to the patent owner's dealings with the SSO.[54] Even if the patent survives and the litigation succeeds, a prevailing patent owner will be unlikely to recover either enhanced damages[55] or attorney's fees[56] against infringers where the in-

1895) (titanium alloy deemed anticipated by falling within a range of alloys described in a single article published in Russia). A patent may also be invalidated for obviousness, *see* 35 U.S.C. § 103 (2006); Graham v. John Deere Co., 383 U.S. 1, 17 (1966) (reaffirming standards for determining obviousness); lack of utility, *see* 35 U.S.C. § 101 (2006); Brenner v. Manson, 383 U.S. 519, 535 (1966) (holding a novel process for making steroids with no known use to be unpatentable for lack of utility); lack of enablement in the specification, *see* 35 U.S.C. § 112 (2006); *In re* Wright, 999 F.2d 1557, 1562 (Fed. Cir. 1993) (upholding denial of patent registration because the invention disclosed in the specification could actually be made to work for a much smaller range of purposes than those set forth in the claims); failure to disclose the best mode for use of the invention, *see* 35 U.S.C. § 112 (2006); Chemcast Corp. v. Arco Indus. Corp., 913 F.2d 923, 930 (Fed. Cir. 1990); claim indefiniteness, *see* 35 U.S.C. § 112 (2006); Amgen, Inc. v. Chugai Pharm. Co., 927 F.2d 1200, 1217–18 (Fed. Cir. 1991) (patent held invalid due to indefinite terms describing chemical characteristics of substances used in method of manufacture); and public use, sale, or offer for sale more than one year prior to the patent application, *see* 35 U.S.C. § 102(b) (2006); Pfaff v. Wells Elecs., Inc., 525 U.S. 55, 67 (1998) (a single unconsummated offer for sale raises the on-sale bar if the invention is sufficiently described to be manufactured); Egbert v. Lippmann, 104 U.S. 333, 338 (1881) (invention deemed unpatentable as in public use for a period longer than the prevailing statutory bar, even though its use was not visible to the public). Enforceability may even be compromised by the discovery of an undisclosed co-inventor, from whom the alleged infringer may obtain a license on favorable terms. *See* Ethicon, Inc. v. U.S. Surgical Corp., 135 F.3d 1456, 1468 (Fed. Cir. 1998) (undisclosed co-inventor of subject matter in two of fifty-five claims could assign rights to all claims of the patent); *see also* Mayview Corp. v. Rodstein, 620 F.2d 1347, 1351 (9th Cir. 1980) (holding patent invalid because identified inventor was determined not to be the sole inventor).

54 *See* Marshall Leaffer, *Patent Misuse and Innovation*, 10 J. HIGH TECH. L. 142, 147 (2010):

> If the alleged infringer can demonstrate that the patent owner engaged in prohibited conduct, the patent is rendered unenforceable despite its validity. In this respect, patent misuse is similar to the doctrine of inequitable conduct, which also results in making the patent unenforceable. A defendant claiming patent misuse is not required to show that he/she was personally harmed by the misuse.

55 35 U.S.C. § 284 (2006) ("[T]he court may increase the damages up to three times the amount found or assessed."). However, in *Read Corp. v. Portec, Inc.*, 970 F.2d 816 (Fed. Cir. 1992), the Federal Circuit noted that "if infringement is . . . innocent, increased damages are not awardable for the infringement." *Id.* at 830 (quoting Kloster Speedsteel AB v. Crucible, Inc., 793 F.2d 1565, 1580 (Fed. Cir. 1986)). The facts of the typical patent ambush scenario would seem to foreclose willfulness on the part of alleged infringers.

56 35 U.S.C. § 285 (2006) ("The court in exceptional cases may award reasonable attorney fees to the prevailing party."). Where the patent owner prevails, the "exceptional cases" require-

fringement was through the use of patented technology adopted by an SSO without notice. In the wake of the Supreme Court decision in *eBay Inc v. MercExchange, L.L.C.*,[57] the patent owner may yet be denied an injunction, particularly if the owner does not itself practice the patent.[58] In effect, a district court may impose an ongoing royalty at a rate lower than what the patentee would be able to impose based on its market position.[59]

C. Patent Misuse as a Defense to Infringement

1. Antitrust Theory Generally

The theory underlying antitrust laws is that the single control of any commodity by any party permits that party to charge monopoly rents—extracting a higher price than could be obtained in a properly competitive market.[60] In order to protect against the perceived harms caused by such a circums-

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ment has been read by courts to require something along the lines of willful infringement or litigation misconduct on the part of the infringer. *See* Mahurkar v. C.R. Bard, Inc., 79 F.3d 1572, 1579 (Fed. Cir. 1996) ("Bad faith litigation, willful infringement, or inequitable conduct are among the circumstances which may make a case exceptional."). Even a finding of willful infringement does not necessarily render a case "exceptional." *See* Baldwin Hardware Corp. v. FrankSu Enter. Corp., 78 F.3d 550, 563 (Fed. Cir. 1996).

57 547 U.S. 388, 394 (2006).

58 *See id.* at 396–97 (Kennedy, J., concurring):

> An industry has developed in which firms use patents not as a basis for producing and selling goods but, instead, primarily for obtaining licensing fees. For these firms, an injunction, and the potentially serious sanctions arising from its violation, can be employed as a bargaining tool to charge exorbitant fees to companies that seek to buy licenses to practice the patent. When the patented invention is but a small component of the product the companies seek to produce and the threat of an injunction is employed simply for undue leverage in negotiations, legal damages may well be sufficient to compensate for the infringement and an injunction may not serve the public interest.

Id. (citations omitted).

59 *See, e.g.*, Paice LLC v. Toyota Motor Corp., 504 F.3d 1293, 1314 (Fed. Cir. 2007) ("Under some circumstances, awarding an ongoing royalty for patent infringement in lieu of an injunction may be appropriate."). The Federal Circuit noted that this was not a compulsory license, stating, "We use the term ongoing royalty to distinguish this equitable remedy from a compulsory license." *Id.* at 1313 n.13.

60 RICHARD POSNER, ANTITRUST LAW 10 (2d ed. 2001). Posner, however, notes that the existence of monopoly prices is itself a factor that attracts competitors to the field. *Id.* at 14. For a critical view of this belief, see ROBERT H. BORK, THE ANTITRUST PARADOX 16 (1978) (referring to the oft-claimed experiential basis for antitrust regulation and stating, "[T]he history cited does not exist. Never has 'experience' demonstrated the anticompetitive nature of any

tance, Congress enacted the Sherman Act in 1890.[61] Because monopoly pricing can be achieved for a time if competitors form a cartel and collude, rather than compete on the price, or take other steps designed to prevent actual competition from occurring,[62] section 1 of the Sherman Act prohibits "[e]very contract, combination in the form of trust or otherwise, or conspiracy, in restraint of trade or commerce among the several States, or with foreign nations."[63] Section 1 was Congress' response to the trusts dominating major industries in the guise of separate corporate entities, but it does not address unilateral acts such as those alleged against the non-disclosing patent owner.[64] Section 2 of the Sherman Act requires no agreement or collective action, but neither does it prohibit the mere possession of monopoly power.[65] Violation under this section requires first that the monopolist must have monopoly power in the relevant market; and, second, must have willfully acquired or maintained that power through anti-competitive behavior.[66]

However, "exercise of monopoly power, including the charging of monopoly prices, through the exercise of a lawfully gained monopoly position will not run afoul of the antitrust laws."[67] For example, it has become axiomatic that

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of these practices."). *See also* RONALD COASE, THE FIRM, THE MARKET, AND THE LAW 68–69 (1988) (criticizing the facility with which monopolistic practices are attributed to businesses that outperform their competitors).

61 Sherman Act of 1890, 15 U.S.C. §§ 1–7 (2004).

62 POSNER, *supra* note 60, at 14. Posner further notes that cartel members must expend resources in maintaining the cartel (i.e. preventing entry into the cartelized market by non-participating competitors), and that even if no new competitors enter the market, the cartel members nevertheless have incentives to compete for market share on aspects other than price, and that such competition can devour the marginal benefit that arises from acting as a cartel in the first instance. *Id.* at 15.

63 15 U.S.C. § 1 (2004).

64 *See, e.g.,* Schwimmer v. Sony Corp. of America, 677 F.2d 946 (2d Cir. 1982):

> The starting point for proof of a violation of § 1 of the Sherman Act is evidence that the defendant acted as part of a "contract, combination …, or conspiracy." Other elements aside, it is clear that the essence of a § 1 violation is a combination or agreement between two or more persons. Proof of joint or concerted action is required; proof of unilateral action does not suffice.

65 15 U.S.C. § 2 (2004); United States v. Grinnell Corp., 384 U.S. 563, 570–71 (1966) ("The offense of monopoly under § 2 of the Sherman Act has two elements: (1) the possession of monopoly power in the relevant market and (2) the willful acquisition or maintenance of that power as distinguished from growth or development as a consequence of a superior product, business acumen, or historic accident.").

66 *Grinnell*, 384 U.S. at 570–71.

67 DOJ/FTC REPORT, *supra* note 2, at 1 (citing Verizon Commc'ns Inc. v. Law Offices of Curtis V. Trinko, LLP, 540 U.S. 398, 407 (2004)).

"the acquisition or maintenance of monopoly power as a result of a superior product does not violate the Sherman Act."[68] Patents have been characterized as such a "lawful monopoly,"[69] because they permit the patent owner the exclusive right to reap the rewards of the invention for which the patent has issued.[70] There is simply no established market for a patented product prior to its invention, and the existence of the market dominance inherent in the patent itself is intended to reward the inventor's contribution to technology.[71] Furthermore, "if there are close substitutes for the patented product, the patent 'monopoly' is not a monopoly in a sense relevant to antitrust law."[72]

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68 Transamerica Computer Co. v. IBM Corp., 481 F. Supp. 965, 1003 (N.D. Cal. 1979), *aff'd*, 698 F.2d 1377 (9th Cir. 1983).

69 Broadcom Corp. v. Qualcomm Inc., 501 F.3d 297, 314 (3d Cir. 2007) ("Although a patent confers a lawful monopoly over the claimed invention, . . . its value is limited when alternative technologies exist"); Thompson v. Haight, 23 F. Cas. 1040, 1044 (C.C.S.D.N.Y. 1826) (stating that patent law "allows patent monopolies to those who have invented 'any new and useful art, machine, manufacture or composition of matter, not known or used before the application'"); ENCYCLOPAEDIA BRITANNICA 803 (3d ed. 1797) (referring to a party being "under the protection of the States of Holland and the court of France, having obtained a patent monopoly from the States and from Louie XIV"). *But see*, BRUCE W. BUGBEE, THE GENESIS OF AMERICAN PATENT AND COPYRIGHT LAW 12 (1967) (stating that the common attribution of the Statute of Monopolies as the origin of patent law "has served to strengthen the misidentification of patents as a species of monopoly."); Mark A. Lemley, *Antitrust and Intellectual Property in Global Context: A Symposium in Celebration of the Work of Lawrence A. Sullivan: A New Balance Between IP and Antitrust*, 13 SW. J.L. & TRADE Am. 237, 246–47 (2007) ("IP rights do not ipso facto confer monopoly power. While they do permit product differentiation, and sometimes give the owner power over price, there is a vast difference between an exclusive right and the sort of economic monopoly that is the concern of antitrust law.").

70 35 U.S.C. § 271(a) (2006) ("Except as otherwise provided in this title, whoever without authority makes, uses, offers to sell, or sells any patented invention, within the United States or imports into the United States any patented invention during the term of the patent therefor, infringes the patent.").

71 *See* SCM Corp. v. Xerox Corp., 645 F.2d 1195, 1203 (2d Cir. 1981):

> The patent laws reward the inventor with the power to exclude others from exploiting his invention. . . . In return, the public benefits from the disclosure of inventions, the entrance into the market of valuable products whose invention might have been delayed but for the incentives provided by the patent laws, and the increased competition the patented product creates in the marketplace.

72 Asahi Glass Co. v. Pentech Pharm., Inc., 289 F. Supp. 2d 986, 995 (N.D. Ill. 2003).

2. Patent as an "Essential Facility"

Some commentators have suggested that a patent might be comparable to an essential facility,[73] which must be made available to competitors because lack of such access makes it impossible for competition to occur at all.[74] This is an exception to the general rule to which courts have adhered: a party is free to choose not do business with a competitor.[75] The application of this principle to intellectual property is aptly demonstrated by the decisions in *Intergraph Corp. v. Intel Corp.*,[76] and *In re Independent Service Organizations Antitrust Litigation*.[77] In each of these cases, the Federal Circuit found that a patent owner could refuse to continue to extend a license, even as to firms that had grown dependent on the patent owner through an established course of business.[78]

3. The Patent Misuse Doctrine

A longstanding rule in patent law has been that misuse of a patent as to one party will render the patent unenforceable as to others, even if the party raising the misuse as a defense was neither a party to it nor harmed by it.[79] This rule was established in *Morton Salt Co. v. G.S. Suppinger Co.*,[80] which found that:

> Where the patent is used as a means of restraining competition with the patentee's sale of an unpatented product, the successful prosecution of an infringement suit, even against one who is not a competitor in such sale, is a powerful

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73 *See* Constance E. Bagley & Gavin Clarkson, *Adverse Possession for Intellectual Property: Adapting an Ancient Concept to Resolve Conflicts Between Antitrust and Intellectual Property Laws in the Information Age*, 16 HARV. J.L. & TECH. 327, 376 (2003).

74 *See generally* Aspen Skiing Co. v. Aspen Highlands Skiing Corp., 472 U.S. 585 (1985); Otter Tail Power Co. v. United States, 410 U.S. 366 (1973); United States v. Terminal R.R. Ass'n, 224 U.S. 383, 393–94 (1912) (noting the association's control of railroad terminals, bridges, and switching yards serving St. Louis was anticompetitive because those facilities were essential to competitors).

75 *See* Verizon Commc'ns Inc. v. Law Offices of Curtis V. Trinko, LLP, 540 U.S. 398, 408 (2004).

76 195 F.3d 1346 (Fed. Cir. 1999).

77 203 F.3d 1322 (Fed. Cir. 2000).

78 *Id.* at 1326; *Intergraph Corp.*, 195 F.3d at 1362–63.

79 Adelman, *New World*, *supra* note 7, at 1003–04 ("[T]rials can be unduly lengthened by an infringer alleging acts that affect only third parties.").

80 314 U.S. 488 (1942).

> aid to the maintenance of the attempted monopoly of the unpatented article . . . .[81]

The Court found that:

> Equity may rightly withhold its assistance from such a use of the patent by declining to entertain a suit for infringement, and should do so at least until it is made to appear that the improper practice has been abandoned and that the consequences of the misuse of the patent have been dissipated.[82]

Thus, the rule has come down that "a violation of the antitrust laws by the patentee may constitute a defense to a suit for patent infringement under the equitable doctrine of patent misuse, at least until the adverse effects of the misuse are purged by the patentee."[83]

The exemplar of misuse is an antitrust violation premised on the overextension of a patent, such as the tying arrangement at issue in *Morton Salt*.[84] In many instances, this defense is brought even where the patent owner has no hope and no intention of monopolizing the allegedly tied market.[85] The doctrine burdens the ability of the patent owner to enter into a contract involving the voluntary surrender of rights by another party beyond what the law would require. For example, the term of a patent is now twenty years,[86] but a licensee might wish to agree in an arms-length transaction to pay royalties for a period of twenty-five years, in exchange for a lower royalty rate over the term. This, however, is considered a misuse of the patent because the licensee would thereby be agreeing to pay royalties on an invention even after it had fallen into the public domain.[87] Even absent a complaint on the part of the licensee, a third party could cite this as a misuse that would render the patent itself unenforceable. Misuse may be asserted even though the alleged infringer stands to suffer no harm whatsoever from the patent-owner's violation.[88] As a whole, the doctrine has created uncertainty where there had previously been security in patent

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81 *Id.* at 493.

82 *Id.*

83 ADELMAN ET AL., *supra* note 7, at 1074.

84 *See* Merges & Kuhn, *supra* note 1, at 38 ("[A]ntitrust-like abuses of licensing, market power, and tying arrangements typify [the current body of misuse] case law, rather than cases of strategic delay in filing suit.").

85 POSNER, *supra* note 60, at 198–99.

86 35 U.S.C. § 154 (2006).

87 Brulotte v. Thys. Co. 379 U.S. 29, 32–33 (1964) (finding that a license requiring payments beyond the expiration of the patent was an attempt "to project its [the patent holder's] monopoly beyond the patent period.").

88 Leaffer, *supra* note 54, at 147.

law, and has been characterized as "born out of hostility to the patent system; it is antipatent in theory and, if blindly applied, potentially destructive to the patent system."[89]

D. SSO Power to Deal with Members' Proprietary Interests

To the extent that proprietary interests may be in the hands of individual SSO members, the SSOs are well-equipped with tools to ameliorate the possibility of a patent holdup. In many instances, the SSOs require disclosure of intellectual property interests,[90] and incorporate a requirement that members agree to license their patents under RAND ("reasonable and non-discriminatory") or FRAND ("fair, reasonable and non-discriminatory")[91] licensing terms.[92] By June of 2002, Mark A. Lemley found that thirty-six out of forty-three SSOs in the telecommunications and computer networking fields had adopted written policies governing intellectual property ownership.[93] Of the thirty-six SSO's that adopted policies, twenty-nine had policies requiring members to license their patent rights under RAND terms.[94]

SSOs have experienced scenarios in which participants have been successful in pressing infringement suits despite the alleged non-disclosure of patents. At least some of these incidents derived from determinations that the disclosure requirements were too narrowly drawn for the nondisclosure complained

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89 Adelman, *New World*, *supra* note 7, at 1003–04, (citing Ansul Co. v. Uniroyal, Inc., 306 F. Supp. 541 (S.D.N.Y. 1969), *modified*, 448 F.2d 872 (2d Cir. 1971) Adelman notes that the *Ansul* court stated:

> [T]he defendant successfully asserted that the plaintiff was using an unlawful resale price maintenance scheme in marketing the patented product. This practice either had no effect on the marketing efforts of the infringer or enabled the infringer to compete more effectively against the patentee. Moreover, because resale price maintenance was lawful in some states and it was used by manufacturers of both patented and unpatented products in their marketing, the fact that the product in Ansul was patented may have had little or no relationship to the price maintenance scheme found to justify a royalty-free license to the infringer.

Id. at 1004 n.97.

90 Kattan, *supra* note 5, at 23.

91 The advent of "FRAND" licensing is interesting in that it implicitly presumes that it is possible for licensing terms to be "reasonable and non-discriminatory" and yet still not be "fair," thus requiring imposition of a separate requirement that the terms be fair.

92 Kattan, *supra* note 5, at 23.

93 Lemley, *supra* note 35, at 1904.

94 *Id.* at 1906.

of to violate the letter of the agreement,[95] a criticism that has been leveled at RAND licensing terms as well. Indeed, "it appears well accepted in the literature that SSOs are doing less than they should to spell out the RAND promise's details."[96] Even where the disclosure requirements are lacking, a RAND requirement could be written so as to provide blanket coverage of all member-owned patents relating to the standard, whether disclosed or not. Although disclosure under such terms may have some influence in the standard selected, this influence is certain to be trumped by the importance of selecting the best standard, irrespective of ownership.[97]

The power of SSOs to address this situation may be resolved by adherence to the principles espoused by the American National Standard Institute ("ANSI"), "an umbrella organization founded in 1918 that accredits SSOs in the United States, [which] has fostered voluntary industry standard[s] setting and established model SSO policies."[98] Although ANSI's current suggested language governing patent ownership by SSO participants is somewhat vague,[99] it

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95 *See* Rambus Inc. v. Infineon Techs., 318 F.3d 1081, 1102 (Fed. Cir. 2003) (finding that "The patent policy requires disclosure of certain 'patents or pending patents' – not disclosure of a member's intentions to file or amend patent applications," and noting "a staggering lack of defining details in the EIA/JEDEC patent policy"). *But see* TruePosition Inc. v. Andrew Corp., 568 F. Supp. 2d 500, 520-21 (D. Del. 2008). In TruePosition, the District Court noting that the parties had "fought throughout this litigation" over what discloser was required by the relevant standard-setting disclosure policy. The Court found that the policy had required disclosure of the plaintiff's patent, and that the plaintiff had not disclosed the patent in the time required by the disclosure policy. Nevertheless found that the plaintiff was not equitably estopped from pressing that patent because plaintiff had still disclosed the patent to the defendant prior to the onset of the alleged infringement, in time to give the defendant notice that the patent would be enforced.

96 Miller, *supra* note 12, at 357.

97 See *infra* Section IV.A (discussing the overriding concern in picking the best standard).

98 Miller, *supra* note 12, at 361.

99 *Id.*

> 3.1.1 Statement from patent holder
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> Prior to approval of such a proposed American National Standard, the Institute shall receive from the identified party or patent holder (in a form approved by the Institute) either: assurance in the form of a general disclaimer to the effect that such party does not hold and does not currently intend holding any invention the use of which would be required for compliance with the proposed American National Standard or assurance that:
>
> a) a license will be made available without compensation to the applicants desiring to utilize the license for the purpose of implementing the standard; or
>
> b) a license will be made available to applicants under reasonable terms and conditions that are demonstrably free of any unfair discrimination.

could easily be supplemented with broader waivers of the right to seek injunctive relief based on the ownership of patents by members, and by agreements to make reporting requirements ongoing, and to subject disputes to arbitration.

III. THE EVOLUTION OF PATENT AMBUSH DECISIONS

A. Early Decisions

Some opportunities to address the issue went unnoticed or ignored in the earliest cases in which SSO participants were alleged to have asserted patents that were undisclosed or even disavowed during the standard-setting process. It is important to note at the outset that decisions holding the patent owner to be estopped from asserting the patent, barred by laches, or to have made an implied contract, do not thereby support a claim of an antitrust violation, or of misuse generally. The former doctrines may be imposed with no consideration of the subjective intent of the patentee, and with no concern for market effects. Moreover, the finding that the patentee is barred by laches, estopped, or has made an implied contract as to one infringer does not disqualify the patent from enforcement against other, differently situated infringers.

The earliest such reference is in *Potter Instrument Co. v. Storage Technology Corp.*[100] Potter's patents included one for "[g]roup [c]oded [r]ecording" ("GCR") as a component of magnetic tape recording system,[101] which it had licensed to IBM.[102] In 1973, representatives of Potter attended a meeting of an ANSI subcommittee, where IBM proposed that GCR be adopted as the standard for that industry.[103] Potter's representatives remained silent as to the patent,[104] despite the subcommittee's policy that:

> [W]hen any one or more patents are to be included within a proposed industry standard, the owner of such [patents] must bring to the attention of the Subcommittee the existence of such patents and agree to offer licenses to members of the affected industry on reasonable and nondiscriminatory terms as a prerequisite to the adoption of the industry-wide standard.[105]

Id.

100 1980 U.S. Dist. LEXIS 14348 (E.D. Va. 1980).

101 *Id.* at *1.

102 *Id.* at *3.

103 *Id.* at *7.

104 *Id.*

105 *Id.* The enforceability of such language is questionable. Read strictly, it is not limited to ANSI members or participants, and therefore could be claimed to apply to non-participants,

The GCR standard was adopted in 1976,[106] and Potter sued the alleged infringers in this case in 1979.[107]

The court denied recovery on the suit, holding that Potter was barred by laches because it had delayed suit for nine years after first learning of the infringement.[108] The court also deemed Potter estopped from enforcing the patent because it "intentionally failed to bring its ownership of the '685 patent to the committee's attention"[109] However, the court made no mention of misuse, much less of an antitrust violation. The case was appealed to the Fourth Circuit,[110] which, in a brief opinion, upheld the finding of laches.[111] Regarding estoppel, the Fourth Circuit said that it "would be inclined to uphold this ground of decision on the facts of this case,"[112] but withheld a decision on this question.[113]

Similarly, in *Stambler v. Diebold, Inc.*,[114] a federal district court found patent owner Leon Stambler[115] to be estopped from seeking relief against an alleged infringer, in finding in part that:

> [P]laintiff sat on an American National Standard Institute standards committee after concluding that the proposed [T]hrift and MINTS standards infringed his patent. Plaintiff subsequently left the committee without notifying it of the alleged infringement of his patent. Under these circumstances, plaintiff had a duty to speak out and call attention to his patent.[116]

As with *Potter*, no misuse or antitrust claim was raised. Rather, the court was persuaded by the eleven-year gap between the implementation of the standard and the filing of suit, finding that the "[p]laintiff could not remain silent while

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who would have no knowledge that their proprietary technology was being proposed as a standard.

106 *Potter*, 1980 U.S. Dist. LEXIS 14348 at *7–8.

107 *Id.* at *12. Potter had previously sued another alleged infringer in 1970, resulting in a settlement after the patent was held valid. *Id.* at *8.

108 *Id.* at *18–19.

109 *Id.* at *18.

110 Potter Instrument Co. v. Storage Tech. Corp., 641 F.2d 190 (4th Cir. 1981).

111 *Id.* at 191–92.

112 *Id.* at 192.

113 *Id.*

114 11 U.S.P.Q. 2d (BNA) 1709 (E.D.N.Y. 1988).

115 As of 2003, Leon Stambler was a retired electronics engineer living in Florida, and was continuing to pursue claims alleging infringement of his patent on a means of electronic communication. Grant Gross, *Jury Turns Down Internet Patent Claims*, INFOWORLD DAILY NEWS (March 10, 2003, 6:00 PM), http://www.pcworld.com/article/109766/jury_denies_internet_patent_claims.html.

116 *Stambler*, 11 U.S.P.Q. 2d at 1715.

an entire industry implemented the proposed standard and then when the standards were adopted assert that his patent covered what manufacturers believed to be an open and available standard."[117]

Another early example of a patent ambush claim occurred in *Wang Laboratories, Inc. v. Mitsubishi Electronics America, Inc*.[118] In the 1980s, Wang developed new technology in the area of "Single In-line Memory Modules" (SIMMS), an arrangement for computer memory chips.[119] Wang thereafter participated in the standard-setting proceedings of the Joint Electron Device Engineering Council (JEDEC).[120] Specifically, Wang:

> [B]rought its SIMMs to JEDEC and sought to persuade the group to designate Wang's design a standard. Wang argued for adoption of the SIMM from September 1983 through June 1986, when JEDEC accepted the SIMM as a standard. During that period, Wang did not inform JEDEC of its ongoing pursuit of patent rights in the SIMM.[121]

Even before Wang had initiated these efforts, a panelist from among a group of Wang employees at a June 1983 press conference "stated that Wang was not seeking patent rights in the SIMM, that no licensing agreements were involved for the companies approached by Wang to make SIMMs, and that SIMM makers could sell their products to third parties."[122] As the panelists indicated, Wang never intended to make the SIMM modules itself, and instead expected to buy them from producers on the market.[123] To this end, "several manufacturers cooperated with Wang to begin mass producing and marketing SIMMs, " and "a large market developed for the modules and Wang became a high volume purchaser."[124] Mitsubishi was one of the makers of the SIMM modules,[125] but in the late 1980s, Wang reversed course and began suggesting that Mitsubishi was infringing, eventually suing Mitsubishi for infringement.[126]

Wang's participation in JEDEC was not raised by Mitsubishi within the contours of an antitrust-type defense to the infringement claims. Rather, Mitsubishi leaned on the direct relationship between itself and Wang, particularly

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117 *Id.*

118 103 F.3d 1571 (Fed. Cir. 1997).

119 *Id.* at 1573.

120 *Id.* at 1575.

121 *Id.*

122 *Id.*

123 *Id.*

124 *Wang*, 103 F.3d at 1575.

125 *Id.*

126 *Id.* at 1575–76.

Mitsubishi's alterations of the technology to suit Wang's consumption.[127] The Federal Circuit found this sufficient to raise an implied license.[128]

B. In re Dell Computer Corporation *(FTC 1996)*

While the earliest precedential decisions involving patent owners participating in SSOs did not consider antitrust law, the earliest actions asserting the patent ambush as an antitrust violation had a contrary characteristic—they did not result in precedential decisions. The first of these was *In re Dell Computer Corporation*.[129] Dell was a member of the Video Electronic Standards Organization (VESA), a private SSO that had begun to employ basic IP disclosure and licensing rules.[130] As a member of the Video Electronics Standards Association, Dell participated in a number of meetings at which certain VESA standards were proposed and evaluated, including a standard for the "VESA Local Bus."[131] Dell had an undisclosed patent, which it revealed once the industry was effectively locked in to using this standard.[132] Dell sought to force industry members to pay royalties, which prompted the FTC to bring an action alleging that Dell had disclaimed ownership of IP reading on the standard, and therefore had misled VESA about its patent holdings.[133] The FTC proceeded on the theory that the VESA would have acted differently if Dell had disclosed, and that Dell's actions were therefore in bad faith.[134]

FTC officials coined the term patent ambush to describe its theory of Dell's liability,[135] and expressed concern that this kind of conduct would discourage people from participating in SSOs in a positive and useful way.[136] However, the case was never litigated. Instead, "Dell entered into a consent agreement not to enforce its patent rights against computer manufacturers that complied with the established standard, and it agreed not to enforce for a period of 10

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127 *Id.* at 1578–79.

128 *Id.* at 1582 ("[W]e hold that Mitsubishi's implied license is in the nature of equitable rather than legal estoppel, because the license arose from an accord implicit in the entire course of conduct between the parties . . . .").

129 121 F.T.C. 616 (1996).

130 *Id.*

131 *Id.*

132 *Id.*

133 *Id.*

134 *Id.*

135 Baer & Balto, *supra* note 1, at 82.

136 *Id*. at 89.

years any patent rights that it intentionally failed to disclose during the standard-setting process."[137] Because Dell agreed to the settlement and the consent decree that issued pursuant to it, liability was never adjudicated, and no precedential decision arose from this action.

C. Union Oil Company of California (Unocal) *(FTC 2003)*

Unocal participated in the California Air Resources Board (CARB), a state-sponsored SSO under the authority of the State of California, created to establish a standard for low-emission gasoline.[138] Unocal asserted to CARB and other industry members participating in the group that Unocal's technology in the field was nonproprietary.[139] However, Unocal owned an undisclosed patent application reading on the standard that was ultimately selected, and used it to sue competitors for patent infringement.[140] The FTC sued for violation of the very broad section 5 of the FTC Act, alleging that Unocal's misrepresentations to CARB unlawfully allowed Unocal to gain monopoly power in the low-emission gasoline market.[141] Because the standard was pursuant to state action as opposed to private action, the case was dismissed by the Administrative Law Judge under the *Noerr-Pennington* doctrine,[142] which exempts from antitrust liability efforts by market participants to petition for government action to their benefit.[143] However, in order to avoid the potential of a surprising result on appeal, Unocal agreed to a consent order under which it would "cease and desist from any and all efforts" to enforce its relevant patents.[144]

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137 Hemphill, *supra* note 1, at 58.

138 Complaint, *In re* Union Oil Co. of Cal., [2001–2005 Transfer Binder] Trade Reg. Rep. (CCH) ¶ 15,371 at *1 (F.T.C. Mar. 4, 2003), *available at* http://www.ftc.gov/os/adjpro/d9305/030304unocaladmincmplt.pdf.

139 *Id.* at *2.

140 *Id.*

141 *Id.*.

142 *In re* Union Oil Co. of Cal., No. 9305, 2003 WL 22977696, at *52 (F.T.C. Nov. 25, 2003). By contrast, the Supreme Court has held that participants in private SSOs "[enjoy] no Noerr immunity from any antitrust liability." Allied Tube & Conduit Corp. v. Indian Head, Inc. 486 U.S. 492, 509–510 (1988).

143 The doctrine is derived from *Eastern Railroad Presidents Conference v. Noerr Motor Freight, Inc.*, 365 U.S. 127, 135 (1961) ("[N]o violation of the [Sherman] Act can be predicated upon mere attempts to influence the passage or enforcement of laws.") and *United Mine Workers v. Pennington*, 381 U.S. 657, 670 (1965) ("Joint efforts to influence public of-

E. The Rambus *Cases*

The involvement of computer technology company Rambus in JEDEC spawned a family of cases and numerous reported decisions, which have effectively called into question the direction of the patent ambush doctrine.[151] Rambus briefly participated in JEDEC, while that organization adopted dynamic random access memory standards that read on Rambus patents.[152] Once these standards had been implemented, Rambus sued various parties for patent infringement.[153] In its suit against Infineon, the jury found actual fraud in the failure to disclose, and thus declined to enforce the Rambus patents.[154] In an opinion by Judge Randall Rader, the Federal Circuit reversed,[155] finding that under Virginia law, the silence of one party does not defraud other parties absent a clear obligation to disclose.[156] In reaching this conclusion, the Federal Circuit observed that there was "a staggering lack of defining details in the EIA/JEDEC patent policy."[157]

While the private litigation was ongoing, the FTC filed a complaint that set forth a patent ambush theory, and alleged antitrust violations under section 2 of the Sherman Act and deceptive practices under section 5 of the FTC Act.[158] The ALJ found no violation because there was no evidence that JEDEC would have gone in a different direction if it knew of Rambus' patent in its superior technology, stating, "[t]he exclusion of inferior products from the market is not exclusionary in an economic sense."[159] This result was disputed by some in the legal community, who urged its reversal en banc,[160] and speculated that a differ-

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151 Rambus, Inc. v. FTC (*Rambus II*), 522 F.3d 456, (D.C. Cir. 2008); Rambus, Inc. v. Infineon Techs. (*Rambus I*), 318 F.3d 1081 (Fed. Cir. 2003); Hynix Semiconductor, Inc. v. Rambus, Inc., Nos. C-00-20905 RMW, C-05-00334 RMW, No. C-06-00244 RMW, 2008 U.S. Dist. LEXIS 60838, at *1 (N.D. Cal. July 24, 2008).

152 *Rambus II*, 522 F.3d at 460; *Rambus I*, 318 F.3d at 1085.

153 *Rambus II*, 522 F.3d at 460; *Rambus I*, 318 F.3d at 1086.

154 *Rambus I*, 318 F.3d at 1086.

155 *Id* at 1106.

156 *Id* at 1096.

157 *Id.* at 1102.

158 *Rambus II*, 522 F.3d at 461.

159 *In re* Rambus, Inc., 2004 FTC LEXIS 17 (FTC 2004),

160 David Balto & Richard Wolfram, Rambus v Federal Trade Commission*: It's Not Over Until It's Over*, GLOBAL COMPETITION REV. 1 (May 20, 2008), *available at* http://www.rwolframlex.com (follow "Articles & Publications" hyperlink; then select "*Rambus v. Federal Trade Commission: It's Not Over Until It's Over"* hyperlink).

ent outcome in the civil matter on appeal to the Federal Circuit could lead to a split requiring resolution by the Supreme Court.[161]

The FTC appealed to the Commission and won, but Rambus appealed to the D.C. Circuit and came out truly victorious—the D.C. Circuit noted the FTC's finding that had JEDEC known of the patent, JEDEC would have either not used Rambus patented technology or would have demanded better licensing terms from Rambus.[162] However, the latter result would have gained Rambus no additional market power, and if JEDEC would only have agreed to adopt the same standard at a lower rate, then the purportedly deceptive conduct engaged in by Rambus gained it only additional income. As there was no way to tell how JEDEC would have gone, there was no antitrust violation. Notably, the D.C. Circuit stated at the outset: "We assume without deciding that avoidance of the first of these possible outcomes was indeed anticompetitive; that is, that if Rambus' more complete disclosure would have caused JEDEC to adopt a different (open, non-proprietary) standard, then its failure to disclose harmed competition and would support a monopolization claim."[163] A rather idealistic assumption inherent in this statement is that an "open, non-proprietary" alternative existed for a sufficiently advanced standard in the cutting-edge field of computer memory configurations.

In reaching its conclusion regarding the effect of deceit in the second circumstance, the D.C. Circuit extensively discussed *NYNEX Corp. v. Discon, Inc.*,[164] a Supreme Court case involving allegations of antitrust violations, but not patents.[165] In that case, the Supreme Court found that the holder of a lawful monopoly—in that instance, the monopoly over provision of telephone services—had committed no antitrust violation when it deceived customers in order to extract higher prices.[166] The award of the monopoly itself was not at issue in *NYNEX*, there being no allegation that NYNEX had acted improperly to obtain that franchise. However, even had there been deceit in that process, it could not have harmed competition in the market. The market would have been monopolized irrespective of the party to which the monopoly was awarded. The *Rambus* court noted that the Third Circuit had not followed *NYNEX*, and opined that

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161 *Id.*

162 *Rambus II*, 522 F.3d at 463.

163 *Id.* at 463.

164 525 U.S. 128 (1998).

165 *Id.* at 130 (noting that "[i]n this case we ask whether the antitrust rule that group boycotts are illegal *per se*... applies to a buyer's decision to buy from one seller rather than another, when that decision cannot be justified in terms of ordinary competitive objectives").

166 *Id.* at 131–32.

if the Third Circuit's decision "rested on a supposition that there is a cognizable violation of the Sherman Act when a lawful monopolist's deceit has the effect of raising prices (without an effect on competitive structure), it conflicts with *NYNEX*."[167]

The most recent reported decision on this topic is *Hynix Semiconductor, Inc. v. Rambus, Inc*.[168] In this case, various manufacturers who were part of JEDEC sued Rambus, alleging that the aforementioned conduct indeed amounted to "monopolization or attempted monopolization," as well as fraud.[169] In March of 2008, a jury found Rambus not liable on all counts.[170] In seeking a new trial, the plaintiffs claimed that, but for an adverse evidentiary ruling, they "would have offered evidence . . . that RDRAM was an inferior technology."[171] The trial court, in denying the manufacturers' motion for a new trial, noted that "the Manufacturers never proffered such evidence or testimony,"[172] and noted further on that it could not "have permitted the Manufacturers to introduce evidence that RDRAM was a technical failure without permitting Rambus to introduce evidence that RDRAM was superior and failed because it was allegedly illegally boycotted by DRAM manufacturers."[173] The last item of concern may be facing extinction, however. In October of 2008, in *Golden Bridge Technology, Inc. v. Motorola, Inc.*,[174] the Fifth Circuit held that it was not an antitrust violation for SSO members to conscientiously build a standard so as to avoid the patents of a particular competitor.[175]

F. Other Recent Decisions

This issue's recent increased attention is amply demonstrated by a number of other 2008 decisions. In *Alien Tech. Corp. v. Intermec, Inc.*,[176] a district court denied a motion to dismiss fraud and state unfair competition counterclaims asserted in plaintiff's infringement action, which were premised on fail-

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167 *Rambus II*, 522 F.3d at 466.

168 Nos. C-00-20905 RMW, C-05-00334 RMW, No. C-06-00244 RMW, 2008 U.S. Dist. LEXIS 60838, at *1 (N.D. Cal. July 24, 2008).

169 *Id*. at *11–12.

170 *Id*.

171 *Id*. at *28.

172 *Id*.

173 *Id*. at *30.

174 547 F.3d 266 (5th Cir. 2008), *cert. denied*, 129 S. Ct. 2055 (2009).

175 *Id.* at 273.

176 No. 3:06-cv-51, 2008 U.S. Dist. LEXIS 13095, at *1 (D.N.D. Feb. 20, 2008).

ure to comply with an SSO requirement for disclosure of patents "necessary to practice a proposed standard."[177] In *Research in Motion Ltd. v. Motorola, Inc.*,[178] another district court denied Motorola's motion to dismiss antitrust claims brought against it. The antitrust claims were premised on Motorola's failure to follow through on promised FRAND licensing terms once its disclosed patented technology was selected as a standard.[179] However, in *TruePosition Inc. v. Andrew Corp.*,[180] yet another district court upheld jury findings of patent infringement against a defendant despite the plaintiff's failure to declare its patents as "essential" under ambiguously worded disclosure requirements.[181]

The most recent of these decisions is *Research in Motion*, which also contains the most extensive analysis of the antitrust issues raised by the defendant. The *Research in Motion* court made the rather remarkable pronouncement that *Allied Tube* "highlights the importance of keeping biased entities out of the standard-setting process."[182] Such a policy, if implemented, would in effect prevent the participation of the parties most likely to contribute effectively to the creation of the best standard, if not all parties in the affected industry.

IV. THE ERROR OF CLASSIFYING "PATENT AMBUSH" AS AN ANTITRUST CONCERN

While some have suggested that antitrust is not the best mechanism through which to address an alleged patent ambush,[183] a more searching review is needed to determine whether the facts of a patent ambush scenario are susceptible to a finding of an antitrust violation at all.

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177 *Id.* at *5.

178 644 F. Supp. 2d 788 (N.D. Tex. 2008).

179 *Id.* at 793.

180 568 F. Supp. 2d 500 (D. Del. 2008).

181 *Id.* at 520.

182 *Research in Motion*, 644 F. Supp. 2d at 795.

183 *See, e.g.*, HERBERT HOVENKAMP, MARK D. JANIS, & MARK A. LEMLEY, 2 IP & ANTITRUST §35.5 at 35–52.1 (Supp. 2009) ("[A]ntitrust can serve as a useful check on abuses of the standard-setting process, [but] it cannot substitute for a general enforcement regime for disclosure rules."); Merges & Kuhn, *supra* note 1, at 14 ("Antitrust law should be only a backstop to other mechanisms for preventing strategic behavior; patent law must police many harmful abuses on its own.").

A. The Economic Bases of SSO Motivation

Standard setting is not an exercise in altruism. Each party that engages in this activity necessarily does so with a firm eye towards achieving the best economic results for itself. Indeed, any firm that believes that it can win over the market with its own unilaterally formed standards will do so.[184] The purpose of standard setting is not merely to adopt any standard (even though standardization itself presents demonstrable benefits), but "to pick the right technical standard"[185]—that is, to adopt the best standard, the standard which presents the most effective and efficient solution among all possible options. The best standard will be the one deemed by the participants in the process—the experts in the area of technology under examination—to be the best for business, which will almost certainly be the standard which provides the most favorable outcome to consumers.

It would be particularly naïve to presume that SSOs act so rashly in the adoption of standards that the process can be easily gamed by a non-disclosing patent owner. Although the cases set forth above indicate that it is at least *possible* for this to occur, these represent only a handful cases among the tens of thousands of standards that have been set across numerous industries.

B. Patent Status of the Best and Second Best Technology

In adopting the best standard, the actors are often dealing with a leading edge in technology, especially where the field is highly technical and the standard is prospective and aspirational.[186] No entity capable of participating in a standard-setting process should be so foolish as to be unaware of the strong likelihood that the chosen technology will be governed by patents.[187] Patents will not adhere only to the best standard. The "second best" and "third best" standards, and so on, will also likely be protected by patents, and to the extent that leaders in the field are participating in the SSO, it is possible that all viable alternatives are inventions patented by different parties at the table. Furthermore, the actors are necessarily aware that any one of them may have developed or

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184 Miller, *supra* note 12, at 364 (citing CARL F. CARGILL, INFORMATION TECHNOLOGY STANDARDIZATION: THEORY, PROCESS, AND ORGANIZATION 42 (1989)) (stating that "[a] corporation will accept and use standards only if it believes that it cannot control the market directly and that standards can").

185 Lemley, *supra* note 35, at 1956.

186 *See* Jacobsen, *supra* note 39, at 467.

187 *Id.* (noting that "[a]n SSO may deliberately choose to incorporate patented technology in a standard, or it may do so inadvertently").

may in the future develop patentable aspects of this technology.[188] Indeed, a relevant patent could very well lie with an unknown third party.

The matrix of possible relationships between patent owners—whether the best choice or second best choice is represented—and SSOs may be set forth as follows:

	SSO Participant	**Non-participating Third Party**
Patents are known/ disclosed.	Parties may contract in advance with respect to licensing terms.	Parties may contract with respect to licensing terms, *or* SSO members may seek to avoid the patent.
Patents are unknown/ undisclosed.	Parties may contract for limitations on enforcement of undisclosed patents.	SSO members are fully exposed to a patent hold-up.

Although the technical work of selecting standards is performed by "volunteers . . . who are technical, not legal or business, experts,"[189] the companies that participate in SSOs are themselves sophisticated players, which are—or reasonably should be—aware of patents and amendments and continuances. These entities are able to effectively contract for disclosure or specific limitations on licensing fees. Therefore, a lack of legal expertise among the representatives who actually set the standard should not be read as absolving the companies they represent from liability for infringing patents incorporated into the standard. After all, the chosen standard could expose the participants to liability from an unknown third party not at all involved in the process— and indeed the second-best standard, the standard that the SSO members would choose if the first was found to be foreclosed, poses exactly the same risks.

The economics of the process dictate that, to the extent that SSOs are aware of a potential holdup, they will first try to bargain for the ability to use the best standard, and only when that fails will they move to a second-best solution. Therefore, there is no prejudice to be derived from patent ownership by a non-disclosing participant. In a free-market transaction, every party at the table

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188 Miller, *supra* note 12, at 365 (noting that SSO participants initially "make the RAND promise behind a veil of ignorance about their ultimate status as patentees or licensees"). Admittedly, this would be less of a concern to a company such as Rambus, which "does not manufacture any memory devices itself, but relies instead on licensing its patent portfolio for revenue." Rambus Inc. v. Infineon Techs. AG, 318 F.3d 1081, 1084 (Fed. Cir. 2003).

189 Miller, *supra* note 12, at 364.

knows that every other party might deal sharply. In any technologically-forward industry in which standard setting is a useful strategy, any party with an interest in participating in this process might either presently or in the near future own patents respecting the matters for which standards are set. The solution would appear to be in contract, with surrender of the patent in question serving as the harsh penalty for breach of that contract.

Merges and Kuhn suggest, for example, that "the SSOs likely would have altered the standards to avoid the Rambus patents"[190]—but altered to what? To a second-best solution? To a technology of unknown ownership? Indeed, it is impossible to say that in the case of Rambus the participants would have chosen a different technology, or would have come to different licensing terms, had Rambus revealed its patent interests at the fore. If the standard proposed was inferior, it would have been passed upon in favor of a superior standard. If the standard proposed was understood to be superior, and the interest held by Rambus was known, the parties would have had as much incentive to bargain with Rambus for access to the patents needed to implement the superior standard. The amount of litigation spawned by the Rambus patents suggests that the parties merely miscalculated, and moreover, that JEDEC failed to implement participation policies that would head off such a situation.

One aspect of undisclosed patents in the standard-setting process as a potential dampener of market competition has been overlooked. As noted above, it is impossible to be certain that no third party will assert patent rights to whatever standard is selected—and if such a third party does not participate in the standard-setting process at all, then nothing can be said against its later assertion of its patents. With JEDEC, the likelihood of patents attaching to the selected technology was amplified by the fact that the standards applied were prospective and aspirational. JEDEC was seeking to improve the general market performance of its standards by adopting "specifications it could include in a next-generation SDRAM standard."[191] Thus, there was virtually no chance that the technology specified would have already fallen into the public domain through public use, much less the expiration of old patents. The question was not whether the technology was proprietary, but who owned that interest.

So long as JEDEC succeeded in incorporating a new and advanced technology into its standards, it would effectively be granting a monopoly to whoever owned the patents to that technology. Thus, whether it was a non-disclosing participant or a non-disclosing third party, the effect on the market, so far as the contraction of competition, would have been the same. The pover-

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190 Merges & Kuhn, *supra* note 1, at 14.

191 Rambus Inc. v. F.T.C., 522 F.3d 456, 460 (D.C. Cir. 2008).

ty of the Third Circuit's approach in *Broadcom* is exposed in the comparable example of the switch from GIF to JPEG compression formats for images. The GIF format, a proprietary arrangement owned by Unisys, was favored by programmers because Unisys granted royalty-free licenses to certain parties.[192] When Unisys began assessing royalties, the subscribing community switched to the technically less desirable JPEG format because it was believed to be nonproprietary.[193] At that point, a patent owner stepped forward and claimed ownership of the JPEG arrangement.[194] Thus, the switch to a second-best option in an environment of incomplete information yielded a worst-case scenario—incorporation of less desirable technology combined with the need to pay royalties to a previously unknown owner for its use.[195] It is hard to see how Rambus can be faulted for maneuvering to be the beneficiary of a windfall that was bound to fall to some party.

If the purpose of the SSO is to make an unbiased selection of the best technology available for implementation as a standard, then an antitrust claimant in a patent ambush scenario should have to make a showing that is, frankly, virtually impossible. It must show not merely that there is an alternative which makes an acceptable substitute to the patented technology, but that such an alternative exists and is *not owned* by anyone, including a third party with an as-yet-unpublished patent application covering that alternative. The nonproprietary nature of such an alternative must be a matter of fact, not an article of faith, because mere faith in the availability of technology has never prevented an infringer from getting sued, nor would it prevent an unknown patent owner from obtaining the monopoly feared by the *Broadcom* and *Research in Motion* courts. Absent such an assurance, there is no clear path to finding an anticompetitive effect on the market with respect to the technology that is known to be proprietary. This is the reality of the market that both the D.C. Circuit and the Third Circuit should have recognized in *Rambus* and *Broadcom*, respectively.

C. Patent Misuse Misplaced

The D.C. Circuit's decision in *Rambus* leaves a gray area for situations in which the patentee obtusely disregards more explicit disclosure obligations set forth by the SSO. However, the same outcome should apply in that situa-

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192 Merges & Kuhn, *supra* note 1, at 10.

193 *Id.* at 10–11.

194 *Id.* at 11.

195 In the case of JPEG, the patent expired before the patent owner could carry forth its strategy of assessing royalties. *Id.*

tion. Consider the most blatant "patent ambush" that can be conceived. An SSO participant—we'll call the participant Ambushtech, Inc.—owns a newly issued patent that reads precisely on technology under consideration by that SSO, which clearly requires the disclosure of all patents owned by participants. Ambushtech not only fails to disclose this patent, but it affirmatively represents that it has no patents relating to the technology under consideration. Furthermore, Ambushtech's representatives to the SSO effectively push for the adoption of a standard incorporating the technology covered by Ambushtech's patents—effectively because, of course, the other engineers and technicians present at the table can objectively agree that the proposed technology is superior for the purposes to which the standard will be applied. Once the standard has been adopted and implemented, Ambushtech predictably sends letters demanding that users of the technology take a license, or face a lawsuit in the United States District Court for the Eastern District of Texas.[196]

In this hypothetical, Ambushtech may indeed have been dishonest, and the members of the SSO should have a number of avenues through which they might argue that Ambushtech ought not be given the benefit of its crooked bargain. However, alleging an antitrust violation should not be among those avenues. There can be no question but that the gain attempted by the party asserting the patent is nothing more than the value of the patent itself, for the term of the patent. No other products need to be tied to the patent, and no conditions restraining trade need be put forth, beyond those contemplated by the law of patent itself. The harm to competition is not more than what would have arisen if the standard adopted had read on a third party's undisclosed patent, or even on a disclosed patent. One standard prevailing over all others in the eyes of the SSO participants is sufficient to create the monopoly irrespective of the participation of the patent owner, and of the disclosure of the patent. The harm to the SSO members is no different than what they would face if the technology adopted turned out to be owned by a heretofore unknown third party who refused to deal in the patented product at all.

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[196] The United States District Court for the Eastern District of Texas draws a vastly disproportionate number of patent cases, partially due to the reputation of local juries for being patent-friendly, and partly because an initial effect of this reputation was that the courts of that District have developed significant experience in dealing with patent claims. *See* Julie Creswell, *So Small a Town, So Many Patent Suits*, N.Y. TIMES, Sept. 24, 2006, http://www.nytimes.com/2006/09/24/business/24ward.html?_r=1&pagewanted=all#. In reality, Ambushtech is initially likely to be a bit less forward about its litigious intentions, in order to minimize the possibility that recipients of its letter will seek a declaratory judgment of non-infringement in a court more disposed to patent infringement defendants.

In this respect, the asserted patent ambush seems similar to the situation in *United States v. Studiengesellschaft Kohle*.[197] There, the D.C. Circuit observed, as had the district court from which appeal was taken, that the defendant's patent for a process to produce aluminum trialkyls[198] was "so economical that no other process can be commercially competitive with it."[199] The D.C. Circuit noted:

> [A] patent by definition restrains trade, and in effect makes most exclusive patent licenses per se violations of the antitrust laws. But as the Supreme Court noted in E. Bement & Sons v. National Harrow Co., "The very object of (the patent laws) is monopoly . . . The fact that the conditions in the contract keep up the monopoly does not render them illegal." . . . [T]he protection of the patent laws and the coverage of the antitrust laws are not separate issues. Rather, the conduct at issue is illegal if it threatens competition in areas other than those protected by the patent, and is otherwise legal. The patentee is entitled to exact the full value of his invention but is not entitled to endanger competition in other areas by manipulating his patent monopoly.[200]

The patent misuse standard creates particular uncertainty if the "improper conduct" at issue is the failure to disclose information in the process leading up to adoption of a standard. It is certainly unclear how the patentee in this situation would "purge" the allegedly improper conduct, by any means short of releasing the patents into the public domain. Unlike a tying arrangement, use of the standard cannot be unilaterally ended by the patentee, and in fact attempting to force such a change would probably be more harmful to the parties claiming injury. Even charging a below-market licensing fee could be deemed a failure to purge, as the parties bound to the standard might be paying no licensing fee at all but for the adoption of the patented technology.

If SSO membership is read as the undoing of the enforceability of undisclosed patents, the owners of the best technology in an area will simply avoid membership and await enactment of the standard from the sidelines. After all, "companies at the leading edge are often in such a strong position that they do

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197 670 F.2d 1122 (D.C. Cir. 1981).

198 Aluminum trialkyls is a vitally important catalytic agent and chemical reactant, primarily for its utility in manufacturing polypropylene, a highly versatile plastic compound capable of being made both flexible and transparent. The defendant's invention in this case overtook the market through superiority of technology. *See generally* HEINZ MARTIN, POLYMERS, PATENTS, PROFITS: A CLASSIC CASE STUDY FOR PATENT INFIGHTING 76–81 (2007) (providing a fascinating and detailed account of the importance of this discovery).

199 670 F.2d at 1124.

200 *Id.* at 1128 (internal citations omitted).

not need the support of standards to market their products successfully."[201] The SSO will thereby lose out on both the knowledge of that entity, and of the ability to persuade it to enter into an agreement that might be more palatable to the SSO members.

D. Contract as a Solution

The solution to this dilemma lies in contract, where every party at the table has an incentive to agree to contractual terms that limit their ability to recover under their own patents. Even if some parties have patents that they believe can be asserted, no one knows what technology the standard will end up incorporating or what rights other parties may claim.[202] This is akin to a prisoner's dilemma, a classic economic decision making exercise.[203] Every party is best served by contracting to limit license fees in light of the potential assertion of ownership of patent rights by any other party, and indeed the certainty that whatever standard is adopted will incorporate rights owned by somebody. Even

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201 Knut Blind & Nikolaus Thumm, *Intellectual Property Protection and Standardization*, *in* ADVANCED TOPICS IN INFORMATION TECHNOLOGY STANDARDS AND STANDARDIZATION RESEARCH 177 (Kai Jakobs ed., 2006).

202 Miller, *supra* note 12, at 365 ("[A]t the start, participants do not know which sponsoring firms will turn out to have contributed the technologies essential to the standard, or which of the essential technologies, if any, are covered by patents owned by the sponsoring firms.").

203 An excellent explanation of the classic prisoner's dilemma can be found in Page v. United States, 884 F.2d 300, 301 (7th Cir. 1989) (Easterbrook, J.):

> Students of strategy and bargaining cut their teeth on the game of Prisoners' Dilemma. Two prisoners, unable to confer with one another, must decide whether to take the prosecutor's offer: confess, inculpate the other, and serve a year in jail, or keep silent and serve five years. If the prisoners could make a (binding) bargain with each other, they would keep silent and both would go free. But they can't communicate, and each fears that the other will talk. So both confess. Studying Prisoners' Dilemma has led to many insights about strategic interactions.

Page involved a true-to-life "prisoner's" dilemma, the appellant having been one of two defendants in a criminal case who was confronted with information that the other defendant was going to testify against him, pled guilty to the crime, and later regretted this plea upon learning that the other defendant would have agreed to stonewall the prosecution had they been able to communicate in advance. However, the underlying concern of a prisoner's dilemma—the need for parties to a transaction to cooperate while each tries to gain an advantage based on information not known to the other – transcends the criminal and arises in economic contexts involving patent and antitrust issues. *See* Bristol-Myers Squibb Co. v. Ben Venue Lab., 90 F. Supp. 2d 540, 544 (D.N.J. 2000) (characterizing a patent infringement defendant's choice between exiting the market, taking a license, or defending against the lawsuit, as a prisoner's dilemma).

the party that thinks it owns the rights should prefer to be insured against a claim that another participant owns superior rights, which could be asserted against the first party. Therefore, each party to the SSO should be willing, if not to agree to a royalty in advance, to take off the table the nuclear option of an injunction—even with respect to undisclosed patents—and to commit to arbitration as a first step towards resolving disputes as to the appropriate license.

Absent a requirement to disclose, no wrong is committed through the lack of disclosure. Even where such a requirement exists, the failure to disclose would be nothing more than a breach of the agreement incorporating the requirement. To classify such a breach as an antitrust violation would be little different from giving such a label to *any* breach of contract involving a patent. The members of an SSO which had adopted a standard incorporating patented technology for which the patent was owned by an unknown party with no relation to the SSO would be in no better position to bargain with the patent owner than with a member holding undisclosed patents. A breach of contract action would entail a much simpler resolution than an antitrust action: if the governing document is well-drafted, it leaves to the courts the comparatively less burdensome task of determining whether the actions of the patent owner fall within the four corners of the document, irrespective of the effects that such actions have had on the marketplace.

V. CONCLUSION

Although the facts of the *Broadcom* and *Rambus* cases highlighted different kinds of alleged misdeeds, they—in combination with emerging district court decisions, such as *Research in Motion*—forecast a circuit split[204] on the more fundamental question: whether the unilateral misrepresentations of a party made with the desire to have its patents made part of a standard constitute an attempt at improper monopolization, and thus spell out an antitrust violation. In light of the requirements of the Sherman Act, even the most calculating and deceptive effort to enact a "patent ambush" does not constitute such an attempt, unless the aggrieved parties can show that but for the deception, the SSO selecting the standard would have chosen not only a different standard, but one in which it turns out that no patent controlled.

Deceptive conduct certainly bespeaks resolvability through other routes, as it may raise estoppel, and may even be a fraud—if the disclosure require-

[204] Notably, although other circuits may come down on the side of finding an antitrust violation, decisions of the F.T.C. are appealed to the D.C. Circuit—which has already decided against antitrust liability in *Rambus*.

ments of SSO participation are properly spelled out. Furthermore, the SSOs are fully able to engage in self-help by binding members to licensing terms that apply irrespective of disclosure, and which waive injunctive relief. But the attempt to solve the perceived wrong of a patent ambush by claiming it as an effort to achieve a monopoly is an attempt to jam a square peg into a very round hole.