

Standard Setting, Patents, and Access Lock-In: RAND Licensing and the Theory of the Firm

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Abstract

Many leading voluntary standard-setting organizations (“SSOs”) have adopted intellectual property policies under which participants must promise to license on reasonable and non-discriminatory terms (“RAND”) any patents on technology that they contribute to a standard. The widespread use of this RAND promise has generated its own boomlet in the legal literature on standard setting. A common refrain in analyses of the RAND promise is that its meaning is uncertain to a troubling degree. We know more, however, than these individual analyses suggest. I show that we already know the RAND promise’s core meaning, and why it remains attractive to SSOs. Specifically, I demonstrate that, although framed by reference to patent rights, the RAND promise’s core function is to solve a problem of business organization that all SSOs confront—namely, the need to clear the path to team production of a viable standards-based technology platform by removing the threat of post-adoption hold-up. One solves the organizational problem by transferring a property right. For example, corporate law scholars have shown that the corporate form enables team production of complex goods by giving contributors a way to lock in their capital to a separate property-holding entity, precluding subsequent withdrawal and hold-ups from threatened withdrawal. Patent pools thus use new central entities to hold all patent rights. Similarly, in the standard setting context, SSOs enable team production of a standards-based platform by conditioning contributors’ participation on making the RAND promise, i.e., on making a property-like grant to the adopter community that lock in adopters’ access to contributors’ patented contributions to the standard, precluding subsequent shutouts or hold-ups from threatened shutouts. Every participating patent owner, by making the RAND licensing promise, has thereby irrevocably waived any right to seek that most traditional of intellectual property law remedies, a court injunction against unauthorized access. The only relief a frustrated patent owner can seek against an adopter thereafter is the reasonable royalty expressly contemplated. The irrevocable RAND promise, according to the access lock-in model, must also follow the patent if the patent is sold to another party. In property law terms, the RAND promise creates an enduring servitude that burdens the patent and benefits the standard adopters. Only in this way does the RAND promise ensure that the standard can flourish without hold-up for as long as the market supports the technology.

Standard Setting, Patent Rights, and Access Lock-In: The Core Meaning of the RAND Licensing Promise

Joseph Scott Miller*

INTRODUCTION

Voluntarily established compatibility standards pervade the information and communications technology (“ICT”) sectors, touching everything from basic internet and wireless communication protocols to the design of computer buses, ports, and peripherals. The standards embodied in detailed product and process specifications, which facilitate smooth interoperability among parts provided by competing suppliers, “are an inevitable outgrowth of *systems*, whereby *complementary products work in concert to meet users’ needs*.”¹ As the ICT sectors grow in importance, so too do voluntary standard-setting organizations (SSOs).²

ICT firms also avidly pursue U.S. utility patents.³ The rates at which inventors seek and obtain U.S. utility patents have grown significantly since the mid-1980s.⁴ With respect to computer technology, this growth has been spurred, at least in part, by two important court deci-

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¹ Carl Shapiro, *Setting Compatibility Standards: Cooperation or Collusion?*, in EXPANDING THE BOUNDARIES OF INTELLECTUAL PROPERTY: INNOVATION POLICY FOR THE KNOWLEDGE SOCIETY 81, 82 (Rochelle Cooper Dreyfuss et al. eds., 2001).

² See *id.* at 97 (“As more and more products work in conjunction to form systems, interface standards play a bigger and bigger role in the economy. And, as computer and communications systems encompass a larger portion of economic activity, compatibility standards become an ever-more important aspect of competitive strategy.”); CARL SHAPIRO & HAL R. VARIAN, INFORMATION RULES: A STRATEGIC GUIDE TO THE NETWORK ECONOMY 228 (1999) (“Network economies and positive feedback make cooperation more important than ever. Most companies need to cooperate with others to establish standards and create a single network of compatible users.”). For example, in a sign that standard-setting activity has grown to the point where it attracts the sustained attention of a large numbers of scholars, the publisher Idea Group launched the INTERNATIONAL JOURNAL OF IT STANDARDS & STANDARDIZATION RESEARCH in 2002. See <http://www.idea-group.com/jitsr> (describing the journal).

³ Utility patents cover useful, new, and nonobvious products and processes. 35 U.S.C. §§ 101-103. This is the type of patent that most people think of as, simply, a patent. The two other types of patents—design patents (which cover new, original, and ornamental designs for articles of manufacture, 35 U.S.C. §§ 171-173), and plant patents (which cover distinct and new varieties of plants that are asexually reproduced, 35 U.S.C. §§ 161-164)—are not pertinent here.

⁴ The marked increase in U.S. utility patent application and grant rates is both well-documented and frequently discussed, often in terms of “exploding” growth or an “explosion.” See, e.g., Nancy J. Linck *et al.*, *A New Patent Examination System for the New Millenium*, 35 HOUS. L. REV. 305, 307 (1998); Note, *Estopping the Madness at the PTO: Improving Patent Administration Through Prosecution History Estoppel*, 116 HARV. L. REV. 2164, 2165 (2003). For a compact graphical depiction of the growth in annual U.S. utility patent application filings and grants from 1960 to 2001, see WILLIAM M. LANDES & RICHARD A. POSNER, THE ECONOMIC STRUCTURE OF INTELLECTUAL PROPERTY LAW 340, fig. 12.1 (2003).

sions squarely embracing the patentability of computer software inventions.⁵ And, whatever the cause, the annual lists of the top 25 recipients of U.S. patents, from 1995 to 2003, read like a “who’s who” of ICT firms: IBM has been the top patent recipient in each of those years; the others include (in alphabetical order) Advanced Micro Devices, Canon, Fujitsu, General Electric, Hewlett-Packard, Hitachi, Intel, Lucent, Matsushita, Micron Technologies, Motorola, NEC Corp., Philips, Samsung, Sharp, Siemens, Sony, Sun Microsystems, Toshiba, Xerox.⁶ Their holdings are, of course, just the tip of the iceberg.

Given that both standard setting and intellectual property protection are common to the forward edge of ICT, one cannot be surprised that “SSOs increasingly encounter situations in which one or more companies claim to own proprietary rights that cover a proposed industry standard.”⁷ The tension created by this union of group-set standards (the purpose of which is to give competing market actors a common, accessible specification around which to build and compete) and patent rights (the purpose of which is to encourage investment in innovation by conferring a right to exclude competitors from using a technology) is also obvious; it is the tension between free access and tight control.⁸

SSOs respond to this tension between common access and proprietary control by choosing an approach to participants’ patent rights that falls somewhere along the continuum from closed (i.e., there is no stated patent policy at all, leaving default patent rules in place) to open

⁵ See *AT&T Corp. v. Excel Commc’ns, Inc.*, 172 F.3d 1352 (Fed. Cir. 1999) (overturning trial court decision rejecting computer invention as unpatentable subject matter); *State Street Bank & Trust Co. v. Signature Fin. Group, Inc.*, 149 F.3d 1368 (Fed. Cir. 1998) (same). See also John R. Allison & Emerson H. Tiller, *The Business Method Patent Myth*, 18 BERKELEY TECH. L.J. 986, 990-91 & n.7 (2003) (discussing spike in patent applications on software-embodied business methods in the wake of the *State Street* and *Excel* cases).

⁶ The pertinent Patent Office report is called PATENTING BY ORGANIZATIONS. See, e.g., OFFICE OF ELEC. INFORMATION PRODS., U.S. PATENT & TRADEMARK OFFICE, PATENTING BY ORGANIZATIONS (2003). Annual reports are available at http://www.uspto.gov/web/offices/ac/ido/oeip/taf/reports_topo.htm#TOPO.

⁷ Mark A. Lemley, *Intellectual Property Rights and Standard-Setting Organizations*, 90 CAL. L. REV. 1889, 1893 (2002) [hereinafter IPRs & SSOs]. See also Knut Blind, *Intellectual Property Protection and Standardization*, 2 J. IT STANDARDS & STANDARDIZATION RESEARCH 61, 63 (2004) (“Since [intellectual property rights] tend[] to concentrate in the areas of greater technical complexity, it becomes virtually impossible to adopt a standard without incorporating proprietary material.”).

⁸ As Professor Farrell explained more than fifteen years ago, “if technology used in a proposed standard is protected, as by patents or copyright, then its owner would benefit much more from the standard’s adoption than would others.” Joseph Farrell, *Standardization and Intellectual Property*, 30 JURIMETRICS J. 35, 43 (1989). As a result, “the more a standards body becomes an arena in which to fight over intellectual-property spoils, the less likely it is to reach rapid agreement on choosing the ‘best’ technology, or on any choice at all.” *Id.*; see also *id.* at 44 (“strong intellectual property probably retards formal standardization because it increases vested interests”); Robert P. Feldman et al., *The Effect of Industry Standard Setting on Patent Licensing and Enforcement*, IEEE COMM. MAG., July 2000, at 112, 112 (“The ideal of open, widely promulgated standards is at odds with a patent owner’s right to exclude others from making, using, or selling the patented invention ... [because this right] would serve to undermine rapid and widespread adoption of the standard, resulting in reduced value of the standard.”).

(i.e., the policy requires participants to make any standard-pertinent patent available to all comers on a royalty free basis).⁹ What has come to be the most common patent policy “occup[ies] a middle ground,”¹⁰ requiring those who participate in setting a standard to promise to license, on reasonable and nondiscriminatory terms (“RAND”), their patents that prove essential to implementing the standard. Professor Lemley found, in his empirical study of patent policies among telecommunications and computer-networking SSOs as of June 2002, that 36 of the 43 SSOs (i.e., 84%) had written IP policies, and that 29 of the 36 written policies (i.e., 81%) required the SSOs participants to promise to license their patents on RAND terms.¹¹ Indeed, the RAND policy has become so popular that it has been incorporated into both copyright law¹² and federal procurement policy.¹³ Most SSOs also require participants to disclose standard-pertinent

⁹ See IPRs & SSOs, *supra* note 7, at 1901-02 (describing this continuum of policies).

¹⁰ *Id.* at 1902.

¹¹ *Id.* at 1904 & n.48, 1906. In this study, Professor Lemley “surveyed the rules and bylaws of forty-three different SSOs ... to which companies in the telecommunications and computer-networking industries, where many of the most contentious IP issues arise, were likely to belong.” *Id.* at 1903. The study’s Appendix summarizes the IP policies of the different SSOs. *Id.* at 1973-80. A more recent empirical study of SSO patent policies observed a similar, albeit smaller, rate of RAND licensing: of the 59 SSOs the authors studied, 36 (i.e., 61%) had patent policies requiring, at a minimum, RAND licensing. Benjamin Chiao et al., *The Rules of Standard Setting Organizations: An Empirical Analysis* 26, tbl. 1 (Harvard NOM Research Paper No. 05-05, Feb. 9, 2005), available at <http://ssrn.com/abstract=664643>.

Other students of voluntary standard setting have noted that SSOs most often condition participation on agreement to a RAND policy. See, e.g., CARL F. CARGILL, *OPEN SYSTEMS STANDARDIZATION: A BUSINESS APPROACH* 31-32 (1997); Carl Shapiro, *Navigating the Patent Thicket: Cross-Licenses, Patent Pools, and Standard Setting*, in *INNOVATION POLICY AND THE ECONOMY* 119, 128 (Adam Jaffe et al. eds., 2000); Michael G. Cowie & Joseph P. Lavelle, *Patents Covering Industry Standards: The Risks to Enforceability Due to Conduct Before Standard-Setting Organizations*, 30 *AIPLA Q.J.* 95, 100 (2002); Michael J. Schallop, *The IPR Paradox: Leveraging Intellectual Property Rights to Encourage Interoperability in the Network Computing Age*, 28 *AIPLA Q.J.* 195, 226-27 (2000).

¹² See 17 U.S.C. § 512(i)(1)(B), (2) (conditioning eligibility for safe harbors against copyright infringement liability on an Internet service provider’s accommodation of “standard technical measures,” and defining such measures as those which, *inter alia*, result from a “multi-industry standards process” and “are available to any person on reasonable and nondiscriminatory terms”). The statute does nothing to specify what constitutes “reasonable and nondiscriminatory terms” for purposes of section 512, and the three congressional committee reports on the Act are utterly silent on this point. See Senate Judiciary Committee, S. Rep. No. 105-190, at 40-56 (May 11, 1998) (relevant portion of section-by-section analysis); House Judiciary Committee, H.R. Rep. No. 105-551, pt. 1, at 24-29 (May 22, 1998) (same); House Commerce Committee, H.R. Rep. No. 105-551, pt. 2, at 49-66 (July 22, 1998) (same); House Conference Rep. No. 105-796, at 72-76 (Oct. 8, 1998) (same), reprinted in 1998 U.S.C.C.A.N. Vol. 5, at 639, 649-652. There are, to date, no reported cases on what constitutes “reasonable and nondiscriminatory terms” for purposes of this copyright provision.

¹³ In Office of Management & Budget Circular A-119, entitled “Federal Participation in the Development and Use of Voluntary Consensus Standards and in Conformity Assessment Activities,” (Revised Feb. 10, 1998), OMB “directs [federal] agencies to use voluntary consensus standards in lieu of government-unique standards except where inconsistent with law or otherwise impractical.” Circular A-119, § 1, available at <http://www.whitehouse.gov/omb/circulars/a119/a119.html>. Specifically, “[a]ll federal

patents and other intellectual property rights of which they are aware, although these requirements are far more varied in their details than the RAND policies.¹⁴

What, then, does the promise to license on reasonable and nondiscriminatory terms mean, in detail? This very question has absorbed the attention of several legal and economics commentators in the last few years.¹⁵ This literature has quickly converged on three consensus points about the meaning of the RAND promise. First, the nondiscrimination part of the promise is straightforward, requiring that participants license similarly situated adopters on the same terms.¹⁶ Second, when patent-owner participants negotiate royalty rates with adopters, “[r]easonable *should* mean the royalties that the patent holder could obtain in open, up-front competition with other technologies, not the royalties that the patent holder can extract once other participants are effectively locked in to use technology covered by the patent.”¹⁷ Patent

agencies must use voluntary consensus standards in lieu of government-unique standards in their procurement and regulatory activities, except where inconsistent with law or otherwise impractical.” *Id.* at § 6. The Circular expressly defines “voluntary consensus standards” to include RAND licensing: “These standards include provisions requiring that owners of relevant intellectual property have agreed to make that intellectual property available on a non-discriminatory, royalty-free or reasonable royalty basis to all interested parties.” *Id.* at § 4(a).

¹⁴ According to Professor Lemley, “The majority of SSOs that had a policy (twenty-four of thirty-six) imposed either an express or implied obligation that members disclose IP rights of which they are aware. ... There was greater variation, however, with respect to what must be disclosed.” IPRs & SSOs, *supra* note 7, at 1904. He also notes that, although “SSOs are remarkably diverse in their IP rules,” the RAND promise is a “notable example” of the fact that “there are specific terms that seem to have been widely adopted.” *Id.* at 1954 & n.272.

¹⁵ See SHAPIRO & VARIAN, *supra* note 2, at 199-200, 238, 241; Shapiro, *supra* note 11, at 128, 136; Cowie & Lavelle, *supra* note 11, at 140-50; James C. DeVellis, *Patenting Industry Standards: Balancing the Rights of Patent Holders With the Need for Industry-Wide Standards*, 31 AIPLA Q.J. 301, 346-38 (2003); IPRs & SSOs, *supra* note 7, at 1912-18, 1923-27, 1948-57; Mark R. Patterson, *Inventions, Industry Standards, and Intellectual Property*, 17 BERKELEY TECH. L.J. 1043, 1056-73 (2002); Schallop, *supra* note 11, at 227; David J. Teece & Edward F. Sherry, *Standards Setting and Antitrust*, 87 MINN. L. REV. 1913, 1953-64 (2003); Robert M. Webb, *There Is a Better Way: It's Time to Overhaul the Model for Participation in Private Standard-Setting*, 12 J. INTEL. PROP. L. 163, 203-09 (2004). A separate subliteration focuses on the patent disclosure obligations that SSOs impose on participants, as well as the antitrust analysis of those situations where a participant has arguably failed to adhere to a disclosure obligation. The leading sources are 2 HERBERT HOVENKAMP ET AL., *IP AND ANTITRUST: AN ANALYSIS OF ANTITRUST PRINCIPLES APPLIED TO INTELLECTUAL PROPERTY LAW* § 35.5b (2002); Cowie & Lavelle, *supra* note 11, at 103-40; and Janice M. Mueller, *Patent Misuse Through the Capture of Industry Standards*, 17 BERKELEY TECH. L.J. 623 (2002).

¹⁶ See IPRs & SSOs, *supra* note 7, at 1913, 1965 & n.325; Patterson, *supra* note 15, at 1053. Of course, even as straightforward a requirement as treating like parties alike is not without some complications, as Professors Teece and Sherry explore at length. See Teece & Sherry, *supra* note 15, at 1960-64. See also Feldman et al., *supra* note 8, at 114-15 (discussing nondiscrimination term).

¹⁷ SHAPIRO & VARIAN, *supra* note 2, at 241. Professor Patterson presents the most detailed account of the reasonableness of a royalty attributable to the contributed technology's ex ante inherent technical advantages, but not to the fact of standardization itself. See Patterson, *supra* note 15, at 1056-73; Mark R. Patterson, *Antitrust and the Costs of Standard-Setting: A Comment on Teece & Sherry*, 87 MINN. L. REV. 1995 (2003)

law's default damages rule, which specifies that a patentee's damages will "in no event [be] less than a reasonable royalty for the use made of the invention by the infringer,"¹⁸ has generated a large body of cases the courts can use to determine a reasonable royalty in the standard-setting context.¹⁹ The consensus on these two points, at least, appears well founded.

Third, there is a common refrain that the RAND promise's meaning is unclear to a troubling degree, and that SSOs do too little to explain its meaning. For example, Professor Patterson, after noting that "the 'nondiscriminatory' element of [RAND] policies is straightforward," frets that "the definition of 'reasonable' is not so clear. Moreover, the standard-setting bodies themselves make little effort to define the term."²⁰ Such observations trade on the tacit premise that more effort at defining terms and the like should have been made. From widespread comments such as Professor Patterson's, it appears well-accepted in the existing literature that SSOs are doing less than they should to spell out the import of the RAND promise.²¹ Indeed, one commentator goes so far as to argue that, because the seemingly vague RAND promise is a "tool for misuse," SSOs should be held to have violated the antitrust laws when they fail "to require, or at least affirmatively encourage, 'ex ante' disclosure of intended license terms prior to voting [to adopt a standard], with a related mechanism for collective negotiation of the li-

(elaborating further on his approach). See also Cowie & Lavelle, *supra* note 11, at 148; Daniel J. Gifford, *Developing Models for a Coherent Treatment of Standard-Setting Issues Under the Patent, Copyright, and Anti-trust Laws*, 43 IDEA 331, 351 (2003); IPRs & SSOs, *supra* note 7, at 1966-67 & n.332. Two pieces have also suggested that a reasonable royalty should be a low one in absolute terms. See Stanley M. Besen & Joseph Farrell, *Choosing How to Compete: Strategies and Tactics in Standardization*, 8 J. ECON. PERSP. 117, 125 & n.12 (1994) (equating "acceptable terms" with "low-cost licensing," citing licenses of IBM and Unisys patents on proposed modem compression standard); Peter C. Grindley & David J. Teece, *Managing Intellectual Capital: Licensing and Cross-Licensing in Semiconductors and Electronics*, 39 CAL. MGMT. REV. 8, 20 (1997) ("Industry standards bodies sometimes require that patent holders agree to license their patents with low or zero royalty fees, often on a non-discriminatory basis. . . . The 'reasonable rate' royalty involved is likely to be low, though need not be zero.").

¹⁸ 35 U.S.C. § 284, ¶ 1.

¹⁹ See Cowie & Lavelle, *supra* note 11, at 140-41 (noting the relevance of the patent damages statute); IPRs & SSOs, *supra* note 7, at 1914 & n.84 (same).

²⁰ Patterson, *supra* note 15, at 1053.

²¹ See Shapiro, *supra* note 11, at 128 ("Perversely, by leaving the precise licensing terms vague, this caution [about avoiding the appearance of an unlawful buyers' cartel] can in fact lead to ex post holdup by particular rights holders, contrary both to the goal of enabling innovation and to consumers' interests."); Cowie & Lavelle, *supra* note 11, at 100-01 ("[A]mong the questions that the SSO regulations frequently do not address [is] ... What constitutes a 'reasonable' or 'nondiscriminatory' royalty?"); IPRs & SSOs, *supra* note 7, at 1964-65 ("Virtually no SSO specifies the terms on which licenses must be granted beyond the vague requirement that they be 'reasonable' and 'nondiscriminatory.' Indeed, some SSOs expressly forbid discussion such issues when a standard is under consideration, presumably for fear of antitrust liability. Further, private licenses are normally confidential. The result is uncertainty over the cost and scope of patent licenses that may not prove much better than having no policy at all.") (footnotes omitted); Schallop, *supra* note 11, at 227 ("the meaning of 'reasonable' and 'fair' is not entirely clear").

cense agreement.”²² We should, however, reject the current consensus that the conventional RAND promise is materially underspecified, for it portrays as deficient a powerfully concise and effective means for structuring the patent licensing relationship between standard setters and adopters.

Admittedly, there is little doubt that SSOs could make their patent policies, and the RAND promise component thereof, more detailed.²³ Nor do I doubt that the added detail could reduce uncertainty on some occasions, to the mutual benefit of participants and adopters alike. However, though I myself once concluded that the RAND promise’s meaning is badly underspecified, I now think that view is unsound.

We already know the RAND promise’s core meaning. By making this promise, a participant owner grants the adopter community an irrevocable right to use its patented technology to comply with the standard in exchange for a reasonable royalty and other reasonable terms, the details of which are negotiated later without any possibility or threat of court injunction. The RAND promise locks in adopters’ access, with all the clarity that is needed to achieve that core goal; the details of the license terms they later negotiate are trivial by comparison to the patentee’s inability to seek an injunction.²⁴ In fact, the same commentators to which I have already referred strongly point the way to this very conclusion, repeatedly highlighting the central role of the RAND promise in preventing participant patent owners from obtaining injunctions against adopters.²⁵ What the existing literature has *not* done, and what this paper does, is to put the core meaning of the RAND promise—an irrevocable waiver of injunctive relief and other extraordinary remedies—on the strongest footing by a detailed demonstration of its function as a transaction-cost-minimizing governance structure equivalent to the separate patent-holding corporation that sits at the center of the typical patent pool.

The fundamental clarity of the RAND promise already in common use is no small

²² Robert A. Skitol, *Concerted Buying Power: Its Potential for Addressing the Patent Holdup Problem in Standard Setting*, 72 ANTITRUST L.J. 727, 728-29 (2005). Messrs. Curran and Webb, in separate articles, also advocate that adopters be permitted to negotiate collectively for the license(s) they need to practice a standard. See Patrick D. Curran, Comment, *Standard-Setting Organizations: Patents, Price Fixing, and Per Se Legality*, 70 U. CHI. L. REV. 983, 1001-08 (2003); Webb, *supra* note 15, at 221-25. Unlike Mr. Skitol, however, they do not argue that a SSO risks antitrust liability when it fails to help adopters collectively bargain for a license.

²³ For example, the RAND promise could expressly state that, in determining a reasonable royalty, the central question is the patented technology’s *ex ante* technological value, not its *ex post* coordination value.

²⁴ Where the parties cannot reach agreement, “the courts will determine what royalty is reasonable based on industry custom—here, the treatment of patents of similar scope in related industries,” as they already do in conventional patent cases. IPRs & SSOs, *supra* note 7, at 1914. The key difference from a conventional case is that the reasonable royalty applies not only to past use of the patented technology, but also to continued use after the suit ends (rather than being negotiated after suit, at the patentee’s option, in the shadow of an actual injunction against further use of the patented technology).

²⁵ See *infra* Part II.

point—at least, not for the lawyers. Professor Lemley’s observation in 2002 about the RAND promise remains true today: “there has not been much in the way of judicial explication of this term so far.”²⁶ The courts and the Federal Trade Commission have, however, ruled on disputes about a variety of SSO patent disclosure rules.²⁷ Perceived lack of clarity in an IP policy’s terms played the decisive role in *Rambus Inc. v. Infineon Technologies, Inc.*,²⁸ the leading federal appellate court case that directly interprets and applies a SSO IP disclosure policy.²⁹ The Federal Circuit focused on gaps in the disclosure policy to explain its rejection of Infineon’s claims that Rambus had committed fraud in the standard setting process at issue in the case:

In this case there is a *staggering lack of defining details* in the EIA/JEDEC patent policy. When direct competitors participate in an *open standards committee*, their work *necessitates a written patent policy with clear guidance on the committee's intellectual property position*. A policy that does not define clearly what, when, how, and to whom the members must disclose does not provide a firm basis for the disclosure duty necessary for a fraud verdict. Without a clear policy, members form vaguely defined expectations as to what they believe the policy requires—whether the policy in fact so requires or not.³⁰

The case focused on a disclosure policy, but it surely holds a lesson for RAND policies as well. It seems inevitable that the federal appellate courts will be called on to interpret and apply the RAND promise, whether the litigation begins as a patent infringement suit brought by a participant patent owner³¹ or as an antitrust or other suit brought by an adopter.³² The prospect

²⁶ IPRs & SSOs, *supra* note 7, at 1954 n.272.

²⁷ For a detailed discussion of these cases, see HOVENKAMP ET AL., *supra* note 15, at § 35.5b; Mueller, *supra* note 15, at 653-69.

²⁸ 318 F.3d 1081 (Fed. Cir. 2003), *cert. denied*, 540 U.S. 874 (2003).

²⁹ For a concise review of the *Rambus* case, see David Alban, Note, *Rambus v. Infineon: Patent Disclosures in Standard-Setting Organizations*, 19 BERKELEY TECH. L.J. 309 (2004).

³⁰ 318 F.3d at 1102 (emphasis added). My goal here is not to quarrel with the particular analysis or outcome in *Rambus*. Rather, it is simply to highlight the central role that perceived clarity is likely to play in any court review of the terms of an SSO’s IP policy.

³¹ There has already been district court litigation of this sort. See *Agere Sys. Guardian Corp. v. Proxim, Inc.*, 190 F.Supp. 2d 726 (D. Del. 2002); *Townshend v. Rockwell Int’l Corp.*, 55 U.S.P.Q.2d (BNA) 1011 (N.D. Cal. 2000). Cowie & Lavelle conclude that “[i]n the near future it seems likely that the courts will begin to decide cases involving the interplay between standards commitments to license on a ‘reasonable’ basis and the requirements of 35 U.S.C. § 284,” the basic patent damages statute. Cowie & Lavelle, *supra* note 11, at 148.

³² Again, there has already been district court litigation of this sort. See *ESS Tech., Inc. v. PC-Tel, Inc.*, No. C-99-20292 RMW, 1999 WL 33520483, at *1 (N.D. Cal. Nov. 4, 1999). In July 2005, Broadcom Corp. sued Qualcomm Inc., alleging antitrust and other wrongs relating to Qualcomm’s license terms for patents thought to be essential for complying with a wireless telephony standard. See Ashlee Vance, *Broadcom Finds an Antitrust Suit for Qualcomm*, THE REGISTER, July 5, 2005, at http://www.theregister.co.uk/2005/07/05/broadcom_anti_qualcomm. A copy of Broadcom’s complaint is at http://www.broadcom.com/qualcomm_antitrust.pdf.

that the Federal Circuit or other appellate court might undermine the widely adopted RAND policy out of a mistaken sense that it is fatally unclear, disrupting settled expectations among legions of standards adopters with ripples through both copyright law and federal procurement policy, is worrying indeed.

One last preliminary matter: The RAND promise, embedded in SSO bylaws to which participants agree, is primarily a matter of contract law.³³ As a consequence, there is a sense in which one cannot interpret the RAND promise in the abstract; the individual wording of different policies could make a difference, depending on the particulars of a dispute. The popularity of the RAND promise suggests, however, that the policy embodies a feature of the patent rights/standard setting interaction that is deeper than any particular policy's wording. For my purposes here, we can use a model policy as the basis for discussion—namely, the patent policy of the American National Standards Institute (“ANSI”).

ANSI, an umbrella organization founded in 1918 that accredits SSOs in the U.S., has played a leading role in fostering voluntary industry standard setting and establishing model SSO policies.³⁴ The basic patent policy for ANSI-accredited SSOs states that “[t]here is no objection in principle to drafting a proposed American National Standard in terms that include the use of a patented item, if it is considered that technical reasons justify this approach.”³⁵ With regard to adopters' access to the technology covered by a standard-essential patent, the policy triggers a demand for a written statement from the patent holder whenever there is “notice that a proposed American National Standard may require the use of a patented invention.”³⁶ The requirement of a written statement provides as follows:

3.1.1 Statement from patent holder

³³ See IPRs & SSOs, *supra* note 7, at 1909-18 (analyzing the enforceability of SSO IP policies as contracts). Because it is a contract about a property right, it is also about property law.

³⁴ See Shapiro, *supra* note 1, at 86. ANSI provides information about its history at <http://ansi.org>. For an ICT industry expert's perspective on ANSI's history and accomplishments, see CARGILL, *supra* note 11, at 242-49.

Because ANSI's standard-setting model is highly formalized, *id.*, one might suspect that its IP policy is not representative of the approach taken by far less formal industry consortia, i.e., “collection[s] of like minded companies who are devoted to doing something using the same basic technology ... [and] believe that, if they could get a common technology out, they could all compete using this common technology.” *Id.* at 125. On the RAND licensing point, however, the most formal SSOs and less formal consortia appear to occupy common ground. For example, the Internet Engineering Task Force (“IETF”) consortium is the most important SSO for the Internet. See *id.* at 256-61 (describing IETF's work). Its RAND policy, which I describe in detail in the appendix to this paper, *infra*, is quite close to ANSI's.

³⁵ AMERICAN NATIONAL STANDARDS INSTITUTE, ANSI ESSENTIAL REQUIREMENTS: DUE PROCESS REQUIREMENTS FOR AMERICAN NATIONAL STANDARDS 9, ¶ 3.1 (Jan. 31, 2005), available at <http://public.ansi.org/ansionline/Documents> (follow “Standards Activities” hyperlink; then follow “American National Standards” hyperlink; then follow “Procedures, Guides, and Forms” hyperlink).

³⁶ *Id.*

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.³⁷

In addition, ANSI retains a record of this written statement,³⁸ and the published standard itself is required to notify adopters that “compliance with th[e] standard may require use of an invention covered by patent rights.”³⁹ As ANSI’s General Counsel, Ms. Amy Marasco, has explained, “[i]f the patent holder submits a patent statement to the effect of either (a) or (b) [of ¶ 3.1.1 of the ANSI patent policy], this creates third-party beneficiary rights in implementers of the standard.”⁴⁰

By adopting a RAND policy such as ANSI’s, SSO participants—who will also be adopters, in need of access to standard-essential patents—grant an irrevocable, property-like use right to adopters. Put another way, they contract out of a property rule, and into a liability rule.⁴¹

³⁷ *Id.* at ¶ 3.1.1.

³⁸ *Id.* at ¶ 3.1.2.

³⁹ ¶ 3.1.3.

⁴⁰ Amy A. Marasco & Elizabeth Dodson, *Invention and Innovation: Protecting Intellectual Property in Standards-Setting*, 2 J. IT STANDARDS & STANDARDIZATION RESEARCH 49, 50 (2004); see also *id.* at 57 (noting that Ms. Marasco is ANSI’s Vice President and General Counsel). In his empirical study, which predates Marasco’s article by two years, Professor Lemley expresses guarded support for the third-party beneficiary theory. See IPRs & SSOs, *supra* note 7, at 1914-15. In addition to the then-existing trial court decision he notes, *id.* at n.88, another trial court has since concluded that a standard adopter can use a third-party beneficiary theory to enforce a SSO’s IP policy. See *Agere Sys. Guardian Corp. v. Proxim, Inc.*, 190 F.Supp. 2d 726, 738 (D. Del. 2002) (granting the adopter leave to amend its answer and counterclaims to include a breach of contract count, on third-party beneficiary grounds).

⁴¹ The *locus classicus*, at least in the intellectual property law domain, is Robert P. Merges, *Contracting Into Liability Rules: Intellectual Property Rights and Collective Rights Organizations*, 84 CAL. L. REV. 1293 (1996) [hereinafter *Contracting*]. Professor Merges shows in this paper that patentees use patent pools as a form of private ordering to clear mutually blocking patent portfolios that would otherwise halt commercialization in a valuable market space. *Id.* at 1340-58; see also Robert P. Merges, *Institutions for Intellectual Property Transactions: The Case of Patent Pools*, in EXPANDING THE BOUNDARIES OF INTELLECTUAL PROPERTY: INNOVATION POLICY FOR THE KNOWLEDGE SOCIETY 123, 146-54 (Rochelle Cooper Dreyfuss et al. eds., 2001) [hereinafter *Institutions*] (discussing the MPEG-2 and DVD pools). More recently, Merges has briefly noted the similar institutional function of patent pools and SSOs. See Robert P. Merges, *From Medieval Guilds to Open Source Software: Informal Norms, Appropriability Institutions, and Innovation* 4, 18-19 (Conference on the Legal History of Intellectual Property, University of Wisconsin Law School Institute for Legal Studies, Nov. 13, 2004), available at <http://ssrn.com/abstract=661543>. Professor Lemley, for his part, lauds SSOs as another form of private ordering, but in doing so stresses what he sees as “important differences between SSOs and patent pools.” IPRs & SSOs, *supra* note 7, at 1951, 1951-54 (describing these

The adopters' locked-in access right, rather than the patent owner's traditional right to obtain a court injunction against unauthorized use,⁴² frames all subsequent license negotiations. In this respect, the structural words "a license *will* be made available" play a more fundamental role than the substantive words "reasonable terms and conditions that are demonstrably free of any unfair discrimination," on which most existing discussions focus. Part I highlights both the features of voluntary standard setting that drive the meaning of the RAND promise, and the conventional backdrop for negotiating a patent license that the RAND promise is designed to displace. Part II shows that most who have analyzed the RAND promise's meaning expressly describe it as a mechanism for preventing a participant-patentee from holding up adoption of a standard with an injunction threat. Part III, after brief discussion of the pertinent transaction cost economics literature, shows how the corporate form generally, and patent pool central licensing corporations more specifically, are the access lock-in institutions to which the RAND promise is functionally equivalent.

I. STANDARD SETTING AND DEFAULT PATENT RULES

SSOs tackle a wide variety of technology problems, even within the limits of the ICT sectors. The details of the standard setting process vary somewhat from group to group, and from technology to technology. There are many resources describing the standard-setting process generally, as well as the details of many groups' processes and particular standards outputs.⁴³ It is not necessary, however, to rehearse a host of such details here. Instead, it suffices to review a small number of key facts about both the typical standard-setting context and patent law's default rules favoring injunctive relief (which are, for voluntary standard setting, an ill fit).

A. The Typical Standard Setting Context

The space for group-set *de jure* standards exists only where a single firm cannot supply a single solution to the market and thereby establish a *de facto* standard.⁴⁴ "A corporation will ac-

differences). One goal of this paper is to show that the RAND promise serves the same function as a patent pool's central licensing entity, making the similarities between SSOs and pools far more important than the differences.

⁴² See 35 U.S.C. § 283 ("The several courts having jurisdiction of cases under [the Patent Act] may grant injunctions in accordance with the principles of equity to prevent the violation of any right secured by patent, on such terms as the court deems reasonable."); *MercExchange, LLC v. eBay, Inc.*, 401 F.3d 1323, 1338 (Fed. Cir. 2005) ("Because the right to exclude recognized in a patent is but the essence of the concept of property, the general rule is that a permanent injunction will issue once infringement and validity have been adjudged.") (internal quotation omitted), *petition for cert. filed*, 74 U.S.L.W. 3051 (U.S. July 25, 2005) (No. 05-130).

⁴³ The interested reader should begin with CARGILL, *supra* note 11; CARL F. CARGILL, *INFORMATION TECHNOLOGY STANDARDIZATION: THEORY, PROCESS, AND ORGANIZATION* (1989); MARTIN LIBICKI ET AL., *SCAFOLDING THE NEW WEB: STANDARDS AND STANDARDS POLICY FOR THE DIGITAL ECONOMY* (2000); SHAPIRO & VARIAN, *supra* note 2, at chs. 7 & 8; and *STANDARDS POLICY FOR INFORMATION INFRASTRUCTURE* (Brian Kahin & Janet Abbate eds., 1995).

⁴⁴ The space for group-set standards is necessary, but not sufficient, for their creation. Firms may, of

cept and use standards only if it believes that it cannot control the market directly and that standards can.”⁴⁵ The goal of ICT compatibility standardization is thus plural supply of a single interface, i.e., different parts made by different producers working together to accomplish the consumer’s desired results. When this need arises for a set of specifications to which different producers can conform, an SSO can pick up the task as a new standardization project (or interested producers can form a new SSO). The typical scenario, of interest here, is anticipatory standard setting that enables an emerging technology.⁴⁶ For “history proves that the consensus process of formal standard setting is time and again critical to launching new technologies.”⁴⁷

Contemporary standard setting is a technical process undertaken for a business end. SSOs comprise two parts: the administrative management part, and the working group(s) part.⁴⁸ The working group is the basic unit that meets collaboratively to draft a written specification embodying a standard.⁴⁹ And the working group is peopled with volunteers from the interested firms (and sometimes from government agencies and academic departments); they are technical, not legal or business experts.⁵⁰ These volunteers, as technical experts, each con-

course, choose to battle in the marketplace to become the *de facto* standard. For discussion of historical examples and business strategies, see SHAPIRO & VARIAN, *supra* note 2, at ch. 9 (entitled “Waging a Standards War”), and PETER GRINDLEY, STANDARDS STRATEGY AND POLICY: CASES AND STORIES (1995). My focus here is on those who have chosen to work with other providers to create a standard; how firms choose between market battle or collaborative standard setting is beyond the scope of this paper.

⁴⁵ CARGILL, *supra* note 43, at 42.

⁴⁶ See *id.* at 45 (“the IT industry is moving, in many cases, to standards that anticipate the actual creation of a product and are used to define a market”); SHAPIRO & VARIAN, *supra* note 2, at 236 (“Companies developing new technology *collectively* tend to welcome standards, because standards typically expand the total size of the market and may even be vital for the emergence of the market in the first place.”); Skitol, *supra* note 22, at 735-36 (“[T]he essence of information technology (IT) standard setting in many context today is joint development of new technologies necessary to the creation and growth of new markets and the related necessity for interoperability among new products ...”).

⁴⁷ SHAPIRO & VARIAN, *supra* note 2, at 237.

⁴⁸ See CARGILL, *supra* note 11, at 118-19.

⁴⁹ *Id.*

⁵⁰ See *id.* at 123; IPRs & SSOs, *supra* note 7, at 1907 (“A company’s representative to such an SSO is normally an engineer with little or no understanding of patent law.”); Marasco, *supra* note 40, at 50 (“The standards-setting participants are often technical experts who do not have legal or business responsibilities with regard to licensing issues.”). The fact that it is frontline, technical SSO participants who undertake the RAND promise, rather than intellectual property lawyers or business licensing experts, should not interfere with a court’s ability to construe the RAND promise definitively according to its intended function. Just as two tradespeople can agree on the legally definitive terms of a service contract without legal expertise, so too can engineers agree with a SSO to make standard-essential patents available to all future adopters on RAND terms without legal expertise. *But cf.* IPRs & SSOs, *supra* note 7, at 1956 (“IP rules have largely been an afterthought for most SSOs. SSOs are made up of engineers who want to pick the right technical standard, not lawyers who want to clear rights. ... SSO IP rules ... are often put together without much participation by lawyers, and without much thought to the sorts of disputes that might arise.”).

tribute technology ideas to the process from which a final specification emerges.⁵¹ If it is to succeed, the standard-setting process entails evaluating a participant's contributions and suggestions primarily on their technical, practical merit, rather than on the identity of the firm she represents in the standard-setting process. "[S]tandards developers understand that they are participating in an activity that may transcend individual or corporate needs or goals. If the participants are involved only to espouse their own causes, at the expense of the common good, the system will not work."⁵²

The common good at which the working group aims—a detailed specification embodying an interface standard that many producers can use to grow the market for the standardized product—is, of course, unknown at the start of the process.⁵³ Most important, participants do not know at the start which sponsoring firms will turn out to have contributed the technologies essential to the standard, or which of those essential technologies, if any, are covered by patents owned by the sponsoring firms. Each participant thus sees at the start that, at the end of the process, its sponsoring firm is just as likely to require a patent license from another sponsoring firm as it is to own a patent that all adopters require. Indeed, the process could easily result in a situation where multiple participants hold multiple patents on small, interlocking pieces of the standard. Whatever the final outcome, participants make the RAND promise behind a veil of ignorance about their ultimate status as patentees or licensees.⁵⁴

The only thing the sponsoring companies know for certain is that, once the standard's selection ushers in a new network technology by setting the interface specifications, "these same companies [will] shift gears and compete head to head for their share of that network."⁵⁵ Indeed, the competitively driven diffusion of interoperable technologies is among the central benefits consumers enjoy from industry adoption of accessible standards. Experience with patent license disputes from outside the SSO context suggests that, if participants were to wait until after the standard were set before working out any license terms, those who turned out to own essential patents could hold up patentless adopters for a disproportionate share of the standardized technology's substantial coordination value.⁵⁶ The RAND promise, an agreement

⁵¹ See CARGILL, *supra* note 43, at 43 (the standard-setting process "is based on the belief that all parties can and will contribute something").

⁵² CARGILL, *supra* note 11, at 163.

⁵³ *Id.* at 124 ("When a working group begins its creative function, there is no guarantee as to what will emerge from the standards process: The common good is a complete unknown.").

⁵⁴ See HOVENKAMP ET AL., *supra* note 15, at § 35.6c3, page 35-54.2 (describing this "veil of ignorance").

⁵⁵ SHAPIRO & VARIAN, *supra* note 2, at 228; see also Gifford, *supra* note 17, at 357 (when "producing firms agree on compatibility, they remain free to compete fiercely on everything else: the quality of their products, their features, and their prices").

⁵⁶ See Shapiro, *supra* note 11, at 124-26 (describing such patent licensing holdups). Adopters with equally essential patents of their own could likely obtain royalty-free cross-licenses. See IPRs & SSOs, *supra* note 7, at 1949 (discussing royalty-free cross-licensing).

on the framework for later negotiation timed to take advantage of the veil of ignorance's tempering effect,⁵⁷ is designed to prevent this holdup problem.⁵⁸

Given the risk of holdup, it is natural to wonder why SSOs insist merely that each participant promise to license all adopters on reasonable terms later, rather than insisting that participants negotiate detailed license terms with the adopter community before a standard is finalized. There are two main reasons, one legal and one practical. First, assuming it were possible for participants to hammer out detailed license terms before the standard is determined, the prospect of antitrust liability deters a SSO from being a forum for adopters to bargain as a group with participant patentees. As ANSI's General Counsel has observed, "discussing licensing issues may impose a risk that the [SSO] and the participants will become targets of allegations of improper antitrust conduct."⁵⁹ SSOs fear liability for acting, in effect, as a buyers' cartel that artificially suppresses the price a patentee can command for access to its technology.⁶⁰

Second, it is *not* possible to specify in advance detailed license terms for standard-

⁵⁷ Professor Vermeule, examining constitutional law, describes a "veil of ignorance rule" as "a rule that suppresses self-interested behavior on the part of decisionmakers ... by subjecting the decisionmakers to uncertainty about the distribution of benefits and burdens that will result from a decision." Adrian Vermeule, *Veil of Ignorance Rules in Constitutional Law*, 111 YALE L.J. 399, 399 (2001). The RAND promise subjects SSO participants to just this sort of uncertainty, with the intended benefit. See IPRs & SSOs, *supra* note 7, at 1951 ("SSOs tend to set a uniform IP policy and apply it across the board," and "[b]ecause the members of the SSO generally don't know in advance whether they will be the owner or the licensee of any particular IP right, the policy is more likely to be drafted evenhandedly."). Moreover, even those commentators who conclude that the RAND promise does not adequately constrain patent owners recognize *ex ante* bargaining's tempering effect. See Skitol, *supra* note 22, at 734; Webb, *supra* note 15, at 221.

⁵⁸ Shapiro, *supra* note 11, at 128, 136; IPRs & SSOs, *supra* note , at 1895 (the "promise" of SSO IP policies is to "solv[e] patent holdup problems"), 1952 ("Bargaining under the veil of ignorance is particularly likely to solve holdup problems in which society as a whole would benefit from a deal, but once property entitlements are distributed those who receive them have an incentive to 'hold up' others for a disproportionate share of the returns.").

⁵⁹ Marasco, *supra* note 40, at 50.

⁶⁰ See HOVENKAMP ET AL., *supra* note 15, at § 35.6b; Shapiro, *supra* note 11, at 128 ("[M]any [SSOs] are wary of sanctioning any specific agreement regarding the magnitude of licensing terms for fear of antitrust liability, as such agreements might be construed as price-fixing."); Cowie & Lavelle, *supra* note 11, at 102 ("SSOs have been reluctant to specify or become involved in setting royalty rates for patented technology for fear that they will be accused of price fixing or another violation of the antitrust laws."). Several commentators, while acknowledging this widely held fear, argue that SSOs *should* be able to negotiate detailed license terms (such as precise royalty rates) with patent owners on behalf of adopters, without fear of antitrust liability. See Curran, *supra* note 22, at 994 (acknowledging current fear), 1001-08 (arguing for *per se* legality of collective license negotiations); Patterson, *supra* note 15, at 1054 n.41 (acknowledging current fear), 1078-80 (arguing for collective license negotiations); Skitol, *supra* note 22, at 729 (acknowledging current fear), 735-42 (arguing that current fear is based on erroneous view of antitrust law). One need not decide, to interpret the RAND promise, whether SSOs are right to fear antitrust liability in these circumstances, or whether (assuming the fear *is* well-founded) antitrust law should be changed to permit such collective license negotiation.

essential patents. Frontline participants in today's SSOs are not equipped to engage meaningfully with the details of licensing deals that will shape the market for the interface: "individuals who participate in standard setting are, for the most part, engineers unschooled in business considerations and unequipped to address the costs and related competitive implications of their technical specification-writing exercises."⁶¹ More fundamentally, even if they *were* expert in business and licensing details, SSO participants would still face data gaps that would surely defeat such *ex ante* negotiations. Some of the gaps will relate to patents. For example, before the standard is established, it is unclear which, if any, of the participants will own standard-essential patents. This uncertainty is compound, comprising questions about both whose technology the standard will incorporate and whether the contributor in question owns a patent covering that technology.⁶² Once all essential patents come to light, negotiations may take account of each patent's centrality to the standardized technology, relative to all the other essential patents. Other gaps will relate to the future market for products that include that standardized interface. What unstandardized products will discipline the price of standardized products early in the product cycle, and how will that change as more people adopt the standardized product? What plans, if any, should be made for adjustable license terms that take account of dramatic price changes in the market, what should the adjustment formulae be?⁶³ Royalty rates should take account of the answers to these and myriad other patent and market questions, but most of the answers will not be known (or known in sufficient detail) until after the SSO has established the standard and producers have begun selling standardized products.

It is folly to expect, much less insist upon, *ex ante* negotiation of detailed license terms much beyond the royalty-free and RAND options.⁶⁴ The RAND promise's mandate that license

⁶¹ Skitol, *supra* note 22, at 734.

⁶² If the contributor seeks a patent at around the same time as the standard-setting process takes place, it may be years before the patent issues and the precise scope of its coverage is clear. *See infra* note 68 (discussing typical time lag in patent issuance and changes in claim scope during patent prosecution). It seems likely that many patents will be sought during or after standard setting, if only because anticipatory standards are likely to pull in contributions at the forward edge of each participant's technology development process.

⁶³ In the *ESS* case, for example, one of the reasons alleged to explain the unreasonableness of the patentee's royalty demand was a significant change in modem chipset price from 1996 to 1998. According to the plaintiff adopter *ESS*,

while the proposed royalty payments may have been appropriate when chipsets sold for approximately \$50 per unit [in 1996], chipsets were selling for approximately \$10 per unit by March 1998 ... [and] due to the changed modem market, the proposed royalty payments were unreasonably expensive and did not allow for new market entrants to compete with existing market participants.

ESS Tech., Inc. v. PC-Tel, Inc., No. C-99-20292 RMW, 1999 WL 33520483, at*1 (N.D. Cal. Nov. 4, 1999).

⁶⁴ On this point, I strongly differ with those who urge that SSO participants can establish detailed license terms for standard-essential patents before the details of the standard itself are known, e.g., Curran, *supra* note 22, at 984 (proposing a rule of antitrust *per se* legality "for single-source patent price bargaining

terms be “reasonable” is not needlessly vague. Rather, it is appropriately open-textured, given that participants in the standard-setting process do not yet know the contours of the standard that will emerge, or how the as-yet-unknown patents essential to the standard should be valued in the standard-based market that develops. As Professor Lemley notes, “parties need not specify a price in order to create a binding agreement. In the absence of a price, courts will supply a reasonable and customary price term,” and other reasonable terms as well.⁶⁵

B. Default Patent Rules

The typical SSO’s openness goals are hard to square with patent law’s pronounced tilt toward injunctive relief that protects the patentee’s power to exclude others. This pro-injunction default, moreover, is the rule in the shadow of which standards adopters must bargain with patentees for standard-essential patent licenses, unless the parties have taken themselves out of this shadow (whether by making the RAND promise or by some other means). Brief reflection on the default injunction rules is adequate to show that the RAND promise is calculated to displace them.

Assume an adopter has been selling an item that implements a standard, and that this adopter and a participant patentee are unable to reach negotiated terms for a standard-essential patent. Whether it begins as one or not, any suit between the adopter and the patentee over the license terms will, at bottom, be a patent infringement case.⁶⁶ The gravamen of the patentee’s claim will be that the adopter, by making and selling the standard-compliant good or service, directly infringes the essential patent in question in violation of section 271 of the Patent Act.⁶⁷

In the typical case, the adopter will find it difficult to deny the fact of infringement. First, if the patentee has done a competent job drafting the formal patent claim that corresponds

[that] would permit SSOs to bargain with patent owners over the price of patent licenses before adopting patented technologies as industry standards”); Skitol, *supra* note 22, at 729 (“A much more sensible and effective approach [than requiring RAND terms] would be for the SSO to require, or at least affirmatively encourage, ‘ex ante’ disclosure of intended license terms prior to voting”); Webb, *supra* note 15, at 221 (proposing “the requirement that the participants in a standard-setting process negotiate a detailed license before the standard-setting deliberations begin”). If the price that adopters are asked to pay for patent access is to have any connection at all to the prices the market later sets for standard-compliant products, the access price cannot be set in advance at anything other than “a reasonable price, which we will determine with precision later.” The license price term that *is* available in advance of determining the standard’s details is \$0. Not surprisingly, \$0 and “reasonable royalty” are the two price terms that SSOs use. See IPRs & SSOs, *supra* note 7, at 1906.

For additional structural terms that could facilitate post-standardization license negotiations, see *infra supra* note 97 (describing suggestions from Professor Lemley).

⁶⁵ IPRs & SSOs, *supra* 7 note, at 1914 (citing E. ALLAN FARNSWORTH, CONTRACTS § 7.17 (2d ed. 1990)).

⁶⁶ For examples, see the suits cited above in notes 31 and 32.

⁶⁷ 35 U.S.C. § 271(a) (“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”).

to the standard-essential technology, the correspondence between the patent right and the standard will be clear. Indeed, it will often be the case that the formal patent claim was drafted *after* the standard was codified by the SSO, making it virtually certain that the claim will correspond tightly to the standard's terms.⁶⁸ Second, the adopter will likely have stated, in its marketing materials, that the good or service accused of infringement complies with the standard; perhaps there is even a certification program for the standard to support those marketing statements.⁶⁹ In light of such marketplace statements (which the patent infringement jury will definitely hear about), the adopter can hardly deny that it complies with the standard. An adopter accused of infringing a standard-essential patent will also find it difficult to prove that the patent claim is invalid or unenforceable, and thus of no consequence. Each claim in an issued patent enjoys a presumption of validity,⁷⁰ and both invalidity and unenforceability must be proved by the patent challenger to the "clear and convincing" standard.⁷¹

The adopter's weak noninfringement and invalidity positions will make it highly likely, in turn, that the patentee can readily obtain a *preliminary* injunction against the adopter's continued use of the standard-essential technology. This is so because, in patent law, once that patentee has demonstrated a strong showing of likelihood of success on the merits of its infringement claim (taking due account of substantial defenses raised by the accused infringer), irreparable harm against the patentee is presumed and a preliminary injunction is almost sure to is-

⁶⁸ The typical patent application takes about 2½ years to issue from the Patent Office. See Mark A. Lemley & Kimberly A. Moore, *Ending Abuse of Patent Continuations*, 84 B.U. L. REV. 63, 64, 71 (2004) (reporting results of a study of Patent Office prosecution time for all patents issued from 1976 through 2000). During this process, the applicant and the Office engage in a back-and-forth process to finalize the text of the formal claims that the patent will contain. See *id.* at 76-79 (describing this process). "The Federal Circuit has made it clear that the law permits the drafting of claims written during prosecution specifically in order to cover a competitor's product," so long as "the patentee can find some support in the original patent application for the current claims." *Id.* at 77; see also *Lieble-Flarsheim Co. v. Medrad, Inc.*, 358 F.3d 898, 909 n.2 (Fed. Cir. 2004) (approving the practice). Just as they can draft claims to cover specific products, patentees can draft claims to cover specific standards.

⁶⁹ For example, the Wi-Fi Alliance, a "non-profit industry association of more than 200 member companies devoted to promoting the growth of wireless Local Area Networks (WLANs)," administers "testing and certification programs [to] ensure the interoperability of WLAN products based on the IEEE 802.11 specification." <http://www.wi-fi.org/OpenSection/index.asp> (last visited Aug. 31, 2005). According to the WiFi Alliance website, "[s]ince the introduction of the Wi-Fi Alliance's certification program in March 2000, over 2,000 products have been designated as Wi-Fi CERTIFIED™, encouraging the expanded use of Wi-Fi products and services across the consumer and enterprise markets." *Id.* Someone who markets a product as "WiFi certified" is going to have trouble credibly arguing that the product fails to comply with IEEE's 802.11 specification.

⁷⁰ 35 U.S.C. § 282 ("A patent shall be presumed valid. Each claim of a patent ... shall be presumed valid independently of the validity of other claims ...").

⁷¹ See, e.g., *Unitherm Food Sys. v. Swift Ekrich, Inc.*, 375 F.3d 1341, 1349 (Fed. Cir. 2004) (applying this standard of proof).

sue.⁷² Importantly, preliminary relief of this sort can be swift: in Amazon's notorious case against Barnes & Noble on the Bezos one-click patent, the Patent Office issued the patent on September 28, 1999⁷³; Amazon sued Barnes & Noble on October 21, 1999⁷⁴; and the trial court, after a five-day hearing that began on November 16, 1999, issued a preliminary injunction against Barnes & Noble's check-out process on December 1, 1999.⁷⁵ In other words, the suit went from a dead start to a preliminary injunction in one month and eleven days. Although the Federal Circuit would vacate this preliminary injunction 14½ months later,⁷⁶ Barnes & Noble had already suffered reduced sales for that period, which included two Christmas seasons. How many standard adopters will sit on the sidelines for 14 months while their licensed competitors sell standard-compliant items? If the patentee obtains a preliminary injunction, the case is over, practically speaking; the patentee will largely dictate the terms of the adopter's license.⁷⁷ In the event the parties see the litigation through trial to final judgment, and the patentee prevails, a permanent injunction is a virtual certainty.⁷⁸

It is easy to see, in the light of this default rule scenario, why individual participants in a standard-setting process would not want to adopt a standard and invest in complying with it while at the same time exposing themselves to preliminary or permanent injunctions designed for contexts at a distant remove from standard setting. The RAND promise's core function is to displace these default injunction rules in favor of ready adopter access to standard-essential

⁷² See, e.g., *Oakley, Inc. v. Sunglass Hut Int'l*, 316 F.3d 1331, 1345 (Fed. Cir. 2003) (affirming grant of preliminary injunction); 7 DONALD S. CHISUM, CHISUM ON PATENTS § 20.04[1][e][i] (2002). The same presumption of irreparable harm would be triggered if the intellectual property at stake were a copyright, rather than a patent. See, e.g., *Elvis Presley Enters., Inc. v. Passport Video*, 349 F.3d 622, 627 (9th Cir. 2003); *Merkos L'Inyonei Chinuch, Inc. v. Otsar Sifrei Lubavitch, Inc.*, 312 F.3d 94, 96 (2d Cir. 2002).

⁷³ *Method and System for Placing a Purchase Order Via a Communication Network*, U.S. Patent No. 5,960,411 (issued Sept. 28, 1999), available at <http://www.uspto.gov/patft/index.html>.

⁷⁴ *Amazon.com, Inc. v. Barnesandnoble.com, Inc.*, 73 F.Supp. 2d 1228, 1231 (W.D. Wash. 1999) (granting preliminary injunction), *rev'd*, 239 F.3d 1343 (Fed. Cir. 2001) (vacating preliminary injunction).

⁷⁵ *Id.*

⁷⁶ The Federal Circuit vacated the injunction on February 14, 2001. See 239 F.3d at 1343.

⁷⁷ In their empirical study of preliminary injunctions in patent cases, Professors Lanjouw and Lerner describe the preliminary injunction's "powerful impact" as a litigation "weapon":

[P]ractitioner accounts suggest that ... many firms request preliminary injunctions not just to avoid "irreparable harm" but also to impose financial stress on their rivals. An injunction proceeding itself raises the legal expenditure required to pursue a case through to a trial ruling. If, in addition, a plaintiff can shut down a significant fraction of a defendant's operations for months or years while an issue is being resolved, the defendant is likely to experience a sharp reduction in operating cash flow.

Jean O. Lanjouw & Josh Lerner, *Tilting the Table? The Use of Preliminary Injunctions*, 44 J.L. & ECON. 573, 573-74 (2001).

⁷⁸ See *MercExchange, LLC v. eBay, Inc.*, 401 F.3d 1323, 1338 (Fed. Cir. 2005), *petition for cert. filed*, 74 U.S.L.W. 3051 (U.S. July 25, 2005) (No. 05-130).

patent licenses. With access assured, adopters will make the investments needed to bring the standardized technology to market, driving more rapid network growth for mutual benefit.

II. RECOGNITION THAT THE RAND PROMISE DISPLACES INJUNCTIONS

Patent law's powerful pro-patentee injunction default rules are ill suited to the open SSO milieu, the basic premise of which is vigorous competition among adopters who have ready access to the technology they need to produce the standardized item. Economists and lawyers who analyze the standard-setting process recognize this fact, openly discussing both the tension between a patentee's conventional injunction-backed bargaining power and dependable long-term access to SSO output, and the role of the RAND promise in resolving that tension. Oddly, having identified this core function of the RAND promise, these same analysts suggest that the promise's basic meaning lies elsewhere.

For example, Professors Shapiro and Varian (both economists), in their illuminating work on the business strategies common to the network technology domain, identify the cession of control as a key step in cooperative technology adoption for a network market. According to Shapiro & Varian, "[t]he underlying idea is *to forsake control* over the technology to get the [consumer adoption] bandwagon rolling. If the new technology draws on contributions from several different companies, *each agrees to cede control* over its piece in order *to create an attractive package: the whole is greater than the sum of the parts.*"⁷⁹ They also identify the RAND promise as the means for ceding control:

A fundamental principle underlying the consensus approach to standards is that they should be "open," with no one or few firms controlling the standard. Thus, a quid pro quo for having one's technology adopted in a formal standard is a commitment to license any patents *essential* to implementing the standard on "fair, reasonable, and non-discriminatory" terms.⁸⁰

Professor Shapiro emphasizes this same basic function of the RAND promise in subsequent work on standard setting, linking participants' insistence on the RAND commitment at the standard-setting stage to the prevention of holdup problems at the implementation stage. According to Shapiro,

once a standard is picked, any patents (or copyrights) necessary to comply with that standard become truly essential ... and the standard itself is subject to holdup if these patent holders are not somehow obligated to license their patents on reasonable terms. ... [F]or precisely this reason, standard setting bodies require participants to license any essential patents on reasonable terms as a quid pro quo before adopting any standards.⁸¹

In other words, the RAND promise is the very "somehow" by which participant-patentees *are*

⁷⁹ SHAPIRO & VARIAN, *supra* note 2, at 199-200 (emphasis added).

⁸⁰ *Id.* at 238 (emphasis in original).

⁸¹ Shapiro, *supra* note 11, at 136. *See also id.* at 124-26 (describing the general patent holdup problem).

“obligated to license their patents on reasonable terms.” It is odd, then, that, earlier in the same discussion, Shapiro suggests that holdup can occur even with a RAND policy where a patent owner’s “precise licensing terms” are left “vague” in an effort to avoid the appearance of an unlawful buyers’ cartel: “this caution can in fact lead to ex post holdup by particular rights holders, contrary both to the goal of enabling innovation and to consumers’ interests.”⁸² Such a holdup cannot occur, however, if the court confronted with a license dispute interprets the RAND promise, consistent with its core function, as an irrevocable waiver of the patentee’s right to extraordinary relief for infringement, i.e., an injunction (preliminary or permanent) or enhanced damages for willful or bad faith infringement.⁸³

Legal analysts have shown a similar blend of keen insight and befuddlement about the RAND promise’s meaning. For example, Mr. Schallop concludes that the RAND policy’s meaning “is not entirely clear.” At the very same time, however, he hones in on its precise meaning: “this contractual language, at a minimum, requires that essential IPR owners not chill the adoption and proliferation of the standard through the enforcement of their essential patent rights by enjoining competitors from practicing the standard.”⁸⁴ Similarly, Mr. DeVellis concludes that, “[a]lthough the meaning of ‘reasonable’ is not well settled, it seems to require, at a minimum, that patent holders offer terms that will not prevent their competitors from practicing the stan-

⁸² *Id.* at 128.

⁸³ The Patent Act provides that, in an infringement case, “the court may increase the damages up to three times the [compensatory damages] amount found or assessed.” 35 U.S.C. § 284. The courts have interpreted this provision, in conventional cases removed from standard setting, to permit, but not compel, enhanced damages where the infringement was willful or in bad faith. See *Knorr-Bremse Systeme Fuer Nutzfahrzeuge GmbH v. Dana Corp.*, 383 F.3d 1337, 1342 (Fed. Cir. 2004) (in banc). In other words, “enhanced damages are punitive, not compensatory.” *Sensonics, Inc. v. Aerosonic Corp.*, 81 F.3d 1566, 1574. The threat of punitive damages in conventional cases helps deter infringement that may be difficult to detect. See Roger D. Blair & Thomas F. Cotter, *An Economic Analysis of Damages Rules in Intellectual Property Law*, 39 WM. & MARY L. REV. 1585, 1640 (1998) (concluding that “[s]ome enhancement of the patentee’s [damages] award ... may be necessary to deter those infringers who know about the patent, or who could learn about it at a reasonable cost, but whose conduct otherwise might go undetected or undeterred”). A punitive damages award is, however, improper in the context of an adopter who has negotiated in good faith, albeit unsuccessfully, with the owner of a standard-essential patent who is bound by the RAND promise. Cf. *id.* at 1641 (concluding that “a finding that the defendant’s conduct is only marginally unlawful weighs against” enhanced damages, and “may even counsel in favor of limiting the recovery to an award of compensatory damages only”). First, the adopter has not acted in disregard of the patentee’s rights, but actively sought to come to reasonable license terms with the patentee. Second, infringement of a standard-essential patent is not so hard to detect that it warrants extra deterrence, both because the adopter has sought out the patentee and because adopters must actively communicate their use of the standard to attract consumers.

⁸⁴ Schallop, *supra* note 11, at 227; see also *id.* at 230 (concluding that the RAND promise “ensures that a participant will not significantly hinder the proliferation of the standard by threatening to unduly interfere (e.g., attempt to license at an overvalued royalty rate) or enjoining others (e.g., via an injunction) from practicing the standard because of its patent”).

dard.”⁸⁵ He also concludes that a useful “patent policy *must create a duty* requiring members to agree to reasonable licensing terms.”⁸⁶ An irrevocable waiver of injunctive relief that ensures adopters’ long-term access to standard-essential technology is, of course, the lynchpin of such a “duty,” i.e., an obligation to license to which adopters have a corresponding access right.

Professor Lemley, who offers the standards literature’s most extended and penetrating legal analysis of the RAND promise, repeatedly casts its role in conferring long-term access on adopters as a patentee’s waiver of the injunction right. In describing the SSOs that use the RAND policy, he states that “[t]hey permit their members to own IP rights, but require those members to commit in advance to licensing those rights on specified terms and *to forego injunctive relief altogether*.”⁸⁷ Similarly, in describing the relief available to a frustrated adopter who brings a contract action against a participant-patentee over failure to license, he concludes that “[s]pecific performance of *an obligation to license* on royalty-free or [RAND] terms seems particularly appropriate; the defendant [patentee] *had already agreed to give up a legal right* in exchange for something of value, and is merely being prevented from asserting *the right it had given up*.”⁸⁸ After reviewing patent law’s implied license doctrine as an alternate interpretive route, Professor Lemley concludes it is the better route precisely because it more firmly removes the injunction threat:

I think it is preferable as a policy matter to construe an IP owner’s agreement to an SSO IP-licensing requirement as the grant of a license itself, rather than merely a contract with the SSO. ... [M]ost importantly, the implied-license approach reduces opportunism by IP owners. Under the contract approach, IP owners have an incentive to assert claims for patent infringement against users of well-established standards, even if the owners previously agreed to license those patents on reasonable and nondiscriminatory terms. By threatening to prevent use of the standard, they can coerce significantly more than a reasonable royalty from users. Determining that IP owners have already licensed their patents prevents such opportunism.⁸⁹

In short, whether denominated a contract or an implied license, the key on which Lemley rightly focuses is removing the threat of injunction from the patentee’s arsenal. He uses these insights into the RAND promise’s function as a bridge to Professor Merges’ work on collective rights organizations, analyzing SSO IP policies as a form of private ordering (albeit a “messy” one) and contrasting them with patent pools.⁹⁰ Finally, extending prior analyses of the RAND policy’s meaning, he shows that a participant’s commitment to license standard-essential pat-

⁸⁵ DeVellis, *supra* note 15, at 346.

⁸⁶ *Id.* at 347 (emphasis added).

⁸⁷ IPRs & SSOs, *supra* note 7, at 1902 (emphasis added).

⁸⁸ *Id.* at 1916 (emphasis added).

⁸⁹ *Id.* at 1925.

⁹⁰ *Id.* at 1948-57.

ents is ongoing, not temporary.⁹¹

Notwithstanding his cogent focus on the RAND promise's role in eliminating the threat of injunction, and thus of post-standardization holdup, Professor Lemley also describes the RAND policy as unclear and uncertain: "while IP owners at many SSOs [in the study] were required to license their rights on reasonable and nondiscriminatory terms, it isn't clear what those obligations mean in practice,"⁹² and SSO IP policies "are ambiguous on important terms."⁹³ He suggests the SSOs have left the meaning of the RAND policy ill-defined by failing to explain it in more detail: "

- "While 'reasonable and nondiscriminatory licensing' thus appears to be the majority rule among SSOs with a patent policy, relatively few SSOs gave much explanation of what those terms mean or how licensing disputes would be resolved."⁹⁴
- "One of the most common requirements imposed on IP owners is an obligation to license IP rights on reasonable and nondiscriminatory terms. But virtually no SSO policies specify what that phrase means, leaving courts to decide what terms are 'reasonable.'"⁹⁵
- "Virtually no SSO specifies the terms on which licenses must be granted beyond the vague requirement that they be 'reasonable' and 'nondiscriminatory.' ... The result is uncertainty over the cost and scope of patent licenses that may not prove much better than having no policy at all."⁹⁶

He also urges SSOs to "give content to the reasonable and nondiscriminatory licensing requirement," concluding that, "without some idea of what those [RAND] terms are, reasonable and nondiscriminatory licensing loses much of its meaning."⁹⁷

So long as the RAND promise is construed according to its core function, however, it is hard to know what more the SSOs that rely on it need to say to make it an effective means to

⁹¹ *Id.* at 1912, 1914 & n.83.

⁹² *Id.* at 1906.

⁹³ *Id.* at 1957.

⁹⁴ *Id.* at 1906.

⁹⁵ *Id.* at 1913.

⁹⁶ *Id.* at 11964-65.

⁹⁷ *Id.* at 1964. Interestingly, Professor Lemley concedes that "specifying the royalty in advance is likely to be too rigid." *Id.* at 1965. And his suggestions for adding content to the RAND policy – suggestions that strike me as worthy of adoption – do not actually make the RAND promise's core role in precluding injunctions any more explicit. Specifically, he recommends that SSOs "require members who assert patents to make available to others a copy of all their licenses involving the patent"; "specify[] whether royalty rates must be identical for all parties, or whether potential licensees in different situations may be treated differently"; "prevent certain kinds of restrictive nonprice license terms such as grantback clauses and noncompetition agreements"; and "set up some means of dispute resolution within the [SSO] to help resolve royalty disagreements," such as "an arbitration group specializing in standards conflicts." *Id.* at 1965-66 & n.329.

eliminate post-adoption holdup. It locks in the adopters' right to access the technology on reasonable terms. Parties can negotiate license terms later, with far more information about the scope of standard-essential patents and market conditions. The courts have vast experience determining reasonable royalty rates in patent cases, as Professor Lemley himself notes,⁹⁸ and the parties can resort to them if negotiations fail.

All these economists and lawyers have greatly advanced our understanding of the RAND promise by squarely identifying its core function of preventing post-standardization holdup. At the same time, however, their hesitation to conclude that the RAND policy's core function directly dictates its fundamental meaning suggests that its meaning is unclear, or lies elsewhere. It does not.

III. THE RAND PROMISE AS GOVERNANCE STRUCTURE

The central question for those who plan to collaborate on an ICT standard that may be covered by a privately owned patent is this: Who, if license negotiation fails, holds the access right to the patent—the patent owner, or individual adopters? The animating theory of group standard-setting dictates that it must be the adopters. If the owner of a standard-essential patent can enjoin (or threaten to enjoin) would-be adopters from practicing the standard, the very enterprise of adopting a standard fails to meet its basic purpose. The RAND promise is tailored to reallocate the access right from the patentee to adopters. This is the RAND promise's central function and thus its meaning.

Can matters truly be this simple? Can the RAND promise's function be merely to lock in adopters' right to access, for a reasonable fee, any standard-essential patent? The holdup problem that the RAND promise solves has, in fact, long been a subject of analysis in the transaction cost economics literature. This literature helps illuminate the RAND promise's simplicity and power.

A. Transaction Cost Economics and the Problem of Opportunism

[Discuss team production, contractual hazard of asset specificity (in this context, adopters' investments to enter the market with standard-compliant products, which will have much less value if they later forbidden to practice the standard), and governance response, focusing on Alchian & Demsetz (1972), Klein et al. (1978), Williamson (1985, 1996), and Hart (1995). Rob Merges artfully pulls these strands together in the context of contracting over intellectual property rights.⁹⁹]

B. The Corporate Form and Opportunism Prevention

[Two well-appreciated examples of opportunism prevention in action: corporate form

⁹⁸ *Id.* at 1966 & n.331.

⁹⁹ See Robert P. Merges, *A Transactional View of Property Rights* 5-11 (Berkeley Center for Law & Technology, Law & Technology Scholarship Paper No. 8, 2005), available at <http://repositories.cdlib.org/bclt/lts/8>.

generally, which creates a separate legal person to hold assets and thereby lock them into the team production setting; and patent pools, which use a separate licensing corp. to lock patent assets into a common basis for market competition using the technology.]

1. *Corporate Law and Locking in Capital*

[Discuss Margaret Blair's historical account of creation of Singer Corp., and Margaret Blair and Lynne Stout's joint work demonstrating that "one of the most important functions of corporate law" is "the creation of a legal and institutional basis for accumulating enterprise-specific physical capital, as well as specialized organizational and other intangible capital, and for 'locking in' that capital by discourage premature asset withdrawal by managers, investors, and their heirs."¹⁰⁰]

2. *Patent Pools and Locking in Access*

[Summarize analyses of patent pools by Merges, Vaughn, Carlson. The common feature is that a new corporate entity holds the pool of essential patents and locks in access for adopters, distributing revenue according to an established licensing formula.

Compared to the typical SSO scenario, patent pools are developed later in the technology life cycle, when firms have a much better idea who owns the key blocking patent positions. Knowledge of these patent positions makes it practical for pool founders to work out a licensing arrangement, including a royalty rate and distribution formula, in some detail. SSO members, who are most often working on anticipatory technology, have less information about people's ultimate patent positions, but they have no less need to lock in access.]

C. The RAND Promise and Access Lock-In

[The RAND promise, like the new licensing corp at the center of a patent pool, locks in adopters' access. It does so by granting adopters an irrevocable right to use the patented technology to build to the standard, in exchange for a reasonable royalty and other reasonable terms.

The scope of this grant to adopters makes sense, given the circumstances. The right to practice the patented invention is essential for adopters, so it is insufficient to grant a routine, revocable license that permits the owner to get an injunction and shut out an adopter. However, given that the patented technology may have multiple uses as yet unknown (after all, it is early in the technology life cycle), outright assignment of the patent to a licensing corp (as if it were a pool) would unnecessarily preclude the owner from getting licensing revenue outside the standard context. A grant that both eliminates the prospect of injunctive relief, ensuring adopters long-term access, and leaves the patent in the owner's hands, allowing for revenue from other sources, is best tailored to the circumstances. And that is what RAND is.

¹⁰⁰ Margaret M. Blair, *Why Markets Chose the Corporate Form: Entity Status and the Separation of Asset Ownership from Control 2* (Georgetown University Law Center, Business, Economics & Regulatory Policy Working Paper No. 429300, July 14, 2003), available at <http://www.ssrn.com/abstract=429300>.

One technical problem with this construction is that, without more, it might systematically permit licensees to force a less-than-reasonable royalty by refusing to pay (or pay enough) unless sued. Specifically, under the American attorney fee rule, each party generally pays its own way. An adopter might use this fact to force a royalty discount just less than the best estimate of the patentee's attorney fees in an infringement suit to establish reasonable license terms. The RAND promise should not be a shield for this forced discount, and there is a patent law mechanism to prevent it. The Patent Act's fee-shifting rule in favor of the prevailing party is limited to "exceptional cases."¹⁰¹ Although the provision has not been used in such a way before, it seems a court could readily use it to shift fees in the patentee's favor in cases where the reasonable license terms the court sets are not materially different from those the patentee had been willing to accept before the litigation. It seems a fair analogy to existing fee awards in favor of prevailing patentees, which can be based on an accused infringer's maintaining the litigation in "bad faith."¹⁰² Cowie & Lavell make a similar suggestion.¹⁰³

New application: What is a court to do in the case where a patent has changed hands? Does the original patentee's promise to license on RAND terms bind the patent's next owner? I have not seen any RAND policy that includes a detailed statement on this point. And we know such a dispute can arise.¹⁰⁴ It is clear, from the foregoing analysis, that adopters' need for access to the technology does not diminish merely because the patent changes hands. The next owner takes the patent subject to the access rights already locked in. Effectively a servitude, the RAND promise continues to burden the patent, even when it is sold to another party. (This is

¹⁰¹ 35 U.S.C. § 285 ("The court in exceptional cases may award reasonable attorney fees to the prevailing party.").

¹⁰² See, e.g., *Imonex Servs., Inc. v. W.H. Munzprufer Dietmar Trenner GmbH*, 408 F.3d 1374, 1378 (Fed. Cir. 2005) (upholding an award of attorney fees in prevailing patentee's favor).

¹⁰³ Cowie & Lavelle, *supra* note 11, at 149 ("A court could find that ... the defendant who refuses to accept a reasonable offer and forces the patentee to litigate is liable for the patent holder's attorneys' fees under Section 285.").

¹⁰⁴ See *ESS Tech., Inc. v. PC-Tel, Inc.*, No. C-99-20292 RMW, 1999 WL 33520483, at *1 (N.D. Cal. Nov. 4, 1999) ("Before [adopter ESS] and [original patentee] GDC could resolve all their differences, defendant PC-Tel acquired GDC toward the end of 1998. [ESS] alleges that [PC-Tel] then reversed course and started demanding increasingly unreasonable and discriminatory terms for licensing the V.34 and V.90 patents."). This issue came to the fore in December 2004 when, as part of a bankruptcy proceeding, Commerce One auctioned off a portfolio of seven patents and thirty-two pending applications for \$15.5 million. The portfolio "cover[s] a broad spectrum of electronic communication and web services technologies and standards." David G. Barker, *Troll or No Troll? Policing Patent Usage With an Open Post-Grant Review*, 2005 DUKE L. & TECH. REV. 0009, ¶ 2, <http://www.law.duke.edu/journals/dltr/articles/PDF/2005DLTR0009.pdf>. Novell Corporation, which purchased the portfolio anonymously through a shell named "JGR Acquisitions," has since stated that it "acquired the patents for defensive reasons and did not plan to seek licensing revenue from them." John Markoff, *Secretive Buyer of Some E-Commerce Patents Turns Out to be Novell*, N.Y. TIMES, May 2, 2005. Such scenarios will likely become more common, in view of the fact that "a secondary market is emerging for intellectual property acquired by individuals and corporations not involved in the original inventions." *Id.*

also clear from the fact that the opposite conclusion would invite chicanery in the form of transfers to other entities, the sort of evasion problem that Lemley uses to argue that the basic term of the grant must be for as long as the patent lasts.)

CONCLUSION

APPENDIX

IETF's patent policy is set forth in Scott Bradner, *Intellectual Property Rights in IETF Technology*, Request For Comment #3979 (March 2005) [hereinafter "RFC 3979"], available at <http://www.ietf.org/rfc/rfc3979.txt>.

The policy makes clear that "[i]n general, IETF working groups prefer technologies with no known IPR claims or, for technologies with claims against them, an offer of royalty-free licensing." RFC 3979 at § 8. Like ANSI-accredited bodies, however, "IETF working groups have the discretion to adopt a technology with a commitment of fair and non-discriminatory terms, or even with no licensing commitment, if they feel that this technology is superior enough to alternatives with fewer IPR claims or free licensing to outweigh the potential cost of the license." *Id.*

The policy operates similarly to the ANSI policy, i.e., disclosure of a pertinent patent claim triggers a request for a written licensing commitment from the standard-setting participant. Specifically,

Where Intellectual Property Rights have been disclosed for IETF Documents as provided in Section 6 of this document, the IETF Executive Director shall request from the discloser of such IPR, a written assurance that upon approval by the IESG for publication as RFCs of the relevant IETF specification(s), all persons will be able to obtain the right to implement, use, distribute and exercise other rights with respect to Implementing Technology under one of the licensing options specified in Section 6.5 below unless such a statement has already been submitted.

Id. at § 4(C). The licensing options, in turn, provide the RAND promise as one of two options. According to the "IPR Disclosures" rules in § 6,

Since IPR disclosures will be used by IETF working groups during their evaluation of alternative technical solutions, it is helpful if an IPR disclosure includes information about licensing of the IPR in case Implementing Technologies require a license. Specifically, it is helpful to indicate whether, upon approval by the IESG for publication as RFCs of the relevant IETF specification(s), all persons will be able to obtain the right to implement, use, distribute and exercise other rights with respect to an Implementing Technology a) under a royalty-free and otherwise reasonable and non-discriminatory license, or b) under a license that contains reasonable and non-discriminatory terms and conditions, including a reasonable royalty or other payment, or c) without the need to obtain a license from the IPR holder.

The inclusion of licensing information in IPR disclosures is not mandatory but it is encouraged so that the working groups will have as much information as they can during their deliberations. If the inclusion of licensing information in an IPR disclosure would significantly delay its submission it is quite reasonable to submit a disclosure without licensing information and then submit a new disclosure when the licensing information becomes available.

Id. at § 6.5.