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Comparative Law and Economics of Standard-Essential Patents and FRAND Royalties

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I. Introduction

Standard-setting organizations (SSOs) often require their members to disclose, prior to adoption of a standard, any patents or pending patent applications that might be relevant to the standard under consideration. SSOs also often require

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members to declare which of their patents are essential to the practice of the prospective standard and to agree to license any such standard-essential patents (SEPs) on "fair, reasonable, and nondiscriminatory" (FRAND) terms.[1] The term "RAND" for "reasonable and nondiscriminatory" is used synonymously with FRAND. The wording of these obligations nevertheless differs from one SSO to another, and SSO members generally are not obligated—and choose not—to define the precise meaning of "FRAND" in advance, for a variety of reasons.[2] SSOs themselves also typically do not conduct any investigation into whether patents declared to be SEPs really are, in fact, standard-essential, which is a policy choice that probably results in some degree of overdeclaration.[3]

Not surprisingly, the vagueness and ubiquity of FRAND commitments, coupled with the importance of SEPs to the modern economy, have generated a variety of legal questions that are playing out throughout the world, most notably in connection with the Mobile Devices Patent Wars[4], a term sometimes used for the litiga-

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1 *See, e.g.*, Institute of Electric and Electronics Engineers Standards Association (IEEE-SA) Standards Board Bylaws Rule 6.2 (Dec. 2012), *available at* http://standards.ieee.org/develop/policies/bylaws/sect6-7.html (stating general IEEE-SA Standards Board policies); COMMON PATENT POLICY FOR ITU-T/ITU-R/ISO/IEC, *available at* http://www.itu.int/en/ITU-T/ipr/Pages/policy.aspx (summarizing ITU-T/ITU-R/ISO/IEC policies); ETSI Intellectual Property Rights Policy, Rule 6 (Nov. 2008), *available at* http://www.etsi.org/WebSite/document/Legal/ETSI_IPR-Policy.pdf (offering a voluntary FRAND policy). See RUDI BEKKERS & ANDREW UPDEGROVE, A STUDY OF IPR POLICIES AND PRACTICES OF A REPRESENTATIVE GROUP OF STANDARDS SETTING ORGANIZATIONS WORLDWIDE 48–99 (2012), *available at* http://sites.nationalacademies.org/PGA/step/PGA_058712 for a study of disclosure and licensing obligations among twelve leading SSOs, which discusses, among other things, which members are subject to these obligations and when they must make their disclosures and commitments.

2 *See* Doug Lichtman, *Understanding the RAND Commitment*, 47 HOUS. L. REV. 1023, 1027–29 (2010) (stating that among the reasons firms "might prefer the ambiguous RAND commitment over a more conventional, explicit pricing term" are that "intricate negotiations over patent validity and patent value would take an enormous amount of time"; that "standard-setting is a process run by engineers, not lawyers"; that "many new technologies flop"; and that "RAND allows implementing firms to wait for additional information before they commit to a specific royalty structure"). Also, there could be antitrust problems if SSO members were to engage in some sort of collective bargaining over terms, though opinions are mixed on how serious this problem would be. *See* Thomas F. Cotter, *Reflections on the Antitrust Modernization Commission's Report and Recommendations Relating to the Antitrust/IP Interface*, 53 ANTITRUST BULL. 745, 786–94 (2008); Lichtman, *supra* note 2, at 1046 n.65. Some SSOs encourage or require members to disclose the maximum royalty rates they would seek, but do not engage in group rate setting. *See* Jorge L. Contreras, *Technical Standards and* Ex Ante *Disclosure: Results and Analysis of an Empirical Study*, 53 JURIMETRICS 163, 173–75 (2013).

3 According to studies conducted by Robert A. Myers and David J. Goodman and funded by Nokia, half or fewer of the patents declared essential to various standards are, in fact, essential as judged by the authors' panel of experts. *See, e.g.*, Fairfield Resources International, Inc., *Review of Patents Declared as Essential to LTE and SAE (4G Wireless Standards) Through June 30, 2009* (Jan. 6, 2010), *available at* http://www.frlicense.com/LTE%20Final%20Report.pdf; Fairfield Resources International, Inc., *Review of Patents Declared as Essential to WCDMA Through December, 2008* (Jan. 6, 2009), *available at* http://www.frlicense.com/wcdma1.pdf.

4 *See, e.g.*, Rebecca Haw Allensworth, *Casting a FRAND Shadow: The Importance of Legally Defining "Fair and Reasonable" and How* Microsoft v. Motorola *Missed the Mark*, 22 Tex. Intell.

tion that is taking place, at present count, in at least ten countries,[5] concerning rights in patents that are alleged to cover various aspects of smartphone and other mobile telecommunications devices. Many, though hardly all, of the patents asserted in the Mobile Devices Patent Wars are SEPs subject to FRAND terms. Among the issues that have arisen in these disputes are the following:

- What are the legal consequences of a commitment to license on FRAND terms? Does such a commitment create a binding contract, giving rise to third-party beneficiary rights? Does it (or should it) deprive the SEP owner of a right to obtain an injunction against an alleged infringer?
- Does or should the law of patent remedies generally entitle the prevailing patent owner to an injunction against infringement?
- Regardless of whatever role contract or patent law may play, does or should competition law—antitrust—limit the patentee's ability to seek injunctive relief for the infringement of SEPs, and if so under what circumstances?
- If one or more of the above bodies of law prevents the patentee from obtaining an injunction, is the patentee entitled to some other form of relief? If the patentee is entitled to infringement damages, what should those damages be? Put another way, how should courts calculate FRAND royalties?

This article provides both an overview of how courts and other entities have begun to address these questions in the United States and elsewhere, and an analysis of the advantages and disadvantages of different possible approaches. More specifically, I will examine these issues through the lens of "comparative law and economics," an analytical perspective that I employ in my newly-published book on patent

Prop. LJ. (forthcoming 2014); Roger D. Blair & Thomas Knight, *Problems in Sharing the Surplus*, DAVID THOMAS KNIGHT (Jan. 6, 2014), *available at* http://dtknight.com/Thomas_Knight/Research_files/PROBLEMS IN SHARING THE SURPLUS.pdf; Dennis W. Carlton & Allan L. Shampine, *An Economic Interpretation of FRAND*, 9 J. COMP. L. & ECON. 531 (2013); Keith N. Hylton, *A Unified Framework for Competition Policy and Innovation Policy*, *in* BOSTON UNIV. SCHOOL OF LAW, LAW AND ECONOMICS RESEARCH PAPER NO. 13–55 (June 11, 2014), *available at* http://ssrn.com/abstract=2367283; WILLIAM H. PAGE, JUDGING MONOPOLISTIC PRICING: F/RAND AND ANTITRUST INJURY (October 8, 2013), *available at* http://ssrn.com/abstract=2337691; DANIEL SOKOL & WENTONG ZHENG, FRAND IN CHINA (Feb. 3, 2014), *available at* http://ssrn.com/abstract=2335664; Christopher S. Yoo, *Toward a Closer Integration of Law and Computer Science*, 57 COMMUNIC'NS OF THE ACM 33 (2014).

5 *See* Florian Mueller, *List of 50+ Apple-Samsung Lawsuits in 10 Countries*, FOSS PATENTS (Apr. 28, 2012, 12:04 PM), *available at* http://www.fosspatents.com/2012/04/list-of-50-apple-samsung-lawsuits-in-10.html (providing a list of all initial filings Apple and Samsung brought against each other between April 2011 and April 2012).

remedies.[6] Parisi and Luppi offer the best summary of what I view as the core features of this perspective:

> Much of the work in comparative law and economics builds on the findings of comparative law by identifying interesting legal issues and analyzing them with an economic framework. Comparative law provides a very fertile ground for the economist in searching for interesting issues to analyze. The fact that legal systems choose different solutions to common legal problems indicates that there is no single best rule to resolve the issue in question. In situations like these economics provides valuable techniques for assessing the comparative advantages and effects of alternative legal rules. Methodologically, comparative law and economics applies the conceptual apparatus and empirical methods of economics to the study of comparative law and legal systems.[7]

Consistent with this methodology, I will provide both a positive and a normative response to the questions posed above. Part I presents the positive perspective by examining the ways in which courts and other entities in the United States, Europe, and Asia have begun to address these issues as a matter of legal doctrine. Part II provides a normative analysis of the comparative advantages and disadvantages of injunctions versus licensing, and of patent law versus antitrust as a means for achieving optimal outcomes. My principal normative conclusion is that courts generally should allow SEP owners to obtain damages only, and not injunctions, for the SEP's unauthorized use; and that, in principle, it would be preferable to use contract and patent law to achieve this result, as opposed to antitrust. At the same time, however, I recognize (and have argued elsewhere)[8] that policies that may seem ideal in isolation and as a matter of abstract theory are not always the policies that are best suited for use within a specific legal environment. It may be rational for different legal systems to approach similar issues in different ways and with the use of different tools, given the assumptions, constraints, and institutions under and within which these systems operate. In the present context in particular, I will suggest that, for the time being, an approach under which patent law plays a dominant (and antitrust a subservient) role in addressing problems raised by SEPs may be optimal for

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6 *See* THOMAS F. COTTER, COMPARATIVE PATENT REMEDIES: A LEGAL AND ECONOMIC ANALYSIS 33 (2013) ("One way of thinking about comparative law and economics [] is as a subgenre, within the broader field of law and economics, that involves the use of economic analysis to explain, or predict the consequences of, observed similarities and differences among the rules, standards, and institutions found in different nations, regions, and legal systems.").

7 *Id.* at 33–34 (quoting Francesco Parisi & Barbara Luppi, *Quantitative Methods in Comparative Law*, *in* UNIVERSITY OF MINNESOTA LAW SCHOOL LEGAL STUDIES RESEARCH PAPER SERIES, RESEARCH PAPER NO. 12–20, at 2 (May 2, 2012), *available at* http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2049907).

8 *See* COTTER, *supra* note 6, at 37–38. *See also* HERBERT J. HOVENKAMP, INSTITUTIONAL ADVANTAGE IN COMPETITION AND INNOVATION POLICY 7 (2013), *available at* http://ssrn.com/abstract=2307141 (stating, in the context of pay-for-delay settlements of pharmaceutical patent litigation, that "[t]he boundaries of patent and antitrust law are defined by policy rather than nature. So it is meaningless to debate about whether this is 'really' a patent problem or an antitrust problem. It is a policy problem that needs to be addressed in a way that makes the proper tradeoffs between the incentive to innovate further and the consumer interest in competitive markets and low prices. The real question is what is the best system for addressing it?").

the United States and perhaps some other common-law jurisdictions, whereas in Europe and elsewhere competition law arguably should (as it does) play the larger role.[9] Part III then examines, from both a positive and normative perspective, the related issue of how courts should calculate FRAND royalties, if and when they are called upon to do so. Part IV concludes.

II. Doctrinal Overview

This Part provides an overview of different approaches to SEPs and FRAND commitments as a matter of contract, patent, and competition law. Section A begins by sampling some of the leading SSO policies on intellectual property rights before turning to the ways in which courts in the United States, Europe, and Asia have begun to interpret the obligations arising from these policies. Section B then shifts to patent law by showing how most of the world has retained the strong presumption in favor of injunctive relief that the U.S. Supreme Court abandoned in its 2006 decision in *eBay Inc. v. MercExchange, L.L.C.*[10] Finally, Section C examines how competition law interacts with SEPs and FRAND obligations, principally in the United States and Europe. Once again, the U.S. and European approaches appear potentially quite different, though in precisely the opposite manner in which the patent approaches are different: whereas European *patent law*, standing alone, provides patent owners with a strong entitlement to injunctive relief, European *competition law* may be on the verge of taking a more aggressive role than would be expected in the United States toward the regulation of SEP disputes.

A. Contract Law

As far as contract law is concerned, the relevant doctrinal questions are whether a FRAND commitment constitutes a binding contract; if so, what it obligates the patentee and would-be licensee to do; and whether third parties (such as other SSO members) have a right to seek enforcement of those obligations. The answers to these questions depend upon the language of the SSO IPR policies to which the SEP owner consents, and applicable contract law principles.

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9 I will have less to say about contract law as a normative matter, due both to space and time constraints and to the fact that I do not fancy myself a contract scholar. From a positive perspective, however, I thought it was important to provide a feel for how different jurisdictions have begun to address the relevant contract-law issues. From a normative perspective, one might argue that many of the issues surrounding FRAND-encumbered SEPs could be resolved by contract law alone, and if so perhaps this private-law approach would be preferable—more efficient— than one that relies on the machinery of public law (whether patent or antitrust). See Florian Mueller, *Lawmakers, Regulators, Standardization Bodies Address Abuse of Standard-Essential Patents*, FOSS PATENTS (Sept. 28, 2013), *available at* http://www.fosspatents.com/2013/09/lawmakers-regulators-standardization.html for a discussion of a recent effort by the IEEE to deal prospectively with some of the relevant issues. I thank Keith Hylton for suggesting this point, though in my view, patent and/or antitrust standards remain necessary to address externalities (third-party effects) or to fill other gaps (such as the risk of patent holdup arising in a case in which there is no FRAND commitment) that contract law would not cover.

10 547 U.S. 388 (2006).

SSO IPR policies are varied, but among the ones most relevant to the Mobile Devices Patent Wars are the policies of the European Telecommunications Standards Institute (ETSI), the Institute of Electrical and Electronics Engineers (IEEE), and the common policy of the International Telecommunication Union (ITU), International Organization for Standardization (ISO), and the International Electrotechnical Commission (IEC).[11] All three of these policies require members to disclose relevant patents and to agree to license them on reasonable terms. For example, ETSI IPR Policy Rule 6.1 states:

> When an ESSENTIAL IPR relating to a particular STANDARD or TECHNICAL SPECIFICATION is brought to the attention of ETSI, the Director-General of ETSI shall immediately request the owner to give within three months an irrevocable undertaking in writing that it is prepared to grant irrevocable licenses on fair, reasonable and non-discriminatory ("FRAND") terms and conditions under such IPR . . . .[12]

Similarly, IEEE-SA Rule 6.2 requires the SEP owner to submit a "Letter of Assurance" stating, *inter alia*, "that a license for a compliant implementation of the standard will be made available to an unrestricted number of applicants on a worldwide basis without compensation or under reasonable rates, with reasonable terms and conditions that are demonstrably free of any unfair discrimination."[13] And the Common Patent Policy for ITU-T/ITU-R/ISO/IEC requires an SEP owner to, *inter alia*, agree that it is "willing to negotiate licenses free of charge with other parties on a non-discriminatory basis on reasonable terms and conditions."[14]

So far, two[15] courts in the United States have held that policies including the ones discussed above create binding obligations under U.S. law. In the first of these decisions, *Microsoft Corp. v. Motorola, Inc.*, Microsoft filed suit alleging that "1. Motorola entered into binding contractual commitments with the IEEE and the ITU, committing to license its declared-essential patents on RAND terms and conditions;

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11 See BEKKERS & UPDEGROVE, *supra* note 1 for a study of twelve leading SSO IPR policies.

12 ETSI Rules of Procedure, Annex 6 Rule 6.1 (Mar. 2013), *available at* http://www.etsi.org/WebSite/document/Legal/ETSI_IPR-Policy.pdf. Rule 4.1 requires each member to disclose its essential IPRs in a timely fashion. *Id.* at Rule 4.1. Rule 6.1bis states that the FRAND obligation shall be interpreted as binding on successors in interest, or where this is not possible under applicable law, the FRAND obligation shall be included in any contract of transfer. *Id.* at Rule 6.1bis. Unless the FRAND obligation "runs with the patent" or is otherwise included in a contract of transfer, the lack of privity between the transferee and the SSO otherwise could create difficulties in using contract law to enforce a FRAND obligation against a transferee. *Cf.* Negotiated Data Solutions LLC, Docket No. C-4234, at 4–12 (Sept. 22, 2008), *available at* https://www.law.berkeley.edu/files/In_the_Matter_of_Negotiated_Data_Solutions_Complaint_and_Decision_and_Order.pdf (FTC consent order forbidding a transferee from reneging on a royalty commitment made by the original patent owner, on the theory that the transferee's conduct amounted to an unfair act or practice in violation of FTC Act § 5(a)(1), 15 U.S.C. § 45(a)(1)).

13 IEEE-SA Standards Board Bylaws, supra note 1, at Rule 6.2.

14 COMMON PATENT POLICY FOR ITU-T/ITU-R/ISO/IEC, *supra* note 1, at 2.1.

15 *See* Ericsson Inc. v. D-Link Sys., Inc., Case No. 6:10-CV-473, 2013 WL 4046225, at *25 (E.D. Tex. Aug. 6, 2013) (stating that "If two parties negotiating a RAND license are unable to agree to the financial terms of an agreement, it is entirely appropriate to resolve their dispute in court. . . . RAND licensing also includes an obligation to negotiate in good faith.").

2. Microsoft is a third-party beneficiary of Motorola's commitments to the IEEE and the ITU."[16] Applying the law of the State of Washington, U.S. District Judge James Robart agreed with Microsoft's position on these two issues[17] and rejected Motorola's argument that the IEEE and ITU commitments were merely unilateral offers to negotiate RAND licenses.[18] Thus, Motorola was obligated to grant Microsoft a FRAND license, not merely "to engage in bilateral, good-faith negotiations leading to RAND terms."[19] The court also rejected Motorola's argument that the court lacked the power to create a FRAND agreement itself, stating that "[w]ithout the ability to create (or at the very least enforce creation of) the very license Motorola has promised to grant, Motorola's obligations would be illusory."[20] In addition, Judge Robart held that Motorola's commitments required that its initial offers to license its SEPs be made in good faith, but that the "initial offers do not have to be on RAND terms so long as a RAND license eventually issues."[21] In November 2012, Judge Robart held a bench trial to determine the "RAND royalty range for Motorola's SEPs" and "a specific RAND royalty rate for Motorola's SEPs," and in April 2013 he issued his findings of fact and conclusions of law on these two issues.[22] A jury trial on the issue of whether Motorola breached its duty to negotiate in good faith concluded in September 2013, with the jury returning a verdict in favor of Microsoft in the amount of $14.5 million.[23]

In the second case, *Apple, Inc. v. Motorola Mobility, Inc.*, Judge Barbara Crabb concluded, first, that Wisconsin law applied to Apple's breach of contract claim against Motorola arising from Motorola's commitment to the IEEE, and that French

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16 Microsoft Corp. v. Motorola, Inc., 854 F. Supp. 2d 993, 997 (W.D. Wash. 2012).

17 *Id.* at 999.

18 Microsoft Corp. v. Motorola, Inc., 864 F. Supp. 2d 1023, 1029–32 (W.D. Wash. 2012).

19 Microsoft Corp. v. Motorola, Inc., No. C10-1823JLR, 2012 WL 4827743, at *6 (W.D. Wash. Oct. 10, 2012).

20 *Id.* at *7.

21 Microsoft Corp. v. Motorola, Inc., No. C10-1823JLR, 2013 WL 2111217, at *2 (W.D. Wash. Apr. 25, 2013).

22 *Id.* As of October 1, 2013, *Microsoft v. Motorola* was the only publicly available U.S. decision in which a court had actually calculated the FRAND rate. Two days later, Judge James Holderman issued his FRAND ruling in another case. *In re Innovatio IP Ventures, LLC Patent Litig.*, No. 11 C 9308, 2013 WL 5593609, at *43 (N.D. Ill. Oct. 3, 2013). *See also* Thomas F. Cotter, *Judge Holderman's RAND Ruling in Innovatio IP Ventures, LLC,* COMPARATIVE PATENT REMEDIES (Oct. 3, 2013 7:54 PM), *available at* http://comparativepatentremedies.blogspot.com/2013/10/judge-holdermans-rand-ruling-in-in-re.html.

23 *See* Florian Mueller, *Motions for Judgment on the Pleadings Denied in Microsoft-Google FRAND Breach Case,* FOSS PATENTS (Sept. 25, 2013 9:54 PM), *available at* http://www.fosspatents.com/2013/09/motions-for-judgment-on-pleadings.html (detailing the to-date latest developments in the case). The patent infringement suit is still pending, but in November 2012 Judge Robart determined that Motorola cannot obtain an injunction on *eBay* grounds. *See* Microsoft Corp. v. Motorola, Inc., No. C10-1823JLR, 2012 WL 5993202, at *6 (W.D. Wash. Nov. 30, 2012) ("because Motorola has always been required to grant Microsoft a RAND license agreement for its H.264 standard essential patents, as a matter of logic, the impending license agreement will adequately remedy Motorola as a matter of law.").

law applied to the contract claim arising from Motorola's commitment to ETSI.[24] Next, she determined that, under the applicable law, Motorola had made a contractual commitment to license its patents on FRAND terms, and that Apple was a third party beneficiary of this commitment. With this framework in place, Judge Crabb held, "Apple must prove that Motorola's initial offer of a 2.25% royalty rate and attempts to negotiate were unfair, unreasonable or discriminatory and violated Motorola's commitments to ETSI and IEEE."[25] She expanded on this point in a subsequent ruling, stating that "it makes sense to allow Apple to sue for specific performance of Motorola's contractual obligations and for the court to determine license terms, if necessary. In fact, in situations such as this in which the parties cannot agree on the terms of a fair, reasonable and nondiscriminatory license, the court may be the only forum to determine license terms."[26] When Apple subsequently refused to declare that it would consider itself bound by Judge Crabb's determination of what a FRAND royalty would be, however, she dismissed Apple's claims.[27]

Courts in other countries, by contrast, so far have reached very different results. The German cases, for example, have held that an SEP owner's FRAND commitment does not invest third parties with a right to obtain a license, or constitute a waiver of the right to obtain an injunction. Rather, a FRAND commitment merely amounts to an invitation for third parties to make offers.[28] Similarly, in 2012, in a dispute between Samsung and Apple, a Dutch court concluded that the ETSI IPR Policy did not of its own force create a license between Samsung and Apple (though it did not state whether Samsung had a contractual duty to conclude such a contract, or whether the FRAND commitment is merely an invitation for offers).[29] The only other country I am aware of in which the issue has been litigated

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24 Apple, Inc. v. Motorola Mobility, Inc., 886 F. Supp. 2d 1061, 1081–82 (W.D. Wis. 2012).

25 *Id.* at 1087.

26 Apple, Inc. v. Motorola Mobility, Inc., 2012 WL 5416941, at *4 (W.D. Wis. Oct. 29, 2012).

27 Apple, Inc. v. Motorola Mobility, Inc., 2012 WL 5416931, at *4 (W.D. Wis. Oct. 29, 2012), *reconsideration denied*, 2012 WL 7989412 (W.D. Wis. Nov. 8, 2012), 2012 WL 5943791 (W.D. Wis. Nov. 28, 2012).

28 *See* Landgericht Mannheim [LG] [Regional Court] May 2, 2012, 2 O 240/11, at B.II (Ger.); Landgericht Mannheim [LG] [Regional Court] May 2, 2012, 2 O 387/11, at B.II (Ger.); Landgericht Düsseldorf [LG] [Regional Court] Aug. 4, 2011, http://openjur.de/u/450408.html (Ger.). Copies of the latter two decisions—the first in the original German and in English translation, the second in English translation only—can be found at http://www.fosspatents.com/2012/05/german-approach-to-frand-lets-err-on.html. For scholarly discussion of the contract issues under German law, see, e.g., CLAUDIA TAPIA, INDUSTRIAL PROPERTY RIGHTS, TECHNICAL STANDARDS AND LICENSING PRACTICES (FRAND) IN THE TELECOMMUNICATIONS INDUSTRY 18–36, 39–40 (2010) (arguing that under German law it is possible that a FRAND commitment constitutes a binding pre-contract for the benefit of third parties) (citing, *inter alia*, STEFAN MAAßEN, NORMUNG, STANDARDISIERUNG UND IMMATERIALGÜTERRECHTE 313–21 (2006)).

29 Rb.'s-Gravenhage, 14 maart 2012, m.nt. ¶¶ 4.2–4.7 (Samsung Elecs. Co./Apple Inc.) (Neth.), *available at* http://uitspraken.rechtspraak.nl/inziendocument?id=ECLI:NL:RBSGR:2012:BV8871. *See also* Michael Fröhlich & Gertjan Kuipers, *FRAND and Injunctive Relief*, AIPPI E-NEWS, NO. 25 (July 2012), *available at* https://www.aippi.org/enews/2012/edition25/Michael_Frohlich.html;

to date is South Korea, where in another dispute between Apple and Samsung, a court in 2012 rejected Apple's defense that Samsung's FRAND commitment constituted a binding contract or a commitment to forsake injunctive relief.[30]

B. Patent Remedies

Aside from contract law, other bodies of law also may be relevant to the question of whether an SEP owner may obtain injunctive relief for the infringement of a patent subject to a FRAND commitment. One of these bodies of law is competition law, which I discuss in section C below. Another possibility is that patent law itself—or other bodies of law, including the law of remedies or generally applicable provisions of civil law, as applied to patent rights—may have a say in the matter. I'll discuss these possibilities first because they provide a more promising basis for denying injunctive relief in the United States, as well as the background against which the competition-law defense, which is of central importance at present in Europe, may be understood.

Christof Karl, UNIVERSITY OF WASHINGTON SCHOOL OF LAW, *The FRAND Defense in European Litigation Involving Standard-Essential Patents* (Mar. 27, 2013), *available at* https://courses.law.washington.edu/TakenakaT/P506ab_Sp13/powerpoints.html; Torsten Körber, *Machtmissbrauch durch Erhebung patentrechtlicher Unterlassungsklagen? Eine Analyse unter besonderer Berücksichtigung standard ellentieller Patente*, WRP 2013, 734, 740–41; Florian Mueller, *Samsung Suffers Second and Even More Important FRAND Defeat to Apple in the Netherlands*, FOSS PATENTS (Mar. 14, 2012, 4:40 PM), *available at* http://www.fosspatents.com/2012/03/samsung-suffers-second-and-even-more.html. Notwithstanding the court's holding on the contract issue, the overall outcome was relatively favorable to Apple, as discussed *infra* at notes 59–60 and accompanying text.

30 *See* Haksoo Ko, *Facilitating Negotiation for Licensing Standard Essential Patents in the Shadow of Injunctive Relief Possibilities* 6 (May, 2013), *available at* http://ssrn.com/abstract=2267280 (discussing Seoul District Court [Dist. Ct.], 2011Kahap39552, Aug. 24, 2012 (S. Kor.)). *See also* Seoul District Court [Dist. Ct.], 2011Kahap39552, Aug. 24, 2012 (S. Kor.) (concluding that French law governed questions relating to the ETSI policy at issue; that under French law, there was no binding contract or third-party beneficiary contract; and that a FRAND declaration only imposes a general obligation upon the declarant to negotiate in good faith, honoring the mandate of the FRAND terms, and does not automatically grant any third party an immediate, irrevocable right to use the SEPs on its own terms).
See Yoshiyuri Tamura, *Standardization and Patent Rights: Legal Issues Concerning the Application of the RAND Provisions*, *in* THE EXERCISE OF ESSENTIAL PATENTS FOR STANDARDS, 21 IIP BULL. 1, 2–3 (2012) for discussion of how Japanese courts might address the breach of contract issue. Finally, according to reports, a court in Shenzhen earlier this year held that InterDigital violated Chinese competition law by, *inter alia*, charging excessive royalties and commencing an ITC action in the United States while negotiations between the companies were pending; the court imposed a FRAND royalty rate of 0.019% on sales of Huawei products. Huawei had also alleged that InterDigital failed to negotiate on FRAND terms with Huawei, as required under the ETSI policy. On this issue, the court reportedly held that Chinese law applied and that InterDigital's offers were not FRAND. *See* Shylah R. Alfonso & Kevin A. Zeck, *Chinese Court Issues Landmark Decision Determining a FRAND Royalty Rate*, AM. BAR ASS'N, ANTITRUST SECTION, INTELL. PROP. COMM. TIDBITS, Apr. 1–5, 2013, *available at* http://www.americanbar.org/content/dam/aba/publications/antitrust_law/at315000_tidbits_20130405.authcheckdam.pdf. The decision has not been published.

1. U.S. Law

In patent infringement litigation, courts in the United States until recently awarded the prevailing patent owner a permanent injunction absent "exceptional circumstances."[31] In the 2006 *eBay*[32] decision, however, the Supreme Court held that courts should instead consider four equitable factors before awarding a permanent injunction. Specifically, the prevailing plaintiff must demonstrate:

> (1) that it has suffered an irreparable injury; (2) that remedies available at law, such as monetary damages, are inadequate to compensate for that injury; (3) that, considering the balance of hardships between the plaintiff and defendant, a remedy in equity is warranted; and (4) that the public interest would not be disserved by a permanent injunction.[33]

Since *eBay*, prevailing patent owners have obtained permanent injunctions in about 75% of cases,[34] as opposed to close to 100% before.[35]

Applying *eBay*, Judge Robart in the *Microsoft* case discussed in Part I held that Motorola would not have been entitled to a permanent injunction against Microsoft's alleged infringement of Motorola's FRAND-encumbered SEPs, because the FRAND commitment demonstrates the existence of an adequate remedy at law and the absence of irreparable harm if an injunction is not entered.[36] Judge Posner, sitting as a trial court judge in *Apple, Inc. v. Motorola, Inc.*, reached the same conclusion.[37] Doctrinally, these two decisions appear to be on solid ground to the extent they rest on the adequacy of the remedy at law and the absence of irreparable harm.[38] Moreover, the other two factors—the balance of convenience and the public interest—also arguably weigh against the entry of injunctive relief in the typical case involving FRAND-encumbered SEPs, given that the defendant typically needs access to SEPs in order to market its products, and that injunctive relief therefore creates a substantial risk of patent holdup (as discussed below).[39] Thus, while *eBay* counsels against the use of "broad classifications" and "categorical" rules for or

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31 MercExchange, L.L.C. v. eBay, Inc., 401 F.3d 1323, 1339 (Fed. Cir. 2005), *rev'd*, 547 U.S. 388 (2006).

32 eBay Inc. v. MercExchange, L.L.C., 547 U.S. 388 (2006).

33 *Id.* at 391.

34 Patstats.org lists 165 cases granting permanent injunctions post-*eBay*, as of December 3, 2012, and 57 denying them. *See U.S. Patent Litigation Statistics*, PATSTATS.ORG (Aug. 15, 2013), *available at* http://www.patstats.org/Patstats2.html.

35 Prior to *eBay*, there were a few unusual cases in which courts denied permanent injunctions. *See, e.g.*, Vitamin Tech., Inc. v. Wis. Alumni Res. Found., 146 F.2d 941, 944 (9th Cir.1944); City of Milwaukee v. Activated Sludge, Inc., 69 F.2d 577, 593 (7th Cir. 1934).

36 Microsoft Corp. v. Motorola, Inc., No. C10–1823JLR, 2012 WL 5993202, at *6–7 (W.D. Wash. Nov. 30, 2012).

37 Apple, Inc. v. Motorola, Inc., 869 F. Supp. 2d 901, 913–15 (N.D. Ill. 2012) appeal dismissed (May 21, 2014), *aff'd in part, rev'd in part and remanded*, 757 F.3d 1286 (Fed. Cir. 2014) (Posner, J., sitting by designation). This matter is currently on appeal.

38 *But see infra* notes 153–62 and accompanying text (discussing counterarguments that dispensing with injunctive relief risks undercompensating the patentee—which, if true, might suggest that the remedy at law is not adequate).

39 *See infra* Part II.A.

against the entry of injunctive relief,[40] one might safely conclude that the application of the *eBay* factors in the typical case involving an SEP generally would militate against the use of permanent injunctions.

The principal complication under U.S. law is the availability, in many instances, of a parallel forum for litigating patent infringement matters, namely the International Trade Commission (ITC). The ITC is a federal agency that hears complaints arising under § 337 of the Tariff Act of 1930, which declares unlawful (among other things) "the importation into the United States, the sale for importation, or the sale within the United States after importation . . . of articles that . . . infringe a valid and enforceable United States patent."[41] As I have explained elsewhere, the ITC has become an increasingly popular venue for litigating patent matters in recent years for a variety of reasons, one of them being the limited nature of the relief available: the ITC can *only* award exclusion and cease-and-desist orders—i.e., injunctive relief—not monetary damages,[42] and it is not bound by the *eBay* decision.[43] The ITC is supposed to consider the public interest, however, before entering an exclusion order,[44] and in recent cases the issue has arisen whether the public interest would be served by excluding infringing products that incorporate SEPs subject to FRAND obligations. In one recent high-profile investigation, the ITC on June 4, 2013 held that Samsung was entitled to an exclusion order prohibiting the entry into the United States of certain models of Apple iPhones and iPads that infringed one of Samsung's patents, even though the Samsung patent at issue was standard-essential and subject to a FRAND commitment.[45] The Commission specifically rejected Apple's

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40 eBay Inc. v. MercExchange, L.L.C., 547 U.S. 388, 393 (2006).

41 19 U.S.C. § 1337(a)(1)(B). The ITC is a body that enforces border measures against the importation of infringing goods. Many countries restrict the importation of patent-infringing merchandise, but to my knowledge only the United States and South Korea have created separate quasi-judicial bodies to implement these restrictions. Elsewhere, if the Customs Service interdicts allegedly infringing goods and the importer objects, the matter typically plays out in the same court that would hear any other infringement action. *See* Thomas F. Cotter, *The International Trade Commission: Reform or Abolition? A Comment on Colleen V. Chien & Mark A. Lemley*, Patent Holdup, the TIC, and the Public Interest, 98 CORNELL L. REV. ONLINE 43, 48–49, n.96 (2013).

42 *See id.* at 45. The fact that the ITC cannot award damages might seem like a disadvantage, but ITC proceedings do not preclude parallel infringement proceedings in district court (and ITC judgments do not have preclusive effect in those proceedings). However, see Jenna Greene, *ITC Docket Returning to 'Normal:' Large Corporations Are Using the Forum Less for Their Major Disputes*, NAT. L.J. 1 (2012), *available at* http://www.law.com/jsp/nlj/PubArticleNLJ.jsp?id=1202604295341&slreturn=20130804214810 for some evidence that its popularity may be waning.

43 *See* Spansion, Inc. v. ITC, 629 F.3d 1331, 1339 (Fed. Cir. 2010), *cert. denied*, 132 S. Ct. 758 (2011).

44 *See* 19 U.S.C. § 1337(d) (providing that the ITC "shall direct that the articles concerned . . . be excluded from entry into the United States, unless, after considering the effect of such exclusion upon the public health and welfare, competitive conditions in the United States economy, the production of like or directly competitive articles in the United States, and United States consumers, it finds that such articles should not be excluded from entry").

45 *See* Notice of Final Determination, In the Matter of Certain Electronic Devices, Inv. No. 337-TA-794 (ITC June 4, 2013).

defense saying, "it would be contrary to the public interest to allow Samsung to obtain a remedy in this investigation because Samsung has breached an alleged obligation to offer Apple a license to the '348 patent on FRAND terms," or that Samsung had in fact breached any such obligations.[46] But another quirk of ITC practice is that the statute authorizes the President of the United States to veto any exclusion order within sixty days of the ITC's decision.[47] (Pursuant to an executive order issue in 2005, the president delegated this authority to the United States Trade Representative.[48]) On August 3, 2013, U.S. Trade Representative Michael Froman exercised his authority to disapprove the ITC's June 4 exclusion order, on the ground that the relevant policy considerations—specifically, concerns about holdup—generally weigh against permitting injunctions in cases involving SEPs subject to FRAND obligations.[49] Although it may be too early to state with confidence the impact of the disapproval, the decision may encourage the ITC to deny exclusion orders in other cases involving SEPs, and thus to discourage patent owners from filing in the ITC to avoid *eBay*.[50]

2. *Europe*

As far as patent law alone is concerned, the situation in Europe at present is quite different, although there appears to be some room for flexibility. Article 12 of the EC's 2004 Enforcement Directive, for example, states that members "may provide that, in appropriate cases," courts may order, in lieu of an injunction, "pecuniary compensation to be paid to the injured party instead of applying the measures provided for in this section if that person acted unintentionally and without negligence, if execution . . . would cause . . . disproportionate harm and if pecuniary

46 *See* In the Matter of Certain Electronic Devices, Inv. No. 337-TA-794 (ITC July 5, 2013) (public version), slip op. at 41–64, 107–14.

47 19 U.S.C. § 1337(j)(2) (2004).

48 Assignment of Certain Functions Under Section 337 of the Tariff Act of 1930, 70 Fed. Reg. 43251 (July 21, 2005).

49 Letter from Michael B.G. Froman, Exec. Office of the President of the U.S. Trade Rep., to Hon. Irving A. Williamson, Chairman, U.S. Int'l Trade Comm'n, Aug. 3, 2013, *available at* http://online.wsj.com/public/resources/documents/AppleLetter.pdf (stating that "whether public interest considerations counsel against a particular exclusion order depends on the specific circumstances at issue," but that "to mitigate against patent hold-up, exclusionary relief from the Commission based on FRAND-encumbered SEPs should be available only" when, for example, "'a putative licensee refuses to pay what has been determined to be a FRAND royalty, or refuses to engage in a negotiation to determine F/RAND terms,'" or "'is not subject to the jurisdiction of a court that could award damages'") (quoting U.S. DEP'T OF JUSTICE & U.S. PAT. & TRADEMARK OFF., POLICY STATEMENT ON REMEDIES FOR STANDARDS-ESSENTIAL PATENTS SUBJECT TO VOLUNTARY F/RAND COMMITMENTS, at 7–8 (Jan. 8, 2013), *available at* www.justice.gov/atr/public/guidelines/290994.pdf).

50 For another interesting case in somewhat the same vein, *see* Realtek Semiconductor Corp. v. LSI Corp., No. C–12–03451 RMW, 2013 WL 2181717 (N.D. Cal. May 20, 2013) (enjoining the defendants from enforcing "any exclusion order or injunctive relief by the ITC," which obligation "shall remain in effect until this court has determined defendants' RAND obligations and defendants have complied therewith").

compensation . . . appears reasonably satisfactory."[51] As I have noted elsewhere, taken at face value, this provision would appear to permit member states of the European Union to adopt something like an *eBay* rule if they chose to do so.[52] Similarly, Rule 118(2) of the current version of the Draft Rules of Procedure for the contemplated Unified Patent Court[53] has language very similar to article 12 of the Di-Directive[54] and, unlike the Directive, will if adopted have the force of law, whereas the Directive merely authorizes member states to implement such a rule. There are other complications, however, which as a practical matter may take much of the force out of Rule 118(2), and which I need not go into here.[55]

At present, however, in the major European venues for patent litigation—Germany, France, the U.K., and the Netherlands—injunctive relief still remains, by far, the presumptive remedy for patent infringement.[56] For example, courts in Germany—home to at least half of all patent infringement suits within Europe[57]—almost always grant the prevailing patent owner injunctive relief, subject only to the possibility of the defendant's successfully raising the competition-law defense discussed below in Part III.[58] The situation is a little more complex in the Netherlands.

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[51] Directive 2004/48/EC of the European Parliament and of the Council of 29 April 2004 on the Enforcement of Intellectual Property Rights, art. 12, 2004 O.J. (L 195) 16, 23 (EC) [hereinafter EC Enforcement Directive].

[52] *See* COTTER, *supra* note 6, at 245–48.

[53] *See id.* at 228–29 (discussing agreement among, at the time, 25 of the 27 member states of the E.U. to institute a Unified Patent Court that would serve as the forum for infringement disputes within the E.U.) The Agreement on a Unified Patent Court will enter into force no earlier than January 1, 2014. European Union Institutions, Bodies, Offices and Agencies, Agreement on a Unified Patent Court (2013/C 175/01), art. 89, art. 22. Eventually the court will be the exclusive forum for litigating European patents and European Patents with Unitary Effect. *See id.* art. 2(e)–(g), 3, 32.

[54] Preliminary set of provisions for the Rules of Procedure ("Rules") of the Unified Patent Court, Ref. Ares (2013) 2443291-21/06/2013, R.118(2) (15th draft, May 31, 2013), *available at* http://www.unified-patent-court.org/images/documents/draft-rules-of-procedure.pdf ("In appropriate cases and at the request of the party liable to the orders and measures provided for in paragraph 1 the Court may order damages and/or compensation to be paid to the injured party instead of applying the orders and measures if that person acted unintentionally and without negligence, if execution of the orders and measures in question would cause such party disproportionate harm and if damages and/or compensation to the injured party appear to the Court to be reasonably satisfactory.").

[55] *See also*, Thomas F. Cotter, *Effect of the Unified Patent Court on Patent Remedies*, COMPARATIVE PATENT REMEDIES (July 7, 2013, 1:20 AM), *available at* http://comparativepatentremedies.blogspot.com/2013/07/effect-of-unified-patent-court-on.html; Thomas F. Cotter, *Effect of the Unified Patent Court on Patent Remedies, Part 2*, COMPARATIVE PATENT REMEDIES (July 9, 2013, 8:05 AM), *available at* http://comparativepatentremedies.blogspot.com/2013/07/effect-of-unified-patent-court-on_9.html; and Thomas F. Cotter, *Effect of the Unified Patent Court on Patent Remedies, Part 3*, COMPARATIVE PATENT REMEDIES (July 12, 2013, 8:04 AM), *available at* http://comparativepatentremedies.blogspot.com/2013/07/effect-of-unified-patent-court-on_12.html.

[56] *See* COTTER, *supra* note 6, at 180–82, 245–46.

[57] *See id.* at 233.

[58] *See id.* at 245–48; *see also* Axel Walz, *Patentverletzungen im Lichte des Kartellrechts: In Sachen Europäische Kommission gegen Orange-Book*, GRUR INT. 8-9/2013, 718, 718 (stating that in contrast to the American equity right, all intellectual property codes according to European and Ger-

Although some commentators have asserted that Dutch courts almost always award injunctive relief,[59] in one recent case involving Samsung's assertion of an SEP against Apple the court specifically declined to do so (and without citing a competition-law based rationale).[60] The court reasoned that an injunction would have enabled Samsung to abuse its patent rights, because the terms Samsung had offered were not FRAND, and the evidence did not show that Apple was unwilling to take a license.[61]

Of the four, the U.K. appears to provide courts with the greatest degree of discretion in awarding injunctions, though the governing law stops well short of embracing *eBay*. In a recent infringement suit brought by IPCom against Nokia, for example, Justice Roth of the English Patent Court indicated that he was unlikely to grant an injunction in light of IPCom's representation that it would license its SEP on FRAND terms and Nokia's willingness to accept such a license. IPCom thereafter voluntarily withdrew its request for injunctive relief.[62] More generally, as dis-

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man law view the claim for an injunction as an essential feature of their respective exclusive rights). Walz also argues, however, that European courts could look to article 3(2) of the EC Enforcement Directive, which states that "Those measures, procedures and remedies shall also be effective, proportionate and dissuasive and shall be applied in such a manner as to avoid the creation of barriers to legitimate trade and to provide for safeguards against their abuse," as a basis for limiting the right to obtain an injunction in some cases. *See* Walz, *supra*, at 727–28. Other commentators also have suggested that German courts could depart from the presumption in favor of injunctive relief in an appropriate case. *See* COTTER, *supra* note 6, at 247–48 (citing sources). *See also* HEINRICH TETZNER, DAS MATERIELLE PATENTRECHT DER BUNDESREPUBLIK DEUTSCHLAND 87–88 (1972) (asserting that a court should deny the patent owner an injunction where the harm to the defendant would be disproportionate); Thomas F. Cotter, *Tetzner on Permanent Injunctions Under German Law*, COMPARATIVE PATENT REMEDIES (Aug. 5, 2013), *available at* http://comparativepatentremedies.blogspot.com/2013/08/tetzner-on-permanent-injunctions-under.html.

59 *See* COTTER, *supra* note 6, at 246 n.220 (citing sources).

60 *See* Rb.'s-Gravenhage, 14 maart 2012, m.nt. (Samsung Elecs. Co./Apple Inc.) (Neth.), *available at* http://uitspraken.rechtspraak.nl/inziendocument?id=ECLI:NL:RBSGR:2012:BV8871.; *see also* sources cited *supra* note 29.

61 *See* Rb.'s-Gravenhage, 14 maart 2012, m.nt. ¶¶ 4.31–4.44 (Samsung Elecs. Co./Apple Inc.) (Neth.), *available at* http://uitspraken.rechtspraak.nl/inziendocument?id=ECLI:NL:RBSGR:2012:BV8871. The decision contrasts with the same court's decision in Rb's-Gravenhage, 17 Maart 2010, 316533 m.nt. Nos. 08-2522, 08-2524, ¶¶. 6.18–6.27, 6.44–6.45 (Koninlijke Philips Elecs. N.V./SK Kassetten GmbH) (Neth.). As discussed in the sources cited *supra* in note 29 and in Fabio Babey & Salim Rizvi, *Die FRAND-Selbsverpflichtung: Fair, Reasonable and Non-Discriminatory Terms (FRAND) im Lichte des Kartellrechts*, WuW 09/2012, 808, 814–15, in this earlier case the court held that a FRAND commitment did not preclude the patentee from obtaining an injunction, and that the burden of seeking to obtain a license prior to entering the market rested on the defendant. A partial translation into English can be found at http://www.eplawpatentblog.com/eplaw/2010/03/nl-philips-v-sk-kasetten-frand.html. On the question of whether other countries, including Germany, could recognize an abuse of right defense in a case involving SEPs, see TAPIA, *supra* note 28, at 39–41, 51, 74–75, 78–79; Thomas F. Cotter, *Abuse of Right as a Rationale for Denying Injunctive Relief (and Damages?)*, COMPARATIVE PATENT REMEDIES (Aug. 26, 2013), *available at* http://comparativepatentremedies.blogspot.com/2013/08/abuse-of-right-as-rationale-for-denying.html.

62 *See* Peter Bell, *Standards Essential Patents: UK and US*, EUROPEAN PATENT LAWYER ASSOCIATION (Apr. 22, 2013), *available at* http://www.eplaw.org/Downloads/

cussed in a recent paper by Lundie-Smith and Moss,[63] the foundational case in the U.K. is *Shelfer v. City of London Electric Lighting Co.*,[64] which states that damages may be preferable to an injunction "(1) If the injury to the plaintiff 's legal rights is small, (2) And is one which is capable of being estimated in money, (3) And is one which can be adequately compensated by a small money payment, (4) And the case is one in which it would be oppressive to the defendant to grant an injunction."[65] In the authors' view, this standard permits some flexibility, but (unlike *eBay*) it places the burden of overcoming the presumption in favor of injunctive relief on the defendant and does not directly take into account the public interest or the balance of convenience.[66]

3. *Asia*

To my knowledge, thus far the only other countries in which an SEP owner's entitlement to injunctive relief has been adjudicated are South Korea and Japan. As noted previously, in the Korean *Samsung v. Apple* decision the court awarded Samsung an injunction on the ground that Samsung's FRAND commitment did not constitute a binding contract.[67] In addition, according to Haksoo Ko, the court rejected Apple's argument that Samsung's filing of a lawsuit seeking injunctive relief constituted an abuse of patent rights, reasoning that "a FRAND declaration, without more, cannot be construed to include a commitment not to seek . . . injunctive relief."[68]

An abuse of rights argument, however, was successful in a dispute between Apple and Samsung in Japan. In a decision handed down in February 2013, the Tokyo District Court held that Samsung could not obtain *damages* for the infringement of a SEP asserted against Apple due to Samsung's "abuse of right."[69] In particular,

Bell_Young_EPLAW_Congress_SEPs.pdf; Florian Mueller, *UK High Court Denies a Patent Injunction Against Nokia in Light of a FRAND Commitment*, FOSS PATENTS (May 30, 2012), *available at* http://www.fosspatents.com/2012/05/uk-high-court-denies-patent-injunction.html. There is no written opinion on the issue, however.

63 Robert Lundie-Smith & Gary Moss, *Bard v. Gore: To Injunct, or Not to Injunct, What Is the Question? Is It Right to Reward an Infringer for Successfully Exploiting a Patent?*, 8 J. INTELL. PROP. L. & PRAC. 359, 361 (Apr. 2013). *See also* COTTER, *supra* note 6, at 179–82, and sources cited therein.

64 Shelfer v. City of London Electric Lighting Co., [1895] 1 Ch. 287 (A.C.) (Eng.).

65 *Id.* at 322–23.

66 *See* Lundie-Smith & Moss, *supra* note 63, at 367.

67 *See* Ko, *supra* note 30, at 4–6.

68 *See id.* at 6. *See also* Samsung Elec. v. Apple Korea Ltd., *supra* note 30, at 192–94 (concluding that Samsung did not abuse its rights).

69 *See* Tomofumi Sato, *Apple Japan Limited Liability Company (Plaintiff) v. Samsung Electronics Co., Ltd. (Defendant), Tokyo District Court/Judgment of Feb. 28, 2013/Case No. 2011 (wa) No. 38969; Case to seek declaration of nonexistence of liability*, 38 AIPPI J. 174 (2013). A translation of portions of the judgment provided by Apple, Inc., can be found in Respondent Apple, Inc.'s Notice of New Facts Related to the Commission's Questions on the Issues Under Review, and on Remedy, Bonding, and the Public Interest, *In the Matter of Certain Electronic Devices*, Inv. No. 337-TA-794 (FTC Mar. 4, 2013), *available at* http://www.fosspatents.com/2013/03/japanese-court-deemed-samsungs-delayed.html [hereinafter Apple Translation].

the court held that, under the Civil Code of Japan, while "there are no express provisions regarding the duties of parties at the stage of preparation for contract execution . . . it is reasonable to understand that, in certain cases, parties that have entered into contract negotiations owe a duty to each other under the principle of good faith to provide the other party with important information and to negotiate in good faith."[70] The court rejected Samsung's argument that the duty to negotiate in good faith had not arisen because Apple's offer reserved the right to contest validity, and concluded that Samsung had not acted in good faith because, *inter alia*, it had refused to disclose information Apple had requested to substantiate Samsung's offer of a 2.4% royalty for all patents essential to the UMTS standards, and had continued to seek a preliminary injunction in the Japanese proceedings.[71] The court therefore concluded that Samsung's conduct constituted an abuse of rights precluding Samsung from the right to seek damages from Apple.[72]

The matter has also been the subject of discussion in Chinese patent circles, as discussed by Chengjian and Xiao,[73] though without any definitive resolution. As I discuss in my book, however, based on some limited case law and a 2008 speech by Supreme People's Court Justice Cao Jianming, there is reason to believe that Chi-

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70 Apple Translation, *supra* note 69, at 10. Article 1 of the Japanese Civil Code states:

> (1) Private rights must conform to the public welfare.
> (2) The exercise of rights and performance of duties must be done in good faith.
> (3) No abuse of rights is permitted.

MINPŌ [MINPŌ][Civ. C.] art. 1, no. 1. A translation is available on a Japanese government website at http://www.moj.go.jp/content/000056024.pdf. *See also* Florian Mueller, *Japanese Court Deemed Samsung's Delayed Disclosure of Essential Patents Abusive Conduct*, FOSS PATENTS (Mar. 5, 2013, 6:44 PM), *available at* http://www.fosspatents.com/2013/03/japanese-court-deemed-samsungs-delayed.html (noting that there is a parallel in certain provisions of the German Constitution and Civil Code).

71 *See* Sato, *supra* note 69, at 175; Apple Translation, *supra* note 69, at 11–13.

72 *See* Sato, *supra* note 69, at 175; Apple Translation, *supra* note 69, at 13. According to Christoph Rademacher, there also has been a good deal of discussion in Japan concerning whether to adopt an *eBay*-like rule, but "[i]n light of the low success rates of Japanese patentees in Japanese patent infringement lawsuits and the difficulties defending the validity of plaintiffs' patents, the consensus in the Japanese patent community has been to refrain, at least for the time being, from introducing any measures that would result in further weakening the status of the patentee." Christoph Rademacher, *Injunctive Relief in Patent Cases in the US, Germany and Japan: Recent Developments and Outlook*, *in* INTELLECTUAL PROPERTY IN COMMON LAW AND CIVIL LAW 325, 341 (Toshiko Takenaka ed. 2013). For discussion of win rates and invalidity rates in Japan, *see* COTTER, *supra* note 6, at 298–300. Rademacher also discusses the possibility that a nonpracticing entity that merely licenses its patent would not be viewed as "practicing" the invention and therefore might be vulnerable to compulsory licensing under article 83 of the Japanese Patent Act; unlike article 93 of that act, which also permits compulsory licensing under some circumstances, article 83 does not require a showing that the license is necessary to serve the public interest. *See* Rademacher, *supra*, at 344–46. Apparently there are no cases applying this provision, though.

73 *See* Wu Chengjian & Zhang Xiao, *On Injunctive Relief for Standard-Essential Patents*, CHINA PATS. & TRADEMARKS, No. 2, 2013, at 27–28.

nese courts view themselves as having some discretion to deny injunctive relief in appropriate cases.[74]

C. Competition Law

1. U.S. Law

In two cases resolved within the last year, the Federal Trade Commission (FTC) has invoked competition law as a basis for limiting a patent owner's ability to seek injunctive relief for the infringement of SEPs.[75] In the first case, *In the Matter of Robert Bosch GmbH*, the FTC complaint alleged (1) that Bosch's proposed acquisition of SPX Service Solutions (SPX) would violate § 7 of the Clayton Act and § 5 of the FTC Act by tending to monopolize the market for air conditioning recovery, recycling, and recharging (ACRRR) systems used for the repair of motor vehicle air conditioning (MVAC) systems; and (2) that SPX's conduct of seeking injunctive relief in an action for the infringement of two patents that may have been essential to the practice of the J-2788 and J-2843 standards promulgated by SAE International (an SSO that develops standards to ensure that ACRRR systems comply with U.S. Environmental Protection Agency regulations), despite its having provided a Letter of Assurance to SAE that it would license those patents on FRAND

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74 *See* COTTER, *supra* note 6, at 349–50 and sources cited therein.

75 The FTC is a federal agency charged with investigating, prosecuting, and adjudicating violations of § 5 of the FTC Act, 15 U.S.C. § 45(a)(1), which proscribes "Unfair methods of competition in or affecting commerce, and unfair or deceptive acts or practices in or affecting commerce." The Commission shares authority with the Department of Justice to challenge allegedly anticompetitive practices as unfair methods of competition. For the most part, these practices coincide with practices that violate the Sherman or Clayton Acts, although the Commission "retains some authority to define as 'unfair methods of competition' certain practices that do not violate the other antitrust laws." BARTON BEEBE ET AL., TRADEMARKS, UNFAIR COMPETITION, AND BUSINESS TORTS 370 (2011) (citing FTC v. Sperry & Hutchinson Co., 405 U.S. 233, 239–40 (1972), and *Negotiated Data Solutions LLC*, Analysis of Proposed Consent Order to Aid Public Comment, 73 Fed. Reg. 5846–01, at 5848–49 (Jan. 31, 2008)). The FTC also may challenge practices such as false advertising or other deceptive conduct injurious to consumers as "unfair" or "deceptive" trade practices. *See id.* As was the case in the two matters discussed in the text above, following an investigation the Commission may, by majority vote of the five commissioners, present a party believed to be in violation of the Act with a draft complaint and proposed consent order, which the party either may accept (subject to a period for public commentary before entry) or reject. If the party rejects the consent order, the matter proceeds to trial before an administrative law judge, whose findings of fact and conclusions of law are subject to appeal to the Commission. The Commission's decision on appeal may then be appealed to a federal appellate court. Alternatively, if a party rejects a consent order, the FTC may proceed directly to federal district court for preliminary relief, pursuant to FTC Act § 13(b), 15 U.S.C. § 53(b). *See* BEEBE ET AL., *supra*, at 371, n.14.

I should emphasize that the two cases discussed in the text above are notable because the FTC specifically alleged that the act of seeking an injunction for the infringement of a FRAND-encumbered SEP could be a violation of the FTC Act. This goes beyond merely requiring a merging entity to license certain patents to competitors, as a condition of allowing what otherwise might be an anticompetitive merger to go forward. *See, e.g.* Fed. Trade Comm'n, Press Release, *FTC Puts Conditions on Honeywell's Acquisition of Scan Engine Manufacturer Intermec: Settlement Preserves Competition by Requiring Honeywell to License Key Scanner Patents*, Sept. 13, 2013, *available at* http://www.ftc.gov/opa/2013/09/honeywell.shtm.

terms, constituted an unfair method of competition in violation of FTC Act § 5.[76] In April 2013 the FTC entered a consent order requiring Bosch, among other things, to (1) license certain enumerated patents, including the patents at issue in the SPX lawsuit, on a royalty-free basis; (2) license any other patents it might thereafter acquire that are essential to the practice of the J-2788 and J-2843 standards on FRAND terms; and (3) not to seek injunctive relief for the infringement of any of these patents.[77]

The Commission explained its reasoning with regard to the SEP portion of the consent order in an accompanying Statement. First, the Commission asserted, the act of seeking injunctive relief for the infringement of a FRAND-encumbered SEP "has the potential to cause substantial harm to U.S. competition, consumers, and innovation," because the SEP owner can demand royalties "that reflect the investments firms make to develop and implement the standard, rather than the economic value of the technology itself," thus potentially harming "incentives to develop standard-compliant products" and leading "to excessive royalties that can be passed along to consumers in the form of higher prices."[78] Second, given this potential harm to competition, the Commission concluded that, in the present case, it would be fair to characterize the seeking of injunctive relief for the infringement of a FRAND-encumbered SEP as an unfair method of competition, a term that is not limited to conduct that violates the Sherman or Clayton Acts.[79] (Indeed, the Commission asserted that it had "no reason to believe that, in this case, a monopolization count under the Sherman Act was appropriate."[80] As we shall see, the Commission probably was correct to make this concession.) Third, the Commission sought to limit the precedential effect of its order to some degree by noting that "[w]hile not

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76 *See* Complaint, *In the Matter of Robert Bosch GmbH*, Docket No. C-4377 (FTC Nov. 26, 2012), *available at* http://www.ftc.gov/os/caselist/1210081/121126boschcmpt.pdf.

77 *See* Decision and Order (Redacted Public Version), *In the Matter of Robert Bosch GmbH*, Docket No. C-4377, §§ II.B.2, IV (FTC Apr. 24, 2013), *available at* http://www.ftc.gov/os/caselist/1210081/130424robertboschdo.pdf; Analysis of Agreement Containing Consent Orders to Aid Public Comment, *In the Matter of Robert Bosch GmbH*, Docket No. C-4377, at 5, *available at* http://www.ftc.gov/os/caselist/1210081/121126boschanalysis.pdf.

78 Statement of the Federal Trade Commission, *In the Matter of Robert Bosch GmbH*, FTC File No. 121-0081, at 1–2, *available at* http://www.ftc.gov/os/caselist/1210081/121126boschcommissionstatement.pdf (quoting Third Party United States Federal Trade Commission's Statement on the Public Interest filed on June 6, 2012 in *In re Certain Wireless Communication Devices, Portable Music & Data Processing Devices, Computers and Components Thereof*, Inv. No. 337-TA-745, *available at* www.ftc.gov/os/2012/06/1206ftcwirelesscom.pdf, and in *In re Certain Gaming and Entertainment Consoles, Related Software, and Components Thereof*, Inv. No. 337-TA-752, *available at* http://www.ftc.gov/os/2012/06/1206ftcgamingconsole.pdf). The Commission also perceived "a tension between offering a FRAND commitment and seeking injunctive relief." *Id.* at 2.

79 Statement of the Federal Trade Commission, *In the Matter of Robert Bosch GmbH*, FTC File No. 121-0081, at 3, *available at* http://www.ftc.gov/os/caselist/1210081/121126boschcommissionstatement.pdf ("The plain language of Section 5, the relevant legislative history, and a long line of Supreme Court cases all affirm that Section 5 extends beyond the Sherman Act.").

80 *Id.* at 2, n.7.

every breach of a FRAND licensing obligation will give rise to Section 5 concerns, when such a breach tends to undermine the standard-setting process and risks harming American consumers, the public interest demands action . . . ."[81] Commissioners Ohlhausen and Rosch both supported the Commission's decision to challenge Bosch's acquisition of SPX, but dissented from the portion of the order relating to SEPs.[82]

The more prominent case, however, was the second one, *In the Matter of Motorola Mobility LLC and Google Inc.*[83] By way of background, in February 2012, the United States Department of Justice approved Google's acquisition of Motorola Mobility, which owned a portfolio of over 17,000 patents.[84] The transac-

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81 *Id.* at 8.

82 *See* Statement of Commissioner Maureen K. Ohlhausen, *In the Matter of Robert Bosch GmbH*, File No. 121-0081, Docket No. C-4377, at 1, 4, *available at* http://www.ftc.gov/os/caselist/1210081/121126boschohlhausenstatement.pdf:

> Even if all of the SEP-related allegations in the complaint were proved . . . I would not view such conduct as violating Section 5 of the FTC Act. Simply seeking injunctive relief on a patent subject to a fair, reasonable, and non-discriminatory ("FRAND") license, without more, even if seeking such relief could be construed as a breach of a licensing commitment, should not be deemed either an unfair method of competition or an unfair act or practice under Section 5 . . .
>
> Before invoking Section 5 to address business conduct not already covered by the antitrust laws . . . the Commission should fully articulate its views about what constitutes an unfair method of competition, including the general parameters of unfair conduct and where Section 5 overlaps and does not overlap with the antitrust laws, and how the Commission will exercise its enforcement discretion under Section 5. Otherwise, the Commission runs a serious risk of failure in the courts and a possible hostile legislative reaction, both of which have accompanied previous FTC attempts to use Section 5 more expansively.

See also FTC Order Restores Competition in U.S. Market for Equipment Used to Recharge Vehicle Air Conditioning Systems (Nov. 26, 2012), *available at* http://www.ftc.gov/opa/2012/11/bosch.shtm (noting that Commissioner Rosch also voted against the Commission order).

83 *See* Decision and Order, *In the Matter of Motorola Mobility LLC and Google Inc.*, (FTC July 24, 2013), *available at* http://ftc.gov/os/caselist/1210120/130724googlemotorolado.pdf.

84 *See* Statement of the Department of Justice's Antitrust Division on Its Decision to Close Its Investigations of Google Inc.'s Acquisition of Motorola Mobility Holdings Inc. and the Acquisitions of Certain Patents by Apple Inc., Microsoft Corp. and Research in Motion Ltd., DOJ OFFICE OF PUBLIC AFFAIRS (Department of Justice, Washington, D.C.), Feb. 13, 2012, *available at* http://www.justice.gov/opa/pr/2012/February/12-at-210.html. The Statement notes:

> During the course of the division's investigation, several of the principal competitors, including Google, Apple and Microsoft, made commitments concerning their SEP licensing policies. The division's concerns about the potential anticompetitive use of SEPs was lessened by the clear commitments by Apple and Microsoft to license SEPs on fair, reasonable and non-discriminatory terms, as well as their commitments not to seek injunctions in disputes involving SEPs. Google's commitments were more ambiguous and do not provide the same direct confirmation of its SEP licensing policies.

tion closed in May 2012.[85] Shortly thereafter, however, the FTC formally launched its own investigation into Google/Motorola Mobility's conduct with regard to SEPs.[86] The initial version of the FTC's complaint alleged that Google and Motorola Mobility violated § 5 by engaging in unfair methods of competition *and* unfair acts or practices[87] by seeking injunctive relief for the infringement of FRAND-encumbered SEPs in federal district court and before the ITC.[88] The parties agreed to a consent order under which Google and Motorola Mobility agreed not to seek injunctive relief for the infringement of these SEPs, subject to some exceptions.[89] In its accompanying Statement, the Commission asserted that, as in *Bosch*, "a breach of a FRAND commitment in the context of standard setting poses serious risks to the standard-setting process, competition, and consumers," and again reiterated that it was *not* alleging a violation of the Sherman or Clayton Acts.[90] In July 2013, the Commission published the final version of the consent order and the final version of the complaint. The latter had been amended to delete

85 *See* Jenna Wortham, *Google Closes $12.5 Billion Deal to Buy Motorola Mobility*, N.Y. TIMES (May 22, 2012), *available at* http://bits.blogs.nytimes.com/2012/05/22/google-closes-12-5-billion-deal-to-buy-motorola-mobility/.

86 *See* Sara Forden, *Google Said to Face U.S. Probe Over Motorola Patents*, BLOOMBERG NEWS (June 29, 2012), *available at* http://www.bloomberg.com/news/2012-06-29/google-said-to-face-u-s-probe-over-motorola-patents.html.

87 The "unfair trade practices" branch of FTC practice more typically addresses consumer protection rather than antitrust-related matters. For discussion, see BEEBE ET AL., *supra* note 75, at 370, 399–401. In *Bosch*, the Commission had "reserved for another day the question whether, and under what circumstances, similar conduct might also be challenged as an unfair act or practice . . . ." Statement of the Federal Trade Commission, *In the Matter of Robert Bosch GmbH*, FTC File No. 121–0081, at 2 n.7, *available at* http://www.ftc.gov/os/caselist/1210081/121126boschcommissionstatement.pdf.

88 Complaint, *In the Matter of Motorola Mobility LLC and Google Inc.*, No. 121-0120, ¶¶ 1, 25–27, 31–32 (FTC Jan. 3, 2013), *available at* http://www.ftc.gov/os/caselist/1210120/130103googlemotorolacmpt.pdf.

89 Decision and Order, *In the Matter of Motorola Mobility LLC and Google Inc.*, No. 121-0120, (FTC July 24, 2013), *available at* http://ftc.gov/os/caselist/1210120/130724googlemotorolado.pdf.

90 See Statement of the Federal Trade Commission, *In the Matter of Google Inc.*, No. 121-0120, at 2–3 (FTC Jan. 3, 2013) ("A stand-alone Section 5 unfair methods of competition claim allows the Commission to protect consumers and the standard-setting process while minimizing the often burdensome combination of class actions and treble damages associated with private antitrust enforcement."). Three members of the Commission—Chairman Leibowitz and Commissioners Brill and Ramirez—were of the view that the facts supported an unfair methods of competition claim. *Id.* at 3, n.9. An overlapping but not identical group of three—Chairman Leibowitz and Commissioners Brill and Rosch—were of the view that the facts supported an unfair acts of practices claim. *Id. See also*, Separate Statement of Commissioner J. Thomas Rosch Regarding Google's Standard Essential Patent Enforcement Practices, *In the Matter of Google Inc.*, No. 121-0120 (FTC Jan. 3, 2013), *available at* http://www.ftc.gov/os/caselist/1210120/130103googlemotorolaroschstmt.pdf. Commissioner Ohlhausen dissented with regard to both claims. *See* Dissenting Statement of Commissioner Maureen K. Ohlhausen, *In the Matter of Motorola Mobility LLC and Google Inc.*, No. 121-0120 (FTC Jan. 3, 2013), *available at* http://ftc.gov/os/caselist/1210120/130103googlemotorolaohlhausenstmt.pdf.

the claim of unfair acts or practices, leaving only the claim for unfair methods of competition.[91]

Despite the fact that both *Bosch* and *Google* were decided just within the last year, the prospect of the FTC taking a similarly aggressive policy with respect to FRAND commitments in the near future is unclear. As noted above, both *Bosch* and *Google* were 3-2 decisions in favor of interpreting the unfair methods of competition language of FTC Act § 5 as providing a stand-alone[92] basis for preventing the owner of a FRAND-encumbered SEP from seeking injunctive relief. Since then, Commissioner Rosch—who dissented from the unfair methods of competition analysis in *Bosch* and *Google*, but concurred with the Commission's initial inclination to allege unfair acts or practices in *Google*—has stepped down and been replaced by Commissioner Wright, who in his public statements has promoted a relatively modest interpretation of both unfair methods of competition[93] and unfair acts or practices.[94] Chairman Leibowitz also has stepped down and has been replaced as chair by Commissioner Ramirez.[95] Terrell McSweeny has been nominated for the vacant seat,[96] but as of September 2013 has not yet been confirmed, leaving at pre-

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91 *See* Complaint, *In the Matter of Motorola Mobility LLC and Google Inc.*, *supra* note 88, at ¶¶ 1, 31; *see also* Letter to Commenters, *In the Matter of Motorola Mobility LLC and Google Inc.*, No. 121-0120, Docket No. C-4410 (FTC July 24, 2013), at 2 n.2, *available at* http://www.ftc.gov/os/caselist/1210120/130724googlemotorolaletter.pdf (noting the change).

92 That is, without demonstrating that the conduct also violated the Sherman or Clayton Act.

93 *See* Statement of Commissioner Joshua D. Wright, *Proposed Policy Statement Regarding Unfair Methods of Competition Under Section 5 of the Federal Trade Commission Act* (June 19, 2013), *available at* http://www.ftc.gov/speeches/wright/130619umcpolicystatement.pdf. Commissioner Wright proposes, among other things, that for the FTC to find an unfair method of competition that does not violate the Sherman or Clayton Act, the conduct at issue must both harm competition and offer no cognizable efficiencies. Although he does not indicate how he would have decided *Bosch* or *Motorola Mobility/Google*, the requirement of a complete absence of cognizable efficiencies, as opposed to a balancing of efficiencies against anticompetitive harms, would seem to result in a fairly modest construction of unfair methods of competition.
More recently, Commissioner Wright has expressed the view that FRAND commitments should not be interpreted as contractual obligations to forgo injunctive relief, or as precluding injunctive relief under the *eBay* standard; and that antitrust has only a very limited role to play in this space as well. *See* Remarks of Joshua D. Wright, Commissioner, *SSOs, FRAND, and Antitrust: Lessons from the Economics of Incomplete Contracts* (Sept. 12, 2013), *available at* http://www.ftc.gov/speeches/wright/130912cpip.pdf. For my initial thoughts on Commissioner Wright's remarks, *see* Thomas F. Cotter, *Wright on Standard-Essential Patents and FRAND*, COMPARATIVE PATENT REMEDIES (Sept. 13, 2013, 1:51 PM), *available at* http://comparativepatentremedies.blogspot.com/2013/09/wright-on-standard-essential-patents.html.

94 *See* Joshua D. Wright & Audrey N. Stuempfle, *Patent Holdup, Antitrust, and Innovation: Harness or Noose?*, 61 ALA. L. REV. 559, 566 (2010) (book review of MICHAEL A. CARRIER, INNOVATION FOR THE 21ST CENTURY: HARNESSING THE POWER OF INTELLECTUAL PROPERTY AND ANTITRUST LAW (2009) (casting doubt on the FTC's unfair acts or practices authority as a tool for remedying alleged patent holdup)).

95 Erin Coe, *Obama Taps DOJ's McSweeny for FTC Seat*, LAW360 (June 21, 2013), *available at* http://www.law360.com/articles/452356/obama-taps-doj-s-mcsweeny-for-ftc-seat.

96 *Id.* A confirmation hearing was held before the Senate Commerce Committee on September 18, 2013. Alex Zank, *U.S. Senate Committee Reviews FTC Nomination*, THE BLT: BLOG OF LEGAL

sent only four active commissioners, two of whom I predict would not vote in favor of another consent order like the ones in *Bosch* and *Google*. McSweeny's views are, to my knowledge, not publicly known.

In any event, aside from possible FTC intervention in cases such as *Bosch* and *Google*, the role of U.S. antitrust law as a means for enforcing FRAND commitments seems quite limited. The basis for an antitrust claim would have to be that, by seeking an injunction or otherwise holding out for higher royalties, an SEP owner somehow violates Sherman Act § 2, which condemns monopolization and attempts to monopolize.[97] U.S. law generally doesn't condemn excessive pricing in and of itself, however, so the only way for such a claim to work would be to characterize the SEP owner's conduct as an actionable refusal to deal or as involving actionably deceptive conduct. In the present context, neither theory seems to hold much promise.[98]

TIMES (Sept. 19, 2013, 3:27 PM), *available at* http://legaltimes.typepad.com/blt/2013/09/us-senate-committee-reviews-ftc-nomination.html.

[97] *See* 15 U.S.C. § 2 (2004) ("[e]very person who shall monopolize, or attempt to monopolize, or combine or conspire with any other person or persons, to monopolize any part of the trade or commerce among the several States, or with foreign nations, shall be deemed guilty of a felony . . . ."). Of course, if an SSO, through certain of its members, were to agree to disadvantage or exclude another member or potential member, the agreement may be actionable under Sherman Act § 1. *See, e.g.*, Allied Tube & Conduit Corp. v. Indian Head, Inc., 486 U.S. 492 (1988); Am. Soc'y of Mech. Eng'rs, Inc. v. Hydrolevel Corp., 456 U.S. 556 (1982); Radiant Burners, Inc. v. Peoples Gas Light & Coke Co., 364 U.S. 656 (1961) (per curiam). Whether an SSO should be liable for failing to *prevent* one or more of its members from engaging in FRAND abuse—that is, for failing to institute policies that would prevent members from exploiting the ex post market power conferred by the incorporation of their technology into a standard—was a point of discussion during the University of Florida workshop. *See* Thomas F. Cotter, *Day 2 of University of Florida Workshop on Standard Essential Patents and FRAND: Page on "Judging Monopolistic Pricing: F/RAND and Antitrust Injury,"* COMPARATIVE PATENT REMEDIES (Sept. 12, 2013, 8:15 AM), *available at* http://comparativepatentremedies.blogspot.com/2013/09/day-2-of-university-of-florida-workshop_12.html; *see also* Trueposition, Inc. v. LM Ericsson Tel. Co., 899 F. Supp. 2d 356, 364–66 (E.D. Pa. 2012) (denying an SSO's motion to dismiss an antitrust claim which, according to the SSO, alleged only that the SSO failed to prevent its members from excluding the plaintiff's technology from the standard, on the ground that the complaint also alleged that the SSO cloaked the members with apparent authority to engage in concerted action).

[98] Doctrinally, a § 2 monopolization claim requires proof of are "(1) the possession of monopoly power in the relevant market and (2) the willful acquisition or maintenance of that power as distinguished from growth or development as a consequence of a superior product, business acumen, or historic accident." United States v. Grinnell Corp., 384 U.S. 563, 570–71 (1966). The first element requires evidence of very substantial market power, usually in the range of a 70% or better market share coupled with substantial barriers to entry. *See, e.g.*, E.I. DuPont de Nemours & Co. v. Kolon Indus., Inc., 637 F.3d 435, 451 (4th Cir. 2011) (70% market share); United States v. Microsoft Corp., 253 F.3d 34, 51 (D.C. Cir. 2001) (over 95% market share); Reazin v. Blue Cross & Blue Shield, Inc., 899 F.2d 951, 967–68 (10th Cir. 1990) (up to 60% market share). Proving this element may not be terribly difficult in the context of SEPs. If the patent in suit is indeed standard-essential, it is a fair inference that the ability to exclude firms that sell products that comply with the standard from practicing the patent would indeed confer substantial market power. Once users are locked in, the patent owner armed with an injunction can pretty much name its price. Moreover, the barriers to entry (creating a new standard) would be very high. The more challenging issue

One possibility would be to try to characterize the act of seeking an injunction against the unauthorized use of a FRAND-encumbered SEP as an actionable unilateral refusal to deal, but this theory is problematic for several reasons. First, an SEP owner's refusal to license on terms that the user believes to be FRAND may not be so unreasonable as to constitute a practical refusal to deal.[99] After all, the typical SEP owner is probably not seeking exclusion, but rather licensing fees. Second, even if the SEP owner's conduct could be characterized as a refusal to deal, the U.S. Supreme Court has held that, in general, there *is* no duty to deal—although in theory a monopolist may be liable under § 2 if it lacks a legitimate business purpose for its refusal to deal, for example, if there was a prior course of dealing between the parties or if the monopolist appears to be forgoing the short-term benefits from continuing the relationship for the prospect of longer-term gain.[100] The Court in *Verizon Communications Inc. v. Law Offices of Curtis V. Trinko, LLP* nevertheless cautioned against broad interpretations of § 2, on the grounds, among others, that forced sharing may reduce ex ante incentives to innovate; that courts are not well-positioned to regulate price and output, in the manner of central planners; and that forced sharing may encourage collusion between the monopolist and potential competitors.[101]

Making things even harder for the antitrust plaintiff is the fact that the antitrust claim would involve a unilateral refusal to deal in IP, which is even *less* likely to violate § 2 under U.S. law. Although the different circuits have articulated different standards for assessing liability in such cases, there is a widespread consensus that there is a presumptively legitimate business justification for an IP owner's refusal to license. Under one approach, the presumption can be rebutted only in rare circum-

would be to satisfy element (2), which normally entails proof of some sort of predatory or exclusionary conduct that lacks a procompetitive justification. *See, e.g.*, LePage's Inc. v. 3M, 277 F.3d 365, 381 n.11 (3d Cir. 2002) reh'g en banc granted, opinion vacated (Feb. 25, 2002), *on reh'g en banc*, 324 F.3d 141 (3d Cir. 2003); *Microsoft*, 253 F.3d at 358. Although refusals to deal and deceptive conduct sometimes may fit the bill, as discussed above the chances of prevailing in the context under discussion seems weak. Similarly, an attempted monopolization claim requires proof of (1) a specific intent to monopolize, (2) predatory or anticompetitive conduct, and (3) a dangerous probability of success. *See* Spectrum Sports, Inc. v. McQuillan, 506 U.S. 447, 456 (1993). Thus, if the conduct at issue is not actionably predatory or anticompetitive, for the reasons stated above, there would be no actionable attempted monopolization claim either. The third element seems suspect as well if the court is likely to deny an injunction (so there would be no dangerous probability of success) and award damages that might approximate a FRAND royalty.

99 *See* MetroNet Servs. Corp. v. Qwest Corp., 383 F.3d 1124, 1132 (9th Cir. 2004) ("An offer to deal with a competitor only on unreasonable terms and conditions can amount to a practical refusal to deal.").

100 *See* Verizon Communc'ns Inc. v. Law Offices of Curtis V. Trinko, LLP. 540 U.S. 398, 410 (2004); Aspen Skiing Co. v. Aspen Highlands Skiing Corp., 472 U.S. 585, 608 (1985). See Novell, Inc. v. Microsoft Corp., No. 12-4143, 2013 WL 5303259 (10th Cir. Sept. 23, 2013) for a recent federal appellate decision adopting a narrow view of the circumstances in which a unilateral refusal to deal may be actionable.

101 *See Trinko*, 540 U.S. at 411–16.

stances where cooperation is "indispensable to effective competition."[102] That condition seems unlikely to be present in the SEP context, because the market for the patented technology is not, ex post, competitive. Under another approach, the presumption can be rebutted by proof that the refusal was a pretext.[103] This rule has been criticized for introducing a subjective element into the analysis,[104] but even on its own terms the pretext rationale seems unlikely to be applicable as long as the litigation is not a sham and (unlike in *Image Technical*)[105] the assertion of patent infringement is not a mere afterthought. Finally, under the Federal Circuit's approach (predicting the law of the Tenth Circuit), the presumption can be rebutted only if the patentee is enforcing a fraudulently procured patent, or is engaging in sham litigation, or the refusal is a means for gaining a monopoly beyond the scope of the patent.[106] None of these methods of rebutting the presumption normally would be applicable; claims of fraud or sham are extremely difficult to prove, and as long as the patent owner is simply holding out for a better deal the beyond-the-scope rationale would be extremely difficult to sustain as well.[107]

A variation on the theme of refusals to deal would be to invoke the "essential facilities" doctrine, but this doctrine would seem to stand little chance of success either. To be sure, some courts have recognized a duty on the part of a monopolist to share a facility that is essential to competition in some market—though the U.S. Supreme Court in recent years has called the doctrine's existence (and its status as an independent ground for antitrust liability) into question.[108] Under one formulation of the doctrine, the plaintiff must prove four elements "(1) control of the essential facility by a monopolist; (2) a competitor's inability practically or reasonably to duplicate the essential facility; (3) the denial of the use of the facility to a competitor; and (4) the feasibility of providing the facility."[109] As above, however, one problem would be proving that the SEP owner is, in fact, denying use of the "facility" to a competitor, as opposed to merely holding out for a better price. Moreover,

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[102] Data Gen. Corp. v. Grumman Sys. Support Corp., 36 F.3d 1147, 1187, n.64 (1st Cir. 1994) *abrogated by Reed Elsevier, Inc. v. Muchnick*, 559 U.S. 154, 130 S. Ct. 1237, 176 L. Ed. 2d 18 (2010).

[103] Image Technical Servs., Inc. v. Eastman Kodak Co., 125 F.3d 1195, 1218–20 (9th Cir. 1997).

[104] *See, e.g.*, Herbert Hovenkamp et al., *Unilateral Refusals to License in the US*, *in* ANTITRUST, PATENTS AND COPYRIGHT: EU AND US PERSPECTIVES 12 (Howard Shelanski & François Lévêque eds., 2005).

[105] *See Image Technical Servs.*, 125 F.3d at 1219 ("Kodak's parts manager testified that patents 'did not cross [his] mind' at the time Kodak began the parts policy" that formed the basis of the plaintiffs' antitrust claim).

[106] *See* In re Indep. Serv. Orgs. Antitrust Litig. CSU, L.L.C., 203 F.3d 1322, 1325–28 (Fed. Cir. 2000).

[107] Causation might be yet another problem. Even if the SEP owner's conduct could be viewed as willful or exclusionary, it's not at all clear that one single lawsuit against one single firm would contribute much to the owner's acquisition or maintenance of monopoly power in the market occupied by the patent, particularly if the SEP by itself confers monopoly power in a properly-defined market.

[108] *See* Thomas F. Cotter, *The Essential Facilities Doctrine*, ANTITRUST LAW AND ECONOMICS 157, 161 (Keith Hylton ed., 2010).

[109] MCI Comm'n Corp. v. AT&T Co., 708 F.2d 1081, 1132–33 (7th Cir. 1983).

in addition to the four elements just listed courts often require evidence that the defendant operates in both an upstream and a downstream market, and that the defendant is excluding competition in one or the other by refusing access.[110] Additionally, in *Intergraph Corp. v. Intel Corp.*, the Federal Circuit held that the doctrine does not apply unless both plaintiff and defendant are competitors.[111] Unless these additional factors were met, the doctrine would have little chance of success; and even aside from these problems, the courts' general disapproval of unilateral refusal to deal with theories involving intellectual property rights would lead me to conclude that, as a practical matter, the essential facilities doctrine has little likelihood of success in the present context.

Leaving refusal to deal theories behind, a second possibility might be to try to characterize the SEP owner's conduct—either the seeking of an injunction, or possibly even the holding out for a supra-FRAND royalty—not as a refusal to license but rather as reneging on the commitment to license on FRAND terms. Assuming, for the sake of argument, that the antitrust plaintiff can prove that the terms offered by the SEP owner were not FRAND (a major though not insurmountable hurdle in and of itself, as discussed in Part IV below), doctrinally the question would be whether the breach of the FRAND commitment is the sort of "willful" conduct that § 2 condemns. The closest precedents to date are the cases addressing whether deceptive conduct before an SSO can constitute a § 2 violation; the two leading decisions are the Third Circuit's opinion in *Broadcom Corp. v. Qualcomm, Inc.*[112] and the D.C. Circuit's decision in *Rambus v. FTC*.[113] In *Broadcom*, the Third Circuit held that deceptive conduct that resulted in an SSO's choice of a standard that otherwise would have been rejected can violate § 2.[114] But the D.C. Circuit in *Rambus* held that it is not a § 2 violation if, absent the deception, the SSO would have chosen the same or another proprietary standard, and all the plaintiff is complaining about is that (but for the deception) it would have negotiated a better deal.[115] In effect, the court distinguished between monopoly acquisition or expansion, which might be actionable, and monopoly exploitation on the part of a lawful monopolist, which the court believed is not.[116] The *Rambus* decision has been criticized for not recognizing as a cognizable harm the injury to consumers resulting from a lawful monopolist's exercise of monopoly power that would have been constrained absent

[110] Cotter, *supra* note 108, at 161–62.

[111] Intergraph Corp. v. Intel Corp., 195 F.3d 1346, 1357 (Fed. Cir. 1999).

[112] Broadcom Corp. v. Qualcomm, Inc., 501 F.3d 297 (3d Cir. 2007). For discussion of other cases in a similar vein, including Negotiated Data Solutions LLC, Analysis of Proposed Consent Order to Aid Public Comment, 73 Fed. Reg. 5846-01 (Jan. 31, 2008); In Re Union Oil Co., No. 9305, (F.T.C. July 6, 2004), *available at* http://www.ftc.gov/os/adjpro/d9305/040706commissionopinion.pdf; and In Re Dell Computer Corp., 121 F.T.C. 616 (1996), *see* Thomas F. Cotter, *Patent Holdup, Patent Remedies, and Antitrust Responses*, 34 J. CORP. L. 1151, 1188–90 (2009).

[113] Rambus, Inc. v. Fed Trade Comm'n, 522 F.3d 456, 459 (D.C. Cir. 2008).

[114] *See Broadcom*, 501 F.3d at 313-14.

[115] *See Rambus*, 522 F.3d at 463–67.

[116] *See id.* at 466–67.

the monopolist's deceptive conduct.[117] But even if other courts were to reject *Rambus* on this ground, a claim premised on the deceptive conduct theory would have to show that the SEP owner engaged in some form of deceptive conduct before the standard was adopted. This would be problematic if the SEP owner only declared its patent standard-essential and made the FRAND commitment after the standard was adopted, which (as I understand it) is the more typical sequence of events. Even under *Broadcom*, the antitrust plaintiff arguably would have to show that, but for the deception, the SSO would have chosen a different standard.[118] The theory seems to be too much of a stretch.

Yet another issue common to any of the above theories is the possibility that the *Noerr-Pennington* doctrine would preclude any antitrust claim premised on the SEP owner's assertion of valid patent rights. Generally speaking, the *Noerr-Pennington* doctrine recognizes an immunity for conduct that amounts to petitioning the government; to overcome the immunity, the antitrust plaintiff asserting that the defendant violated the antitrust laws by engaging in or threatening sham infringement litigation must prove that the infringement claim was both objectively and subjectively unreasonable.[119] Whether the *Noerr-Pennington* doctrine immunizes an SEP owner from antitrust liability that otherwise might arise from asserting a right to injunctive relief is, at present, an open question.[120] In the *Apple v. Motorola* case referenced above, Judge Crabb concluded that *Noerr-Pennington* immunized Motorola from antitrust liability arising from its having initiated a proceeding before the ITC.[121] By contrast, in its actions relating to *Robert Bosch*, the FTC rejected the argument that "imposing [FTC Act] Section 5 liability where a SEP holder violates its commitment to license its SEPs on fair, reasonable, and non-discriminatory ("FRAND") terms offends the First Amendment," on the ground that the SEP owner who has made a FRAND commitment has, in effect, agreed to give

117 *See, e.g.*, Cotter, *supra* note 112, at 1196-99. The case was handled quite differently in Europe. *See* Memorandum, European Comm'n, Antitrust: Commission Confirms Sending a Statement of Objections to Rambus (Aug. 23, 2007), http://europa.eu/rapid/press-release_MEMO-07-330_en.htm. Rambus subsequently settled the European action. For discussion, see, e.g., Babey & Rizvi, *supra* note 61, at 815.

118 *See* Commission Opinion, *In the Matter of Certain Electronic Devices*, Inv. No. 337-TA-794, USITC Pub. slip op. at 64–66 (July 5, 2013) (rejecting Apple's argument that Samsung had engaged in actionably deceptive conduct by failing to timely disclose the relevant patents to the SSO).

119 *See* Prof'l Real Estate Investors, Inc. v. Columbia Pictures Indus., Inc., 508 U.S. 49, 60–61 (1993). *See also* C.R. Bard, Inc. v. M3 Sys., Inc., 157 F.3d 1340, 1368 (Fed. Cir. 1998) (citing Handgards, Inc. v. Ethicon, Inc., 743 F.2d 1282, 1288, (9th Cir. 1984) for the proposition that "the claimant must show 'some abuse of process,'" i.e., "clear and convincing evidence of bad faith").

120 *See* Thomas Dillickrath & David Emanuelson, *Injunctive Relief and the* Noerr-Pennington *Doctrine: The Search for Clarity on a Muddied Pitch*, CPI ANTITRUST CHRONICLE (Mar. 2013).

121 *See* Apple, Inc. v. Motorola Mobility, Inc., 886 F. Supp. 2d 1061, 1075–77 (W.D. Wis. 2012) ("Apple's antitrust claim is premised on Motorola's attempt to enforce its patents. Because Motorola's enforcement of its patents is privileged conduct protected by the First Amendment, the *Noerr-Pennington* doctrine applies.").

up its right to seek injunctive relief.[122] My own, somewhat preliminary, view is that *Noerr-Pennington* should not apply because the antitrust claim is premised not on the assertion of patent rights generally but rather on the patentee's request for a specific remedy—injunctive relief. (I admit that I am not aware of any cases making this distinction between rights and remedies in the *Noerr-Pennington* context, however.) Nevertheless, if my analysis of the substantive antitrust issues above is correct, whether *Noerr-Pennington* immunity applies or not may be something of a moot point.

2. *Europe*

In Europe, by contrast, competition law may come to play a larger role than patent law in forcing SEP owners to license their patents on FRAND terms. So far, however, the signals are mixed, and the matter probably will not be resolved until an expected ruling by the Court of Justice for the European Union (CJEU) in 2013.[123]

At issue in Europe is the application of article 102 of the Treaty on the Functioning of the European Union (TFEU). In relevant part, this article states:

> Any abuse by one or more undertakings of a dominant position within the internal market or in a substantial part of it shall be prohibited as incompatible with the internal market in so far as it may affect trade between Member States.
>
> Such abuse may, in particular, consist in:
>
> (a) directly or indirectly imposing unfair purchase or selling prices or other unfair trading conditions;
>
> (b) limiting production, markets or technical development to the prejudice of consumers;
>
> (c) applying dissimilar conditions to equivalent transactions with other trading parties, thereby placing them at a competitive disadvantage;

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122 *See* Response to Commenters, In the Matter of Robert Bosch GmbH, File No. 121-0081, No. C-4377, F.T.C. Wash, 20580, at 1-2, *available at* http://www.ftc.gov/os/caselist/1210081/130424robertboschltr.pdf; Statement of the Federal Trade Commission, In the Matter of Google Inc., F.T.C. File No. 121-0120, at 5 n.15 (Jan. 3, 2013), *available at* http://ftc.gov/os/caselist/1210120/130103googlemotorolastmtofcomm.pdf. Commissioner Ohlhausen dissented from both statements. *See* Statement of Commissioner Maureen K. Ohlhausen, In the Matter of Robert Bosch GmbH, File No. 121-0081, No. C-4377, *available at* http://www.ftc.gov/os/caselist/1210081/121126boschohlhausenstatement.pdf; Dissenting Statement of Commissioner Maureen K. Ohlhausen, In the Matter of Motorola Mobility LLC and Google Inc., File No. 121-0120, *available at* http://ftc.gov/os/caselist/1210120/130103googlemotorolaohlhausenstmt.pdf.

123 *See, e.g.*, Seoul District Court [Dist. Ct.], 2011Kahap39552, Aug. 24, 2012 (S. Kor.) (holding that Samsung had market power in 3GPP market technology, and that its SEPs could be considered essential facilities, but nevertheless rejecting all of Apple's antitrust claims, concluding that Samsung lacked any intent or purpose to expand its monopoly power or to disturb the market's free competition by artificially manipulating the fair market discipline). I gather that the issue also may have arisen in the Chinese *Huawei v. InterDigital* case, *see supra* note 29, which has yet to be published. Because I have less information on the specifics of the antitrust issues raised in these two cases, for now I will confine my discussion to Europe.

> (d) making the conclusion of contracts subject to acceptance by the other parties of supplementary obligations which, by their nature or according to commercial usage, have no connection with the subject of such contracts.[124]

In practice, antitrust enforcers within the EU do not frequently invoke article 102 to regulate prices or to penalize price discrimination absent some evidence of competitive disadvantage or segmentation of the common market.[125] In the present context, however, both the courts and the European Commission have indicated that a refusal to conclude a license on FRAND terms can, under some circumstances, amount to an abuse of dominant position. Nevertheless, as discussed below, for now they are not of one mind as to what those conditions are.

To date, the most important body of case law on the topic has come from Germany.[126] The leading case is a 2009 decision of the *Bundesgerichtshof* (German Federal Supreme Court, or BGH for short) in a patent infringement case brought by Philips against Master & More involving a patent that was essential to the Orange Book Standard used for recordable and rewritable compact disc technology.[127] In

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[124] Consolidated Version of the Treaty on the Functioning of the European Union art. 102, Mar. 30, 2010, 2010 O.J. (C 83) 47, 89 art. 102 (2010). Note that, although article 102 is, more or less, the counterpart of Sherman Act § 2, unlike that statute, article 102 does not, on its face, condemn the acquisition or maintenance of monopoly power. *See* Einer Elhauge, *Disgorgement as an Antitrust Remedy*, 76 ANTITRUST L.J. 79, 89–92 (2009).

[125] *See, e.g.*, ALISON JONES & BRENDA SUFRIN, EU COMPETITION LAW: TEXT, CASES, AND MATERIALS 531–48 (4th ed. 2010).

[126] The two Dutch decisions referenced earlier both touch on the issue. *See* Rb's-Gravenhage 17 Maart 2010, Nos. 08-2522, 08-2524 m.nt. ¶¶ 6.20–25 (Koninlijke Philips Elecs. N.V./SK Kassetten GmbH), *available at* http://www.eplawpatentblog.com/eplaw/2010/03/nl-philips-v-sk-kasetten-frand.html (rejecting the argument that Philips had abused its monopoly position by enforcing its SEP against SK and characterized the German *Orange-Book-Standard* defense as "fl[ying]in the face of patent law."). In the more recent *Samsung v. Apple* case, however, in which the court held that Samsung had abused its rights by not negotiating in good faith, the court declined to determine whether Samsung also violated Dutch or E.U. competition law. *See* Rb's-Gravenhage14 Maart 2012, Nos. 11-2212, 11-2213, 11-2215 m.nt. ¶ 4.42 (Samsung Elecs. Co./Apple Inc.), *available at* http://uitspraken.rechtspraak.nl/inziendocument?id=ECLI:NL:RBSGR:2012:BV8871 (holding that no decision needs to be made on whether this set of claims also can be regarded as an abuse of discretion); *Accord* Körber, *supra* note 29, at 741 n.58 (stating that the court left the competition law issue open). Karl notes that in the earlier case the defendant had not applied to the SEP owner for a license. *See* Karl, *supra* note 29, at 6.

[127] Although German judicial opinions omit the parties' names, those names are sometimes discernible from other sources. *See* Karl, *supra* note 29, at 9 (identifying the parties to the *Orange-Book-Standard* case). In one earlier case, the BGH had recognized that an infringement defendant could assert a competition-law counterclaim. *See* Bundesgerichtshof [BGH] [Federal Court of Justice] July 13, 2004, GEWERBLICHER RECHTSSCHUTZ UND URHEBERRECHT [GRUR] 966, 2004 (Ger.), *translated in* 36 INT'L REV. INTELL. PROP. & COMPETITION L. 741 (2005). In that case, the defendant asserted that the plaintiff, which had granted royalty-free licenses to three other companies (and paid licenses to others), violated an anti-discrimination provision of German competition law by refusing to grant the defendant a royalty-free license. *See id.* at 742, 745, 748–49 (concluding that it could not be ruled out that the plaintiff was in breach of this provision, the court remanded for further determination whether the defendant was entitled to a royalty-free license or, if not, to a license on terms similar to those granted to the recipients of the paid licenses). The defendant had

its defense, Master & More asserted that Philips had refused to license on fair, reasonable and nondiscriminatory terms and therefore was in violation of what is now article 102. Philips, however, was not subject to any sort of SSO-based FRAND obligation, as are the parties in some of the recent cases. As a result, Master & More argued that the court should refuse to grant Philips its requested injunction under the legal principle of *dolo petit, qui petit quod statim redditurus est*.[128]

The BGH agreed that competition law sometimes could preclude a patent owner from obtaining an injunction, but that for the asserted defense—now sometimes referred to as the *Zwangslizenzeinwand* (compulsory license objection), or more commonly as the *Orange-Book-Standard* defense—to succeed, the defendant must prove two conditions. The first is that it "made an offer, ready for acceptance, on contractual conditions, which the patent holder cannot refuse without thereby treating the party seeking a license unequally without good cause as compared with similar enterprises or impeding him inequitably" in violation of applicable competition law, which forbids a "market-dominant patent holder" from abusing its market-dominant position by refusing "to conclude a contract offered to him on non-obstructive and non-discriminatory terms." Second, the infringer must "behave[ ] as if the patent holder had already accepted his offer" by paying "the consideration that the licensee would be obliged to pay according to a non-discriminatory or non-obstructive license contract."[129] The prospective licensee may satisfy the second condition by paying the appropriate license fee into an escrow account, or if the amount is not easily determined, by paying into the account an amount that exceeds his own estimate of a FRAND royalty and offering to accept a license that the licensor will set on equitable terms (*nach billiger Ermessen*).[130] If the licensee subsequently believes that the licensor has set terms that are not fair, reasonable and nondiscriminatory, the licensee may petition the court for redress.[131] On the facts of the

previously agreed to an injunction, so the only matters before the court was the questions of damages. *Id.* at 742–49.

128 *See* Bundesgerichtshof [BGH] [Federal Court of Justice] May 6, 2009, GEWERBLICHER RECHTSSCHUTZ UND URHEBERRECHT [GRUR] 747 (749), 2009 (Ger.), *translated in* 41 INT'L REV. INTELL. PROP. & COMPETITION L. 369 (2010). The Latin maxim—sometimes phrased in the alternative as "Dolo *agit*, qui petit quod statim redditurus est"—means "He petitions (or, in the alternative formulation, acts) deceptively, who seeks that which must be immediately returned". In the present context, the meaning would appear to be that "the patentee, who nevertheless refuses to grant a license, would act with unclean hands when seeking protection, because he would claim what he has to immediately return to the defendant." *See* Hanns Ulrich, *Patents and Standards: A Comment on the German Federal Supreme Court Decision* Orange Book Standard, 41 INT'L REV. INTELL. PROP. & COMPETITION L. 337, 342–43 (2010) ("in purely dogmatic terms, this is no perfectly clean construction of the" *dolo agit* rule).

129 GRUR 747 (749) (Ger.), *translated in* 41 INT'L REV. INTELL. PROP. & COMPETITION L. 369, 372.

130 *Id.* at 750, *translated in* 41 International Review of Intellectual Property and Competition Law 369, 374–75.

131 *Id.* *See also* Oberlandesgericht Karlsruhe [OLG] [Higher Regional Court], GEWERBLICHER RECHTSSCHUTZ UND URHEBERRECHT [GRUR] 736, 738, 2012 (Ger.); Karl, *supra* note 28, at 20–23.

case, however, the court concluded that Master & More had failed to satisfy the necessary conditions for the defense to apply.[132]

Subsequent cases have shown that the *Orange-Book-Standard* conditions are not easy to prove.[133] German courts have held, for example, that *Orange-Book-Standard* is not satisfied if the would-be licensee reserves the right to contest infringement[134] or refuses to agree that, in the event it challenges the patent at issue, the license will terminate.[135] Some commentators have criticized this last condition in particular, on the ground that such commitments effectively insulate weak SEPs from review.[136] Others argue that the two conditions are simply too onerous, and result in practice in patentees being able to extract supra-FRAND royalties.[137]

There is reason to believe, however, that dissatisfaction with *Orange-Book-Standard* may lead to its modification, as a matter of EU law, in the near future. First, in December 2012, the European Commission issued a Statement of Objections[138] informing

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132 GRUR 747 (751) (Ger.).

133 According to one recent article, so far the defense has succeeded only twice. *See* Axel Verhauwen, *"Goldener Orange-Book-Standard" am Ende?: Besprechung zu LG Düsseldorf, Beschl. v. 21.3.2013-4 bO /104/12*, GRUR, 558, 559 (2013). One of the two cases is discussed *infra* at note 134; the other is unreported.

134 *See* Landgericht Mannheim [LG] [Regional Court] Dec. 9, 2011, MITT. HEFT 120 (124), 2012 (Ger.), *aff'd* Oberlandesgericht Karlsruhe [OLG] [Higher Regional Court] Jan. 23, 2012, MITT. HEFT, 127 (129), 2012 (Ger.). The defendant (Apple) subsequently made an unconditional offer, pursuant to which the plaintiff (Motorola Mobility) could set the royalty *nach billiger Ermessen*, subject potentially to judicial review, and the OLG Karlsruhe concluded that this offer satisfied *Orange-Book-Standard* and on this basis lifted the preliminary injunction that had been entered against Apple. *See* Oberlandesgericht Karlsruhe[OLG Karlsruhe] [Higher Regional Court in Karlsruhe] Feb. 27, 2012, GEWERBLICHER RECHTSSCHUTZ UND URHEBERRECHT [GRUR], 736 (738–39), 2012 (Ger.). For further discussion, *see* Hermann Deichfuß, *Die Rechtsprechung der Instanzgerichte zum kartellrechtlichen Zwangslizeneinwand nach "Orange-Book-Standard"* WUW, 1156, 1157–60 (2012); MICHAEL FRÖHLICH, INT'L ASSOC. FOR THE PROTECTION OF INTELLECTUAL PROP., 2012 REPORT OF Q222: STANDARDS AND PATENTS, 4–5, *available at* https://www.aippi.org/download/commitees/222/Report222Report+Executive+Committee+Meeting+Seoul+2012English.pdf; Verhauwen, *supra* note 133, at 563.

135 *See* GRUR 736 (738) (Ger.); MITT. HEFT 120 (127, 128) (Ger.); Deichfuß, *supra* note 134, at 1160–61; Ronny Hauck, *Die kartellrechtliche Bewertung von Nichtangriffsverpflichtungen und Sonderkündigungsrechten in Lizenzverträgen: Neueste Entwicklungen zum Zwangslizenzeinwand seit "Orange-Book-Standard,"* WRP, 673, 675 (2013); Verhauwen, *supra* note 133, at 564.

136 *See* Stephan Barthelmeß & Lars-Peter Rudolf, *Die "Unbedingtheit" eines Lizenzangebotes als Voraussetzung des kartellrechtlicher Zwangslizenzeinwands im patentrechtlichten Unterlassungsverfahren*, WUW 2013, 116; Philip Cepl & Kai Rüting, *Kartellrechtliche Zulässigkeit von Nichtangriffsabreden und ihre Prüfung im Petentnichtigskeitsverfahren*, WRP, 305, 308–09 (2013); Marc Grunwald, *Der kartellrechtliche Zwangslizenzeinwand: Muss das Lizenzangebot einen Kündigungsvorbehalt für den Fall enthalten, dass der lizenzsucher das Klagepatent angreift?*, MITT. HEFT, 492 (2012); Walz, *supra* note 58, at 726–27.

137 *See* Ulrich, *supra* note 128.

138 *See* Press Release, European Comm'n, Antitrust: Commission Sends Statement of Objections to Samsung on Potential Misuse of Mobile Phone Standard-Essential Patents (Dec. 21, 2012), http://europa.eu/rapid/press-release_IP-12-1448_en.htm ("[A] Statement of Objections is a formal

> Samsung of its preliminary view that Samsung's seeking of injunctions against Apple in various Member States on the basis of its mobile phone standard-essential patents ("SEPs") amounts to an abuse of a dominant position prohibited by EU antitrust rules. While recourse to injunctions is a possible remedy for patent infringements, such conduct may be abusive where SEPs are concerned and the potential licensee is willing to negotiate a license on Fair, Reasonable and Non-Discriminatory (so-called "FRAND") terms.[139]

Five months later, the Commission issued a similarly-worded Statement of Objections to Motorola.[140] In a memorandum concerning the latter Statement of Objections, the Commission specifically took issue with the condition that the license could be terminated in the event of a challenge to patent validity.[141]

Second, partly in reaction to these ongoing developments within the Commission, in March 2013 a German court in Düsseldorf referred to the CJEU the question of whether it is an abuse of dominant position for the owner of an SEP who has made a FRAND commitment to seek an injunction when the infringer has expressed its willingness to negotiate a FRAND license.[142] This court seemed much more re-

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step in Commission investigations. The Commission informs the parties concerned in writing of the objections raised against them and the parties can reply in writing and request an oral hearing to present comments. The Commission takes a final decision only after the parties have exercised their rights of defence.").

[139] *Id.*

[140] *See* Press Release, European Comm'n, Antitrust: Commission Sends Statement of Objections to Motorola Mobility on Potential Misuse of Mobile Phone Standard-Essential Patents (May 6, 2013), http://europa.eu/rapid/press-release_IP-13-406_en.htm.

[141] *See* Memorandum, European Comm'n, Antitrust: Commission Sends Statement of Objections to Motorola Mobility on Potential Misuse of Mobile Phone Standard-Essential Patents—Questions and Answers (May 6, 2013), *available at* http://europa.eu/rapid/press-release_MEMO-13-403_en.htm ("[I]n the Commission's preliminary view, the fact that the potential licensee challenges the validity, essentiality or infringement of the SEP does not make it unwilling where it otherwise agrees to be bound by the determination of FRAND terms by a third party. In the case at hand, Motorola required clauses that prohibited such challenges by Apple, even after Apple had agreed to be bound by a third party determination of the FRAND terms. The Commission's preliminary view is that it is in the public interest that licensees should be able to challenge the validity, essentiality or infringement of SEPs.").

[142] *See* Landgericht Düsseldorf [LG] [Regional Court] Mar. 21, 2013, GEWERBLICHER RECHTSSCHUTZ UND URHEBERRECHT–RECHTSPECHUNGS-REPORT [GRUR-RR] 196, 2013 (Ger.). The specific questions presented (in English translation by Florian Mueller) are the following:

1. Does an SEP owner who declared himself willing, vis-à-vis a standard-setting organization, to grant a license to all comers on FRAND terms, abuse his dominant market position if he seeks injunctive relief from a court of law against a patent infringer despite the infringer having declared himself willing to negotiate such a license, or is it a requirement for the presumption of abusive conduct that the infringer has made a binding offer to the SEP owner on terms that the SEP owner cannot refuse without treating the infringer unfairly or discriminatorily and [furthermore require that] the infringer, in anticipation of the license he is seeking already complies with his contractual obligations with respect to past acts of infringement?

2. In the event that a presumption of abuse of a dominant market position may already result from the infringer's willingness to negotiate:

ceptive to the argument that the defense should not be conditioned on the licensee's agreement to a termination clause that would be triggered in the event of a validity challenge.[143]

III. Policy Considerations

In this Part, I present my analysis of the policy considerations that ought to inform the discussion of (1) whether, or when, injunctions are preferable to ongoing damages as a remedy for patent infringement; and (2) what body of law courts and other policymakers should apply to attain the desired outcome. First, I will argue that, in the context of SEPs, the presumptive rule should be that the patent owner

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> Does Art. 102 TFEU involve specific requirements for said willingness to negotiate in substantive and/or chronological terms? Can such a presumption be based merely on the infringer's (oral) declaration in broad and general terms of his willingness to enter into negotiations or does such a presumption require that the infringer has indeed entered into negotiations, such as by, for example, communicating terms and conditions under which he is prepared to conclude a license agreement?

3. In the event that the [infringer's] submission of a binding offer to conclude a license agreement is a requirement for an abuse of a dominant market position:

> Does Art. 102 TFEU involve specific substantive and/or chronological requirements with respect to such an offer? Does the offer have to set forth all of the commercial terms that in accordance with relevant industry practice are usually set forth in such license agreements? Can the offer be conditioned upon actual use and/or validity of the SEP-in-suit?

4. In the event that the infringer's [precontractual] fulfillment of obligations arising from the requested license is a requirement for an abuse of a dominant market position:

> Does Art. 102 TFEU involve particular requirements with respect to such acts of fulfillment? Is the infringer required, in particular, to make disclosures relating to past acts of infringement and/or to pay [precontractual] royalties? Can an obligation to pay [precontractual] royalties also be fulfilled by giving security?

5. Do the requirements for the presumption of abuse of a dominant market position by an SEP holder also apply to other remedies for patent infringement (disclosures relating to past infringement, recall [of infringing products from distribution channels], damages)?

Florian Mueller, *German Court Refers Huawei-ZTE Standard-Essential Patent Case to Europe's Highest Court*, FOSS PATENTS (Mar. 21, 2013, 3:40 PM), *available at* http://www.fosspatents.com/2013/03/german-court-refers-huawei-zte-standard.html. Mueller reports that the parties to the dispute are Huawei and ZTE. *Id. See also* Daniel Hoppe-Jänisch, *Der Vorlagebeschluss des LG Düsseldorf "LTE Standard"* MITT. HEFT., 385 (2013) (Ger.), *translated in* Daniel Hoppe-Jänisch, *The Landgericht Düsseldorf's (Düsseldorf District Court) decision to refer "LTE standard,"* WHITE & CASE TECHNOLOGY NEWSFLASH (Aug. 2013), *available at* http://www.whitecase.com/articles-08232013/#.Ukrf2z_OCW8; Johannes Zöttl & Christian Fulda, *Antitrust Alert: Fast Forward for FRAND Disputes in Europe*, JONESDAY PUBLICATIONS (Apr. 2013), *available at* http://www.jonesday.com/antitrust-alert—fast-forward-for-frand-disputes-in-europe-04-11-2013/.

143 *See* GRUR-RR 196 (199–200) (Ger.) (stating the court gets to the heart of the matter with the simple words, and there is no interest in the maintenance of an invalid patent).

may obtain damages only, and that this presumption should apply even when the patent owner has not made a FRAND commitment. Second, after a brief review of some contract law issues, I will argue that, in general, the law of patent remedies has some advantages over competition law as a tool for discriminating between cases in which injunctions are appropriate and cases in which they are not—though, as always, one must take into account how a proposed change in legal practice would fit into the web of existing legal assumptions and institutions.

A. Injunctions Versus Damages

I have argued previously that the principal economic justification for awarding permanent injunctions in patent infringement cases is a matter of information costs: that is, the assumption that the parties (patentee and prospective user/ infringer) are in a better position than is a court or agency to determine what the patent is worth, in terms of how much it is likely to contribute to the infringer's ability to increase profits or reduce costs.[144] Thus, when courts award ongoing royalties, they may generate two costs that otherwise would be avoided: the adjudication costs incurred as a result of having to litigate the amount of the royalty, above what would have been incurred if the court had awarded an injunction instead;[145] and error costs resulting from the court setting the amount of the royalty too high or too low. Those error costs would take the form of either unnecessary deadweight loss, if the royalty is set higher than what the parties would have agreed to, or the social costs of whatever consequences follow from setting the royalty too low and thus potentially undermining the patent incentive. We can denote adjudication costs with the letter A and error costs with the letter E.

On the other hand, there is also a social cost to entering an injunction. One possible cost is that an injunction will limit access to some product that is necessary to public health or safety. This cost might justify compulsory licensing in some cases,[146] but I will put that matter to one side and focus instead on the cost that is

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[144] *See, e.g.*, COTTER, *supra* note 6, at 53–55. Note that when the prospective user/infringer is a less efficient (higher-cost) user of the invention than is the patentee, it is not likely that the parties will reach *any* agreement permitting the use at issue. The patentee would simply exclude the infringer, which is the correct outcome assuming that one of the purposes of patent remedies is to preserve the patent incentive. In such a case, a theoretically adequate alternative to an injunction would be a court-ordered royalty that would exceed the amount the infringer would be willing to pay. By contrast, when the infringer is the more efficient party, one would expect the parties to bargain toward a license permitting the use following entry of an injunction, assuming they had not reached that outcome on their own already. *Id.* at 44–45.

[145] To be sure, there are adjudication costs incident to the fashioning of an appropriate injunction as well. At least under U.S. law, injunctions are supposed to provide some guidance beyond merely directing the infringer to stop infringing. For discussion, *see* John M. Golden, *Injunctions as More (or Less) than "Off Switches": Patent-Infringement Injunctions' Scope* , 90 TEX. L. REV. 1399, 1420-24 (2012). And there can be satellite litigation over precisely what an injunction requires. *See, e.g.*, TiVo Inc. v. EchoStar Corp., 646 F.3d 869, 881 (Fed. Cir. 2011) (en banc) (establishing a procedure to follow for determining whether a design-around violates an injunction).

[146] *See* COTTER, *supra* note 6, at 56–57.

more relevant to SEPs, namely patent holdup. The touchstone of patent holdup is that the patentee can use an injunction to extract a royalty that reflects not only the ex ante value of the patent, but also the ex post costs that the infringer would face in trying to design around (or, to put it another way, some of the value of complementary technologies with which the patented invention interacts).[147] This is a social cost because it results in greater deadweight loss than is presumptively necessary to preserve the patent incentive—that is, the patentee winds up getting a royalty that is higher than the value of the patent's contribution to the state of the art. To be more precise, I have argued previously that, at least as a first approximation, the law of remedies should preserve the incentive scheme that is implicit in the granting of patent rights by rendering the patentee neither better nor worse off than the patentee would have been but for the infringement.[148] If a patent is expected to increase a user's profit by $X over what that profit is expected to be using the next-best available noninfringing alternative, $X is the maximum royalty the user would pay for the use of the patent. Where the patent constitutes only a small portion of the value of an end product and the infringement is inadvertent (as is commonly the case in the IT sector),[149] the amount the patentee can extract ex post—after the user has incorporated the patented technology into its products—can be much higher than $X. The ability of the patent owner to "holdup" the user for a higher royalty potentially confers a greater degree of market power on the patent owner than is presumptively necessary to preserve the patent incentive. In addition, because patent holdup raises the cost to users of patented technology at the margin, it may inhibit some users from going forward at all.[150]

Proceeding from the above analysis, if we designate the costs arising from patent holdup as H, courts should award the prevailing patentee a permanent injunction when $A + E > H$, and deny an injunction when $A + E < H$. But does this theoretical analysis have any practical payoff? Although I readily concede that no one can precisely quantify the relevant variables, I think we can draw some inferences as to whether $A + E$ is likely to be greater or less than H in a large number of cases.

First, there are likely to be cases where the cost of holdup is small. A principal example would be when the patentee would not agree to any royalty because the patentee is the more efficient user, and therefore, prefers exclusion to licensing.[151] In

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147 *Id.* at 58–61.

148 *Id.* at 63–65.

149 *See* Christopher A. Cotropia & Mark A. Lemley, *Copying in Patent Law*, 87 N.C. L. REV. 1421, 1451–57 (2009) (presenting empirical evidence that independent invention is more common than copying in the IT sector). I concede that determining exactly what "inadvertence" or "independent invention" means in the context of patent infringement may not always be easy. *But see* COTTER, *supra* note 6, at 62 n.47.

150 *See* Cotter, *supra* note 112, at 1160–71. Granted, a patent owner who is willing to grant nonexclusive licenses may have no interest in discouraging a productive use from occurring at all. When multiple patent owners all follow the same strategy of trying to extract substantial ex post royalties, however, there is a risk that "royalty stacking" will have precisely this effect. *See id.* at 1169–70.

151 *See* COTTER *supra* note 6, at 44–45.

this type of case, there is no holdup because the patentee wants an injunction for the purpose of exclusion and not as a bargaining chip for the purpose of obtaining a higher royalty.

Second, although analysts have sometimes assumed that the values of the variables I refer to as A and E are generally high,[152] that assumption may not always be accurate. In particular, where the court is awarding *past* damages that provide a basis for calculating a future royalty, the additional cost attributable to A may not be very significant. Much of the work in determining an appropriate royalty base and rate has already been done.[153]

Others might worry that courts are more likely to undervalue than overvalue patent rights, and that the resulting error costs threaten to undermine the patent incentive. Einer Elhauge, for example, argues that damages are likely to be undercompensatory due to factors such as hindsight bias, difficulties that patent owners may face in communicating value to juries, and damages estimation techniques that shortchange accuracy for administrative ease.[154] Perhaps Elhauge is right, but his observations seem rather speculative and (to my mind) do not necessarily support the undercompensation thesis. Hindsight bias might just as easily lead to overcompensation by leading the trier of fact to conclude that the parties would have accurately predicted the commercial success of the patented invention at the time they would have been negotiating a royalty; and techniques that privilege ease over accuracy might result in discounting the effect of potential noninfringing alternatives in reducing the value derived from use of the patent. Elhauge also argues that even if jury awards are on average correct, there will be systematic undercompensation because infringers will opt for litigation when patent value is higher than the average award and opt for a license when it is lower;[155] but that seems to require a good deal of foresight on the part of infringers, as well as a willingness to ignore the high cost of attorney fees and (in some countries) the risk of enhanced damages if the defendant knowingly infringes.[156] In a somewhat similar vein, Ganglmaier et al. argue that

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152 *See, e.g.*, Robert Merges, *Intellectual Property Rights and Bargaining Breakdown: The Case of Blocking Patents*, 62 TENN. L. REV. 75, 78 (1994) (stating that "a property rule makes sense for patents because: (1) there are only two parties to the transaction, and they can easily identify each other; (2) the costs of a transaction between the parties are otherwise low; and (3) a court setting the terms of the exchange would have a difficult time doing so quickly and cheaply, given the specialized nature of the assets and the varied and complex business environments in which the assets are deployed. Hence the parties are left to make their own deal.").

153 In the United States, however, the current practice is for courts that deny permanent injunctions to award ongoing royalties using an increased royalty rate, which is determined post-trial. *See* ActiveVideo Networks, Inc. v. Verizon Commc'ns, Inc., 694 F.3d 1312, 1342–43 (Fed. Cir. 2012); Amado v. Microsoft Corp., 517 F. 3d 1353, 1362 (Fed. Cir. 2008). See *infra* notes 199–200 and accompanying text for critique.

154 *See* Einer Elhauge, *Do Patent Holdup and Royalty Stacking Lead to Systematically Excessive Royalties?*, 4 J. COMP. L. & ECON. 535, 557 (2008).

155 *Id.* at 557–58.

156 In most countries, the losing party pays not only its own attorney's fees but also some portion of the prevailing party's fees as well. In the United States, by contrast, courts award attorney's fees

limiting the patentee to FRAND damages may negatively affect the incentive to innovate.[157] If I understand correctly, however, their model assumes that the ability in some cases to recover more than the FRAND rate generates a more powerful incentive to innovate, despite a paucity of evidence that the patent incentive plays a substantial role in inducing innovation in the industries most affected by the current FRAND disputes.[158] Indeed, the risk of overcompensation might be the more substantial, if courts that deny injunctions award ongoing royalties based on a higher royalty rate than they use to calculate damages for past infringement—a practice that, unfortunately, the U.S. courts currently follow.[159] In addition, I see no reason why courts could not take into account an infringement defendant's (mis)behavior in deciding whether an injunction is appropriate in a given case. In recent months, for example, the FTC, the U.S. Department of Justice, and the U.S. Patent and Trademark Office have all recommended that owners of FRAND-encumbered SEPs generally be denied injunctive relief, but subject to exceptions—for example, when the defendant flatly refuses to pay a royalty that has been determined to be FRAND.[160]

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only in exceptional cases, but (unlike the practice in many countries) offer the possibility of enhanced damages for willful patent infringement. *See* COTTER, *supra* note 6, at 140–48, 209–11, 275–76, 327–28, 360, 370–72; Thomas F. Cotter, *After a Six-Month Hiatus, Enhanced Damages for Patent Infringement in Taiwan Are Back*, COMPARATIVE PATENT REMEDIES (Aug. 6, 2013, 5:42 AM), *available at* http://comparativepatentremedies.blogspot.com/2013/08/after-six-month-hiatus-enhanced-damages.html.

157 Bernhard Ganglmair et al., *Patent Hold-Up and Antitrust: How a Well-Intentioned Rule Could Retard Innovation*, 60 J. INDUS. ECON. 249, 261–62 (2012). In Ganglmair et al.'s model, the prospective licensee can accept the patentee's offer and then bring a claim for damages measured by the difference between the offered rate and the FRAND rate (which can be, but need not be, multiplied as under U.S. antitrust law). Without a multiplier, the effect would be to limit the license fee to the FRAND rate. The authors argue that this rule has ambiguous welfare consequences, because while it prevents holdup, it can retard innovation if the bargaining power of the user and the value of the new technology are high. They propose, as a superior solution, providing the manufacturer with an ex ante option to license at a fixed fee before it invests in using the patented technology. *Id.* at 255–61.

158 *See, e.g.*, Michele Boldrin & David K. Levine, *The Case Against Patents*, 27 J. ECON. PERSP. 3 (2013) (arguing against allowing patents due to lack of empirical evidence showing that patents increase innovation or productivity); Wesley M. Cohen et al., *Protecting Their Intellectual Assets: Appropriability Conditions and Why U.S. Manufacturing Firms Patent (or Not)*, *in* NBER WORKING PAPER NO. 7552 (Feb. 2000), *available at* http://www.nber.org/papers/w7552 (arguing that patents are largely used for reasons other than to protect inventions); *see also* CENTER FOR LAW AND INFORMATION POLICY, *The Impact of the Acquisition and Use of Patents on the Smartphone Industry*, at 39 (Dec. 13, 2012), *available at* http://www.wipo.int/export/sites/www/ip-competition/en/studies/clip_study.pdf ("For the leading smartphone companies, the patent grants generally lagged several years behind market share gains. In other words, companies appeared to gain market share and then received patent grants several years later. This is an important indication that company innovations are what generated increased market share rather than the patents themselves and that companies appear to innovate in order to gain market share. Those gains are then followed by patent grants on the original innovations.").

159 *See* Merges *supra* note 152; *infra* notes 199–200 and accompanying text.

160 *See, e.g.* Decision and Order, *In the Matter of Motorola Mobility LLC and Google Inc.*, Docket No. C-4410 §§ II.E, IV.F (FTC July 24, 2013), *available at*

Relatedly, some commentators have argued that injunctions guard against the risk of "reverse holdup," or "opportunistic behavior" by prospective licensees to "propose rates that are significantly below the fair value or delay negotiations, knowing that the patent holder would have little choice but to accept."[161] In a recent paper, for example, Langus et al. use game theory to model a procedure, inspired by European practice, under which a prospective licensee first makes an offer, which the patentee can either accept or reject.[162] If the offer is rejected, the dispute proceeds to litigation, where there will be a validity determination.[163] If the patent is valid, the next step is an initial determination by the court of whether the prospective licensee's offer was FRAND; if it was not, the defendant can make a second offer before the court makes a final decision on whether to enter an injunction.[164] In Europe, courts award the losing party its attorney's fees. The authors report the following results. First, the risk of reverse holdup is greater than the risk of holdup when the patent is sufficiently weak, litigation costs are high, and the time it would take to obtain an injunction is long, because under these circumstances, the patentee's incentive may be to accept an offer that is below FRAND.[165] Second, reverse holdup also can occur when the patent is strong but litigation costs are low and the time to obtain an injunction long, because the prospective licensee will make a below-FRAND offer that the patentee will reject, and will gamble on the court validat-

http://ftc.gov/os/caselist/1210120/130724googlemotorolado.pdf; Decision and Order (Redacted Public Version), *In the Matter of Robert Bosch GmbH*, Docket No. C-4377, § IV.E (F.T.C. Apr. 24, 2013), *available at* http://www.ftc.gov/os/caselist/1210081/130424robertboschdo.pdf; USDOJ and USPTO, *Policy Statement on Remedies for Standards-Essential Patents Subject to Voluntary F/RAND Commitments*, at 7 (Jan. 8, 2013), *available at* www.justice.gov/atr/public /guidelines/290994.pdf. For a critique of some of the exceptions suggested in the first and third of the above documents, including an exception for a "constructive refusal to negotiate," and another that would permit an SEP owner to seek injunctive relief when the defendant also is seeking injunctive relief for the infringement of an SEP against the plaintiff or is unwilling to make a FRAND commitment, *see* Florian Mueller, *FTC Finalizes Consent Decree in Google FRAND Antitrust Case, Makes 'Technical Modifications,'* FOSS PATENTS (July. 24, 2013, 9:26 PM), *available at* http://www.fosspatents.com/2013/07/ftc-finalizes-consent-decree-in-google.html; Florian Mueller, *'Defensive Use' Exception in FTC-Google Deal Identified as Primary Area of Concern*, FOSS PATENTS (Jan. 9, 2013, 1:33 PM), *available at* http://www.fosspatents.com /2013/01/defensive-use-exception-in-ftc-google.html; Florian Mueller, *DoJ/USPTO Position Paper on FRAND SEP Remedies Muddies the Water*, FOSS PATENTS (Jan. 8, 2013, 11:23 PM), *available at* http://www.fosspatents.com/2013/01/dojuspto-position-paper-on-frand-sep.html; Florian Mueller, *Comparison of the FTC's Standard-essential Patent Agreements with Google and Bosch*, FOSS PATENTS (Jan. 4, 2013, 8:31 AM), *available at* http://www.fosspatents.com/2013/01 /comparison-of-ftcs-standard-essential.html.

161 Peter Camesasca et al., *Injunctions for Standard-Essential Patents: Justice Is Not Blind*, 9 J. COMP. L. & ECON. 285, 287, 290 (2013).

162 Gregor Langus et al., *Standard Essential Patents: Who Is Really Holding Up (and When)?*, 9 J. COMP. L. & ECON. 253, 259–77 (2013).

163 *Id.*

164 *See* the companion articles Camesasca et al., *supra* note 161, at 295, 298–99; Langus et al., *supra* note 162.

165 Camesasca et. al., *supra* note 161, at 304.

ing that below-FRAND rate.[166] Third, holdup on the part of the patent owner occurs only when there is an intermediate probability of invalidity and legal proceedings are not too long.[167] Fourth, injunctions play an important role in reducing reverse holdup, because in the absence of injunctions "the length of the proceedings" (as that variable is defined in the model) can then be equated to "the lifetime of the patent, as injunctions have no power left in those circumstances."[168] Fifth, when a court can actually set the FRAND rate itself, the licensee's incentive is to offer a below-FRAND rate that the patent owner will accept to avoid incurring additional attorneys' fees.[169]

I'm not sure I would draw too many practical conclusions from this analysis. Whether holdup or reverse holdup is more likely to occur under the model appears to depend on the value of the relevant parameters (probability of validity, length of proceedings, cost of litigation); the presence of mandatory fee-shifting (found in many, but not all, patent systems, though common throughout Europe); and the sequence of steps in the modeled procedure.[170] Changes in these parameters may lead

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[166] *Id.*

[167] *Id.* at 304–305.

[168] *Id.* at 305.

[169] *See* Camesasca et al., *supra* note 161, at 304–06; Langus et al., *supra* note 162, at 255–256.

[170] *See* Langus et al., *supra* note 162, at 253–255 (showing that where the licensee gets to make only one offer before the court decides whether to enjoin, the licensee is worse off and the patentee better off than when the licensee gets to make two offers); *id.* at 276 (showing that where the patentee makes the initial offer, "there will be hold-up in equilibrium"). *But see* Camesasca et al., *supra* note 161, at 305–06 (stating that if the patentee makes the initial offer, "the reasoning would be partly reversed," but that the patentee faces an asymmetric risk in comparison with the licensee, in that the court may either (1) accept or reject the offer, or (2) declare the patent invalid). According to Camesasca et al., "if the patent turns out to be invalid, the patent holder has to compensate the legal cost of the prospective licensee and he will be ready to accept a lower rate *ex ante* to avoid this outcome. This issue does not arise with the prospective licensee (who does not have to pay the legal cost of the patent holder if the patent turns out to be valid . . .)." I'm not sure I understand, however, what's wrong with the patent owner's willingness to accept a lower rate when the validity of the patent is in doubt.

As noted above, the model also assumes that the court makes an initial determination of validity during the course of proceedings. In some nations, however—most notably, Germany—infringement and validity proceedings are separate, and the infringement proceeding usually proceeds to judgment first. *See* COTTER, *supra* note 6, at 229 n.43, 279. In fact, the typical time to trial in Germany appears to be about a year, which I think would qualify proceedings there as being on the speedy side under Camesasca et al.'s analysis. *See* COTTER, *supra* note 6, at 229 n.45, 279. The authors note that infringement and validity are bifurcated in Germany. *See* Camesasca et al., *supra* note 161, at 293, but argue that (1) in SEP disputes, there may be parallel proceedings occurring in other countries in which the validity of the relevant national portion of that patent may be at issue, and that such matters may be "brought to the attention of the German courts"; and (2) German courts sometimes will stay proceedings pending a validity determination. *See* Camesasca et al., *supra* note 161, at 295, 303. Stays are hardly automatic, however. *See* COTTER, *supra* note 6, at 229 n.45, 279. On the other hand, the authors might have noted that German courts generally do make a preliminary evaluation of validity if the patentee seeks a preliminary injunction. *See* COTTER, *supra* note 6, at 243–44, although this may be of limited relevance if, as they assert, preliminary injunctions are not often granted in SEP cases. *See* Camesasca et al., *supra* note 161, at 293.

to different conclusions (and, of course, ultimately the question of whether holdup or reverse holdup dominates is an empirical one). Moreover, even if reverse holdup as defined by the authors is likely to occur more often than holdup, it may be that the social harm resulting from the latter is greater than the social harm resulting from the former, if the incentive to innovate within the affected industries is not very sensitive to the patent incentive.[171]

Third, if my analysis is correct, the question of whether courts should or should not award injunctions depends primarily on the risk of holdup. Courts therefore should focus on whether the evidence suggests a substantial risk of holdup if the defendant is enjoined; the pertinent factors would be whether the end product incorporates numerous patents, whether the patented invention would be easy or difficult to design around ex ante, and whether the infringement was knowing or inadvertent. In particular, a patentee's having declared the patent in suit to be standard-essential often would be powerful evidence of a substantial holdup risk, because many standards relate to complex end products that potentially incorporate numerous patents, and because standardization suggests that the defendant cannot readily design around the patent. (From a policy perspective, the presence of a FRAND commitment would not appear to be a *sine qua non*, though it may have doctrinal relevance for reasons discussed above.) The one factor that may or may not be present is inadvertence. Where this factor is not present (for example, in the case of deliberate copying), the case for granting an injunction is stronger (though it may be that the defendant wrongly but in good faith believed the patent to be invalid). In such instances, allowing the court to evaluate the strength and relevance of the factors, ra-

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The authors also state that implementing an injunction is "not without risk," because the patentee may have to pay damages to the defendant if the patent is subsequently revoked or the infringement judgment reversed on appeal. *See* Camesasca et al., *supra* note 161, at 296–97. My understanding, however, is that the patentee may be liable for damages, which could exceed the amount of the injunction bond, for what is subsequently determined to be a wrongly-issued *preliminary* injunction (which, again, the authors state is unlikely to occur in any event). Following the entry of a final judgment, the patentee would be liable only for restitution of damages the defendant has paid the patentee, if the patent is later declared invalid; moreover, a licensee is not entitled to restitution of payments made under a license of a subsequently invalided patent. *See* COTTER, *supra* note 6, at 182–83 n.74; Thomas F. Cotter, *U.K. Supreme Court Holds that Infringement Defendant Is Not Required to Pay Damages Where Patent Claims in Suit Are Revoked by the EPO*, COMPARATIVE PATENT REMEDIES (July 4, 2013, 3:50 AM), *available at* http://comparativepatentremedies.blogspot.com/2013/07/uk-supreme-court-allows-overrules-res.html; Thomas F. Cotter, *Remedies for Wrongful Patent Litigation or Enforcement in Some Other Leading Patent Systems*, COMPARATIVE PATENT REMEDIES (May 27, 2013), *available at* http://comparativepatentremedies.blogspot.com/2013/05/remedies-for-wrongful-patent-litigation.html; Thomas F. Cotter, *Some Thoughts on Remedies for Wrongful Patent Litigation or Enforcement Under U.S. Law*, COMPARATIVE PATENT REMEDIES (May 23, 2013), *available at* http://comparativepatentremedies.blogspot.com/2013/05/some-thoughts-on-remedies-for-wrongful.html.

171 *See* Ganglmair et al., *supra* note 157 and accompanying text.

ther than imposing a rigid rule either in favor or in opposition to injunctive relief, may be a sensible policy.[172]

B. The Comparative Advantages of Contract, Patent, and Competition Law

In Part II.A above, I argued that courts generally should not award injunctions for the infringement of SEPs. In this section, I turn to the question of which body of law is best positioned to achieve this result.

As discussed in Part I, contract law is a possibility if the SEP is encumbered by a FRAND obligation, and the court reads that obligation as conferring enforceable third-party rights to avoid injunctive relief upon payment of the FRAND royalty. Whether this is a reasonable interpretation of a given FRAND commitment will depend on the wording of that commitment and on the substantive law of the country or state by which the contract is to be interpreted—as will the further question of whether the court should take it upon itself to craft the terms of the FRAND license. I am not a contracts scholar, and will offer no opinion on whether the courts in the U.S. or elsewhere thus far have properly interpreted the governing law on these issues—though like Brooks and Geradin, I suspect that some of the more ambitious interpretations that have been proposed in the literature may read too much into the nature of the FRAND commitment, simply as a matter of contract law.[173] Of

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[172] *But see* Cotropia & Lemley, *supra* note 149 (suggesting that "inadvertence" may not always be an intuitive concept).

[173] *See* Roger G. Brooks & Damien Geradin, *Interpreting and Enforcing the Voluntary FRAND Commitment*, 9 INT'L J. IT STANDARDS & STANDARDIZATION RES. 1, 2–3 (2011). Brooks and Geradin note that [a]uthors have variously argued that, in order to satisfy a "fair and reasonable" commitment, a patent holder:

> • Must charge no more than the incremental value of his invention over the next best technical alternative (Lemley & Shapiro, 2007; Dolmans, 2008; Temple Lang, 2007);
>
> • Must not negotiate for a royalty-free cross licence as part of the consideration for a license (Dolmans, 2008);
>
> • Must set his royalty rate based on a mathematical proportion of all patents essential to the practice of a standard (Chappatte, 2009; Temple Lang, 2007);
>
> • Must set his royalty rate in such a way as to prevent cumulative royalties on the standardised product from exceeding a low percentage of the total sale price of that product (Lemley & Shapiro, 2007);
>
> • Must not raise requested royalty rates after the standard has been adopted, or after the relevant market has grown to maturity (Chappatte, 2009; Shapiro & Varian, 1999; Swanson & Baumol, 2005);
>
> • Is not entitled to seek injunctive relief against a standard implementer should they fail to agree on licence terms (Farrell et al.,2007; Temple Lang, 2007).

Id. at 2. *See also* Mark A. Lemley, *Intellectual Property Rights and Standard-Setting Organizations*, 90 CALIF. L. REV. 1889, 1915, 1924–26 (2002) (arguing that SSO members would be third-party beneficiaries of a FRAND commitment, but that nonmembers probably would not have en-course, there may be advantages to resolving the relevant issues, where possible, through contract as opposed to public law.[174]

I would note a few interesting consequences of applying contract law to the types of disputes under consideration. First, the contract issue only comes up when there is, in fact, a FRAND obligation. It therefore does not provide a tool for denying injunctive relief in a broader class of cases in which holdup risk may be present. Second, proceeding against the patent owner with a breach of contract claim may enable the user/infringer to avoid application, in the United States, of the *Noerr-Pennington* doctrine, if two recent decisions on this point are correct.[175] Third, if successful a contract claim could lead to an award of damages against the patent owner for breach of contract; presumably this could include incidental and reasona-

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forceable third-party beneficiary rights under U.S. law; and that a FRAND commitment itself constitutes an implied license for third parties to use the patented technology, subject to the obligation to pay a FRAND royalty); Lichtman, *supra* note 2, at 1043 n.56 (suggesting that the patentee might be equitably estopped from requesting an injunction). Brooks and Geradin concede that these economic arguments "may well be useful in debating public policy and the proper application of antitrust rules." *Id.* at 2. Furthermore, they may help "to better understand the course of the contract negotiations, or the contemporaneous industry practices" surrounding the drafting of the policies giving rise to FRAND obligations. *Id.* at 5. However, Brooks and Geradin argue that, although ETSI's IPR Policy and other similar SSO policies do create binding contractual obligations, the most relevant consideration for interpreting those obligations is the intent of the parties (i.e., the SSO members). *Id.* at 11. Based on their review of the drafting history of ETSI Policy and other sources, they conclude that the intent of the parties was simply this:

> if an offer has been made and refused, . . . the only contractual question to be adjudicated is whether the terms offered, taking into account all of the specific circumstances between the parties and prevailing market conditions, fall outside the *range* of reasonableness contemplated by the FRAND commitment.

Id. On this view, a court considering a claim for breach of the FRAND commitment does not need to determine what a reasonable royalty would be. *Id.* For other discussions, *see, e.g.*, Chengjian & Xiao, *supra* note 73, at 28–33 (presenting three models of how a FRAND commitment could be interpreted—(1) "no injunction is granted in all events," (2) "license negotiation under court supervision," and (3) "license negotiation before injunction takes effect"—and arguing in favor of the third option, under which a court would grant an injunction but stay its effect while the parties negotiate the terms of a license. If no license is concluded, the court would then determine whether the defendant's offer was within the FRAND range; if so, the injunction would be lifted); Ko, *supra* note 30, at 13–17 (proposing a two-step procedure under which a court would encourage voluntary bargaining).

174 *See supra* note 8.

175 In both *Apple v. Motorola* and *Microsoft v. Motorola*, the courts held that *Noerr-Pennington* did not immunize Motorola from liability for breach of contract claims premised on Motorola's seeking injunctive relief. *See* Apple, Inc. v. Motorola Mobility, Inc., 886 F. Supp. 2d 1061, 1078 (W.D. Wis. 2012) ("Although the First Amendment protects Motorola's right to petition the courts to enforce its patents, Apple's breach of contract claims are based on the theory that Motorola agreed by contract that it would not enforce its patent rights until it offered a license to Apple on fair, reasonable and nondiscriminatory terms. In other words, Apple contends that Motorola waived some of its petitioning rights through contract. It would be improper to use the *Noerr-Pennington* doctrine to bar Apple from enforcing that contract."); *accord* Microsoft Corp. v. Motorola, Inc., No. C 10-1823JLR, 2013 WL 4053225, at *16–17 (W.D. Wash. Aug. 12, 2013).

bly foreseeable consequential damages resulting from the patent owner's failure to abide by the FRAND commitment.[176] A contract claim in the present context is therefore somewhat analogous to other types of claims, rooted in unfair competition or other bodies of law, that sometimes may be available for wrongful patent enforcement.[177] In future work, I hope to analyze and compare the various claims for wrongful enforcement that the worlds' major patent systems make available.

C. Patent Versus Competition Law

The next question is whether competition law or the law of patent remedies (possibly supplemented by other generally applicable legal principles such as "abuse of right") offers a better set of tools for attaining the policy end of avoiding holdup by denying injunctions in cases involving SEPs. I will argue that, in theory, it makes more sense to provide the needed flexibility within the law of patent remedies than to require courts to invoke competition law to reach the same end. If this proposed application of the law of patent remedies is too radical a step for most of the European systems to adopt at this time, however, the use of competition law may be an acceptable second-best solution, particularly where the latter body of law, unlike in the United States, does not offer litigants the recovery of treble damages.

The law of patent remedies seems to have a comparative advantage over competition law for several reasons. The most obvious is simplicity. If a request for injunctive relief poses a serious risk of patent holdup—and if one believes, as I argued above, that the social benefits of injunctive relief, including the benefit of not having to calculate ongoing damages, are outweighed by the social costs of holdup—the most straightforward solution is to deny the injunction and award ongoing damages. No one necessarily has to determine whether the patentee possesses monopoly power, or to define the market, or to evaluate the parties' negotiating history to see whether the patentee (or the infringer) is guilty of bad faith or abuse. To be sure, if the patent owner has little or no market power, there probably isn't a substantial risk of holdup because, by definition, the infringer can easily design around. In some cases, it might be necessary to determine if the infringer acted in bad faith

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[176] *See* Microsoft Corp. v. Motorola, Inc., No. C 10-1823JLR, 2013 WL 4008822, at *1 (W.D. Wash. Aug. 5, 2013) (noting that Microsoft sought incidental and foreseeable consequential damages resulting from Motorola's failure to abide by the FRAND commitment).

[177] *See* Thomas F. Cotter, *U.K. Supreme Court Holds that Infringement Defendant Is Not Required to Pay Damages Where Patent Claims in Suit Are Revoked by the EPO*, COMPARATIVE PATENT REMEDIES (July 4, 2013, 3:50 AM), *available at* http://comparativepatentremedies.blogspot.com/2013/07/uk-supreme-court-allows-overrules-res.html; Thomas F. Cotter, *Remedies for Wrongful Patent Litigation or Enforcement in Some Other Leading Patent Systems*, COMPARATIVE PATENT REMEDIES (May 27, 2013 5:28 AM), *available at* http://comparativepatentremedies.blogspot.com/2013/05/remedies-for-wrongful-patent-litigation.html; Thomas F. Cotter, *Some Thoughts on Remedies for Wrongful Patent Litigation or Enforcement Under U.S. Law*, COMPARATIVE PATENT REMEDIES (May 23, 2013 9:12 AM), *available at* http://comparativepatentremedies.blogspot.com/2013/05/some-thoughts-on-remedies-for-wrongful.html.

by refusing to accept a reasonable offer; to the extent reverse holdup is a potential problem, it should be avoided. Nevertheless, a presumptive rule in favor of damages-only in cases involving SEPs ought to enable courts to avoid addressing these issues, or addressing them in depth, in a broad range of cases.

I have argued before that, where possible, it probably makes sense to confine overly expansive applications of intellectual property rights through the judicious use of intellectual property law-based exceptions and other doctrines, rather than through the use of competition law.[178] In part, my position reflects a preference for a U.S.-style competition law regime that focuses on harm to the competitive process—monopoly acquisition or expansion—over a European-style system that, to some degree, is intended to counter monopoly exploitation or extraction as well.[179] Not that I'm a big fan of monopoly exploitation—far from it. But I am concerned that a system that focuses on exploitation as opposed to expansion invites many problems—among them the difficulties of requiring courts or antitrust enforcers to determine what a fair return is, in the manner of public utility regulators. The inherent subjectivity of the task, along with risks of erroneous decisions (that then may have precedential value, with potentially wide-ranging effect, in future cases) and of bending competition law to protect competitors instead of the competitive process, all seem to me to counsel against deploying doctrines such as essential facilities or abuse of dominant position in all but the most extreme cases.[180]

In addition, intellectual property law can—and often, rightly, does—condemn some uses of intellectual property rights that do not threaten any demonstrable monopoly acquisition or expansion. I have argued that a rationale uniting many of the relevant doctrines, which include not only fair use and merger in copyright law, but

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178 *See* Cotter, *supra* note 107, at 173; Thomas F. Cotter, *Intellectual Property and the Essential Facilities Doctrine*, 44 ANTITRUST BULL. 211, 249–50 (1999); Thomas F. Cotter, *Evaluating the Pro- and Anticompetitive Effects of Intellectual Property Protection*, ANTITRUST SOURCE (Mar. 2006), at 5–6, *available at* http://www.americanbar.org/content/dam/aba/publishing/antitrust_source/Mar06_CotterRev3_22f.authcheckdam.pdf (reviewing ANTITRUST, PATENTS AND COPYRIGHT: EU AND US PERSPECTIVES, (2005)).

179 *See* Dennis W. Carlton & Ken Heyer, *Appropriate Antitrust Policy Towards Single-Firm Conduct*, ECONOMIC ANALYSIS GROUP DISCUSSION PAPER 08-2, 7–8, 16 (Mar. 2008), *available at* http://ssrn.com/abstract=1111665 (arguing that "[c]onduct merely to extract surplus the firm has created independent of the conduct's effect on rivals should be permitted. Conversely, conduct that extends the firm's market power by impairing the competitive constraints imposed by rivals presents a legitimate cause for concern.").

180 In correspondence, Norman Siebrasse suggests that my preference for patent over antitrust solutions to the problem of patent holdup may be misplaced, because antitrust enforcement agencies may have a better grasp of the underlying economic issues than would a typical court hearing a patent case. That certainly may be true, at least in some places, although in the U.S., the agencies would still have to make their case before a court of general jurisdiction, just as a private litigant would in a patent matter. To a considerable extent, my preferred solution reflects my concern over certain features of U.S. antitrust litigation, including the prevalence of private antitrust suits and the use of juries in such suits, which are of lesser or no moment in other systems; competition law therefore may be a more acceptable tool for addressing patent holdup in such systems, *see infra* notes 180–85 and accompanying text.

also experimental use and (possibly) misuse in patent and functionality in trademark law, is (not only) that they sometimes work to minimize transaction costs, but that they reduce even small or unquantifiable risks of harm to dynamic efficiency that are not justified by what may be only a marginal incentive benefit arising from stronger intellectual property rights.[181] In a similar vein, Bohannan and Hovenkamp have argued that courts can apply intellectual property law to remedy "innovation restraints" that threaten dynamic efficiency but not quantifiable anticompetitive harm.[182] Replacing a right to injunctive relief with a right to an ongoing royalty, in appropriate cases, is yet another example of trying to solve an intellectual property problem with the use of intellectual property tools, without all the cumbersome machinery—and risk of overextension—inherent to the competition law approach.[183]

That said, it doesn't necessarily follow that the U.S. *eBay* approach is the gold standard for resolving problems relating to SEPs. I have argued before that, by placing the burden of proof on the plaintiff and (arguably) requiring evidence in support of all four of the relevant factors (as opposed to a more traditional equitable balancing), the *eBay* standard may have altered the playing field more than necessary to remedy the holdup problem.[184] At the same time, the abuse of right concept as deployed against Samsung in cases in the Netherlands[185] and Japan[186] seems to me to place too much emphasis on the parties' states of mind and to risk introducing considerable subjectivity into the analysis. The Japanese approach also seems troubling for the additional reason that it appears to deny the SEP owner *any* remedy in the event of an abuse of right, thus potentially encouraging reverse holdup and unduly undermining the patent incentive. The approach embodied in article 12 of the E.C. Enforcement Directive, by contrast, seems to focus more clearly on the relevant issues, if the purpose is to avoid patent holdup, by stating that nations may deny injunctions in cases in which the infringement is inadvertent ("unintentionally and without negligence"), an injunction would impose a disproportionate burden on the defendant, and monetary compensation would be adequate.[187] Perhaps the Eu-

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[181] *See* Thomas F. Cotter, *The Procompetitive Interest in Intellectual Property Law*, 48 WM. & MARY L. REV. 483 (2006); *see also* Thomas F. Cotter, *Four Questionable Rationales for the Patent Misuse Doctrine*, 12 MINN. J. L. SCI. & TECH. 457, 468–69 (2011) (discussing experimental use while remaining skeptical of the patent misuse doctrine, which may be viewed as fairly standardless to the extent it departs from antitrust); Thomas F. Cotter, *Response, IP Misuse and Innovation Harm*, 96 IOWA L. REV. Bulletin 52, 57 n.30 (2011) (suggesting that even though employee noncompete agreements do not usually violate antitrust law, states such as California that prohibit most noncompetes may better promote innovation).

[182] *See* CHRISTINA BOHANNAN & HERBERT HOVENKAMP, CREATION WITHOUT RESTRAINT: PROMOTING LIBERTY AND RIVALRY IN INNOVATION 238–57 (2011).

[183] *See* Ganglmair et al., *supra* note 157..

[184] *See* COTTER, *supra* note 6, at 102–07.

[185] *See supra* text accompanying notes 60–61.

[186] *See supra* notes 69–72 and accompanying text.

[187] *See* E.C. Enforcement Directive, *supra* note 51, at art. 12. Some states might need to redefine the meaning of "negligence," though. *See* COTTER, *supra* note 6, at 245 (noting that under German law, negligence on the part of the infringer is presumed because patents are public records).

ropean nations could shift the terms of the debate away from the pros and cons of *eBay* by introducing into their national laws the arguably superior approach that article 12 already permits.

If this solution won't fly, however, at least not in the short run, European law may be able to reach the same result through judicious application of competition law. Although the two press releases announcing the European Commission's Statements of Objections against Samsung and Motorola are both careful to state that "recourse to injunctions . . . *may* be abusive where SEPs are concerned and the potential licensee is willing to" negotiate a FRAND license[188]—and that the Commission is "not prejudg[ing] the final outcome of [its] investigation"[189]—the Commission in the Motorola press release also states that it "considers at this stage that dominant SEP holders should not have recourse to injunctions, which generally involve a prohibition to sell the product infringing the patent, in order to distort licensing negotiations and impose unjustified licensing terms on patent licensees.[190] This might foreshadow the formal adoption of a general presumption against granting injunctions in cases involving SEPs, as long as the prospective licensee demonstrates a sufficient willingness to accept a FRAND license.[191] Moreover, since there

188 Press Release, European Comm'n, Antitrust: Commission Sends Statement of Objections to Motorola Mobility on Potential Misuse of Mobile Phone Standard-Essential Patents (May 6, 2013) (emphasis added), *available at* http://europa.eu/rapid/press-release_IP-13-406_en.htm; Press Release, European Commission, Antitrust: Commission Sends Statement of Objections to Samsung on Potential Misuse of Mobile Phone Standard-Essential Patents (Dec. 21, 2012) (emphasis added), *available at* http://europa.eu/rapid/press-release_IP-12-1448_en.htm.

189 Press Release (May 6, 2013), *supra* note 188; Press Release (Dec. 21, 2012), *supra* note 188.

190 Press Release, European Comm'n, Antitrust: Commission Sends Statement of Objections to Motorola Mobility on Potential Misuse of Mobile Phone Standard-Essential Patents (May 6, 2013), http://europa.eu/rapid/press-release_IP-13-406_en.htm.

191 *See* Memorandum, European Comm'n, Antitrust: Commission Sends Statement of Objections to Motorola Mobility on Potential Misuse of Mobile Phone Standard-Essential Patents—Questions and Answers (May 6, 2013), http://europa.eu/rapid/press-release_MEMO-13-403_en.htm:

> [T]he Commission is of the preliminary view that Apple's willingness to enter into a FRAND licence manifested itself in particular by its acceptance to be bound by a German court's determination of a FRAND royalty rate. The Commission's preliminary view is that the acceptance of binding third party determination for the terms of a FRAND licence in the event that bilateral negotiations do not come to a fruitful conclusion is a clear indication that a potential licensee is willing to enter into a FRAND licence. This process allows for adequate remuneration of the SEP-holder so that seeking or enforcing injunctions is no longer justified once a potential licensee has accepted such a process.
>
> By contrast, a potential licensee which remains passive and unresponsive to a request to enter into licensing negotiations or is found to employ clear delaying tactics cannot be generally considered as "willing."

The requirement that the patent owner possess a dominant position might not be difficult to establish. *See* Walz, *supra* note 58, at 719 (stating that, because alternative solution to the use of UMTS-technology are simply unthinkable, every single owner of a standard-essential UMTS patent enjoys quite significant market power due to the exclusionary effect arising from the respective patent). To be sure, it may be that many declared SEPs are not really standard-essential, and are no treble damages suits in Europe—and, so far, relatively little private antitrust litigation at all—some of the risks of abuse arising from prospective licensees' behavior may be more attenuated than they would be in the U.S. setting. Questions that still need to be resolved, however, include the quantum of damages to which the SEP owner is entitled for the defendant's past infringement,[192] and whether courts may impose ongoing FRAND royalties in cases where injunctions are denied. Eliminating the SEP owner's right to claim damages altogether, however, as in the Japanese decision in *Apple v. Samsung*,[193] seems to invite licensee abuse.

IV. Determining the FRAND Royalty

Commentators have suggested and critiqued a variety of techniques and tools for determining FRAND royalties,[194] but for present purposes I will focus on what may be the most obvious approach for use in litigation—namely, to apply (with some appropriate modifications) the methodology that courts generally employ in setting reasonable royalties for patent infringement. Section A below sets out the general method of analysis with the appropriate modifications. Section B analyzes Judge Robart's calculation of a FRAND royalty in *Microsoft v. Motorola*, in view of my proposed modifications.

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infringement defendants may contest both validity and infringement. But perhaps it is or should be sufficient to establish market dominance that the patentee is asserting what it claims to be a standard-essential patent. *See supra* note 2.

192 *See* Mueller, *supra* note 142 (noting that one of the questions referred to the CJEU is whether "the requirements for the presumption of abuse of a dominant market position by an SEP holder also apply to other remedies for patent infringement (disclosures relating to past infringement, recall [of infringing products from distribution channels], damages)"); *See also* GRUR 966 (966), *translated in* 336 IIC 741, 748–49 (asserting that, when competition law entitles a defendant to use a patent, "compensation for damages to the plaintiff resulting from the use the defendant has made can in any case only be demanded for the amount to which the plaintiff would have been entitled if it had not refused (illegally) to grant the defendant . . . a licence for the disputed patent"). Walz argues that this is correct, and that a court in such a case should not award defendant's profits, even though the latter remedy is commonly viewed as one of the plaintiff's three damages options in Germany. Walz, *supra* note 58, at 729–30. *See also* Florian Mueller, *Samsung Seeks Supra-FRAND Royalty from Apple in Germany but Backtracks on Disgorgement*, FOSS PATENTS (Sept. 21, 2013, 1:00 PM) *available at*, http://www.fosspatents.com/2013/09/samsung-seeks-supra-frand-royalty-from.html (stating that Samsung dropped a claim for an award of infringer's profits in a recent German case). This makes sense, if the goal is to place the defendant in roughly the same position it would have occupied had the parties negotiated a FRAND license ex ante, but note that, although the United States awards defendants' profits only in design patent and some copyright and trademark cases, most other countries make this remedy generally available for the infringement of utility patents. Thomas F. Cotter, *Reining in Remedies in Patent Litigation: Three (Increasingly Immodest) Proposals*, 30 SANTA CLARA COMP. & HIGH TECH. L.J. 1 (2013).

193 *See supra* notes 68–71 and accompanying text.

194 *See, e.g.*, VirnetX, Inc. v. Apple Inc., 925 F.Supp.2d 816 (E.D. Tex. 2013) (Nash bargaining); TV Interactive Data Corp. v. Sony Corp., 929 F.Supp2d 1006 (N.D. Cal. 2013) (conjoint analysis); Daniel G. Swanson & William J. Baumol, *Reasonable and Nondiscriminatory (RAND) Royalties, Standards Selection, and Control of Market Power*, 73 ANTITRUST L.J. 1 (2005) (proposing an ex ante auction model); Pierre Dehez & Sophie Poukens, *The Shapley Value as a Guide to FRAND Licensing Agreements*, CORE DISCUSSION PAPER 2013/12, *available at* http://uclouvain.be/cps/ucl/doc/core/documents/coredp2013_12.pdf.

A. General Calculation Issues

In calculating reasonable royalties for the infringement of patent rights, courts in the United States and elsewhere often attempt to replicate the bargain that a willing licensor and licensee would have struck, as of a date just prior to the date on which the infringement began, knowing that the patent was both valid and infringed.[195] Though counterintuitive, the assumption that the parties would have bargained with knowledge of both validity and infringement is necessary to avoid a double discounting problem.[196] From an economic perspective, the amount the prospective licensee would have been willing to pay, as of the date infringement commenced, should be some fraction of the additional profit or cost saving he anticipated by using the patented technology as opposed to the next-best available noninfringing alternative.[197] Because this amount is often very difficult to quantify, however, courts normally consider various proxies and other relevant indicia, including the value of comparable licenses and the advantages actually derived from the use of the patent.[198] (In the U.S., the traditional factors are known as the *Georgia-Pacific* factors, after the case in which they were first set out in the current fashion.)[199] In the context of disputes involving SEPs, there are three possible modifications to this standard approach that deserve attention.

The first relates to the question of timing. As noted above, in the typical case the court attempts to replicate the bargain the parties would have reached as of the date the infringement began. In theory, though, the date of the hypothetical negotia-

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195 *See* COTTER, *supra* note 6, at 95–96, 119–39, 194–97, 266–70, 321–23, 357–59, 369–71. There are, to be sure, some variations from one nation to another. In Germany, for example, the standard is said to be "what the parties would have agreed to, as of the date of the hypothetical agreement, if they had foreseen the future development and the duration and amount of use of the patent," while in the U.K., some case law holds that noninfringing alternatives are irrelevant to the calculation. *See id.* at 195, 266.

196 *See id.* at 135.*See also* Stephen Kalos & Jonathan D.Putnam, *On the Incomparability of "Comparable": An Economic Interpretation of "Infringer's Royalties,"* 9 J. PROPRIETARY RTS. 2, 4–5 (1997) (providing the illustration: suppose that A owns a patent and that B is contemplating the launch of a product that arguably would incorporate that patent. Suppose further that both parties believe that: (1) there is a 70% probability the patent is valid; (2) there is an independent 80% probability that B's product would incorporate the patent; and (3) the present value of B's expected profit from the arguable use of the patent, over and above what B would earn from using the next-best noninfringing alternative, is $2 million. If the parties are equally good bargainers (meaning that they will share the gains from trade on a 50–50 basis), one would expect them to agree to a royalty under which B would pay A $560,000, calculated as follows: $2 million x 0.7 x 0.8 x 0.5 = $560,000. In the event B infringes rather than licenses, A should recover $1 million, not $560,000. The reason is that if A knew she could recover only $560,000 if she went to trial, her expected payoff from going to trial would be $560,000 x 0.7 x 0.8 = $313,000. In other words, there would be a double discounting problem unless the royalty awarded at the patent infringement trial attempts to replicate what A and B would have agreed to ex ante, on the assumption that they both knew the patent to be valid and infringed).

197 *See* COTTER, *supra* note 6, at 128.

198 *Id.* at 67, 131.

199 *See* Georgia-Pacific Corp. v. U.S. Plywood Corp., 318 F. Supp. 1116, 1120 (S.D.N.Y. 1970), *modified on appeal*, 446 F.2d 295 (2d Cir. 1971).

tions arguably should be the date on which the infringer committed to using the patented technology, rather than the date on which infringement began, because a royalty calculated after the date on which the infringer committed to using the technology will, to some degree, reflect the value of other complementary investments that depend on their ability to interact with the patented technology. There is, in other words, a degree of lock-in that occurs after a technology is chosen but before it is implemented.[200] Nevertheless, in the typical case it probably isn't worthwhile to make any distinction between date of commitment and date of first infringement, both because the first date may be difficult to determine and because the portion of the royalty attributable to the complementary investments may be small. Put another way, design-around often may not be unduly burdensome up until the point that infringement actually begins.[201] In SEP cases, however, the distinction between date of commitment and date of infringement can be substantial. In particular, once a standard is selected, there is no easy turning back even if no one is actually using the standard just yet. Using the date of infringement in this context therefore is likely to exacerbate the risk of patent holdup. Instead, courts should calculate the royalty based on the amount willing parties would have negotiated prior to the adoption of the standard, because a large part of a royalty negotiated after that date will reflect not the inherent value of the technology itself in comparison with other possible alternatives, but rather the difficulty of avoiding use of a technology for which ex post there may be no feasible alternatives.[202]

A second issue is whether to retain the assumption that the parties would have bargained in the belief the patent was valid and infringed. As noted above, this assumption is sensible in infringement cases[203] and therefore should apply whenever an SEP sues for infringement. If a court is trying to estimate the hypothetical royalty *outside* this context, however, as in the *Microsoft v. Motorola* breach of contract action, it is correct to consider (as Judge Robart did)[204] the probability of validity and infringement as relevant factors in determining the licensing rate. In this context, the double discounting problem disappears because there has been no determination of validity or infringement. The result, though it sounds a bit paradoxical, is that a FRAND rate decided pre-patent infringement litigation should be lower than a FRAND rate involving the same patent decided during the course of infringement litigation.[205]

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200 *See* COTTER, *supra* note 6, at 127 n.207.

201 *Id.*

202 *See* Cotter, *supra* note 192, at 110 n.45 (quoting Apple, Inc. v. Motorola, Inc., 869 F. Supp. 2d 901, 913 (N.D. Ill. 2012)). *See also* Lichtman, *supra* note 2, at 1043 (quoting Apple, Inc., 869 F. Supp. 2d at 913).

203 *See supra* note 196.

204 *See infra* note 213.

205 *Contra* Dennis W. Carlton & Allan L. Shampine, *An Economic Interpretation of FRAND*, 9 J. COMP. L. & ECON. 531, 552 (2013) (arguing that, in the context of FRAND royalties, a firm that succeeds in proving infringement of its SEP should not be able to recover more than the prelitigation FRAND rate). Complications may arise if the royalty is determined in patent infringe-

A third issue is whether, if a court denies a permanent injunction, the royalty rate for the *prospective* use of the patent should be increased further yet. As noted above, courts in the United States post-*eBay* have answered this question in the affirmative, on the ground that the postjudgment bargaining position of the parties has changed in favor of the patentee.[206] This is economic nonsense, however, because it undermines the principal policy rationale—the avoidance of patent holdup—that in my view underlies the decision not to award a permanent injunction in the first place. It also ignores the fact that the royalty for prejudgment infringement is based, as noted above, on the assumption that the parties bargained in the belief that the patent was valid and infringed, so in that sense nothing at all has changed that requires an upward departure from the royalty rate used to determine prejudgment damages.[207] The rate therefore should be the same for both pre- and postjudgment royalties. Perhaps the Federal Circuit could be convinced to depart from its unfortunate rule at least in cases in which the patentee has committed to accept a FRAND royalty, on the theory that a court should not impose what amounts to a supra-FRAND royalty for the postjudgment use of a FRAND-encumbered patent.

B. Microsoft v. Motorola[208]

In 2010, Motorola offered to license two portfolios of purportedly standard-essential patents to Microsoft. Believing that the asking price of 2.25% per unit was too high, Microsoft filed suit, requesting among other things a declaratory judgment (1) that Microsoft was a third-beneficiary of Motorola's FRAND commitment to the IEEE and ETSI, and (2) that Motorola had breached that contract. As noted in Part I above, Judge Robart in 2012 held that Microsoft was indeed a third-party beneficiary of an enforceable contract.[209] In April 2013, Judge Robart issued his findings of fact and conclusions of law on what a FRAND royalty for the patents at issue would be, as well as the possible range of what a FRAND royalty *could* be (which may be relevant to determining whether Motorola's offer was in good faith).[210]

ment litigation, but *before* a validity determination is made. *See, e.g.*, Innovatio IP Ventures, *supra* note 22. If validity is later upheld in that same litigation, should the FRAND royalty go up? See Cotter, *supra* note 22 for a tentative argument that the answer is no.

206 *See supra* note 153.

207 *See* COTTER, *supra* note 6, at 127–28; Cotter, *supra* note 185, at 111–12; Mark A. Lemley, *The Ongoing Confusion over Ongoing Royalties*, 76 MO. L. REV. 695 (2011).

208 Portions of this section have been discussed in previous articles. *See* Thomas F. Cotter, *Some Initial Reactions to Judge Robart's Opinion in* Microsoft v. Motorola, INTELLECTUAL IP (May 3, 2013), *available at* http://intellectualip.com/2013/05/03/some-initial-reactions-to-judge-robarts-opinion-in-microsoft-v-motorola/; Thomas F. Cotter, *More on Establishing the Value of a FRAND Royalty*, COMPARATIVE PATENT REMEDIES (May 14, 2013), *available at* http://comparativepatentremedies.blogspot.com/2013/05/more-on-establishing-value-of-frand.html.

209 *See* Microsoft Corp. v. Motorola, Inc., 854 F. Supp. 2d 993, 999 (W.D. Wash. 2012).

210 *See* Microsoft Corp. v. Motorola, Inc., No. C10-1823JLR, 2013 WL 2111217 (W.D. Wash. Apr. 25, 2013).

In making this determination, Judge Robart applied a modified version of the *Georgia-Pacific* factors.[211] Among the notable features of his opinion are: (1) the conclusion (correct, as I have argued above) that a patent royalty should reflect the value of the patented invention only, and not the "holdup" value that may result from trying to extract a better deal after a standard incorporating the patent has been chosen; (2) that in industries in which many patents are likely incorporated into a device, courts should avoid royalty stacking that would result in aggregate royalties exceeding the value of the device; (3) the recognition that incremental value (that is, the value of the patented invention over the next-best alternative) is the theoretically correct measure of patent value, though one that may be difficult to estimate in practice; (4) the importance of carefully considering which purportedly comparable licenses are, in fact, comparable to the hypothetical license between the patent owner and the user; and (5) the importance of considering how important (or unimportant) the patent is to the user.

Judge Robart's legal and economic analysis is, for the most part, sound. First, as I suggested above should be the case, Judge Robart appears to have modified the time frame by attempting to reconstruct the hypothetical bargain the parties would have negotiated before the standard at issue was adopted, rather than at the time Microsoft may have begun using the patents in suit.[212] Second, as noted earlier, because this was a breach of contract action occurring prior to any finding of infringement or validity, Judge Robart correctly did not assume that the *parties* would have assumed infringement and validity, but rather took into account the possibility that Microsoft was not using some of the Motorola patents at all.[213] Third, in some instances Judge Robart was convinced by neither side's conclusions regarding valuation and simply proceeded on his own.[214] This contrasts with the approach of Judge Posner in *Apple v. Motorola*, who when convinced that neither side's damages experts had tendered admissible opinions dismissed the action altogether, on the ground that there is no right to proceed to trial for a judgment of nominal damages.[215] Whether in such cases the court should attempt to reach a reasonable result notwithstanding flaws in the evidence—and if so, on what basis—or dismiss is hard to say; perhaps it is or should be relevant whether the relevant portion of the trial is to a jury or to a judge, and whether the party with the burden of proof is the patentee (as in *Apple*) or the user (as, I think, should be the case in a breach of contract matter such as in *Microsoft*).[216]

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211 *See id.* at *92, *93, *105–06, *121.

212 *See id.* at *37–38. Elsewhere, however, Judge Robart states that RAND licenses can be negotiated "after an SSO adopts a standard." *Id.* at *14.

213 *See, e.g., id.* at *92, *93, *105–06, *121.

214 *See, e.g., id.* at *112, *116.

215 *See* Apple, Inc. v. Motorola, Inc., 869 F. Supp. 2d 901 (N.D. Ill. 2012).

216 Courts in some countries may have greater leeway to estimate damages on their own. *See, e.g.*, Marcus Schönknecht, *Determination of Patent Damages in Germany*, 43 International Review of Intellectual Property and Competition Law 309, 311–12 (2012) (discussing courts' ability to calculate damages *nach freier Überzeugung*).

Fourth, while I find most of Judge Robart's analysis persuasive (subject to the caveat that I have not reviewed the underlying evidence), the judge appears to have made some math errors in a lengthy footnote in which he tries to derive the lower end of the FRAND range by means of a comparison with the royalty that Motorola would have earned from its patents had it been a member of the relevant patent pool for the technology in question.[217] Specifically, Judge Robart presents an algebraic analysis of how the value of a patent pool royalty would relate to the value of a royalty calculated outside the pool. Judge Robart proposes that the value to a firm participating in a pool could be described as:

$$VP = P_{+} + IP + E - P_{-} - OC,$$

where P_{+} is the licensing revenue the firm earns from being in the pool; IP is the value to the firm of having access to the pooled patents; E is the "external value the company derived from adding its patents to the pool, such as promoting participation in the pool and thereby encouraging widespread adoption of the standard"; P_{-} is the licensing revenue the firm pays *to* the pool; and OC is the opportunity cost of joining the pool.[218] Similarly, the value to the firm of abstaining from the pool is:

$$VA = A_{+} + IP - A_{-} - OC,$$

where A_{+} is the revenue the firm would derive from licensing its patents outside the pool (the FRAND royalty); A_{-} is the revenue the firm would pay to obtain access to others' patents; and OC is "the opportunity cost of not joining the pool."[219] Comparing the two, Judge Robart concludes that, because Motorola's patents contributed relatively little to the standards at issue, it was fair to assume that $VP = VA$ (and hence that the opportunity costs "cancel out," as does the IP term if we assume both firms benefit equally from having access to the other relevant SEPs).[220] Moreover, he assumes that $P_{+} = E$, based on the inference that "the external value of joining the pool is equivalent to the royalty deficit Microsoft incurs through pool membership"; that $2P+ = P_{-}$, based on evidence that Microsoft paid twice as much in royalties to the pool as it received in licensing revenue from the pool (and the assumption that Motorola would have fared no better); and that $A_{-} = 1.5P_{-} = 3P_{+}$, on the assumption that non-pool royalties would be about 1½ times greater than pool royalties ("higher than the pool rate, but not twice as high because some, if not all, of the companies holding SEPs would be subject to the [F]RAND

217 *See* Microsoft Corp. v. Motorola, Inc., No. C10-1823JLR, 2013 WL 2111217, at *85 n. 23 (W.D. Wash. Apr. 25, 2013).

218 Judge Robart actually says that OC is "the opportunity cost of using the patents in a different way, such as abstaining from the patent pool and licensing patents outside the pool." *Id.* However, I think he means "the opportunity cost of *not* using the patents in a different way . . . ." For further discussion of this point, see the concluding paragraph of this section in the text above.

219 *Id.* Apparently Judge Robart's assumption is that, except for the firm that is deciding whether to join the pool, all other firms with relevant patents are in the pool; otherwise there should be a A_{-} term, though perhaps of lesser magnitude, in the first equation.

220 *Id.*

commitment").[221] Substituting values gives us $A_+ = 3P_+$, meaning that the FRAND royalty is three times the pool royalty.[222]

There are some errors here, though in the grand scheme of things perhaps none of them is consequential. First, it would seem that the opportunity cost of not joining the pool is *VP*, and that the opportunity cost of joining is *VA*, though ultimately this factor does not wind up mattering to the judge's analysis (and probably shouldn't matter in terms of comparing the value of joining the firm versus the value of abstaining). Second, and more significantly, the assumption that $VA = VP$ seems unsupported even if there is reason to think that Motorola's patents are relatively low in value. Motorola apparently thought that $VA \geq VP$, or it would have joined the pool (though to be fair, the judge is using this analysis to calculate the low end of the range). Third, the judge erred when he stated that *E* "is equivalent to the royalty deficit Microsoft incurs through pool membership,"[223] that is that $E = P_+$. In particular, he appears to be conflating *E* with $IP + E$. From his earlier analysis, however, all one can say is that, for *VP* to be positive, $P_+ + IP + E > P_-$. Thus, at best, even if the assumption that $A_- = 3P_+$ is correct, the most that can be inferred is that $A_+ \geq 2P_+ + E$. So, the FRAND royalty is at least twice what the pool royalty would be, plus some increment for the intangible value of being a pool member. It seems to me that the low end of the FRAND range, therefore, would be just twice the pool rate, not three times; in theory, *E* could be as low as zero. If anything, though, the error works in favor of Motorola, though I doubt that Microsoft would make much of it since the overall thrust of the opinion strongly favors Microsoft's position.[224]

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221 *Id.*

222 *Id.*

223 *Id.*

224 For a different take on FRAND royalties, *see* Ericsson Inc. v. D-Link Sys., Inc., No. 6:10-CV-473, 2013 WL 4046225 (E.D. Tex. Aug. 6, 2013). The opinion denies a defense motion to vacate the jury's damages award against the defendants (among other matters in dispute). *Id.* Much of the analysis is very fact-specific (e.g., was there sufficient evidence to support the jury verdict?) and thus centers on the expert testimony on comparable licenses, the appropriate royalty rate and base, etc. *Id.* For arguments that Judge Davis's analysis of FRAND/SEP issues in *Ericsson* may be different from Judge Robart's, *see Rebutting Judge Robart? E.D. Tex. Judge Leonard Davis Upholds Jury Damages Award on WiFi SEPs, Dismisses RAND-Related Issues (Ericsson v. D-Link)*, ESSENTIAL PATENTS BLOG (Aug. 7, 2013), *available at* http://essentialpatentblog.com/2013/08/rebutting-judge-robart-e-d-tex-judge-leonard-davis-upholds-jury-damages-award-on-wifi-seps-dismisses-rand-related-issues-ericsson-v-d-link/ (suggesting that Judge Davis "seemingly plac[ed] the burden on the defendants to show affirmatively that prior licenses were not negotiated under the RAND framework," whereas Judge Robart "seemed to place the burden on Motorola—the SEP holder—to show that its prior comparable licenses were negotiated under the RAND framework;" and that "Judge Davis found that pointing to theoretical royalty-stacking issues was not sufficient to reduce the damages award" and "noted that the defendants' expert 'never even attempted to determine the actual amount of royalties Defendants currently pay for 802.11 patents,'" whereas Judge Robart "concluded that because the RAND commitment exists to mitigate hold-up concerns, the appropriate RAND royalty for Motorola's patents must take into account the royalty rates that could be demanded by other SEP holders" and also "did not require Microsoft to show what royalties it was currently paying for its 802.11-compliant products"). For

V. Conclusion

This article has presented an overview of the law of contracts, patent remedies, and competition as they relate to the question of whether courts should enjoin the infringement of FRAND-encumbered SEPs. At present, objections to injunctions based on the law of contract and of patent remedies have made more headway in the United States than in some other countries, Germany in particular. On the other hand, while the competition-law approach has met with some limited success in the United States and some defeats in Germany, this approach seems to enjoy only a limited prospect of success in future U.S. cases at the same time that Europe may be shifting to an approach more favorable to prospective licensees. In addition, as a normative matter, I have argued that courts generally should deny injunctions to SEP owners and should award ongoing royalties instead. These royalties should be calculated in much the same manner as courts calculate royalties in run-of-the-mill patent disputes, subject to a couple of tweaks. I also have argued that, in theory, the law of patent remedies is a better tool for achieving the desired result than is competition law, though in practice resort to the latter may be acceptable if the necessary changes to the law of patent remedies are not practically feasible.

Finally, it may be that there are better alternatives to all of the options discussed above. Among the options other scholars have put forward in recent months are Jorge Contreras's suggestion of a "pseudo-pool" approach[225] and the Lemley-Shapiro proposal that SSOs require members to submit to binding arbitration.[226] In future work, I hope to engage with these and other proposals that go beyond the scope of the present article. No doubt there may be other possibilities as well; and perhaps different SSOs could experiment with different possible solutions. One thing is certain: as standardization and FRAND commitments become ever more important features of the contemporary economy, our existing legal concepts and institutions will need to adapt and evolve. In this regard, understanding other nations' experiences, triumphs, and failures may help in determining which practices to try, adopt, or discard at home.

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my initial take on these perceived differences, *see* Thomas F. Cotter, *Friday Round-up: Apple v. Samsung in the Federal Circuit and Before the ITC; Ericsson, Microsoft, and FRAND-Encumbered SEPs*, COMPARATIVE PATENT REMEDIES (Aug. 9, 2013, 1:25 PM) *available at* http://comparativepatentremedies.blogspot.com/2013/08/friday-round-up-apple-v-samsung-in.html.

225 *See* Jorge L. Contreras, *Fixing FRAND: A Pseudo-Pool Approach to Standards-Based Patent Licensing*, 79 Antitrust L.J. 47 (2013).

226 *See* Mark A. Lemley & Carl Shapiro, *A Simple Approach to Setting Reasonable Royalties for Standards-Essential Patents*, 28 BERKELEY TECH. L.J. 1135, 1135 (2013) ("Under our proposed approach, if a standard-essential patent owner and an implementer of the standard cannot agree on licensing terms, the standard-essential patent owner is obligated to enter into binding baseball-style (or "final offer") arbitration with any willing licensee to determine the royalty rate.").