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PRIVATE LAW, CONFLICT OF LAWS, AND A LEX MERCATORIA OF STANDARDS-DEVELOPMENT ORGANIZATIONS

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Abstract

Technical standards created by industry standards-development organizations (SDOs) enable interoperability among products manufactured by different vendors. Over the years, SDOs have developed policies to reduce the risk that SDO participants holding patents covering the SDO's standards will disrupt or hinder the development and deployment of these standards. These policies, including commitments to license standards-essential patents (SEPs) on terms that are fair, reasonable and non-discriminatory (FRAND), are most effectively interpreted and applied on the basis of private law (contractual) principles. However, SDO policies are typically embodied in an SDO's governing documents, which are in turn regulated by the law of the jurisdiction in which the SDO is based. This somewhat arbitrary linkage of SDO policies to national and state law has created inconsistencies in their interpretation and threatens to spark jurisdictional competition in an unproductive race to the bottom. This paper poses the question whether it would be possible to decouple SDO policy interpretation from the patchwork of national and state laws that purport to govern such policies in favor of a common lexicon of interpretive principles derived from the shared understanding of SDO participants: a "lex mercatoria" of standardization.

Introduction: Standards and SDOs

The development of technical interoperability industry standards such as Wi-Fi, Bluetooth and USB has been conducted largely within private industry associations known as standards-development organizations or SDOs. While an SDO provides an open forum for standards development, the technical work of standardization is generally carried out by representatives of firms having expertise in the relevant technical field: namely, technology developers and manufactures of standardized products, with the occasional involvement of governmental entities and civil society members.

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The standards that emerge from SDOs enable products manufactured by different producers around the world to communicate and interact without significant user intervention. Large swaths of the global technology infrastructure including the Internet and the wireless telecommunications network not only depend on, but are literally defined by, these standards. As such, SDOs have been characterized as private regulators with significant public functions.² And while a range of national and international legal regimes -- including trade law, antitrust and competition law and national standardization regulations -- impose constraints on SDO behavior, generally requiring that they observe minimal "due process" requirements, the structure and governance of SDOs remains primarily a function of private ordering among their members.³

SDOs assume a range of forms, from non-profit corporations to trade associations to contractual consortia to international non-governmental organizations. In all of these cases, the rules that govern the standardization process, as well as the rights and responsibilities of SDO participants, are codified in written instruments known variously as bylaws, memoranda of understanding, membership agreements, operating procedures, and the like. These policy instruments specify the procedures to be used in proposing, developing, and approving technical standards, as well as means for resolving disputes among SDO participants and the manner in which the SDO itself is governed (e.g., through elected or appointed bodies having specified authority).

A. SDO Policies – Patents and FRAND

In recent years, one of the most contentious areas of SDO rulemaking has concerned intellectual property, particularly with regard to patents that are considered "essential" for a product to comply with a standard (so-called "standards-essential patents" or "SEPs"). There is a large and varied theoretical literature concerning the potential effects that SEPs may have on markets for standards-compliant products. One of the principal areas of debate concerns whether SEP owners can and do "hold-up" the market by demanding excessive royalty rates after a standard has been widely adopted and manufacturers have made substantial capital

² See Jorge L. Contreras, From Private Ordering to Public Law: The Legal Framework Governing Standards-Essential Patents, 30 HARV. J.L. & TECH. 211-231 (2017), Tim Büthe & Walter Mattli, The New Global Rulers: The Privatization of Regulation in the World Economy x (2011).

³ For an in-depth review of the exogenous legal constraints affecting SDOs, see JRC (2018, forthcoming).

⁴ See, generally, Brad Biddle, No Standard for Standards: Understanding the ICT Standards-Development Ecosystem in Cambridge Handbook of Technical Standardization Law: Competition, Antitrust, and Patents, Ch. 2 (Jorge L. Contreras, ed. 2017) (discussing ecosystem of standards development).

⁵ A patent is generally considered to be "essential" to a standard if the claims of the patent must be infringed by any product that complies with the standard. *See, generally,* Jorge L. Contreras, Essentiality and Standards-Essential Patents in Cambridge Handbook of Technical Standardization Law: Competition, Antitrust, and Patents, Ch. 14 (Jorge L. Contreras, ed. 2017) (discussing essentiality).

^{6.} See, e.g., Jorge L. Contreras, Patents, Technical Standards and Standard-Setting Organizations: A Survey of the Empirical, Legal and Economics Literature in Research Handbook on the Economics of Intellectual Property Law, Vol. II — Analytical Methods (Peter S. Menell & David Schwartz, eds. (forthcoming 2018)).

investments in the standardized technology (thus becoming "locked-in").⁷ Another potential issue is "royalty stacking," which, as the U.S. Court of Appeals for the Federal Circuit has explained, can occur "when a standard implicates numerous patents, perhaps hundreds, if not thousands," each of which bears a royalty that must be paid by product manufacturers and which "may become excessive in the aggregate."⁸

Many SDOs have adopted policies designed to mitigate the threats of patent hold-up and stacking. These policies fall into two general categories which are not mutually exclusive: disclosure policies and licensing policies. Disclosure policies require SDO participants to disclose SEPs that they hold, generally prior to the approval of a relevant standard. Licensing policies require SEP holders to grant manufacturers of standardized products licenses on terms that are either royalty-free or bear royalties that are "fair, reasonable and nondiscriminatory" (FRAND). Disclosure policies require SEP holders to grant manufacturers of standardized products licenses on terms that are

Initially, these policies were relatively brief and abstract, requiring, for example, only that "[s]tandards should not include items whose production is covered by patents unless the patent holder agrees to and does make available to any interested and qualified party a license on reasonable terms . . ."

These loosely specified policies remained in effect through the 1990s when they began to attract greater scrutiny from litigants and courts. The situation came to a head in 2003, when semiconductor designer Rambus, Inc. avoided liability for failing to disclose patents essential to an SDO's standards because, the court held, the SDO's patent policy suffered from "a staggering lack of defining details." 12

Critiques such as this, together with increasing litigation among SDO participants, led several prominent SDO to revamp their patent policies in the early- and mid-2000s. Some of the amendments adopted by SDOs were controversial. For example, in 2006 the VMEBus Standards Association ("VITA") amended its patent policy to require advance (*ex ante*) disclosure of patent licensing terms and royalty rates, a requirement that generated significant opposition. Two other SDOs, IEEE and ETSI, which also considered such a requirement during this time period, faced significant opposition to such amendments and eventually adopted a voluntary, rather

^{7.} See, e.g., Joseph Farrell, et al., Standard Setting, Patents, and Hold-Up, 74 Antitrust L.J. 603, 616 (2007); Mark Lemley & Carl Shapiro, Patent Holdup and Royalty Stacking, 85 Tex. L. Rev. 1991 (2007); U.S. Dep't of Justice & Fed. Trade Comm'n, Antitrust Enforcement and Intellectual Property Rights: Promoting Innovation and Competition 34–35 (2007).

^{8.} Ericsson, Inc. v. D-Link Sys., Inc., 773 F.3d 1201, 1229 (Fed. Cir. 2014).

^{9.} See Am. Bar Ass'n, Standards Development Patent Policy Manual 31–85 (Jorge L. Contreras ed., 2007) [hereinafter ABA Patent Policy Manual] (detailed catalog of SDO policy terms); Mark A. Lemley, *Intellectual Property Rights and Standard-Setting Organizations*, 90 Calif. L. Rev. 1889 (2002) (survey of SDO policy provisions).

^{10.} See ABA Patent Policy Manual, supra note 9, at 56-67.

^{11.} Am. Standards Assn., Procedures of American Standards Association, Sec. 11 (1959).

^{12.} Rambus, Inc. v. Infineon Techs. AG, 318 F.3d 1081, 1102 (Fed. Cir. 2003).

^{13.} For quantitative analyses of these policy changes, see Joanna Tsai & Joshua D. Wright, *Standard Setting, Intellectual Property Rights, and the Role of Antitrust in Regulating Incomplete Contracts*, 80 Antitrust L.J. 157, 159–60 (2015) and Anne Layne-Farrar, *Proactive or Reactive? An Empirical Assessment of IPR Policy Revisions in the Wake of Antitrust Actions*, 59 Antitrust Bulletin 373 (2014).

^{14.} See Jorge L. Contreras, Technical Standards and Ex Ante Disclosure: Results and Analysis of an Empirical Study, 53 Jurimetrics 163, 172–75 (2013) (describing the VITA policy amendments).

than a mandatory, *ex ante* disclosure requirement.¹⁵ More recently, SDOs have continued to experiment with policy changes, most notably the IEEE's 2015 amendments that sought to clarify certain aspects of its FRAND licensing commitment and limited the right of SEP holders to seek injunctive relief against manufacturers of standardized products.¹⁶

Nevertheless, most SDO patent policies still remain fairly non-specific. For example, all SDOs that wish to be accredited as developers of American National Standards must comply with the "Essential Requirements" of the American National Standards Institute (ANSI). The ANSI Essential Requirements permit American National Standards to include technologies covered by patents, so long as the accredited SDO receives a written assurance from the patent holder that a license will be made available either without consideration or "under reasonable terms and conditions that are demonstrably free of any unfair discrimination." According to a 2012 ANSI study, 92% of ANSI-accredited SDOs, particularly those in fields other than information and communications technology (ICT), simply reference the ANSI policy in their own membership agreements, bylaws, or policies, rather than adopting a patent policy of their own. 18

B. SDO Policy Disputes

Given that most SDOs offer little guidance regarding the content of their FRAND commitments, parties sometimes disagree over the meaning of such commitments. Many of these disagreements relate to the level of royalties that may be demanded by a SEP holder in compliance with its FRAND commitment. There are countless details regarding the calculation of royalty rates that can cause such disagreements, including the appropriate "base" against which the royalty is calculated, whether different rates should apply to sales in different countries, whether adjustments should be made based on the volume sold by the manufacturer, and whether the value of the SEP holder's patents should be assessed in light of the overall number of patents covering a standard or on an individual basis. Disagreements also arise over the "non-discrimination" prong of the FRAND commitment, with parties clashing over whether a SEP holder's charges may vary based on the uses to which the end customer puts a standardized product, whether a SEP holder may choose to license only at a particular level in the supply chain (e.g., end product manufacturers rather than component manufacturers), whether royalty rates may vary based on the size or market or country of the manufacturer, and whether a SEP holder has any latitude to charge slightly different rates to differently-situated licensees. Finally, in

¹⁵ Id.

^{16.} See Michael A. Lindsay & Konstantinos Karachalios, Updating a Patent Policy: The IEEE Experience, CPI Antitrust Chronicle, Mar. 2015.

¹⁷ Am. Nat'l Standards Inst., ANSI Essential Requirements: Due Process Requirements for American National Standards § 3.1.1(b), at 10 (2016) [hereinafter ANSI Essential Requirements].

¹⁸ See Contreras, Market Reliance, supra note x, at x.

¹⁹ E.g., is a percentage royalty charged against the price of the end product (e.g., a smartphone) or against the chip or component that actually embodies the standardized technology (e.g., the Wi-Fi or radio chip used in a smartphone). In technical terms, the question often posed is whether a SEP holder's royalty is charged against the value of the smallest saleable patent practicing unit (SSPPU) or the entire market value of the end product (EMV). See, e.g., Ericsson, 773 F.3d at x.

²⁰ See, generally, Contreras & Layne-Farrar, Non-Discrimination (2017).

addition to the financial terms of SEP licenses, disagreements may arise of the appropriateness and scope of various non-financial terms such as requirements of reciprocal licensing, grant-backs, and defensive suspension.²¹ The greatest irony of this fractious system is that its goal is standardization. And while interoperability and standardization have been achieved to a breathtaking degree on the technological front, the policy and legal landscape in this area becomes increasingly atomized.

C. Public versus Private Law Enforcement

Given this fertile ground for disagreement, an increasing number of formal disputes have arisen regarding FRAND commitments and a growing number of courts and arbitration tribunals around the world have been called upon to interpret FRAND commitments.²² But given the inherently public character and market-wide impact of technical standards development, a clear intellectual divide has emerged over the most suitable legal mechanisms for enforcing such commitments. On one hand, if standard setting is a public activity, it may warrant traditional "public law" regulation. On the other hand, if standard setting is viewed as an inherently private activity, standardization may be more aptly regulated through self-policing and private law mechanisms.

A number of governmental enforcement agencies around the world have supported the application of competition and antitrust law to police private breaches of commitments made within SDOs.²³ As the U.S. FTC recently noted, "[w]hile not every breach of a FRAND licensing obligation will give rise to [antitrust] concerns, when such a breach tends to undermine the standard-setting process and risks harming American consumers, the public interest demands action rather than inaction."²⁴ An approach to FRAND commitments grounded in competition law is also prevalent in Europe, where the dominant analysis arises under the competition analysis set out by the CJEU in *Huawei v. ZTE*,²⁵ and where the UK High Court (Patent) in *Unwired Planet v. Huawei* evaluated numerous aspects of the SEP holder's FRAND commitment through a lens of competition rather than contract law.²⁶

On the other side of this debate, the Assistant Attorney General for the U.S. Department of Justice Antitrust Division has recently stated that antitrust enforcement and remedies should be used only sparingly in the context of standard setting, and that traditional private law remedies such as contract are preferable means for policing compliance with FRAND

²¹ See, generally, ABA Patent Policy Manual, supra note 9.

²² See Chryssoula Pentheroudakis & Justus A. Baron, *Licensing Terms of Standard Essential Patents: A Comprehensive Analysis of Cases*. JRC Science for Policy Report EUR 28302 (2017) (cataloging FRAND litigation around the world).

²³ For an overview of these actions, see Jorge L. Contreras, *The Global Standards Wars: Patent and Competition Disputes in North America, Europe and Asia* (Jan. 2018), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3106090

^{24.} Fed. Trade Comm'n, Statement of the Federal Trade Commission on *In the Matter of Robert Bosch GmbH*, FTC File Number 121-0081 (Nov. 26, 2012).

²⁵ Eur. Court of Justice, Case C-170/13 (2015).

²⁶ See Jorge L. Contreras, Global Markets, Competition and FRAND Royalties: The Many Implications of Unwired Planet v. Huawei, 16 Antitrust Source, August 2017.

commitments.²⁷ Former FTC Commissioner Joshua Wright and Professor Bruce Kobayashi have also argued that private legal remedies (contract and tort) should suffice to redress most issues arising in standard setting, and that a resort to public law remedies (antitrust) is both unnecessary and counterproductive.²⁸ I, too, believe that while antitrust and competition law remedies must remain available to address instances of deception and other forms of abusive conduct, the essential contours of SDO policies and FRAND commitments, which at their root are privately ordered arrangements among parties, can only be discerned through the application of private law mechanisms.²⁹ As I have written previously, "Despite the public nature of standards development, the most efficient and equitable way to resolve disputes regarding the conduct of participants in the standardization process may be to focus on the scope and nature of the parties' privately ordered arrangements."³⁰ Accordingly, the focus of this paper is on the application of private law, particularly contract law, to SDO policy interpretation and enforcement.

D. National Law and SDO Policies – The Accidents of Geography

By their nature as legal entities, most SDOs are established in a particular legal jurisdiction. For example, the International Telecommunications Union (ITU) is based in Geneva, Switzerland, the European Telecommunications Standardisation Institute (ETSI) is based in Sophia-Antipolis, France, the Institute of Electrical and Electronics Engineers Standards Association (IEEE-SA) is based in New York, New York, USA, and the Internet Engineering Task Force (IETF) is based in Reston, Virginia, USA. The foundational legal documents establishing each of these SDOs are thus drafted according to the laws of the SDO's home jurisdiction, and are often filed with relevant state and national business registries.

Likewise, the policy documents setting forth the rules and procedures of each of these SDOs purports to be governed by the laws of a particular legal jurisdiction, usually the home jurisdiction of the SDO. Thus, ETSI declares that its IPR policy "shall be governed by the laws of France." Other SDOs such as IEEE-SA do not specify the particular jurisdiction whose laws govern its policy documents, but courts interpreting those documents – particularly U.S. courts -- interpret them in accordance with their general understandings of local law. Thus, on top of the intricacies of the written rules governing SDO participation, a further layer of complexity is introduced by the differing national and state laws that provide the analytical and enforcement framework around these rules.

²⁷ Assistant Attorney General Makan Delrahim, Remarks at the USC Gould School of Law's Center for Transnational Law and Business, Nov. 10, 2017, https://www.justice.gov/opa/speech/assistant-attorneygeneral-makan-delrahim-delivers-remarks-usc-gould-school-laws-center

^{28.} See Bruce H. Kobayashi & Joshua D. Wright, Federalism, Substantive Preemption, and Limits on Antitrust: An Application to Patent Holdup, 5 J. Competition L. & Econ. 469, 506–16 (2009) (discussing the comparative advantage of tort and contract law in regulating breaches of FRAND commitments); see also Herbert Hovenkamp, Antitrust and the Patent System: A Reexamination, 76 Ohio St. L.J. 467, 555 (2015) ("Fundamentally, these are problems best addressed through the patent system rather than by antitrust law").

²⁹ See Contreras, Private Ordering, supra note 2, at x.

³⁰ *Id*.

³¹ ETSI, Rules of Procedure, 29 Nov. 2017, Annex 6, Sec. 12.

The application of specific national laws and modes of legal interpretation to already complex and lengthy SDO policies has introduced an additional level of unpredictability and uncertainty to the interpretation of SDO policies, particularly surrounding FRAND commitments. For example, in *Apple v. Motorola*, the federal district court sitting in Wisconsin observed that, with respect to the interpretation of IEEE's policy, "Neither party undertakes an adequate choice of law analysis with respect to claims concerning IEEE, and both sides cite variously to Wisconsin, New York and Illinois law in support of their respective positions."³² To resolve the matter, the court determined that there was no conflict among the laws of New York, Illinois and Wisconsin with respect to the relevant issues in the case, and thus proceeded to apply the laws of Wisconsin.³³

Even more striking have been the efforts of courts to apply French law to the interpretation of ETSI's patent policy. In *Apple v. Motorola*, the Wisconsin court based its interpretation of French law governing the ETSI policy on one party's affidavit of a French law professor and the other party's excerpt from an English language treatise on French contract law.³⁴ With these resources in hand, the court appears to rely on the expert's assertion that French law "requires the same general elements" for contract formation as Wisconsin law, and makes little effort to apply French statutory law to the case.³⁵ In *Unwired Planet v. Huawei*³⁶, the UK High Court (Patent) makes a significantly greater effort to understand and interpret the French law applicable to ETSI's patent policy, thoughtfully probing the arguments of both parties' experts over many pages of the opinion.³⁷ A similar effort was made by the U.S. district court in *TCL v. Ericsson* based on competing affidavits of the parties' French law experts.³⁸ Yet one must wonder how consistent and accurate these renditions of French law in Wisconsin, California and the U.K. can be, especially when based on nothing more than the advocacy of paid experts.

U.S. law also introduces oddities to the interpretation and analysis of SDO FRAND commitments that do not translate well to other countries. For example, in the U.S. the primary statutory measure of damages for patent infringement is a "reasonable royalty".³⁹ For the past several decades, the calculation of reasonable royalty damages in the U.S. has generally followed the 15-factor "hypothetical negotiation" framework established in *Georgia-Pacific Corp. v. U.S. Plywood Corp.* ⁴⁰ Because FRAND commitments speak in terms of a "reasonable" royalty, several U.S. courts have sought to determine the appropriate level of royalties under a FRAND

³² 886 F. Supp. 2d 1061, 1082 (W.D. Wis. 2012). Interestingly, the state of Wisconsin bore no relationship whatsoever to the parties or the case. The case was originally brought in Illinois, given Motorola's Chicago headquarters. Yet for case management reasons, part of the case (that concerning contractual matters) was assigned to be heard in the neighboring federal district in Wisconsin.

³³ Id.

^{34 886} F. Supp. 2d at 1082.

³⁵ Id at 1083.

³⁶ [2017] EWHC 711 (Pat) (Apr. 5, 2017).

³⁷ [2017] EWHC 711 at ¶¶ 103-146.

³⁸ TCL v Ericsson (C.D. Cal. 2018).

³⁹ 35 U.S.C. x

⁴⁰ Georgia-Pacific Corp. v. U.S. Plywood Corp. (S.D.N.Y. 1970).

commitment utilizing traditional methodologies for determining patent damages, including the *Georgia-Pacific* hypothetical negotiation framework. However, because this framework assumes that the patent holder and the infringer have no pre-existing duty toward one another, many of the assumptions underlying this analysis do not apply in cases involving FRAND-encumbered SEPs. This inconsistency has been pointed out in several cases. In *Microsoft v. Motorola*, for example (in which the *Georgia-Pacific* analysis was applied to a FRAND commitment made to ITU, notwithstanding the fact that ITU is a Geneva-based SDO with no acknowledgement of U.S. law), the court expressly modified twelve of the *Georgia-Pacific* factors when conducing its FRAND analysis. Likewise, in *Ericsson v. D-Link*, the Federal Circuit criticized the use of several *Georgia-Pacific* factors when calculating royalties subject to a [F]RAND commitment. These criticisms suggest that the *Georgia-Pacific* framework is not well-suited to the determination of royalty levels complying with FRAND requirements even with respect to FRAND commitments made to U.S. SDOs, let alone non-U.S. SDOs such as ITU and ETSI. And, needless to say, no courts outside the U.S. have evidenced any desire to implement a *Georgia-Pacific* analysis when interpreting SDO FRAND commitments.

Given these and other issues, including the fact that some key questions in the U.S. are tried to a jury, some non-U.S. courts have begun to distance themselves from the reasoning of U.S. cases. The most pronounced example of this distancing occurs in *Unwired Planet*, in which the U.K. court expressly rejects several touchstones of SDO policy analysis developed in the U.S. For example, both courts⁴¹ and enforcement agencies⁴² in the U.S. have concluded that a FRAND royalty should reflect the *ex ante* value of a patented technology, without considering the added value attributable to the adoption of the technology in a standard.⁴³ Yet the court in *Unwired Planet*, while acknowledging these prior analyses, expressly parts ways with its U.S. counterparts with little explanation.⁴⁴

The national law overlay thus introduces numerous complexities and inconsistencies to the analysis of SDO policies and FRAND commitments. First, it is often unclear which body of law to apply to a given SDO policy. Second, even if there is no disagreement over the correct body of law, the interpretation of that law may be based on scant knowledge and experience (e.g., applying French law in Wisconsin). Third, the particular analytical tools of one jurisdiction (e.g., the U.S. *Georgia-Pacific* framework) will not necessarily be used in other jurisdictions, even when the same SDO policy is being interpreted. And, finally, courts in one jurisdiction may simply differ in their analysis from those in other jurisdictions, thus leading to incompatible interpretations of the same SDO policy.

⁴¹ Ericsson v. D-Link, 773 F.3d at 1232; In re Innovatio IP Ventures, LLC Patent Litig., 921 F. Supp. 2d 903, 907 (N.D. III. 2013); Microsoft v Motorola.

⁴² Fed. Trade Comm'n, The Evolving IP Marketplace: Aligning Patent Notice and Remedies with Competition 22-23 (2011) ("A definition of RAND based on the ex ante value of the patented technology at the time the standard is chosen is necessary for consumers to benefit from competition among technologies to be incorporated into the standard").

⁴³ See, e.g., Mark A. Lemley & Carl Shapiro, Patent Holdup and Royalty Stacking, 85 Tex. L. Rev. 1991 (2007); Joseph Farrell, et al., Standard Setting, Patents, and Hold-Up, 74 ANTITRUST L.J. 603, 603 (2007).

⁴⁴ [2017] EWHC 711 at ¶97. For a more detailed discussion of this aspect of the *Unwired Planet* decision, see Contreras, *Global Markets, supra* note 26, at 8.

E. National Law and Global Markets

The UK High Court (Patents) in *Unwired Planet*⁴⁵ introduced yet another wrinkle to the fabric of FRAND adjudication. In that case, Unwired Planet, the holder of several SEPs covering 2G, 3G and 4G wireless telecom standards, had allegedly offered to grant Huawei, a Chinese smartphone manufacturer, a worldwide license under those SEPs. Huawei challenged the reasonableness of Unwired Planet's licensing offer and the parties commenced litigation in several countries, including the UK. In the UK case, Huawei argued that it only wished to obtain a license under Unwired Planet's UK patents, ⁴⁶ and that Unwired Planet's insistence on a worldwide license was unreasonable.

In evaluating the reasonableness of Unwired Planet's proffered license, the court first observed that "the vast majority" of SEP licenses in the wireless telecom industry, including all of the comparable licenses introduced at trial, were granted on a worldwide basis, with only occasional exclusions.⁴⁷ Against this backdrop, the court reasoned that "a licensor and licensee acting reasonably and on a willing basis would agree on a worldwide licence".⁴⁸ In contrast, the court found that country-by-country licensing, as proposed by Huawei, would be extremely inefficient if not "madness".⁴⁹ Accordingly, the court ruled that, in this case, a FRAND license was necessarily a *worldwide* license and that if Huawei did not enter into a license agreement on the global FRAND terms dictated by the court, it would suffer the entry of an injunction in the UK (a sizable market).⁵⁰ Once Huawei enters into that license agreement, it will be licensed across the entire world at the rates set by the UK court. No further licenses will be needed, and proceedings in all other jurisdictions will effectively be mooted.

The UK court's decision in *Unwired Planet* raises the very real possibility that national courts may feel increasingly emboldened to set royalty rates for SEPs across the globe. The implications of this prospect are sobering, as high stakes patent litigation today is an inherently global enterprise with parallel actions brought in a dozen or more jurisdictions.⁵¹ Will the *first* court to hear a particular case now seek to resolve the worldwide dispute?

⁴⁵ [2017] EWHC 711 (Pat) (Apr. 5, 2017).

⁴⁶ *Id*. at ¶ 524.

⁴⁷ *Id.* at ¶ 534. Some comparable licenses, for example, excluded China.

⁴⁸ *Id.* at ¶ 543.

⁴⁹ *Id.* at ¶ 543.

⁵⁰ *Id.* at ¶ x. As of this writing, Huawei had *not* accepted the license and the court entered the injunction but stayed its enforcement pending appeal. [2017] EWHC 1304 (Pat) (May 19, 2017). A similar result was reached by the Landgericht Düsseldorf in *Saint Lawrence Communications v. Vodafone*, Landgericht Düsseldorf 4a O 73/14, 4a O126/14, 4a O 127/14, 4a O 128/14, 4a O 129/14, 4a O 130/14, 31 March 2016. In *Vodafone*, the SEP holder also offered the implementer a worldwide license, which requested instead a n national license. In evaluating the SEP holder's conduct under *Huawei v. ZTE*, the lower court held that the offer for a worldwide license was FRAND compliant. *See* Robin Jacob & Alexander Milner, *Lessons from Huawei v. ZTE*, 4iP Council Research Report, Oct. 2016, at 10, http://www.4ipcouncil.com/news/latest-research-4ip-council-lessons-huawei-v-zte.

⁵¹ See, e.g., Jack Ellis, Vringo and ZTE Go the Distance: An Infographic, Intell. Asset Mgmt. Blog (Dec. 15, 2015), https://perma.cc/2MUJ-YY63 (describing litigation between Vringo and ZTE in twelve different jurisdictions), Kurt Eichenwald, The Great Smartphone War, Vanity Fair, May 3, 2014,

This localized power to affect global commercial relationships could embolden courts in particular jurisdictions to seek to attract litigants based on their methodological or procedural advantages. Thus, the rules and procedures of some jurisdictions might favor SEP holders, attracting them to the courts of that jurisdiction much as U.S. patent holders were once attracted to the patent-friendly District Court for the Eastern District of Texas,⁵² and European patent holders are attracted to Germany, where injunctive relief will often be granted in an expedited proceeding before patent validity is adjudicated.⁵³ By the same token, jurisdictions that gain reputations for setting unfavorable (low) FRAND rates may find a dearth of SEP holders seeking adjudication in their courts, but perhaps an increase in claims by manufacturers of standardized products.

This state of affairs can lead to what is termed a "race to the courthouse", as litigants rush to file suit in the jurisdiction most favorable to their position. Likewise, it may also shape the behavior of courts and institutions within jurisdictions that seek to mold their rules and procedure to attract litigation in a "race to the bottom".⁵⁴

Before *Unwired Planet*, U.S. courts appeared the most willing to give extraterritorial reach to their decisions. In *Microsoft v. Motorola*, the U.S. District Court for the Western District of Washington entered an injunction prohibiting Motorola from enforcing an injunction awarded by a German court against Microsoft pending the resolution of U.S. litigation regarding Motorola's compliance with its FRAND commitment.⁵⁵ At least two other U.S. courts have issued similar anti-suit injunctions in cases involving FRAND disputes.⁵⁶ Will courts in the UK now vie with those in the U.S. to be the first to prohibit parties from prosecuting actions in other jurisdictions? Will the U.S. and UK be joined by Germany, France, Japan, China, Korea and other major markets in this contest? In effect, any country whose market is large enough that the

http://www.vanityfair.com/news/business/2014/06/apple-samsung-smartphone-patent-war (describing litigation between Apple and Samsung across a dozen jurisdictions).

⁵² See, e.g., Brian J. Love & James Yoon, *Predictably Expensive: A Critical Look at Patent Litigation in the Eastern District of Texas*, 20 Stanford Tech. L. Rev. 1 (2017). The peculiar dominance of the E.D.Tex. in U.S. patent litigation may be coming to an end following the U.S. Supreme Court's recent decision in *TC Heartland LLC v. Kraft Foods Group Brands LLC*, 581 U.S. ___ (2017). *See* Ryan Davis, *What We Know about Patent Venue Post-TC Heartland*, Law360, May 23, 2018.

⁵³ The readiness of German courts to issue injunctions to patent holders was tempered somewhat in the case of SEPs subject to FRAND commitments by the European Court of Justice in *Huawei v. ZTE*, Eur. Court of Justice, Case C-170/13 (2015), in which a SEP holder may be found to abuse its dominant position in violation of TFEU 102 if it seeks to obtain an injunction when enforcing a FRAND-encumbered SEP without following a specified set of procedural steps outlined by the CJEU.

⁵⁴ See, e.g., Daniel J.H. Greenwood, *Democracy and Delaware: The Mysterious Race to the Bottom/Top*, 23 Yale L. & Policy Rev., Iss. 2, Art. 2 (2005) (discussing the view that the U.S. state Delaware adjusted its corporate law to attract business incorporations).

⁵⁵ Microsoft Corp. v. Motorola, Inc., 871 F. Supp. 2d 1089 (W.D. Wash. 2012), affd. 696 F.3d 872 (9th Cir. 2012).

⁵⁶ See Jorge L. Contreras & Michael A. Eixenberger, *The Anti-Suit Injunction – A Transnational Remedy for Multi-Jurisdictional SEP Litigation* in Cambridge Handbook of Technical Standardization Law: Patent, Antitrust and Competition Law (Jorge L. Contreras, ed., 2017) (describing anti-suit injunctions in *Microsoft v. Motorola, Vringo v. ZTE* and *TCL v. Ericsson*).

manufacturer is not willing to sacrifice it via an injunction could leverage the threat of an injunction to force parties to enter into a global agreement on the terms that its courts dictate. If so, a true race to the bottom may indeed emerge in cases involving FRAND and other global commitments.⁵⁷

F. The Patchwork Treatment of Injunctive Relief

One of the most controversial issues that has arisen in the context of FRAND litigation is whether the holder of a SEP subject to a FRAND commitment is permitted, under the terms of that FRAND commitment, to enjoin infringing product manufacturers from practicing that patent before they have obtained a license. A related question, which has arisen primarily in Europe, is whether seeking such an injunction constitutes a violation of competition law.

Some litigants have argued that a SEP holder, by making a FRAND commitment, implicitly agrees not to exclude others from the market, but instead agrees to collect only a reasonable royalty for the use of its SEPs. As a result, it has been argued in the U.S. that a SEP holder should automatically be barred from seeking injunctive relief under the Supreme Court's four-part test in *eBay Inc. v. MercExchange, L.L.C.*⁵⁸ In *Apple v. Motorola,* the Federal Circuit, considering this issue, held that while should not be a *per se* rule prohibiting the holder of a SEP from seeking an injunction, a SEP holder could have difficulty showing "irreparable harm" under the *eBay* test if it has previously made a FRAND commitment.⁵⁹

The U.S. antitrust agencies have also taken an interest in whether parties bound by FRAND commitments may seek injunctive relief. In 2011, the FTC wrote that "[a] prior [F]RAND commitment can provide strong evidence that denial of the injunction and ongoing royalties will not irreparably harm the patentee". And in 2012, the DOJ, exercising its merger control authority, approved three large patent acquisition transactions only after the relevant parties (Apple, Google, and Microsoft) agreed not to seek injunctions preventing the use of their FRAND-encumbered SEPs.

In late 2012 and 2013, the FTC brought actions under Section 5 of the FTC Act to address suspected violations of FRAND commitments by Robert Bosch GmbH⁶² and Google/Motorola.⁶³ Each of these cases hinged on the SEP holder's alleged attempt to obtain injunctive relief against a standardized product manufacturer. In each case, the SEP holder settled the action by

⁵⁷ For a more detailed discussion of the potential impact of these developments on global markets, see Contreras, *Global Markets, supra* note 26.

⁵⁸ 547 U.S. 388 (2006).

⁵⁹ 757 F.3d 1286, 1332 (Fed. Cir. 2014) (noting that "an injunction may be justified where an infringer unilaterally refuses a []RAND royalty or unreasonably delays negotiations to the same effect").

⁶⁰ Fed. Trade Comm'n, The Evolving IP Marketplace: Aligning Patent Notice and Remedies with Competition 235 (2011).

⁶¹ See Section x, infra.

⁶² Robert Bosch GmbH, 155 F.T.C. 713 (2013).

⁶³ In re. Motorola Mobility LLC & Google Inc., FTC Docket No. C-4410 (Jul. 23, 2013) (decision and order).

committing not to seek injunctive relief until it had exhausted other remedies. Despite these actions, there are signs that the DOJ may now have a different view regarding injunctions and FRAND-encumbered SEPs. In a recent speech, the head of the DOJ's Antitrust Division was critical of the Federal Circuit's decision in *Apple v. Motorola* and expressed skepticism in general about the denial of injunctive relief to SEP holders.⁶⁴

In contrast to the U.S., the national laws of many European countries, Germany in particular, provide that injunctions are issued as a matter of right once a property owner (i.e., a patent holder) establishes infringement (i.e., before validity and other issues are litigated). This strong presumption in favor of injunctions is offset by Article 102 of the Treaty on the Functioning of the European Union (TFEU), which prohibits the abuse of a dominant position. In some cases, dominance may be conferred by patent rights, SEPs in particular. Thus, it is possible that a patent holder's otherwise valid attempt to obtain an injunction against an infringing manufacturer could constitute a violation of TFEU 102 if the asserted patent is a SEP subject to a FRAND commitment.

The analytical framework in Europe for assessing whether the enforcement of a FRANDencumbered SEP constitutes an abuse of dominance was established by the European Court of Justice (CJEU) in Huawei v. ZTE. 65 In Huawei, the SEP holder sought an injunction against the implementer of a standard. The CJEU held that if a SEP holder possesses market dominance, then in order to avoid violating TFEU 102, the SEP holder must comply with a series of procedural steps. Likewise, in order to preserve its ability to challenge the SEP holder's seeking an injunction, the infringer must comply with a similar set of procedural steps. The combination of these behavioral requirements has been referred to as the *Huawei* "choreography". Since the *Huawei* decision, a number of cases in Germany and other EU member states have helped to clarify these requirements. For example, in Sisvel v. Haier (Germany 2015), NTT DoCoMo v. HTC (Germany 2016), Saint Lawrence v. Vodafone (Germany 2016), and Saint Lawrence v. Deutsche Telekom (Germany 2016), the manufacturer/infringer allegedly failed to comply with the procedural requirements set forth in Huawei v. ZTE. As a result, the courts entered injunctions against the infringers. In some cases, however (Sisvel v. Haier, St. Lawrence v. Deutsche Telekom), the injunctions were stayed on appeal, when the appellate courts questioned whether the SEP holders themselves complied with the *Huawei* procedures.

Further complicating the international picture with regard to injunctions for FRAND-encumbered SEPs, courts in China have recently issued a number of judicial interpretations setting forth principles relating to the grant of injunctive relief for SEPs, and have granted injunctive relief in two recent cases against non-Chinese manufacturers accused of infringing Chinese SEPs.⁶⁶

⁶⁴ Assistant Attorney General Makan Delrahim, Remarks at the USC Gould School of Law's Center for Transnational Law and Business, Nov. 10, 2017, https://www.justice.gov/opa/speech/assistant-attorneygeneral-makan-delrahim-delivers-remarks-usc-gould-school-laws-center

⁶⁵ Eur. Court of Justice, Case C-170/13 (2015).

⁶⁶ See [INPRECOMP Ch. 5].

Thus, courts around the world have developed markedly different interpretations of the effect of FRAND commitments on the ability of SEP holders to seek injunctive relief against standards implementers. This diversity of viewpoints begs the question: what, if anything, did SDO participants intend to commit themselves to when agreeing to make FRAND commitments to the SDO? Most SDO policies are silent regarding remedies in litigation, but the worldwide debate over injunctive relief has resulted in some important private resolutions by SDO participants.

As a private remedy, Injunctive relief may be waived by patent holders so long as they have acted without duress or anticompetitive intent. Such waivers occasionally appear in private contracts between commercial parties. Recently, such waivers have featured prominently in the standard-setting context. As noted above, in 2012 Apple, Google and Motorola each voluntarily committed not to seek injunctions under their SEPs in connection with DOJ approval of their patent-related acquisitions, and both Robert Bosch and Google/Motorola agreed not to seek injunctive relief against implementers of standards in their settlements with the FTC. But perhaps the most telling indication of the understanding held by many SDO participants with respect to injunctions can be found in the 2015 IEEE patent policy amendments. These amendments, among other things, require IEEE participants to forego injunctive relief against manufacturers of products compliant with IEEE standards except in certain limited circumstances.

G. Other SDO Policy Provisions

The principal focus of recent litigation concerning SDO patent policies has been either on injunctive relief or the interpretation of SDO FRAND licensing commitments, generally the royalty rates that comply with the FRAND commitment. However, there are numerous other provisions of SDO policies that may be treated differently under different national laws. While some of these have not yet resulted in significant litigation, it is worth considering the potential mischief that may arise from inconsistent treatment of these provisions by courts in different jurisdictions.

1. Binding Effect

By what legal mechanisms are SDO policies binding on SDO participants? Most courts and commentators rather cavalierly assert that SDO policies create binding contractual commitments on SDO participants. But this assertion fails to take into consideration the diversity of SDO forms and policy documents. As I have shown previously,⁶⁷ many SDOs do not create binding contractual agreements with their participants. Policies may be embodied in corporate bylaws and charter documents that members may be obligated to follow under principles of corporate law. Some SDOs request that participants make unilateral commitments regarding their intentions to license SEPs on FRAND terms —unilateral commitments that clearly lack the formal

⁶⁷ See Contreras, Market Reliance Theory for FRAND Commitments and Other Patent Pledges, 2015 UTAH L. REV. 479 (2015).

attributes of contract, at least under common law systems, and would have to be enforced under allied theories such as promissory estoppel.⁶⁸

A number of U.S. courts and agencies have rejected the notion of SDO policies as enforceable contracts. For example, an administrative law judge of the U.S. International Trade Commission (ITC) reasoned that ETSI's patent policy "is not a contract" and merely "contains rules to guide the parties in their interactions with the organization, other members, and third parties." Similarly, a U.S. federal district court has ruled that the Working Procedures of the 3GPP standards group were "too indefinite to support the formation of a contract." It is clear that SDO participants intend that SDO policies be binding. Yet the vagaries of national law and the diversity of SDO forms and documentation leave open the potential for opportunistic SDO participants to avoid the enforcement of these policies.

2. Transferability

What happens to a FRAND commitment when the original SDO participant that made it transfers the underlying SEP to a third party? Do such commitments travel with patents, binding their new owners, or are they binding only on the original promisor? The question has serious ramifications in view of the number of significant patent transfers that have occurred in recent years. Given the importance of FRAND commitments to markets dependent on technology standards, it is important that such commitments remain binding and enforceable even after the original pledgor transfers the relevant patents to a new owner. Yet private law rules vary in this regard.

Different legal theories have been applied the few times that this question has arisen in litigation. In 2008, the FTC brought an action against a Negotiated Data Solutions LLC (N-Data), non-practicing entity that acquired a SEP originally owned by National Semiconductor. Though National had committed to license the SEP to all implementers for a flat fee of \$1,000, N-Data announced that it would not honor this commitment. The FTC's action was grounded in Section 5 of the FTC Act which prohibits unfair methods of competition. The action was settled when N-Data entered into a consent decree with the FTC agreeing to honor National's original commitment. As a result, the FTC's claims were never adjudicated to a judicial resolution. The section is a property or the property of the FTC's claims were never adjudicated to a judicial resolution.

In 2011, Nortel Networks, a once-prominent Canadian contributor to telecommunications and computer networking standards, proposed the sale of numerous assets as part of its U.S. bankruptcy liquidation. These assets included approximately 6,000 patents, many of which appeared to cover standards developed at a range of SDOs.⁷³ Several manufacturers of

⁶⁸ See id.

⁶⁹ Certain Wireless Devices with 3G and/or 4G Capabilities & Components Thereof, No. 337-TA-868, 2014 WL 2965327 at *75 (U.S.I.T.C. June 13, 2014) (Final).

⁷⁰ TruePosition, Inc. v. LM Ericsson Tel. Co., 977 F. Supp. 2d 462, 470 (E.D. Pa. 2013).

⁷¹ Negotiated Data Solutions LLC, No. C-4234, 2008 WL 4407246, at *1–5 (F.T.C. Sept. 22, 2008).

⁷² See id. at *6–9.

⁷³ In re Nortel Networks Inc., No. 09-10138 (KG), 2011 WL 4831218, at *1 (Bankr. D. Del. July 11, 2011).

standardized products, together with the SDO IEEE, petitioned the U.S. bankruptcy court arguing that Nortel's sale, if conducted on a "free and clear" basis, as is typical in bankruptcy sales, could nullify Nortel's existing FRAND licensing commitments. Ultimately, the purchaser of the patents, Rockstar Bidco, a consortium including several large product vendors, agreed to abide by Nortel's prior licensing pledges. So the issue was not litigated to a precedential judicial decision.

In the context of merger approval, the U.S. DOJ closed its investigation of three significant patent acquisitions by Microsoft, Apple, and Google in February 2012 after each of them publicly committed, among other things, to honor FRAND commitments made by prior owners of the patents being acquired.⁷⁶ And in the realm of pure theory, some have proposed that SEPs be encumbered by FRAND commitments in the manner of servitudes on real property.⁷⁷

Thus, while agencies and courts in different contexts have implied that they would view FRAND commitments as binding on subsequent purchasers of SEPs, there does not appear to be binding legal precedent to this effect in the U.S. or elsewhere. As a result, several SDOs have recently amended their patent policies to provide more expressly that such binding effect exists following transfer. But what of the SDOs that have not made such amendments? And can it be assured that national legal regimes will honor the SDO policy provisions put in place to ensure that such commitments survive a transfer of underlying patents?

3. Third Party Beneficiary

In the case of FRAND commitments, a SEP holder commits to an SDO that it will grant licenses to all who wish to implement a standard. Because SDOs have proven reluctant to enforce such commitments directly against SEP holders, it has often fallen to implementers to enforce those FRAND commitments against the SEP holders who have made them. But because in most cases the SEP holder did not make a commitment directly to the implementer, the implementer and SEP holder lack privity of contract, and the implementer must bring suit as a "third party beneficiary" of the SDO-SEP holder commitment. Under U.S. law, courts have long recognized third party beneficiary claims, and at least two federal district courts have adopted this theory with respect to FRAND commitments.⁷⁹

⁷⁴ *Id*. at *2–3.

⁷⁵ *Id.* at *7.

⁷⁶ U.S. Dept. Justice, 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., Feb. 13, 2012, http://www.justice.gov/opa/pr/2012/February/12-at-210.html. *See also* Jorge L. Contreras, Guest Post: The February of FRAND, PATENTLY-O (Mar. 6, 2012), http://patentlyo.com/patent/2012/03/february-of-frand.html.

⁷⁷ Kesan

⁷⁸ See Block (2017)

⁷⁹ Microsoft Corp. v. Motorola, Inc., 854 F. Supp. 2d 993, 1002–03 (W.D. Wash. 2012); Apple, Inc. v. Motorola Mobility, Inc., 886 F. Supp. 2d 1061, 1085 (W.D. Wis. 2012).

However, application of the third-party beneficiary doctrine to FRAND commitments presents serious doctrinal challenges, both in the U.S. and elsewhere.⁸⁰ In fact, several countries, including the U.K. have never recognized the doctrine.⁸¹ Yet is seems clear that SDO participants making FRAND commitments intend that those commitments be binding and that implementers who would benefit from the licenses granted under such commitments be entitled to enforce SEP holders' commitments to grant such licenses, notwithstanding the vagaries of national and state law concerning third party beneficiaries.⁸²

H. A Lack of Precedent and Predictability

In today's global economy, product markets span the globe and worldwide product interoperability is increasingly expected in fields such as computing, networking, content distribution and telecommunications. The SDOs that develop standards to enable this degree of interoperability, by default, must operate internationally. Their participants come from dozens of countries around the world, particularly North America, Europe, Oceana, and Asia.⁸³ In many cases, the same individuals participate on behalf of their employers in multiple SDOs developing similar technologies. Even SDOs such as ETSI, which began as projects of regional or national governments have, by necessity, expanded to encompass an international membership.

The physical headquarters location of SDOs has thus become increasingly irrelevant to their operation and policy making. Why should the fact that one SDO is legally based in New York and another is legally based in Geneva affect the interpretation and enforcement of commitments made by the same individuals on behalf of the same firms acting in the same technology space with respect to the very same end products?

The examples discussed above illustrate that the national and state private law mechanisms that purport to govern SDO patent policies are inconsistent and sometimes at odds with one another. The result has been an interpretive patchwork that allows room for opportunistic parties to engage in forum shopping and makes planning more difficult for everyone else. Moreover, given the different approaches taken by different jurisdictions to these issues, an adjudication in one jurisdiction relating to a FRAND commitment is not likely to assist with interpretation of that same commitment in other jurisdictions. Given the global nature of markets for standardized products, this fragmentation along national and state boundaries is particularly pernicious.

⁸⁰ For a detailed discussion of the third party beneficiary theory as applied to FRAND commitments, see Contreras, *Market Reliance, supra* note 67, at x; J. Gregory Sidak, *A FRAND Contract's Intended Third Party Beneficiary*, 1 Criterion J. Innovation 1001 (2016).

⁸¹ See Vernon Valentine Palmer, The Paths to Privity: A History of Third Party Beneficiary Contracts at English Law 165–67 (1992); Melvin Aron Eisenberg, Third-Party Beneficiaries, 92 COLUM. L. REV. 1358, 1364–65 (1992); Jan Hallebeek, Contracts for a Third Party Beneficiary: A Brief Sketch from the Corpus Iuris to Present Day Civil Law (working paper 2007), https://research.vu.nl/ws/portalfiles/portal/2330470.

⁸² See Contreras, Market Reliance, supra note 67, at x.

⁸³ See, e.g., Jorge L. Contreras, *Divergent Patterns of Engagement in Internet Standardization: Japan, Korea and China*, 38 Telecom. Policy 916-934 (2014) (describing globalization of Internet standardization and increasing engagement of Asian firms).

What's more, there is not even predictable interpretation of identical SDO provisions from one SDO to the next, even within the same country. That is, each SDO purports to be an independent organization with a unique set of governing documents and policies. As such, most SDOs feel free to disregard guidance and interpretations of policy provisions that are issued by other SDOs. Some SDOs, in fact, vehemently defend their independence in declining to follow the interpretive lead of other SDOs, even where identical policy language is concerned.

Can this fragmentation be efficient? Why should the term "non-discriminatory" have different meanings depending on whether an SDO is based in New York or Sophia-Antipolis, or whether the court adjudicating that meaning is located in London or San Jose? This divergence is particularly senseless when the same individuals interact at these different SDOs on a weekly basis. A lack of consistency in the interpretation of common SDO provisions, even non-controversial ones, lends less predictability to the ordering of private affairs. The lack of consistent understandings of SDO policy provisions may give rise to more disputes regarding policy interpretation and result in less certainty regarding the outcome of disputes. All of these lead to higher transaction and litigation costs, thus disadvantaging smaller players.

Finally, it seems unlikely that this fragmented system can accurately reflect the understanding of individual SDO participants. Is it possible that these individuals adjust their behavior depending on the interpretations given to nearly identical SDO rules country by country, organization by organization? This cannot be the way that individual SDO participants conduct themselves, yet this is the reality imposed on them and their employers by the fragmented nature of private law mechanisms that guide interpretation of SDO policies.

I. A Lex Mercatoria for Standardization?

Let us conduct a thought experiment. Suppose that two engineers, call them Jacques and Mary, employed by different firms, each participate in two SDOs, one based in the U.S. and the other based in France. The patent policies of these SDOs are relatively similar. Further suppose that neither Jacques nor Mary is an attorney or an expert in legal doctrine, but that each of them has many years of experience developing technical standards and some familiarity with both the principles of patent law and his or her own employer's policies relating to patents. Assuming that neither Jacques and Mary, nor their companies, are at the moment embroiled in a dispute and view each other relatively neutrally, what can we assume about their understanding of the SDO's policies relating to certain topics?

Let us first consider the less controversial topics raised in Part G above. If asked, would Jacques and Mary agree that a FRAND commitment made with respect to a patent should continue if the patent is sold to a new owner? While nothing is certain, it is likely that they would agree that the FRAND commitment should, indeed, travel with the patent, even if they know nothing about Section 5 of the FTC Act or the law of property servitudes. What about the ability of a third party implementer to enforce a FRAND commitment against an SDO participant? Again, it is likely that our two engineer friends would agree that the implementer should be able to insist

that an SDO participant grant it a license on FRAND terms, even if they know nothing about the convoluted law surrounding third party contractual beneficiaries.

What about a more controversial topic? For example, the non-discrimination prong of the FRAND commitment. Would they agree that charging one implementer \$0.05 per unit and another implementer \$0.01 per unit for a SEP license is discriminatory? Perhaps they would. Or perhaps they, being thoughtful engineers, would want to know more, such as the relative sizes or unit volumes sold by these two implementers. Depending on the answers to these questions, they might or might not agree on a common position.⁸⁴

From the answers to these questions, we can sequentially build up a common body of understanding between Jacques and Mary as to many, but not all, issues. It is likely that if more engineers, also from different firms, were asked, some of them would agree with some of the common understandings of Jacques and Mary. As a result, we could, in theory, develop a body of policy understandings that is common across a large swath of the relevant stakeholders in the standards-development community.⁸⁵

This set of common understandings could be considered a sort of *lex mercatoria* – a system of rules administered and interpreted not by national and state courts, but by the expert practitioners of a particular trade.⁸⁶ As such, the common understanding of these policy provisions would supersede legal interpretations imposed by national or state law. In fact, it would be reasonable for legal tribunals to defer to such common trade understandings, as is frequently done in the commercial context.⁸⁷

What's more, if we conceptualize the set of policy rules enabling the development of standards across the globe as an interconnected network rather than a multiplicity of isolated nodes, we can begin to adopt learning and interpretation across SDOs, rather than compartmentalizing the interpretive activity of each SDO within itself. Thus, an SDO that gives meaning to a term not previously debated can, at minimum, influence the interpretive act of other SDOs in the network and, at most, serve as a precedent directly bearing on other SDOs' interpretation.

⁸⁴ An actual example of SDO divergence on a controversial topic can be found with respect to the definition of FRAND. As noted above, IEEE enacted policy amendments in 2015 which seek to clarify several aspects of its participants' FRAND commitments including the appropriate royalty base (SSPPU should be considered). In contrast, CENCENELEC in recent policy guidelines has expressly declined to offer such interpretive advice, taking the position instead that FRAND is a mere 'comity device' which cannot be specified in advance.

⁸⁵ For a discussion of the development of common understandings through the mechanism of "shared meaning analysis" in the context of consumer contracts, see Robin Bradley Kar & Margaret Jane Radin, Pseudo-Contract & Shared Meaning Analysis (working paper).

⁸⁶ See Louis L. Jaffe, Law Making by Private Groups, 51 HARV. L. REV. 201, 213 (1937).

⁸⁷ See id. First year students of property law in the U.S. are familiar with the nineteenth century case in which a Massachusetts court looked to the traditional practices of the Nantucket whaling industry to resolve a dispute over the oil extracted from a whale's beached carcass. Ghen v. Rich, 8 F. 159 (D. Mass. 1881). See also Mark A. Lemley, The Law and Economics of Internet Norms, 73 CHICAGO-KENT L. REV. 1257, 1263–64 (1998); Contreras, Private Ordering, supra note 2, at x.

Of course, as noted above, uniformity will not be achievable as to every SDO policy provision, and some contentious issues, such as the appropriate base for FRAND royalty calculations, may remain disputed across SDOs. As a result, different SDOs may adopt different meanings for these disputed terms through whatever internal voting and consensus procedures they wish. Nevertheless, it is likely that there is a significant body of SDO policy provisions that do not suffer from broad disagreement, and which could readily form the basis for a standardization *lex mercatoria*.

How we would use such a *lex mercatoria* remains open to debate. It could intervene in the legal system in a number of ways: as a more or less authoritative input to existing judicial processes, or as a body of adjudicative principles of its own, administered and enforced outside national judicial processes, perhaps through an industry-based transnational tribunal of some kind. But the actual implementation of such a system is less important than the vision of a unified body of policy that it invites. Given the increasing divergence of national and organizational policy interpretations and understandings in the standardization world, the prospect of a common base of understanding driven by SDO participants rather than courts and policy makers cannot help but be attractive.