

SJ Quinney College of Law, University of Utah

Utah Law Digital Commons

Utah Law Faculty Scholarship

Utah Law Scholarship

2-2018

The Global Standards Wars: Patent and Competition Disputes in North America, Europe and Asia

Jorge L. Contreras

Follow this and additional works at: <https://dc.law.utah.edu/scholarship>



Part of the [Intellectual Property Law Commons](#)

The Global Standards Wars: Patent and Competition Disputes in North America, Europe and Asia¹

Jorge L. Contreras²
Professor of Law
University of Utah
S.J. Quinney College of Law
Salt Lake City, Utah, USA

Updated Version: April 7, 2018

Abstract

Over the past decade there has been an increasing number of disputes concerning the enforcement and licensing of patents covering technical standards. These disputes have taken on a global character and often involve litigation in North America, Europe and Asia. And while many of the parties are the same in actions around the world, courts and governmental agencies in different jurisdictions have begun to develop distinctive approaches to some of these issues. Thus, while areas of convergence exist, national laws differ on important issues including the availability of injunctive relief for FRAND-encumbered SEPs, the appropriate method for calculating FRAND royalties, the competition implications of violating a FRAND commitment, and the contours of the FRAND non-discrimination obligation. Thus, at least until greater international harmonization is achieved, firms doing business globally must remain particularly attuned to the evolving legal landscape in this area. This paper presents a brief overview of recent disputes that have arisen around the world with respect to the acquisition, enforcement and licensing of patents that are essential to technical interoperability standards. It is intended as an introduction and covers only the highlights of many complex and controversial subjects. The reader who wishes to obtain a more comprehensive treatment of the topics covered in this paper is referred to the additional references listed in the Appendix.

¹ © Jorge L. Contreras 2017-18. This paper is based on the author's lecture of the same title delivered at Keio University, Tokyo, Japan, on December 7, 2017. An earlier version of this article was translated into Japanese by Mr. Yoshihiko Kido, Patent Attorney admitted in Japan, and Professor Yuko Kimijima, Keio University, with the author's permission. The Japanese version appeared in the Keio University Journal of Law, Politics and Sociology. A Chinese translation of the current version of this article is being prepared by Prof. Dr. Liyang Hou of KoGuan Law School, Shanghai Jiao Tong University.

² A compendium of the author's work on technical standards, intellectual property and other topics can be found at <http://ssrn.com/author=1335192>.

Contents

- I. Standards, Standardization and Patents
- II. Injunctive Relief and Standards Essential Patents
 - A. Injunctions in the United States
 - 1. *eBay* Framework
 - 2. The ITC and Patent Exclusion Orders
 - 3. Injunctions and U.S. Antitrust Agencies
 - B. Injunctive Relief and FRAND in Europe: *Huawei v. ZTE*
 - C. Injunctions in China
 - D. Private Waivers of Injunctive Relief
- III. FRAND Royalty Disputes
 - A. FRAND Royalties in the U.S. and the *Georgia-Pacific* Framework
 - B. Bottom-Up versus Top-Down Royalty Determinations
 - C. Competition versus Contractual Approaches: Unwired Planet
 - D. Global Licenses and FRAND Rates
- IV. Non-Discrimination
 - A. Similarly-Situated Licensees
 - B. Hard-Edged Non-Discrimination
 - C. Level Discrimination
- V. Global Competition Enforcement and Guidance
 - A. India
 - B. China
 - C. Korea
 - D. Taiwan
 - E. Japan
 - F. European Union
 - G. United States
- Conclusion

I. Standards, Standardization and Patents

Technical interoperability standards affect all aspects of the modern networked economy. Every smartphone, laptop, and digital file, along with thousands of other high-tech and low-tech products, depends on standards to operate within a network of devices sold by thousands of different vendors. The existence of these standards, and the widespread product interoperability that they enable, give rise to significant market efficiencies known as “network effects.” It is widely acknowledged that standards can increase innovation, efficiency, and consumer choice; foster public health and safety; and enable efficient and reliable international trade.³

Most of the thousands of technical standards currently deployed throughout the world were developed collaboratively by market participants in voluntary standards-development organizations (SDOs).⁴ SDOs range from officially recognized bodies that address a diverse range of standardization projects (e.g., the International Organization for Standardization (ISO)), to large, well-established private sector groups that address the standardization needs of major industry segments (e.g., the European Telecommunications Standards Institute (ETSI), Internet Engineering Task Force (IETF), and Institute for Electrical and Electronics Engineers (IEEE)) to smaller groups often referred to as “consortia” that focus on one or a handful of related standards (e.g., the HDMI Forum, Bluetooth Special Interest Group, USB Forum). Because of the significant market benefits that are made possible by technical standards, a high degree of cooperation among competitors has long been tolerated by antitrust and competition law authorities, which might otherwise discourage such large-scale coordination efforts among competitors.⁵

Many of the technological features specified by standards can be patented. Such patents are typically obtained by those participants in a standardization activity that make technical contributions to the standard (SDOs themselves almost never obtain patent protection over their standards). However, to the extent that patents cover technologies that are “essential” to the implementation of a standard (“standards-essential patents” or “SEPs”), concerns can arise.

Ordinarily, if the manufacturer of a product that allegedly infringes a patent is unable, or does not wish, to obtain a license on the terms offered by the patent holder, that manufacturer has three choices: to stop selling the infringing product, to design around the patent, or do neither and risk liability as an infringer. With standardized products, however, the manufacturer’s choices are more limited, as designing around the patent may be impossible or may make the product non-compliant with the standard (e.g., who would sell a smartphone today without Wi-Fi capability?). Moreover, once a

³ U.S. DEP’T OF JUSTICE & FED. TRADE COMM’N, ANTITRUST ENFORCEMENT AND INTELLECTUAL PROPERTY RIGHTS: PROMOTING INNOVATION AND COMPETITION 33 (2007) [hereinafter DOJ/FTC ANTITRUST & IPR].

⁴ So-called *de facto* standards, which are developed by a single company and later gain market acceptance, are not addressed by this paper.

⁵ DOJ/FTC Antitrust & IPR, p. 33.

standard is approved and released by an SDO, manufacturers may make significant internal investments on the basis of the standard. In such cases, the cost of switching from the standardized technology to an alternative technology may be prohibitive (a situation often referred to as “lock-in”). Once manufacturers are locked into a particular standardized technology, the holders of SEPs covering that technology may be able to extract fees from them that exceed the value of their patented technology, simply because the manufacturer is unable to switch to an alternative technology without incurring substantial costs. This phenomenon has been termed patent “hold-up” and is discussed extensively in the literature. In addition to harming potential competitors, patent hold-up can have other undesirable market effects, including raising prices for consumers and hindering technological innovation.

The risk of hold-up is likely to increase as the number of parties holding SEPs that cover a single standard rises. Complex technological products may implement dozens, if not hundreds of standards, each of which may be covered by hundreds or thousands of patents held by a wide range of parties. As such, the aggregation of royalty demands by multiple patent holders could lead to cost-prohibitive burdens on implementing standards-compliant products. This situation is sometimes referred to as “royalty stacking”. Royalty stacking can arise “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.”⁶

In order to mitigate the threats of patent hold-up and royalty stacking, many SDOs have adopted internal policies that are binding on their participants. These policies fall into two general categories: 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. These disclosures are often made available to the public via the Internet.⁷ Early disclosure of SEPs enables standards developers to decide whether or not to approve a design that is covered by these SEPs, to choose an alternative, non-infringing technology, to modify a draft standard before it is approved to eliminate the infringing feature, or to seek licenses to the patented technology.

Licensing policies, on the other hand, require SEP holders to grant manufacturers of standardized products licenses to use their SEPs on terms that are either royalty-free (RF) or “fair, reasonable and nondiscriminatory” (FRAND). These commitments are intended to assure product manufacturers that they will be able to obtain all SEP licenses necessary to manufacture a standardized product. FRAND or RF licensing commitments are required of all SDOs accredited by the American National Standards Institute (ANSI) and are also utilized widely among other SDOs around the world.

⁶ *Ericsson, Inc. v. D-Link Sys., Inc.*, 773 F.3d 1201, 1229 (Fed. Cir. 2014).

⁷ For example, IETF (<https://datatracker.ietf.org/ipr/>), ETSI (<https://ipr.etsi.org>), and ISO (<https://www.iso.org/iso-standards-and-patents.html>) all have publicly-accessible online databases containing SEP disclosures by their participants.

Despite the appeal of FRAND commitments, a consistent, practical, and readily enforceable definition of FRAND has proven difficult to achieve.⁸ Virtually no SDO defines precisely what this phrase means, and many SDOs, including IEEE and IETF, affirmatively disclaim any role in establishing, interpreting, or adjudicating the reasonableness of FRAND licensing terms. In fact, some SDOs go so far as to prohibit discussions of royalties and other licensing terms at SDO meetings, making the development of a consensus view difficult. Such ambiguity, it is argued, may permit opportunistic SEP holders to insist on licensing terms, particularly royalty rates, that are not bounded by meaningful limitations. This lack of certainty has contributed to the litigation over FRAND commitments. Such disputes have arisen when a SEP holder and a product manufacturer cannot agree on the terms of a license and there is disagreement whether the patent holder's proposed royalty is "reasonable." However, FRAND disputes can also involve the reasonableness of non-royalty terms, such as requirements that the vendor license-back its own patents to the patent holder ("reciprocity") or that the license be "suspended" if the manufacturer threatens the patent holder with litigation ("defensive suspension"). When parties cannot agree on license terms, no license is granted and any product that conforms to a standard may infringe the patent holder's SEPs. The parties are thus left in a difficult and ambiguous situation, which has led to a vigorous debate within industry, government, and academia regarding the scope and contour of FRAND obligations. Some of the specific issues in dispute are discussed in the following sections.

II. Injunctive Relief and Standards Essential Patents

An injunction is a judicial remedy under which certain actions can be prohibited through the power of the court. In the case of patents, an injunction is typically sought by a patent holder in order to prevent an infringer from continuing to make, use or sell infringing goods or services. Injunctive relief is available in one form or another in most developed countries.

A. Injunctions in the United States

1. The *eBay* Framework

The analysis of injunctive relief in U.S. patent cases takes its current form from the 2006 decision of the U.S. Supreme Court in *eBay Inc. v. MercExchange, L.L.C.*⁹ In *eBay* the Supreme Court held that the decision to grant or deny an injunction is an act of judicial discretion that must be exercised in accordance with "well-established principles of equity" (p. 391). The Court articulated a four-factor equitable test to be applied by courts considering the grant of injunctive relief. This test requires the plaintiff to demonstrate:

⁸ The remainder of this discussion will focus on FRAND commitments, as the interpretation of RF commitments is significantly less controversial.

⁹ 547 U.S. 388 (2006).

1. that it has suffered an irreparable injury;
2. that remedies available at law [i.e., monetary damages] are inadequate to compensate it 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 the award of an injunction.

In view of these factors, some commentators and litigants in the U.S. have argued that a SEP holder, by making a FRAND commitment, implicitly concedes that remedies available at law (i.e., monetary damages) *must* be adequate to compensate it for the infringement of its SEPs by parties implementing a standard. They reason that, by committing to grant a license on FRAND terms, the SEP holder has agreed not to exclude others from the market, but will instead collect only a “reasonable” royalty to compensate it for the infringement of its SEPs. As a result, they argue that the second *eBay* factor can *never* be satisfied by a patent holder that has made a FRAND commitment, and therefore such a patent holder should generally be precluded from seeking injunctive relief to prevent others from operating under its SEPs. The interplay of FRAND commitments with the U.S. law of patent injunctions has given rise to several judicial decisions as well as guidance from regulatory and enforcement agencies in the U.S.

In *Microsoft Corp. v. Motorola, Inc.*,¹⁰ Motorola sought an injunction to prevent Microsoft’s continued infringement of Motorola’s patents covering two industry standards (IEEE’s 802.11 and ITU’s H.264) as to which Motorola made FRAND commitments. The court evaluated Motorola’s request for an injunction in view of the four *eBay* factors and determined that Motorola did not suffer an irreparable injury or show that monetary damages would be inadequate to compensate it for the infringement. Accordingly, the court denied Motorola’s request for an injunction.

In *Realtek Semiconductor Corp. v. LSI Corp.*,¹¹ the U.S. District Court for the Northern District of California held that a SEP holder breached its FRAND commitment by seeking injunctive relief against an implementer of a standard *before* the patent holder offered a license to the implementer. Again, the injunction was denied.

These district court decisions laid the groundwork for the Court of Appeals for the Federal Circuit to consider the issue of injunctive relief in *Apple, Inc. v. Motorola, Inc.*¹² In this case, the trial court denied Motorola’s motion for an injunction on SEPs allegedly infringed by Apple’s products. In rejecting Motorola’s arguments, the trial court reasoned that a patent holder making a FRAND commitment, by definition, acknowledges that a monetary royalty is adequate compensation, thereby eliminating any argument that the infringement would cause the patent holder irreparable harm.

¹⁰ 2012 U.S. Dist. LEXIS 170587 (W.D. Wash. 2012).

¹¹ 946 F. Supp.2d 998 (N.D. Cal. 2013).

¹² 757 F.3d 1286 (Fed. Cir. 2014).

Judge Reyna, writing for the Federal Circuit, upheld the denial of the injunction, but offered different reasoning. Though the Federal Circuit panel was divided on some issues, all three members of the panel concurred that “[t]o the extent that the district court applied a *per se* rule that injunctions are unavailable for SEPs, it erred” (p. 1331). The court reasoned that the *eBay* framework “provides ample strength and flexibility for analyzing [FRAND committed patents and industry standards in general]”, and found no reason to create “a separate rule or analytical framework for addressing injunctions for [FRAND-committed patents]” (pp. 1331-32). The court acknowledged that under the *eBay* framework, “a patentee subject to FRAND commitments may have difficulty establishing irreparable harm” (p. 1332). However, “an injunction may be justified where an infringer unilaterally refuses a [FRAND royalty or unreasonably delays negotiations to the same effect” (id.). With this in mind, the court went on to apply the *eBay* “irreparable harm” test and rejected Motorola’s request for an injunction.

Chief Judge Rader, dissenting-in-part, argued that a genuine issue of material fact existed regarding Apple’s conduct with respect to the acceptance of a FRAND license from Motorola (i.e., did Apple act in good faith or “hold out” by refusing to accept a FRAND license). Accordingly, Judge Rader would have remanded the case for further fact finding on this issue (pp. 1333-34). Judge Prost, on the other hand, concurring-in-part and dissenting-in-part, disagreed with the majority’s suggestion that an alleged infringer’s refusal to negotiate a license could serve as a basis for issuing an injunction on a FRAND-encumbered patent (p. 1342). She reasoned that while a potential licensee’s bad faith negotiation might justify an award of enhanced damages, the *eBay* “irreparable harm” test would nevertheless weigh against granting an injunction on a FRAND-encumbered patent (id.). However, Judge Prost conceded that an injunction might be appropriate if the patentee were unable to collect the damages to which it is entitled, for example, if the potential licensee refuses to pay an adjudicated damage award or is beyond the reach of the court (p. 1343).

2. The ITC and Patent Exclusion Orders

The U.S. International Trade Commission (ITC) is an independent federal agency responsible for protecting U.S. commerce by barring the importation of infringing goods. In recent years, the ITC has become a popular venue for patent infringement suits. The ITC has no authority to award monetary damages. The principal remedy that the ITC awards is an exclusion order, which prohibits goods that are found to infringe a U.S. intellectual property right from entering the country.¹³ In this sense, exclusion orders granted by the ITC are similar to injunctions issued by U.S. courts.

But because the ITC is not a court, it is not bound by Supreme Court precedent. Thus, the ITC is not required to adhere to the *eBay* factors when considering a request for an exclusion order. However, in considering whether to grant an exclusion order, the ITC is required by its own governing statute to consider “the effect of such exclusion upon the public health and welfare, competitive conditions in the United States economy,

¹³ 19 U.S.C. §337(a)(1)(A).

the production of like or directly competitive articles in the United States, and United States consumers”.¹⁴ This requirement has generally been referred to as the ITC’s “public interest” test.

In several recent cases, the ITC has considered requests for exclusion orders against products infringing one or more FRAND-committed SEPs. In the dispute between Apple and Samsung,¹⁵ the ITC issued an exclusion order in 2013 prohibiting Apple from importing devices infringing certain Samsung FRAND-committed SEPs into the U.S. But in response, the U.S. Trade Representative (USTR), acting on behalf of the Obama administration, disapproved (thereby reversing) the ITC’s exclusion order against Apple, reasoning that the ITC did not act on the basis of a sufficient factual record regarding, *inter alia*, “information on the standards essential nature of the patent at issue ... and the presence or absence of patent hold-up or reverse hold-up”.¹⁶ The USTR’s disapproval of the ITC’s exclusion order against Apple took many by surprise. In subsequent cases, the ITC has more extensively considered factors relating to SEPs when conducting its public interest analysis.¹⁷

Several other U.S. federal agencies have expressed views regarding the ITC’s issuance of exclusion orders for FRAND-encumbered SEPs. In 2013, the U.S. Department of Justice (DOJ) and U.S. Patent and Trademark Office (PTO) issued a joint Policy Statement relating to the consideration of the public interest with respect to ITC exclusion orders.¹⁸ It states that “the remedy of an injunction or exclusion order may be inconsistent with the public interest ... where an exclusion order based on a F/RAND-encumbered patent appears to be incompatible with the terms of a patent holder’s existing F/RAND licensing commitment” (p. 6). In this Policy Statement, the DOJ and PTO acknowledge circumstances in which an injunction or exclusion order *may* be an appropriate remedy. These include cases in which the infringer refuses to accept the FRAND license being offered, refuses to pay a reasonable royalty, refuses to engage in negotiation to determine FRAND terms, or is not subject to the jurisdiction of a court that could award damages.

The U.S. Federal Trade Commission (FTC) has made similar arguments regarding the circumstances under which the public interest would be served by the issuance of an ITC exclusion order against a product infringing a FRAND-committed SEP. In a written Statement to the ITC,¹⁹ the FTC reasoned that the ITC’s public interest factors “support

¹⁴ 19 U.S.C. § 1337(d)(1).

¹⁵ *In re Certain Electronic Devices, Including Wireless Communication Devices, Portable Music and Data Processing Devices, and Tablet Computers*, ITC Investigation No. 337-TA-794

¹⁶ Letter from Ambassador Michael B.G. Froman, U.S. Trade Representative to Hon. Irving A. Williamson, Aug. 3, 2013.

¹⁷ Such cases include *In re Certain Wireless Devices with 3G and/or 4G Capabilities and Components Thereof*, ITC Investigation No. 337-TA-868 (Jun. 13, 2014) (relating to Interdigital).

¹⁸ U.S. Dep’t of Justice & U.S. Patent & Trademark Office (DOJ-PTO). 2013. Policy Statement on Remedies for Standards-Essential Patents Subject to Voluntary F/RAND Commitments.

¹⁹ Fed. Trade Comm’n, Third Party U.S. Federal Trade Commission’s Statement of the Public Interest on *In re Certain Wireless Communication Devices, Portable Music & Data Processing Devices, Computers and Components Thereof*, Inv. No. 337-TA-745 at 5 (Jun. 6, 2012).

denial of an exclusion order unless the holder of the RAND-encumbered SEP has made a reasonable royalty offer” (p. 4). The FTC has also suggested that the ITC should consider ways to lessen the impact of exclusion orders in a manner that is supportive of the public interest. Such methods might include delaying the effectiveness of exclusion orders in order to give the infringer time to design around the asserted patent, and carefully circumscribing the scope of orders to cover only infringing articles.

3. Injunctions and U.S. Antitrust Agencies

The DOJ and FTC have each taken an interest in the propriety of parties bound by FRAND commitments seeking injunctive relief. In 2011, the FTC suggested that under *eBay*, injunctive relief might not always be justified in the FRAND context, writing that “[a] prior [F]RAND commitment can provide strong evidence that denial of the injunction and ongoing royalties will not irreparably harm the patentee”.²⁰ And in 2012, the DOJ approved three large patent acquisition transactions only after the involved parties (Apple, Google, and Microsoft) committed not to seek injunctions preventing the use of FRAND-encumbered SEPs.

In late 2012 and 2013, the FTC brought two actions under Section 5 of the FTC Act to address suspected violations of FRAND commitments. In the first such action, the FTC investigated Robert Bosch GmbH in connection with its proposed acquisition of a firm called SPX.²¹ According to the complaint, SPX participated in an SDO developing standards for automotive cooling systems. Despite having made a FRAND commitment to the SDO, SPX asserted two patents covering the SDO’s standards against suspected infringers and then sought injunctive relief to prevent future sales of infringing products. The FTC argued that SPX’s attempt to obtain injunctive relief in the face of its FRAND commitment was coercive, and thereby constituted an unfair method of competition in violation of the Act. Bosch settled the action by committing that SPX would no longer seek injunctive relief in this context.

The second such action was brought against Motorola Mobility and Google.²² In that case, Motorola (later acquired by Google) held patents essential to practice standards promulgated by IEEE, ITU, and ETSI. Motorola participated in, and made FRAND commitments to, each of these SDOs. Nevertheless, in separate suits asserting these patents against Apple and Microsoft, Motorola sought exclusion orders at the ITC and injunctions in federal court to prevent future sales of standards-compliant products, even though both defendants were allegedly willing to acquire licenses to Motorola’s patents. The FTC asserted that Motorola’s attempt to enjoin sales of Apple and Microsoft products using its standards-essential patents constituted an unfair method of competition in violation of Section 5. The dispute was settled after Google agreed not to seek injunctive relief against an infringer of FRAND-committed patents unless the infringer was beyond the jurisdiction of the U.S. courts, stated in writing that it would not accept a

²⁰ Fed. Trade Comm’n, *The Evolving IP Marketplace: Aligning Patent Notice and Remedies with Competition* 235 (2011).

²¹ *Robert Bosch GmbH*, 155 F.T.C. 713 (2013).

²² *In re. Motorola Mobility LLC & Google Inc.*, FTC Docket No. C-4410 (Jul. 23, 2013) (decision and order).

license of the patent, refused to enter into a license agreement determined by a court or arbitrator to comply with the FRAND requirement, or failed to provide written confirmation of an offer of a FRAND license.

Despite these actions, there are signs that the Department of Justice in the Trump Administration may 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.²³

B. Injunctive Relief and FRAND in Europe: *Huawei v. ZTE*

Under the national laws of many European countries, Germany in particular, injunctions are issued as a matter of right once a property owner (i.e., a patent holder) establishes an infringement of its property right. However, this strong presumption in favor of injunctions is offset by the effect of 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, and SEPs in particular. Thus, it is possible that a patent holder's otherwise valid attempt to obtain an injunction against a product manufacturer could constitute a violation of Article 102 if the asserted patent is a FRAND-encumbered SEP.

The analytical framework for assessing abuse of dominance with SEPs subject to FRAND commitments was established by the European Court of Justice (ECJ) in *Huawei v. ZTE*.²⁴ In *Huawei*, the SEP holder sought an injunction against an infringer. The ECJ held that if a SEP holder possesses market dominance, then in order to avoid violating Article 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 behavior under Article 102, the infringer must comply with a similar series of procedural steps. The combination of these behavioral requirements has been referred to as the *Huawei* "choreography". The required steps in this choreography are summarized below:

1. patentee must notify the defendant of the alleged infringement;
2. defendant must show its willingness to license on FRAND terms;
3. patentee must make a specific, written offer for a license on FRAND terms;
4. defendant must diligently respond to that offer without delaying tactics;
5. If defendant rejects the patentee's offer, it must make a counter-offer on FRAND terms; and
6. If patentee rejects the counter-offer, the defendant must provide appropriate security (including for past use) and be able to render an account of its acts of use.

²³ Assistant Attorney General Makan Delrahim, Remarks that the USC Gould School of Law's Center for Transnational Law and Business, Nov. 10, 2017, <https://www.justice.gov/opa/speech/assistant-attorney-general-makan-delrahim-delivers-remarks-usc-gould-school-laws-center>

²⁴ Eur. Court of Justice, Case C-170/13 (2015).

In the few years since the *Huawei* decision, a number of cases in Germany and other jurisdictions have helped to clarify these requirements. In several cases, including *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 failed to comply with the procedural requirements set forth in *Huawei v. ZTE*. These failures included failing to make a specific counter-offer and failing to post monetary security against the royalty demand. As a result, the courts in these cases approved the entry of an injunction against the infringer. In some of these cases, however (*Sisvel v. Haier*, *St. Lawrence v. Deutsche Telekom*), these injunctions were stayed by appellate courts, which found that the SEP holders themselves may not have complied with the *Huawei* procedures. In particular, though lower courts appeared to allow SEP holders to seek an injunction if their initial offers were not obviously non-FRAND, the appellate courts in Germany required an affirmative finding that the offers were FRAND in order to support an injunction.

C. Injunctions in China

The first notable SEP-related case in China was decided in 2013 and involved the enforcement of patents by InterDigital Corporation (IDC) against Chinese manufacturer Huawei. IDC was found to have abused its dominant position by demanding an unreasonably high royalty from Huawei and in enforcing its patents against Huawei both in China and abroad. The court held that IDC violated the Chinese Antimonopoly Law (AML) when it sought an injunction against Huawei, which had demonstrated a willingness to obtain a license on FRAND terms and acted in good faith during the license negotiation. This case was generally viewed as indicating that Chinese courts would take a dim view of attempts by SEP holders to seek injunctions against potential willing licensees.

This general view shifted beginning in 2016 when the Supreme People's Court (SPC) released a set of judicial interpretations relating to patent infringement cases.²⁵ Article 24 of the interpretations provides guidance regarding SEPs. In particular, it states that if a SEP holder deliberately fails to comply with its obligation to grant a FRAND license to a manufacturer, and the manufacturer is not clearly at fault, then the SEP holder should not be entitled to an injunction against the manufacturer. There are, however, several limitations with respect to this interpretation. First, it does not address the availability of injunctions under other circumstances, such as when both parties negotiated in good faith, both were acting in bad faith, or the patent holder was acting in good faith and the implementer was acting in bad faith. Moreover, the interpretation

²⁵ Interpretations (II) of the Supreme People's Court on Several Issues concerning the Application of Law in the Trial of Patent Infringement Dispute Cases (effective as of April 1, 2016), available at <http://www.beijingeastip.com/type-news/interpretation-by-the-supreme-peoples-court-on-some-issues-concerning-the-application-of-laws-in-the-trial-of-patent-infringement-dispute-cases-ii-judicial-interpretation-2016-no-1-3/>.

appears to relate only to recommended national and industrial standards, without mentioning compulsory governmental standards or voluntary international standards.

Additional guidelines regarding patent infringement cases were issued by the Beijing High People's Court in 2017.²⁶ Articles 149-153 of these guidelines deal with patents disclosed in recommended national, industrial or local standards. Articles 152-153 specifically set forth how injunctive relief should be awarded when neither party is at fault, or both parties are at fault, during FRAND licensing negotiations. The Beijing guidelines also provide that if neither party is at fault, the infringer must deposit the amount of its proposed royalty with the court in order to avoid an injunction.

Article 152 sets forth a list of specific criteria that the court may use to assess whether the patent holder willfully violated its FRAND obligations, including the following:

1. failing to notify the accused infringer of the infringement in writing and failing to specify the scope and manner of infringement;
2. failing to provide patent information or specific licensing conditions in written form in accordance with business practices and trading customs, after the accused party explicitly expresses a willingness to engage in licensing negotiations;
3. failing to provide the accused infringer with a time limit for reply in accordance with business practices and trading customs;
4. obstructing or interrupting the licensing negotiation without justifiable reasons;
5. alleging clearly unreasonable conditions during the negotiation, which results in failure to reach a licensing agreement.

In March 2017, the Beijing IP Court granted an injunction to Chinese patent holder Iwncomm against Sony's distribution of wireless handsets that allegedly infringed patents covering the Chinese WAPI standard for wireless networking. The court found that Sony acted in bad faith by stretching out licensing negotiations for six years (so-called "reverse hold-up"). Among the factors that weighed against Sony were its attempted use of comparable licenses based on an international standard (i.e., not the Chinese standard at issue), and its unwillingness to sign a nondisclosure agreement before obtaining claim charts from Iwncomm.²⁷

Most recently, in January 2018, the Intermediate People's Court in Shenzhen issued an injunction against Samsung's sale of 4G telecommunications devices that

²⁶ Beijing High People's Court Guidelines for Patent Infringement Determination (Apr. 20, 2017) available at <http://www.cpahklttd.com/EN/info.aspx?n=20170424155321600369>

²⁷ A claim chart is a document that maps the particular features of a product to the specific patent claims that are alleged to be infringed. Such charts are often quite detailed.

allegedly infringed two Huawei patents.²⁸ As in the Iwncomm case, the court appears to have based its decision, at least in part, on the alleged bad faith behavior of the infringing party. These cases, coupled with the recent interpretive guidance issued by the Supreme People's Court and Beijing High People's Court, clearly indicates a more permissive attitude toward injunctions in China.

D. Private Waivers of Injunctive Relief

Injunctive relief is a remedy available to private litigants, and as such may be waived by sophisticated parties acting without duress or anticompetitive intent. Such waivers occasionally appear in private contracts between commercial parties.²⁹ Recently, such waivers have featured prominently in the standard-setting context. As noted in Part II.A.3 above, Apple, Google and Motorola each voluntarily committed not to seek injunctions under standards-essential patents in connection with DOJ approval of their patent-related acquisitions. And in 2015, IEEE approved revisions to its internal policies to require its members to forego injunctive relief against manufacturers of products compliant with IEEE standards except in certain limited circumstances. These private waivers, if reflecting the desires of SDO participants, can effectively eliminate disputes over the use of injunctions in the SEP context.

III. FRAND Royalty Disputes

One of the most complex issues arising with respect to FRAND licensing is the royalty level that complies with a SEP holder's commitment to grant a license on terms that are "fair and reasonable". As noted above, most SDOs offer little guidance regarding the actual FRAND royalty level. Thus, the determination of FRAND royalty rates is typically left to bilateral negotiations among SEP holders and manufacturers of standardized products. Not surprisingly, there is sometimes disagreement whether a royalty rate is compliant with the SEP holder's FRAND commitment. In some cases, a SEP holder and a manufacturer may disagree whether the royalty rate demanded by the SEP holder for such a license is FRAND, and the manufacturer may sue the SEP holder for breaching its FRAND commitment. In other cases, a SEP holder may sue a manufacturer for infringing its SEPs, and the manufacturer may raise as an affirmative defense the SEP holder's obligation to grant the manufacturer a license on FRAND terms. In both of these scenarios, one of the central questions is whether the royalty rate that the SEP holder sought to charge the manufacturer was FRAND. These questions have been handled somewhat differently among jurisdictions.

²⁸ At the time of this writing, a translation of the Shenzhen decision is not available. A summary of the court's reasoning was reported in Jacob Schindler, *Huawei scores SEP injunction in Shenzhen suit against Samsung Electronics*, IAM Blog, Jan. 11, 2018.

²⁹ *E.g.*, Uniform Commercial Code § 2-719(1)(a) permits contracting parties to "provide for remedies in addition to or in substitution for those provided in this Article and may limit or alter the measure of damages recoverable under this Article".

A. FRAND Royalties in the U.S. and the *Georgia-Pacific* Framework

In the U.S., the assessment of damages in most civil cases, including patent and contract cases, is a question of “fact” reserved to the jury under the Seventh Amendment to the U.S. Constitution. Litigants may waive their right to a jury determination, but only if both parties agree to do so. As a result, FRAND royalty determinations in U.S. cases have been a combination of judicial “bench” decisions and jury verdicts.

Under the U.S. Patent Act, the principal measure of damages for patent infringement is a “reasonable royalty”.³⁰ As a result, several courts that have calculated FRAND royalty rates have looked to traditional methodologies for determining reasonable royalty damages. The calculation of reasonable royalty damages in the U.S. has generally followed the 15-factor framework established in 1970 by *Georgia-Pacific Corp. v. U.S. Plywood Corp.*³¹ However, because this framework assumes that the patent holder and the infringer have no pre-existing relationship, and that the patent holder is not otherwise constrained in its ability to determine its royalty rate, many of the assumptions

³⁰ 35 U.S.C. § 284 (2016) (first enacted in 1952).

³¹ 318 F. Supp. 1116, 1120 (S.D.N.Y. 1970), *modified and aff'd*, 446 F.2d 295 (2d Cir. 1971), *cert. denied*, 404 U.S. 870 (1971). The fifteen *Georgia-Pacific* factors are:

1. The royalties received by the patent holder for licensing the patent, proving or tending to prove an established royalty.
2. The rates paid by the licensee for the use of other similar patents.
3. The nature and scope of the license, whether it is exclusive or nonexclusive, or restricted or non-restricted in terms of territory or customers.
4. The patent holder’s established policy of maintaining its patent monopoly by licensing the use of the invention only under special conditions designed to preserve the monopoly.
5. The commercial relationship between the patent holder and licensees, such as whether they are competitors in the same territory in the same line of business or whether they are inventor and promoter.
6. The effect of selling the patented article in promoting sales of other products of the licensee; the existing value of the invention to the patent holder as a generator of sales of non-patented items; and the extent of such derivative or “convoyed” sales.
7. The duration of the patent and the term of the license.
8. The established profitability of the patented product, its commercial success and its current popularity.
9. The utility and advantages of the patented technology over any old modes or devices that had been used for achieving similar results.
10. The nature of the patented invention, its character in the commercial embodiment owned and produced by the licensor, and the benefits to those who used it.
11. The extent to which the infringer used the invention and any evidence probative of the value of that use.
12. The portion of the profit or selling price that is customary in the particular business or in comparable businesses.
13. The portion of the realizable profit that should be credited to the invention as distinguished from any non-patented elements, manufacturing process, business risks or significant features or improvements added by the infringer.
14. The opinion testimony of qualified experts.
15. The amount that the patent holder and a licensee would have agreed upon at the time the infringement began if they had reasonably and voluntarily tried to reach an agreement.

underlying the *Georgia-Pacific* analysis do not apply in cases involving FRAND-encumbered SEPs.

In *Microsoft v. Motorola*, Judge Robart of the Federal District Court for the Western District of Washington sought to determine both a reasonable royalty and a range of reasonable royalties for Motorola's patents covering two industry standards.³² In doing so, Judge Robart looked first to the reasonable royalty damages analysis in *Georgia-Pacific*, including its hypothetical negotiation framework. He reasoned that the parties to a hypothetical negotiation would set RAND³³ royalty rates by "looking at the importance of the SEPs to the standard and the importance of the standard and the SEPs to the products at issue" (p.19). However, he also noted that "[f]rom an economic perspective, a RAND commitment should be interpreted to limit a patent holder to a reasonable royalty on the economic value of its patented technology itself, apart from the value associated with incorporation of the patented technology into the standard" (id.)

Ultimately, Judge Robart adopted a modified version of the *Georgia-Pacific* framework in which he changed twelve of the fifteen factors to take Motorola's RAND commitment into account. After establishing this analytical framework, Judge Robart looked to several "comparable" sets of license agreements, including some patent pools, to evaluate the basis for Motorola's RAND royalty rates.

The RAND royalty rates determined by Judge Robart were significantly lower than the rates originally demanded by Motorola. For example, with respect to SEPs covering the H.264 audio-video encoding standard, Motorola initially demanded a royalty of 2.25% of the end price of Microsoft products embodying the standard. Thus, for a low-end \$500 computer, the per-unit royalty would have been \$11.25. The court, in assessing the value of Motorola's patents to the H.264 standard and the value of the standard to the overall products in which it was embodied, determined a FRAND royalty rate of \$0.00555 per unit. Based on these results, Motorola's initial royalty demand to Microsoft was more than 2,000 times higher than the "reasonable" royalty rate determined by the court.

In *Innovatio IP Ventures*, Innovatio, a patent assertion entity (PAE) holding twenty-three SEPs covering the 802.11 Wi-Fi standards sent demand letters to hundreds of coffee shops, motels, supermarkets and other retail establishments that offered public Wi-Fi access (thereby allegedly infringing the SEPs), in each case seeking a modest monetary settlement.³⁴ The case was consolidated and the court considered Innovatio's proposed royalty of 6% of the end price of products such as wireless access points, laptops, tablets and bar code scanners, resulting in potential royalties ranging from \$3.39 to \$36.90 per unit (pp. 74-75). In assessing the appropriate RAND royalty rate, Judge Holderman of the Northern District of Illinois largely followed the framework described in *Microsoft* for the determination of RAND royalties. In particular, he applied a

³² *Microsoft*, 2013 U.S. Dist. LEXIS 60233.

³³ Some SDOs use the term RAND in lieu of FRAND. For purposes of this paper, these terms will be considered to be synonymous.

³⁴ 2013 U.S. Dist. LEXIS 144061 at *38 (N.D. Ill. 2013).

modified *Georgia-Pacific* analysis that simulates a hypothetical bilateral negotiation in the context of RAND obligations. After assessing the value of Innovatio’s SEPs, the court held that the appropriate FRAND royalty was only \$0.0956 per unit, making Innovatio’s initial royalty proposals between 35 and 386 times higher than the adjudicated FRAND royalty rate.

In *Ericsson v. D-Link*,³⁵ the FRAND royalty rate was determined by a jury. Thus, the Federal Circuit, on appeal, was limited to reviewing the trial court’s instructions to the jury. In the appeal, the Federal Circuit reversed and remanded the jury verdict based, in part, on the district court’s instruction to apply the fifteen *Georgia-Pacific* factors without modification. The Federal Circuit affirmed that, “[i]n a case involving RAND-encumbered patents, many of the *Georgia-Pacific* factors simply are not relevant; many are even contrary to RAND principles”.³⁶ The Federal Circuit noted several respects in which the *Georgia-Pacific* factors were both irrelevant and contrary to the RAND commitment under consideration. Thus, like Judge Robart in *Microsoft*, the Federal Circuit criticized the use of several specific *Georgia-Pacific* factors when considering royalties subject to RAND commitments.

The Federal Circuit in *Ericsson v. D-Link* made several other important rulings. In particular, it held that an accused infringer seeking to raise the issue of hold-up to a jury must introduce actual evidence of the SEP holder’s hold-up behavior. Because this evidence was not introduced by the alleged infringer, the court was justified in not instructing the jury on the question of hold-up.³⁷ The court used similar reasoning with respect to the question of royalty stacking and held that actual evidence of stacking must be introduced in order for the question to be considered by the jury.³⁸

B. Bottom-Up versus Top-Down Royalty Determinations

In most of the cases discussed in Part III.A above, the courts determined FRAND royalties in a “bottom-up” manner. That is, they calculated the royalty due to the patent holder based primarily on the alleged value of the patents in suit, without regard to the overall number or value of patents covering the standard in question or the results reached by other courts addressing the same standards. In fact, as the Federal Circuit emphasized in *Ericsson v. D-Link*, a court may not even instruct the jury regarding royalty stacking without actual evidence of stacking.³⁹ When such bottom-up approaches are used, royalties due to individual patent holders are determined in an uncoordinated manner independently of one another, and the total royalty burden associated with a standard emerges only as the sum of its individual components. The problem with such

³⁵ *Ericsson, Inc. v. D-Link Sys., Inc.*, 773 F.3d 1201 (Fed. Cir. 2014).

³⁶ *Id.* at 1230.

³⁷ *Id.* at 1234.

³⁸ *Id.* at 1234-35. The author has questioned this analysis and conclusion on the basis that it could lead SEP holders to engage in a “race to the courthouse” in order to be the first to seek and collect damages from particular manufacturers. See Jorge L. Contreras, *Standards, Royalty Stacking and Collective Action*, 3 CPI ANTITRUST CHRON. 6, Mar. 2015.

³⁹ 773 F.3d at 1234-35.

bottom-up approaches is that courts may use different royalty criteria and factors case by case, even when patents covering the same features of the same standard are involved, thus yielding inconsistent and potentially excessive results. For example, as shown in Table 1, in 2013 and 2014, five different U.S. district courts calculated royalties for a total of 35 SEPs covering IEEE’s Wi-Fi standards.

TABLE 1
U.S. Litigated FRAND Royalty Determinations for 802.11 (Wi-Fi) Standard-Essential Patents

Case	Court (year) ⁴⁰	Royalty
<i>Microsoft v. Motorola</i> ⁴¹	W.D. Wash. (2013)	\$0.035 per unit
<i>In re Innovatio</i> ⁴²	N.D. Ill. (2013)	\$0.0956 per unit
<i>Ericsson v. D-Link</i> ⁴³	E.D. Tex. (2013)	\$0.15 per unit
<i>Realtek v. LSI</i> ⁴⁴	N.D. Cal. (2014)	0.12% of net sales
<i>CSIRO v. Cisco</i> ⁴⁵	E.D. Tex. (2014)	Up to \$1.90 per unit

Source: Jason R. Bartlett and Jorge L. Contreras, *Rationalizing FRAND Royalties: Can Interpleader Save the Internet of Things*, 36 REVIEW OF LITIGATION 285, 288 (2017).

The aggregate royalty for these 35 SEPs amounted to approximately 4.5% of the total sale price of a typical \$50 Wi-Fi router. Yet it has been estimated that there are approximately 3,000 patents covering the Wi-Fi standard. If the royalty for each of these patents were calculated in a similarly uncoordinated, bottom-up manner, the aggregate patent royalty on a Wi-Fi router could easily surpass the product’s total selling price by at least an order of magnitude. And even if, as suggested by some commentators, this effect might be reduced because many of these SEPs are held by the same large firms,⁴⁶ the total number of firms holding SEPs covering Wi-Fi is still significantly larger than the number of adjudicated cases to date.

Given the growing recognition of these issues, commentators, courts and policy makers have become increasingly attracted to mechanisms that take into account the *aggregate* royalty burden associated with a standard when considering the royalties owed to any particular patent holder. Thus, as noted by the European Commission in a recent communication regarding SEPs, “an individual SEP cannot be considered in isolation. Parties need to take into account a reasonable aggregate rate for the standard, assessing

⁴⁰ Cited decisions are to the federal district court decision in which the royalty was determined. Subsequent proceedings and appeals are not listed.

⁴¹ *Microsoft*, 2013 U.S. Dist. LEXIS 60233, at *297–98.

⁴² No. 1:11CV-09308, 2013 U.S. Dist. LEXIS 144061, at *183 (N.D. Ill. Oct. 3, 2013)..

⁴³ *Ericsson Inc. v. D-Link Sys.*, 6:10-CV-473, 2013 U.S. Dist. LEXIS 110585 at *72 (E.D. Tex. Aug. 6, 2013), *aff’d* in part, *vacated* in part, *rev’d* in part by *Ericsson Inc. v. D-Link Sys.*, 773 F.3d 1201 (Fed. Cir. 2014).

⁴⁴ Jury Verdict Form, *Realtek Semiconductor Corp. v. LSI Corp. & Agere Sys., LLC*, No. 12-CV-3451, Dkt. No. 324 (N.D. Cal. Feb. 26, 2014).

⁴⁵ *CSIRO v. Cisco Sys.*, No. 6:11-cv-343, 2014 U.S. Dist. LEXIS 107612, at *51 (E.D. Tex. July 23, 2014).

⁴⁶ See Anne Layne-Farrar & Koren W. Wong-Ervin, *An Analysis of the Federal Circuit’s Decision in Ericsson v. D-Link*, 3 CPI ANTITRUST CHRON. 6, Mar. 2015.

the overall added value of the technology.⁴⁷ Royalty calculation methodologies that seek to address these issues can broadly be termed “top-down” approaches because they look first to the overall level of royalties associated with a standard and then allocate a portion of this total to individual patent holders.⁴⁸ Top-down approaches implicitly recognize that, when multiple patents cover a single standard, the rate charged by one SEP holder will necessarily affect the rates that the other SEP holders are able to obtain from a single manufacturer. Top-down royalty approaches offer the following advantages to the parties and to the market as a whole:

- **Accuracy** – the total value attributable to a standard is computed deliberately, not through the uncoordinated aggregation of independent, serial cases
- **Fairness to patentees** – every patent holder obtains its fair share of the total royalty attributable to the standard
- **Fairness to licensees** – licensees are not subject to royalty stacking with multiple suits by different patent holders
- **Precedent** – aggregate royalties are already calculated in patent pools and this methodology is well-understood

The court in *Innovatio* was among the earliest to adopt a top-down methodology to calculate FRAND royalties. It first determined, based on expert testimony, that the average profit margin on the sale of a Wi-Fi chip during the relevant period was 12.1%. It then multiplied this percentage by the average price of a Wi-Fi chip (\$14.85), yielding an average total profit of \$1.80 per chip. The court reasoned that a chip manufacturer would spend no more than its total profit on patent royalties, and therefore equated the aggregate royalty for *all* Wi-Fi SEPs to the chip maker’s total profit. It thus held that the aggregate per-product royalty attributable to the Wi-Fi standard should be \$1.80, and then apportioned a fraction of this total to the plaintiff.⁴⁹

In *Samsung v. Apple Japan*⁵⁰, the Japanese Intellectual Property High Court held that the aggregate royalty burden for the 3G UMTS standard should not exceed 5%. It then allocated a portion of this total royalty to Samsung’s asserted UMTS-essential patent based on the total number of SEPs likely to be essential to the standard. Unlike the court in *Innovatio*, the Japanese court relied on public statements and informal agreements among industry participants supporting an aggregate 5% royalty cap for the UMTS standard. Taking this evidence into account, the court reasoned that “many owners of the UMTS standard essential patents support the 5% aggregate royalty cap with a view to preventing the aggregate cap from being excessively high.”

⁴⁷ European Commission, Communication From the Commission to the European Parliament, the Council and the European Economic and Social Committee Setting out the EU approach to Standard Essential Patents, Brussels, 29.11.2017 COM(2017) 712 final.

⁴⁸ For a more detailed discussion of Top-Down approaches, see Jorge L. Contreras, *Aggregated Royalties for Top-Down FRAND Determinations: Revisiting ‘Joint Negotiation’*, 62(4) ANTITRUST BULLETIN 690-709 (2017), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3051502

⁴⁹ 2013 U.S. Dist. LEXIS 144061 at *83.

⁵⁰ *Apple Japan Godo Kaisha v. Samsung Electronics Co., Ltd.*, IP High Court of Japan, 2013 (Ne) 10043 (May 16, 2014).

Likewise, the UK High Court (Patent) in *Unwired Planet v. Huawei*⁵¹ applied a top-down methodology to calculate FRAND royalties due to the SEP holder. Under the top down methodology used by the court, the FRAND royalty equals $T \times S$, where T is the total aggregate SEP royalty burden of a particular standard on a product (i.e., the percentage of a smartphone's price that should be charged for all patents covering the standard), and S is the share of that aggregate royalty that is allocable to the SEP holder (Unwired Planet). To calculate " T ", the court considered eight public statements made by Ericsson (the original owner of the patents asserted by Unwired Planet) and other holders of SEPs covering the relevant standards. He then calculated " S ", Unwired Planet's share of the relevant SEP value, using a variety of counting and filtering methodologies proposed by the parties' experts, including a filter for the likely essentiality of the patents in the asserted portfolio. The court used the resulting royalty rate as a cross-check to verify a more traditional comparables-based royalty calculation methodology.⁵²

And most recently, the U.S. District Court for the Central District of California in *TCL v. Ericsson*⁵³ used a top-down approach to assess FRAND royalties for a portfolio of patents covering the 2G, 3G and 4G wireless telecommunications standards. Like the courts in *Unwired Planet* and *Apple Japan*, the California court based the aggregate rates for these standards on various public statements and press releases made by Ericsson. These statements supported an aggregate royalty of 5% on the 2G and 3G standards and a rate between 6% and 10% on the 4G standard.⁵⁴ While the court acknowledges that this method "is not perfect",⁵⁵ one of its merits is its dependence on statements made by Ericsson itself to induce the market to adopt standards covered by its own SEPs.⁵⁶ The court's endorsement of a top-down royalty calculation methodology in this case, following the similar endorsements in Japan and the UK, may suggest that top-down methodologies are gaining ground on the "hypothetical negotiation" approaches discussed in Part III.A above

⁵¹ [2017] EWHC 711 (Pat) (Apr. 5, 2017).

⁵² The court in *Unwired Planet* offers two possible methods of calculating the FRAND royalty, one based on an analysis of comparable license rates, the other based on a top-down approach. In the comparables comparison, the fact that Unwired Planet obtained each of its asserted SEPs from Ericsson was convincing proof that Ericsson's licenses qualified as sufficiently comparable, while most other licenses (i.e., those not involving Ericsson) were found not to be suitable comparables. After identifying an appropriate set of comparable licenses, the court reasons that the appropriate FRAND royalty rate for Unwired Planet's SEP portfolio was the rate charged by Ericsson for its own SEP portfolio, scaled to represent Unwired Planet's smaller number of patents.

⁵³ *TCL Communications v. Ericsson*, Memorandum of Findings of Fact and Conclusions of Law (C.D. Cal., Dec. 21, 2017, SACV 14-341 JVS (DFMx) and CV 15-2370 JVS (DFMx)).

⁵⁴ *Id.* at *19-26.

⁵⁵ *Id.* at *25.

⁵⁶ *Id.* See Jorge L. Contreras, *A Market Reliance Theory for FRAND Commitments and Other Patent Pledges*, 2015 UTAH L. REV. 479 (2015) (discussing inducement and "market reliance" on FRAND commitments).

C. Competition versus Contractual Approaches: *Unwired Planet*

In *Unwired Planet v. Huawei*,⁵⁷ Justice Colin Birss of the UK High Court (Patents) made several important observations and rulings tied to EU competition law principles. First, Justice Birss rules, as a matter of law, that there is a *single* royalty rate that qualifies as FRAND for any given set of SEPs and products. This approach runs counter to the FRAND range computed in U.S. cases such as *Microsoft v. Motorola*. This being said, he also concludes that it would *not* be an abuse of dominance under TFEU 102 or the CJEU's holding in *Huawei v. ZTE* for a SEP holder to offer a rate that is different from the precise FRAND rate, so long as it is not *excessively* so. That is, an abuse of dominance will not be found unless an offer "is so far above FRAND as to act to disrupt or prejudice the negotiations themselves".⁵⁸

Justice Birss also addresses the behavior of the potential licensee in FRAND negotiations. If the licensee engages in deliberate delay tactics or other unreasonable behavior to avoid entering into a license (hold-out or reverse hold-up), it is less likely that the SEP holder will be found to possess a dominant position for competition law purposes.⁵⁹

D. Global Licenses and FRAND Rates

In *Unwired Planet*, Unwired Planet offered Huawei a worldwide license under its asserted SEPs. Huawei responded that it only wished to negotiate a license under Unwired Planet's UK patents. In evaluating the reasonableness of Unwired Planet's worldwide license offer, Justice Birss observed that "the vast majority" of SEP licenses in the industry, including all of the comparable licenses introduced at trial, were granted on a worldwide basis. He then observed that Unwired Planet's patents were issued in forty-two countries, while Huawei's operations extended to fifty-one countries. Against this backdrop, he concluded that "a licensor and licensee acting reasonably and on a willing basis would agree on a worldwide licence".⁶⁰ In contrast, country-by-country licensing would be "madness",⁶¹ and that Huawei's insistence on a UK-only license could not be considered FRAND. Accordingly, the court ruled that, under these facts, a FRAND license is necessarily a *worldwide* license.

The global scope of the license determined in *Unwired Planet* invites national courts to set royalty rates for SEPs across the globe.⁶² Will the first court to hear a particular case now try to resolve the worldwide dispute between the parties? Will the

⁵⁷ [2017] EWHC 711 (Pat) (Apr. 5, 2017).

⁵⁸ *Id.* at ¶765.

⁵⁹ *Id.* at ¶806(12).

⁶⁰ *Id.* at ¶543.

⁶¹ *Id.* at ¶544.

⁶² These issues are discussed in greater detail in Jorge L. Contreras, *Global Markets, Competition and FRAND Royalties: The Many Implications of Unwired Planet v. Huawei*, 16 ANTITRUST SOURCE, August, 2017.

FRAND rates set by a particular national court be respected by courts in other jurisdictions evaluating damages claims for past infringement, or will each national court feel compelled to conduct its own FRAND royalty calculation? It is possible that the willingness of judges in particular jurisdictions to set favorable (high) worldwide FRAND rates will begin to attract patent holders to those jurisdictions, much as U.S. patent holders were once attracted to the patent-friendly District Court for the Eastern District of Texas.⁶³ By the same token, jurisdictions that gain reputations for setting unfavorable (low) FRAND rates may attract implementers to their courts. Will a new “race to the bottom” thus emerge, in which litigants seek out the national courts most likely to produce judgments in their favor?⁶⁴ These issues will need to be addressed internationally and, ideally, in a coordinated fashion in the near future.

IV. Non-Discrimination

The non-discrimination (ND) prong of the FRAND commitment is important, but has received far less attention from courts and commentators than royalty disputes. The most thorough recent discussions of non-discrimination appears in *Unwired Planet v. Huawei* and *TCL v. Ericsson*.

A. Similarly-Situated Licensees

There is a general consensus that in order to comply with the non-discrimination prong of the FRAND commitment, a SEP holder must treat “similarly situated” licensees in a similar manner.⁶⁵ Several commentators have understood this constraint to allow a SEP holder to charge different royalty rates to implementers based on their size or market share (often with the understanding that larger players are likely to sell more licensed products and thus pay higher levels of royalties). In *Unwired Planet*, the court reasons that a FRAND royalty rate should be set based on the value of the licensed patents, not on the size of other characteristics of the licensee (§ 175). Thus, “all licensees who need the same kind of licence will be charged the same kind of rate” (*id.*) and “[s]mall new entrants are entitled to pay a royalty based on the same benchmark as established large entities” (§ 806(8)).

Likewise, in *TCL v. Ericsson*, Judge Selna concludes that similarly situated firms are “all firms reasonably well-established in the world market” [for telecommunications

⁶³ The reign of the E.D.Tex. 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).

⁶⁴ See Jorge L. Contreras, *Global Markets, Competition and FRAND Royalties: The Many Implications of Unwired Planet v. Huawei*, 16 ANTITRUST SOURCE, August, 2017 (discussing the implications of global FRAND resolution in a single court).

⁶⁵ For a detailed discussion of the non-discrimination prong of FRAND, see Jorge L. Contreras & Anne Layne-Farrar, *Non-Discrimination and FRAND Commitments* in CAMBRIDGE HANDBOOK OF TECHNICAL STANDARDIZATION LAW: COMPETITION, ANTITRUST, AND PATENTS, Ch. 12 (Jorge L. Contreras, ed., Cambridge Univ. Press: 2017).

products].⁶⁶ The court expressly excludes from this group “local kings” – firms that sell most of their products in a single country (e.g., India’s Karbonn and China’s Coolpad).⁶⁷ The firms that the court finds to be similarly situated to TCL are Apple, Samsung, Huawei, LG, HTC and ZTE.⁶⁸ Ericsson argued that Apple and Samsung are not similar to TCL given their greater market shares and brand recognition, but the court rejects this argument, reasoning that “the prohibition on discrimination would mean very little if the largest, most profitable firms could always be a category unto themselves simply because they were the largest and most profitable firms”.⁶⁹

B. Hard-Edged Non-Discrimination

In *Unwired Planet*, Justice Birss next asks what happens if, after a FRAND rate is agreed between a SEP holder and an implementer, the implementer discovers that the SEP holder has, previously or subsequently, granted more favorable terms (i.e., a lower royalty rate) to another “similarly situated” implementer? Has the SEP holder violated its nondiscrimination commitment? Interestingly, the court rules that a SEP licensee cannot challenge a license granted to it on FRAND terms if it later discovers that a similarly-situated licensee is paying a lower rate for the same patents *unless* the difference would “distort competition” between the two licensees.⁷⁰ In reaching this conclusion, the court rejects the notion that the ND prong of FRAND implies a “hard-edged” obligation that places an absolute ceiling on the rate that a SEP holder may charge to other licensees. It justifies this reasoning under competition law principles, noting that a competition law violation would not occur without a competitive distortion. This reasoning seemingly conflates the competition law effects of violating a FRAND commitment, and the private “contractual” meaning of the FRAND commitment itself. Whether other courts will adopt this competition-based reasoning remains to be seen.

Perhaps following the UK court’s lead, in *TCL v. Ericsson*, Ericsson argued that in order for an instance of discrimination to violate its FRAND commitment, the discrimination must have the effect of “impairing the development of standards”.⁷¹ But Judge Selva takes a different view, holding that discrimination in violation of a FRAND commitment can be found so long as an *individual* firm is harmed. He expressly rejects the application of a competition-based standard, which requires harm to competition rather than harm to a competitor, to the analysis of a FRAND commitment.⁷² In this respect, courts in the UK and U.S. have diverged. Given that both the *Unwired Planet* and *TCL* decisions have been appealed, it remains to be seen whether this trans-Atlantic gap will continue.

⁶⁶ *TCL v. Ericsson*, slip op. at 56.

⁶⁷ *Id.* at 59.

⁶⁸ *Id.* at 58.

⁶⁹ *Id.* at 61.

⁷⁰ *Unwired Planet* at ¶ 501.

⁷¹ *TCL v. Ericsson*, slip op. at 61.

⁷² *Id.* at 91.

C. Level Discrimination

In addition to the questions addressed in these cases, there are several additional issues concerning the non-discrimination prong of FRAND. One of the most hotly debated of these is whether a FRAND commitment requires a SEP holder to license all applicants, or whether SEP holders may refuse to license certain categories of potential licensees (usually “upstream” component vendors) so that they may instead license other categories of licensees (usually “downstream” product vendors that purchase components from upstream vendors). This approach is largely motivated by the doctrine of patent exhaustion, under which a patent holder may collect a royalty only once per patented article. Thus, if a standardized technology is implemented in a chip, the SEP holder may collect a royalty either from the manufacturer of the chip, the assembler of the board on which the chip resides, the producer of the smartphone in which the board is installed or the user of the smart phone that utilizes the chip. But it cannot collect royalties from more than one of these parties in the supply chain. The SEP is “exhausted” once a product is sold by an authorized licensee, and the SEP holder cannot collect royalties from further downstream users of the patented technology.⁷³

There is thus a significant debate regarding the ability of SEP holders, under their FRAND commitments, to refuse to grant licenses to upstream component manufacturers who seek SEP licenses. Courts and commentators are divided on this issue. The U.S. Court of Appeals for the Ninth Circuit held in *Microsoft v. Motorola* that a SEP holder, in its declarations to the ITU, promised to “grant a license to an unrestricted number of applicants on a worldwide, non-discriminatory basis”.⁷⁴ This statement implies that such level discrimination is not permissible. Likewise, in a 2016 remedial order against Qualcomm, the Korean Fair Trade Commission required that Qualcomm grant FRAND licenses under its SEPs to any component manufacturer requesting one.⁷⁵ A similar commitment to universal access was adopted by the IEEE in recent amendments to its intellectual property policy.⁷⁶

But others have argued that the “non-discrimination” prong of FRAND does *not* require SEP holders to offer licenses to every applicant, but only to avoid discrimination

⁷³ From a purely economic standpoint, the level at which a SEP holder elects to license its SEPs should not matter, so long as the SEP holder is free to adjust its royalty rate based on the level at which it is licensing. For example, a 1% royalty on a \$500 smart phone yields the same amount as a 20% royalty on a \$10 chip (i.e., \$5.00). It is unlikely that a chip vendor and a smart phone vendor would be viewed as “similarly situated”, making this form of differential pricing permissible under the non-discrimination prong of FRAND. By the same token, it might be *unreasonable* for a chip vendor to insist on paying only the 1% royalty paid by the smart phone vendor, given the very different markets in which they operate. This is in contrast to applying the same 1% royalty to all smart phone vendors, whether they sell their end units for \$100 or \$800 – at least according to the court in *TCL v. Ericsson*, producers at the same market tier should be considered “similarly situated”.

⁷⁴ *Microsoft Corp. v. Motorola, Inc.* (9th Cir. 2012, p.884).

⁷⁵ Korea Fair Trade Comm’n, Press Release–KFTC Imposes Sanctions Against Qualcomm’s Abuse of SEPs of Mobile Communications – Imposes 1.03 Trillion Won, the Highest Penalty Surcharge Ever Handed to an Individual Company by the KFTC and Remedies on Unfair Business Models (December 28, 2016).

⁷⁶ Inst. Electrical & Electronics Engineers, Inc. IEEE Standards Board Bylaws (December 2016), Sec. 6.2(b).

within the class of applicants that the SEP holder chooses to license. SEP holders who refuse to license component vendors have argued that by instead licensing such component vendors' downstream customers, they have, in effect, "indirectly licensed" the component vendors, and that refusing to the license component vendors does not discriminate against competitors.⁷⁷ In other words, so long as no component vendors receive licenses, no one component maker is placed at a competitive disadvantage. This approach was seemingly validated by the district court in *Ericsson v. D-Link*, which held that Ericsson did not violate its non-discrimination covenant by offering licenses only to vendors of "fully compliant" products and refusing to license chip and component vendors.⁷⁸

V. Global Competition Enforcement and Guidance

In addition to the private litigation discussed above, antitrust and competition authorities around the world have actively been issuing guidance regarding SEP licensing and enforcement and bringing enforcement actions to remedy suspected abuses connected with the licensing of SEPs.⁷⁹

A. India

In India, Ericsson has since 2011 been engaged in a series of SEP infringement actions against Indian and Chinese manufacturers of mobile communication devices. Courts hearing these cases have awarded damages and, in some cases, injunctive relief against these manufacturers. In response to these actions, several of the alleged infringers filed complaints with the Competition Commission of India (CCI) alleging, *inter alia*, that by bringing these infringement actions, Ericsson abused a dominant position created by its SEPs. As of this writing, no substantive ruling has been made as to these issues.

B. China

There are a number of regulatory and enforcement bodies in China with an active interest in standardization: the Standards Administration of China (SAC), which serves as China's principal standard-setting body, the State Administration for Industry and Commerce (SAIC), which has promulgated regulations on abuse of dominance in the IPR field under China's Antimonopoly Law (AML),⁸⁰ and the National Development and Reform Commission (NDRC), which has responsibility for enforcement of the AML.

⁷⁷ See *Ericsson v. D-Link* (E.D. Tex. 2013, p.*80) ("By licensing end product manufacturers, Ericsson believed it was indirectly licensing chip manufacturers.").

⁷⁸ *Id.* at *82).

⁷⁹ See also Section II.A.3, above, relating to U.S. enforcement agency actions against parties seeking injunctions under FRAND-encumbered SEPs.

⁸⁰ Regulation on the Prohibition of Conduct Eliminating or Restricting Competition by Abusing Intellectual Property Rights (Apr. 2015).

In 2013, NDRC initiated an investigation of InterDigital Corporation's (IDC) practices regarding SEP licensing, following litigation between IDC and Huawei. IDC was alleged to discriminate in its licensing practices against Chinese manufacturers and otherwise abuse its dominant position. The investigation was resolved in 2014 with IDC's commitment to discontinue various challenged practices.

In 2013, NDRC also initiated an investigation of Qualcomm for abuse of dominance, including discriminatory and excessive SEP pricing, and impermissible bundling of SEPs and non-SEPs. In 2015 NDRC imposed a fine on Qualcomm of approximately US\$975 million and also ordered Qualcomm to cease certain anticompetitive practices in China.

C. Korea

The Korean Fair Trade Commission (KFTC) has been active in monitoring and regulating SEP licensing in Korea for several years. In 2014, the KFTC issued Amended Guidelines Regarding the Unfair Exercise of Intellectual Property Rights (effective 23 Mar 2016), which established several categories of suspect activity pertaining to SEPs. Potential abuses by SEP holders include seeking injunctive relief against a willing licensee and unreasonably refusing to license on FRAND terms. The Guidelines also focus on conduct by non-practicing entities (NPEs). With regard to SEPs, potential abuses by NPEs include imposing excessive licensing fees, refusing to honor prior FRAND commitments on SEPs and "privateering" (acquiring SEPs from operating companies for the purpose of enforcing them against others, while the operating companies retain some financial interest in the outcome of the enforcement).

The KFTC has also brought two major enforcement actions relating to SEP licensing against Qualcomm. The first, in 2009, resulted in a fine of approximately US\$208 million for allegedly overcharging chip customers for software code. The second action, which concluded in 2016, involved allegations that Qualcomm refused to license chip manufacturers in violation of its FRAND obligations, engaged in unfair licensing practices relating to its SEPs, and unfairly demanded royalty-free grant-back licenses from its licensees. The action resulted in a fine against Qualcomm of approximately US\$853 million.⁸¹

D. Taiwan

The most recent enforcement action against Qualcomm to result in a significant penalty was brought by the Taiwanese Fair Trade Commission. It imposed a fine of approximately US\$774 million against Qualcomm for allegedly exercising a monopoly

⁸¹ Korea Fair Trade Comm'n, Press Release—KFTC Imposes Sanctions Against Qualcomm's Abuse of SEPs of Mobile Communications – Imposes 1.03 Trillion Won, the Highest Penalty Surcharge Ever Handed to an Individual Company by the KFTC and Remedies on Unfair Business Models (December 28, 2016).

position in the market for wireless chips, licensing its technology in violation of antitrust law, and harming competition through its overall business model.

E. Japan

Agencies in Japan have been particularly active in developing policies around SEPs and FRAND licensing. In January 2016, the Japan Fair Trade Commission (JFTC) amended its 2007 guidelines interpreting how the Antimonopoly Act (AMA) applies to intellectual property.⁸² The amended guidelines contain significant discussion of SEPs, particularly pointing out that a SEP holder likely violates the AMA if it refuses to grant a license, or seeks an injunction against, a “willing licensee”. Moreover, the guidelines define a willing licensee as any entity that pursues “licensing negotiations in good faith in light of the normal business practices”, even if that entity has challenged the patent’s validity, infringement or essentiality.

The Japan Patent Office (JPO) has also been active in developing policy around SEPs. In March 2018, the JPO published a draft “Guide to Licensing Negotiations involving Standard Essential Patents”.⁸³ The comprehensive document outlines the processes and procedures that the JPO identifies as constituting “good faith” negotiation over FRAND licensing. In addition, the JPO has announced that it will expand its existing “Hantei” service, in which the JPO offers advisory opinions regarding the coverage of specified products by Japanese patents, to assess whether specified standards may be covered by Japanese patents.⁸⁴

F. European Union

The European Commission has initiated a number of investigations and actions with respect to suspected violations of EU competition law in connection with standard-setting and SEP licensing and enforcement. These include past investigations of Samsung, Rambus and Qualcomm.⁸⁵ In January 2018, the Commission imposed a fine of approximately \$1.2 billion (EUR 997 million) on Qualcomm for making payments to a

⁸² http://www.jftc.go.jp/en/legislation_gls/imonopoly_guidelines.files/IPGL_Frand.pdf

⁸³ https://www.jpo.go.jp/iken/pdf/180308_hyoujun/sep_guide_draft_en.pdf. Public comments on the draft Guide will be accepted until April 10, 2018, after which the JPO is expected to release a final version of the Guide.

⁸⁴ Satoshi Watanabe, *Japanese government publishes the draft of users guide for HANTEI on SEP*, Japan Intel. Prop. News, Feb. 18, 2018, <http://japanip.blogspot.hk/2018/02/japanese-government-publishes-draft-of.html>. As of this writing, an English version of this proposal was not available.

⁸⁵ A discussion of each of these cases is beyond the scope of this paper. For such a discussion, see Damien Geradin, *European Union Competition law, Intellectual Property Law and Standardization*, in CAMBRIDGE HANDBOOK OF TECHNICAL STANDARDIZATION LAW: COMPETITION, ANTITRUST, AND PATENTS, Ch. 6 (Jorge L. Contreras, ed., Cambridge Univ. Press: 2017); and Nicolas Petit, *EU Competition Law Analysis of FRAND Disputes*, in CAMBRIDGE HANDBOOK OF TECHNICAL STANDARDIZATION LAW: COMPETITION, ANTITRUST, AND PATENTS, Ch. 17 (Jorge L. Contreras, ed., Cambridge Univ. Press: 2017).

large customer (Apple) in exchange for its agreement not to purchase baseband chips from Qualcomm's rivals.⁸⁶

In November 2017, the European Commission issued a long-awaited Communication regarding SEPs.⁸⁷ The Communication was issued in response to a general concern within Europe regarding the suitability of existing legal and regulatory frameworks to handle the growth of the Internet of Things (IoT) and 5G wireless communications. The Communication covers four general areas: transparency of SDO SEP disclosures, FRAND licensing, injunctions and open source code.

With respect to transparency, the Commission makes several suggestions regarding improvements to SDO SEP disclosure databases, including enhancing accuracy, detail and searchability of the SEP information that is currently housed in SDO databases. The Commission also responded to frequent criticism of over-declaration of SEPs in SDO databases by suggesting that the essentiality of SEPs be verified through an independent third party. This suggestion has been met with some skepticism in the industry, as the cost of such validation would likely be significant, and no clear model for addressing such cost has been proposed.

With respect to FRAND royalties, the Commission emphasized that licensing terms should bear a clear relationship to the economic value of the patented technology, and that this value should be irrespective of the market success of the product which is unrelated to the patented technology. Moreover, as noted above,⁸⁸ the Commission noted that the value of an individual SEP cannot be considered in isolation, and that parties must take into account a reasonable aggregate rate for the standard, assessing the overall added value of the technology. The Communication also briefly discusses the non-discrimination prong of FRAND and confirms that cross-licensing requirements and patent pools, in certain industries, should be acceptable.

In terms of enforcement and injunctive relief, the Commission acknowledges the binding effect of the ECJ's decision in *Huawei v. ZTE* as well as the proportionality principle established under Article 3(2) of the EU IPR Enforcement Directive⁸⁹ (specifically "the requirement to ensure that injunctive relief is effective, proportionate and dissuasive"). It appears that the Commission, by referencing "the broad impact an injunction may have on businesses, consumers and on the public interest" may be attempting to introduce a "public interest" element to European injunctive relief decisions, along the lines of the public interest factor under the U.S. *eBay* framework.⁹⁰ In addition, the Communication clarifies that alternative dispute resolution (ADR) is an

⁸⁶ European Commission, Press Release - Commission Fines Qualcomm €997 million for abuse of dominant market position (24 Jan. 2018).

⁸⁷ European Commission, Communication From the Commission to the European Parliament, the Council and the European Economic and Social Committee Setting out the EU approach to Standard Essential Patents, Brussels, 29.11.2017 COM(2017) 712 final.

⁸⁸ See discussion of top-down royalty determinations, Section III.B.

⁸⁹ Directive 2004/48/EC of 29.4.2004 on the enforcement of intellectual property rights, OJ L 195 of 2.6.2004, p. 16.

⁹⁰ See Section II.A.1, above.

appropriate means for resolving FRAND disputes, and that no special rules should be applied to the assertion of SEPs by non-practicing entities.

The Communication concludes with a brief discussion of the interaction between SDO processes and open source code community projects, and seeks to encourage further collaboration between these two communities.

G. United States

The U.S. FTC has initiated a number of competition-based enforcement actions relating to SEP licensing. These have included actions against Dell, Rambus, Negotiated Data Solutions (N-Data), Unocal, Bosch and Google/Motorola.⁹¹ Most recently, in late 2016, the FTC brought suit against Qualcomm in the U.S. District Court for the Northern District of California⁹² alleging, among other things, that Qualcomm violated the antitrust laws by linking the sale of its baseband chips to SEP licenses, that it refused to license rival chipmakers under its SEPs, and that an exclusive arrangement with a major customer was intended to foreclose competition and market entry. FTC Commissioner Maureen Ohlhausen filed a dissenting statement objecting to the initiation of the suit.⁹³ The case was still at an early stage as of this writing.

Given that the principal U.S. antitrust enforcement agencies are led by political appointees, it is not uncommon for the priorities of these agencies to change when administrations change. Such a change appears to be under way at the U.S. Department of Justice Antitrust Division (DOJ). Whereas, as noted above, the U.S. FTC continues to pursue allegedly anticompetitive conduct in the standard-setting arena, and the DOJ has previously taken an active role in policing potentially abusive conduct by SEP holders, a recent speech by Makan Delrahim, the new Assistant Attorney General in charge of the Antitrust Division,⁹⁴ indicates that unilateral conduct by SEP holders may no longer be an enforcement priority of the current administration. Rather, he suggests that greater scrutiny may be leveled at SDOs and implementers acting collectively. In particular, concerted actions such as the amendment of SDO policies in a manner that is unfavorable to SEP holders may warrant particular scrutiny. The full implications of this potential policy shift at DOJ remain to be seen. Interestingly, at least one FTC Commissioner has

⁹¹ A discussion of each of these cases is beyond the scope of this paper. For such a discussion, see Renata B. Hesse & Frances Marshall, *U.S. Antitrust Aspects of FRAND Disputes*, in *CAMBRIDGE HANDBOOK OF TECHNICAL STANDARDIZATION LAW: COMPETITION, ANTITRUST, AND PATENTS*, Ch. 16 (Jorge L. Contreras, ed., Cambridge Univ. Press: 2017).

⁹² Fed. Trade Comm'n v. Qualcomm, Inc., Case 5:17-cv-00220 (N.D. Cal. Filed Jan. 17, 2017)

⁹³ Dissenting Statement of Commissioner Maureen K. Ohlhausen in the Matter of Qualcomm, Inc. (Jan. 17, 2017).

⁹⁴ Assistant Attorney General Makan Delrahim, Remarks that 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>

issued what appears to be a response to AAG Delrahim, reaffirming the need for federal agencies to police patent hold-up and other anticompetitive unilateral conduct.⁹⁵

Conclusion

Disputes over standards-essential patents have become global, often involving simultaneous litigation in North America, Europe and Asia. But while many of the parties are the same in actions around the world, courts and governmental agencies in different jurisdictions have begun to develop distinctive approaches to some of these issues. Thus, while areas of convergence exist, national laws continue to diverge on important issues such as the availability of injunctive relief for FRAND-encumbered SEPs, the appropriate method for calculating FRAND royalties, the competition implications of violating a FRAND commitment, and the contours of the FRAND non-discrimination obligation. International harmonization, while a worthy long term goal, does not appear to be on the immediate horizon. Accordingly, firms doing business globally must remain attuned to the diverse legal landscape in this area. Likewise, policy makers and courts should continue to consider solutions that limit the potential for forum shopping among jurisdictions and a jurisdictional “race to the bottom”.

⁹⁵ Commissioner Terrell McSweeney, Holding the Line on Patent Holdup: Why Antitrust Enforcement Matters (Mar, 21, 2018), https://www.ftc.gov/system/files/documents/public_statements/1350033/mcsweeney_-_the_reality_of_patent_hold-up_3-21-18.pdf

Further Reading

As noted at the outset, most of the issues discussed in this paper are addressed in greater detail in other work. Below are a few recommended resources that offer additional information in these areas.

Books

JORGE L. CONTRERAS, ED. CAMBRIDGE HANDBOOK OF TECHNICAL STANDARDIZATION LAW: VOL 1 - COMPETITION, ANTITRUST, AND PATENTS (Cambridge Univ. Press: 2017), <https://www.cambridge.org/core/books/cambridge-handbook-of-technical-standardization-law/0EC1655CDF81AF05BF8726C0904C3362>

This comprehensive reference work addresses the full range of patent and competition law issues arising from technical standardization. Chapters are contributed by leading scholars and practitioners around the world. Many of the cases and actions discussed in this paper are addressed in substantially greater detail in this book.

PATENT CHALLENGES FOR STANDARD-SETTING IN THE GLOBAL ECONOMY, 46-47 (Keith Maskus & Stephen A. Merrill eds., 2013), <https://www.nap.edu/catalog/18510/patent-challenges-for-standard-setting-in-the-global-economy-lessons>

This authoritative report by the U.S. National Academies of Science (NAS) discusses many of the issues and controversies surrounding patenting and standards around the world.

COMM. ON TECHNICAL STANDARDIZATION, AM. BAR ASS'N, STANDARDS DEVELOPMENT PATENT POLICY MANUAL, App. A (Jorge L. Contreras ed., 2007)

This practical manual offers a detailed analysis of common clauses found in the policies of many leading standards-development organizations, with explanations of text and alternatives.

CARL SHAPIRO & HAL R. VARIAN, INFORMATION RULES: A STRATEGIC GUIDE TO THE NETWORK ECONOMY (1999).

This now classic book explains the business and economic logic behind standardization and the standards wars of the past.

Chapters and Articles

Jorge L. Contreras, *Technical Standards, Standards-Setting Organizations and Intellectual Property: A Survey of the Literature (With an Emphasis on Empirical Approaches)*, in RESEARCH HANDBOOK ON THE ECONOMICS OF INTELLECTUAL PROPERTY LAW, VOL. II – ANALYTICAL METHODS (Peter S. Menell & David Schwartz, eds., Edward Elgar: 2018, forthcoming), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2900540

This comprehensive literature review summarizes much of the academic literature concerning standardization and intellectual property, with a focus on empirical studies.

Jorge L. Contreras & Andrew Updegrave, *A Practical Guide to Patent Policies of Standards Development Organizations*, 67(6) STANDARDS ENGINEERING 1 (2015), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2699615

This short piece offers a practical explanation of SDO patent policies for business managers.

Journals

SSRN LAW, POLICY AND ECONOMICS OF TECHNICAL STANDARDIZATION EJOURNAL (Jorge L. Contreras, ed.)

This eJournal, which has been distributed since 2013, offers a range of articles and papers relating to the law, policy and economics of technical standardization. More than 600 articles are contained in its freely-accessible online archive at https://papers.ssrn.com/sol3/JELJOUR_Results.cfm?form_name=journalbrowse&journal_id=2200736. Users with institutional subscriptions to SSRN may subscribe to this journal without additional charge.