What You Need To Know About Standard Essential Patents

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I. INTRODUCTION

In the past several years, standard essential patents, or “SEPs,” have exploded onto the scene. Courts and enforcement agencies around the world have grappled with the nuances they present. What exactly are SEPs? What do attorneys need to know about SEPs?

This article answers these questions. After presenting the setting in which SEPs arise, it addresses three issues: (1) injunctions, (2) antitrust enforcement, and (3) the determination of fair, reasonable, and nondiscriminatory (“FRAND”) royalties.

II. SETTING

Standard essential patents arise in the context of standard-setting organizations (“SSOs”). Standards are common platforms that allow products to work together. They are crucial in fostering interoperability, and are often set by SSOs made up of participants in an industry.

One of the main concerns with SSOs is the risk of holdup. Before a standard is selected, an SSO can choose from an array of alternative technologies. But after the SSO selects a standard incorporating a patented technology, the owner can block others from using the standard by obtaining injunctions or imposing royalties high enough that members are prevented from using the standard. The extent of holdup (or its mirror image, holdout, by which licensees refuse to accept FRAND offers) is a contested issue.3

To address any perceived holdup issues, many SSOs have required patentees to agree before the standard is selected to license their technologies on FRAND terms. Such licenses are particularly helpful for SEPs, which are (technically or commercially) essential to the standard. In the smartphone setting, SEPs have covered wireless broadband technologies (such as WiFi), video compression technologies (H.264), and telecommunications standards (4G LTE).4

Although they are called standard essential patents, not all declared patents actually are essential. Studies have found that patentees overdeclare SEPs, with roughly a quarter of declared

1 Distinguished Professor, Rutgers Law School. Copyright © 2014 Michael A. Carrier.
2 The FRAND term has been used in Europe, with RAND (reasonable and nondiscriminatory) used in the U.S. I use the more frequently employed FRAND term in this article, though the observations apply equally to RAND.
3 For a background on standard-setting, see MICHAEL A. CARRIER, INNOVATION FOR THE 21ST CENTURY: HARNESsING THE POWER OF INTELLIGENCE PROPERTY AND ANTITRUST LAW 325-44 (2009).
SEPs actually determined to be essential.\(^5\) Overdeclaration occurs for a variety of reasons, including the avoidance of antitrust risk, reduction of effort in locating SEPs, and boasting of a strong patent portfolio.

### III. INJUNCTIONS

One of the most contentious issues surrounding SEPs is whether their owners can obtain injunctions when their patents are infringed. Some judges have contended that—based on the framework articulated by the U.S. Supreme Court in *eBay v. MercExchange*\(^6\)—injunctions are not appropriate because the FRAND promise demonstrates the lack of irreparable harm and adequacy of damages as a remedy. For example, in *Microsoft v. Motorola*, Judge James Robart stated that Motorola was not able to demonstrate irreparable harm because it could receive royalties from Microsoft.\(^7\) And in *Apple v. Motorola* (in an opinion reversed by the Federal Circuit), Judge Richard Posner stated that “[b]y committing to license its patents on FRAND terms, Motorola committed to license [its patent] to anyone willing to pay a FRAND royalty and thus implicitly acknowledged that a royalty is adequate compensation.”\(^8\)

After these opinions, the trend moved in the opposite direction, with courts and agencies recognizing that SEP owners sometimes can obtain injunctions. In reversing Judge Posner’s decision in *Apple v. Motorola*, the Federal Circuit explained that there is no “*per se* rule that injunctions are unavailable for SEPs.”\(^9\) The court found that there was “no reason” to craft a separate rule for SEPs, and that injunctions could be justified “where an infringer unilaterally refuses a FRAND royalty or unreasonably delays negotiations.”\(^10\) The Federal Circuit also relied on a January 2013 statement by the Department of Justice (“DOJ”) and U.S. Patent and Trademark Office (“PTO”) that made clear that injunctions were appropriate against an “unwilling licensee” who (1) refused to pay what was determined to be a FRAND royalty, (2) refused to negotiate, or (3) was not subject to the jurisdiction of a court that could award damages.\(^11\)

One of the complexities in analyzing injunctions is presented by the concept of an “unwilling licensee.” In certain cases, such as where a licensee “never meaningfully engage[s] in licensing talks,” injunctive relief is typically viewed as justified.\(^12\) But many cases will not be so

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\(^5\) David J. Goodman & Robert A. Myers, 3G Cellular Standards and Patents, IEEE WIRELESSCOM 2005 (June 13, 2005), (21% of 3GPP and 3GPP2 cellular technologies); Fairfield Resources Int’l, Analysis of Patents Declared as Essential to GSM as of June 6, 2007 (Jan. 14, 2008), (27% of GSM cellular technology); Fairfield Resources Int’l, Review of Patents Declared as Essential to WCDMA Through December 2008, (Jan. 6, 2009), (28% of WCDMA cellular technology).


\(^9\) Id.

\(^10\) Id.


clear, with the two sides vigorously debating the issue and pointing to details from the license negotiation. That is why the DOJ/PTO statement emphasized the three categories mentioned above. And, as the Federal Circuit recognized, an overly expansive view of unwilling licensees would fail to recognize that a proposed license “may not be on FRAND terms” and that the public “has an interest . . . in ensuring that SEPs are not overvalued.”13 For that reason, “an alleged infringer’s refusal to accept any license offer” does not “necessarily justif[y] issuing an injunction.”14

Despite the possibility of injunctions, the Federal Circuit in Apple v. Motorola denied Motorola’s request for an injunction on a standard-essential wireless patent. It found that Motorola’s “many license agreements . . . strongly suggest that money damages are adequate” for compensation, that there was not irreparable harm since industry participants were already using the patent, that the parties were engaging in negotiations, and that there was “no evidence that Apple has been . . . unilaterally refusing to agree to a deal.”15

IV. ANTITRUST ENFORCEMENT: EUROPE

SEP owners that have sought injunctions have recently found themselves in the crosshairs of antitrust enforcement agencies around the world, most directly in Europe.

In 2012, the European Commission (“EC”) began an investigation of Samsung, determining whether it breached its obligation to the European Telecommunications Standards Institute (“ETSI”) to license its patents related to third generation (“3G”) mobile and wireless telecommunications systems on FRAND terms. In particular, the EC examined whether Samsung’s attempts to obtain injunctions against competitors constituted an abuse of a dominant position prohibited by Article 102 of the Treaty of the European Union (“TFEU”).16

In April 2014, the EC accepted a settlement by which Samsung “committed not to seek any injunctions in the European Economic Area (EEA) on the basis of any of its SEPs, present and future, that relate to technologies implemented in smartphones and tablets against any company that agrees to a particular framework for licensing the relevant SEPs.”17 The framework provides for “a negotiation period of up to 12 months,” and if the parties cannot agree, it calls for “a third party determination of FRAND terms by a court if either party chooses, or by an arbitrator if both parties agree.”18

The EC also investigated Motorola Mobility (“MMI”) for its conduct related to injunctions after MMI promised to license its mobile and wireless communications patents on

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13 Apple, 2014 WL 1646435, at *35.
14 Id.
15 Id.
18 Id.
FRAND terms.\(^\text{19}\) In April 2014, the EC found that “it was abusive for Motorola to both seek and enforce an injunction against Apple in Germany on the basis of an SEP which it had committed to license on FRAND terms” where “Apple had agreed to take a licence and be bound by a determination of the FRAND royalties by the relevant German court.”\(^\text{20}\) The Commission also “found it anticompetitive that Motorola [had] insisted, under the threat of the enforcement of an injunction, that Apple give up its rights to challenge the validity or infringement by Apple’s mobile devices of Motorola SEPs.”\(^\text{21}\) The EC nonetheless decided not to levy a fine because there was “no case-law by the European Union Courts dealing with the legality under Article 102 TFEU of SEP-based injunctions,” and “national courts have so far reached diverging conclusions on this question.”\(^\text{22}\)

V. ANTITRUST ENFORCEMENT: UNITED STATES

SEP owners’ attempts to obtain injunctions also have garnered scrutiny in the United States. The Federal Trade Commission (“FTC”) has a history of targeting standard-setting conduct, which includes the manipulation of a standard to harm rivals (\textit{Allied Tube}, \textit{Hydrolevel}), deception in failing to reveal required patents (\textit{Dell}, \textit{Unocal}, \textit{Rambus}), and increases to predecessors’ agreed-upon royalties (\textit{N-Data}).\(^\text{23}\)

The FTC turned to the SEP issue for the first time in 2012, entering into a settlement with Bosch, which had threatened an injunction against what the agency found to be a willing licensee. The FTC found that Bosch’s predecessor had made a FRAND pledge but had “allegedly reneged on these commitments and pursued injunctions blocking competitors from using the standardized technologies, even though the competitors were willing to license the technology on FRAND terms.”\(^\text{24}\)

Shortly thereafter, as part of a wide-ranging settlement that centered on Google’s search-engine behavior, the FTC required Google (as part of its acquisition of MMI) to follow certain procedures in relation to SEPs. Before seeking an injunction, Google was required to provide a potential licensee with a written offer containing the material license terms and also provide an


\(^{21}\) Id.

\(^{22}\) Id.


offer of binding arbitration to determine terms not agreed upon.\textsuperscript{25} The agreement additionally made clear that a licensee could negotiate the terms of a license with Google for at least six months and that (if the licensee did not choose this path) Google was not able to seek an injunction unless it provided license terms for at least six months and an option to arbitrate for at least 60 days.\textsuperscript{26}

The DOJ also has addressed SEPs, finding in 2012 that competition was “unlikely to [be] substantially lessen[ed]” when it issued a statement explaining why it had approved three acquisitions involving numerous SEPs, specifically:

1. Google’s acquisition of MMI’s portfolio of 17,000 patents and 6,800 patent applications;
2. Apple’s acquisition of the nearly 900 patents originally held by Novell and purchased in 2010 by CPTM (a coalition including Apple, EMC, Microsoft, and Oracle); and
3. Acquisition by the “Rockstar” group (made up of Apple, Microsoft, and RIM) of the 6,000 patents and applications available in the Nortel bankruptcy auction.

Central to the DOJ’s approval were the promises made by the acquiring parties to license SEPs. Apple stated that “[s]eeking an injunction would be a violation of the party’s commitment to FRAND licensing,” and Microsoft promised to “not seek an injunction or exclusion order against any firm on the basis of . . . essential patents.”\textsuperscript{27} The DOJ concluded: “Apple and Microsoft made clear that they will not seek to prevent or exclude rivals’ products from the market in exercising their SEP rights.”

The agency also found that Google’s acquisition did not substantially lessen competition, but it pointed to a “significant concern” in “how Google may exercise its patents in the future.”\textsuperscript{29} In particular, Google promised to refrain from seeking injunctions for the infringement of its SEPs, but only for disputes involving future licensing revenues and only if the other party (i) did not challenge patent validity, (ii) paid the full disputed amount into escrow, and (iii) agreed to a reciprocal process for injunctions.\textsuperscript{30}

\section*{VI. ANTITRUST ENFORCEMENT: CHINA, INDIA, GERMANY}

In addition to Europe and the United States, other countries have analyzed antitrust issues related to SEPs. In China, in the case of \textit{Huawei v. InterDigital}, the Guangdong Higher People’s Court found that InterDigital violated the Chinese Anti-Monopoly Law by (1) making royalty proposals that the court believed were excessive, (2) tying the licensing of SEPs to non-SEPs; (3) requesting a grant-back of patent rights, and (4) filing an action in the U.S.

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\item \textsuperscript{25} FTC, \textit{Analysis of Proposed Consent Order To Aid Public Comment, In the Matter of Motorola Mobility LLC and Google Inc.}, File No. 121-0120, Jan. 3, 2013, at 6, \url{http://www.ftc.gov/sites/default/files/documents/cases/2013/01/130103googlemotorolaanalysis.pdf}.
\item \textsuperscript{26} \textit{Id.} at 7-8.
\item \textsuperscript{27} DOJ letter, \textit{supra} note 4 at 5.
\item \textsuperscript{28} \textit{Id.}
\item \textsuperscript{29} \textit{Id.}
\item \textsuperscript{30} \textit{Id.}
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International Trade Commission against Huawei while in licensing negotiations.\(^{31}\) In a second decision, the court required InterDigital to offer its SEPs on FRAND terms even though it had not made a commitment to do so.\(^{32}\)

In India, the Competition Commission of India (“CCI”) found that Ericsson’s imposition of “excessive” and “unfair” royalty rates after making a FRAND promise could be a “prima facie abuse of dominance” and violate section 4 of the Indian Competition Act.\(^{33}\) The excessive pricing had “no linkage” to the patented product, and Ericsson “seemed to be acting contrary to the FRAND terms by imposing royalties linked with the cost of the product.”\(^{34}\) In addition, the CCI found that discriminatory rates could be shown by a company’s refusal to share license terms and the “charging of two different license fees per unit phone for use of the same technology.”\(^{35}\)

The legal system in Germany is unique in providing strong protection to patentees, who are able to obtain injunctions unless there is (i) at least a (roughly) 80 percent chance the patent is invalid\(^{36}\) or (ii) licensees can satisfy the “Orange Book Standard.” This standard requires licensees to show that the SEP owner has a dominant position and that the licensee “(1) has made an unconditional offer to license under terms that cannot be rejected by the patent-holder without abusing its dominant position, and (2) [] actually acted as if had entered into a valid patent licence.”\(^{37}\)

As this article went to press, the Orange Book Standard was being reviewed by the Court of Justice of the European Union (“CJEU”). In particular, the CJEU was addressing five questions submitted by the Landgericht Düsseldorf. Most important, the CJEU was considering expanding antitrust liability beyond the narrow setting in which the Orange Book Standard is satisfied to embrace instances in which injunctions were sought against willing licensees.\(^{38}\)

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32 Id.; see generally Koren W. Wong-Ervin, Standard-Essential Patents: The International Landscape, ABA SECTION OF ANTITRUST LAW INTELLECTUAL PROPERTY COMMITTEE, 11 (Spring 2014).
35 Id.
38 Daniel Hoppe-Jänisch, The Landgericht Düsseldorf’s (Düsseldorf District Court) decision to refer “LTE standard,” WHITE & CASE (Aug. 2013), http://www.whitecase.com/files/Publication/62082331-0a8a-4f06-adcf-7f0363bbdce0/Presentation/PublicationAttachment/cdf6e92f-9121-48e3-9618-842bfd3d8dbc/Landgericht-
expands the notion of willing licensees, it also will determine if there are “specific qualitative and/or chronological requirements” to the willingness to negotiate. On the other hand, if the CJEU affirms the Orange Book standard, it will determine if “the submission of an unconditional binding offer to conclude a licence” is a requirement for abuse of a dominant market position and if there are particular requirements for the licensee’s fulfillment of its obligations.

VII. FRAND ROYALTIES

In the absence of an antitrust violation, one of the most difficult issues presented by FRAND is what constitutes a reasonable royalty. To address this question, Judge Robart set forth a framework in Motorola v. Microsoft that has been supplemented by opinions in In re Innovatio and Commonwealth Scientific and Industrial Research Organisation v. Cisco Systems, and jury verdicts in Realtek v. LSI and Ericsson v. D-Link.

These rulings articulate a framework of a hypothetical bilateral negotiation between the parties. Such a negotiation would be considered in the context of a modified set of the 15 Georgia-Pacific factors for determining reasonable royalties in patent infringement cases. Judge Robart adjusted several of the factors to emphasize: (i) the FRAND setting in determining royalties a patentee could receive, (ii) the contribution of a patented technology separate from its incorporation into the standard, (iii) alternatives to the patented technology, and (iv) the value of the technology to the implementer. The court also underscored the inapplicability of factors relating to a patentee’s attempts to maintain a monopoly by refusing to license its patents and (since the patentee cannot discriminate against rivals in a FRAND setting) the commercial relationship between the parties. Most generally, the framework consists of three fundamental steps: (1) the importance of the patent to the standard, (2) the importance of the patent to the alleged infringer’s product, and (3) comparable licenses.

Another issue requires the determination of an appropriate royalty base, typically a percentage of the price of the end product or of the patented component. To pick one example, the court in Innovatio worried that the calculation of a royalty on an entire product would compensate the patentee for non-infringing components of the product, and thus used WiFi chips embedded in end products as the royalty base.

One approach for determining FRAND royalties that has received attention is the framework Judge Holderman adopted in Innovatio. In that case, the judge rejected a “Bottom
“Up” approach for calculating the FRAND rate that would determine the price by comparing the patent to reasonable alternatives. Although reasonable in theory, such an approach tends to be “too complicated for courts to perform” because it requires the valuation of numerous SEPs and because “the performance of the standard is multidimensional,” with multiple changes resulting from replacing one patent with another.46

For that reason, the court adopted a “Top Down” approach that multiplied the average price of the smallest salable component by the average profit margin on that component. It then multiplied this figure by the percentage of Innovatio’s standard-essential patents as compared to the total number of such patents. The court explained that such an approach accounted for “royalty stacking” concerns, avoided the need to rely on other licenses, and offered more sophistication than strict numeric proportionality.47

Another difference among the courts is their treatment of royalty stacking, the phenomenon that occurs when multiple inputs are supplied by separate firms, with the combination of royalties constituting a significant portion of (or even exceeding) the price of the overall product. The courts in the Motorola and Innovatio cases recognized such a concern. For example, in Motorola, Judge Robart explained that more than 92 entities owned the relevant SEPs, and that if each sought 1.15 percent to 1.73 percent of the end-product price (as Motorola did in the case), the royalty to implement the standard (which was only one feature of Microsoft’s Xbox) would have exceeded the price of the entire product.48 Similarly, in Innovatio, the court “consider[ed] royalty stacking as a way of checking the accuracy of a proposed RAND royalty’s correspondence to the technical value of the patented invention.”49 In contrast, the court in Ericsson v. D-Link was skeptical of royalty stacking, calling it “theoretical” and finding that defendants “c[a]me up empty” when “given the opportunity to present evidence of an actual stack.”50

In determining an appropriate royalty rate, courts have considered analogues that would be similar to the royalties the parties would have forged through negotiation. Judge Robart did not consider agreements to be comparable if they were conducted as part of a “broad cross-license” or reached in the context of the “threat of a lawsuit” or “history of litigation between the parties.”51 The Innovatio court similarly refused to consider potentially comparable licenses that failed to isolate the value of a license from a broader universe of patents that were a small part of a larger settlement, and that were “adopted under the duress of litigation,” which led to a payment that could have reflected “hold-up value.”52 In the Cisco case, Judge Davis found that a license agreement with a business partner involving business plans, IP rights, R&D contracts, and

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48 Motorola, 2013 WL 2111217, at *73.  
51 Motorola, 2013 WL 2111217, at **67-69.  
52 Innovatio, 2013 WL 5593609, at **30-34.
improvements was not comparable to a license that would have emerged from a hypothetical negotiation.  

One potential comparable involves patent pools, which involve the licensing of patents from multiple entities as a package. In this context, however, pools present challenges. Royalties tend to be lower than those attained through bilateral negotiation for several reasons: a pool’s primary objective is to minimize royalties (not maximize licensing), pools often consider only the number (not value) of patents, and rates are reduced from low transaction costs and antitrust concerns.

The Motorola court acknowledged these factors but considered the pool in determining royalties since Motorola’s technologies were not important to the standard and since the pool was widely adopted and selected a royalty high enough to attract patentees but low enough to ensure implementation. In contrast, the Innovatio court did not consider as comparable a patent pool with “considerably depressed” rates, particularly since Innovatio’s portfolio was “of moderate to moderate-high importance.”

VIII. CONCLUSION

In short, SEPs present complex issues that are constantly changing. Such issues, relating to injunctive relief, antitrust law, and FRAND, will continue to bear watching around the world in the months and years ahead.

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54 Motorola, 2013 WL 2111217, at **79-80.
55 Id. at *82, *85.
56 Innovatio, 2013 WL 5593609, at *36.