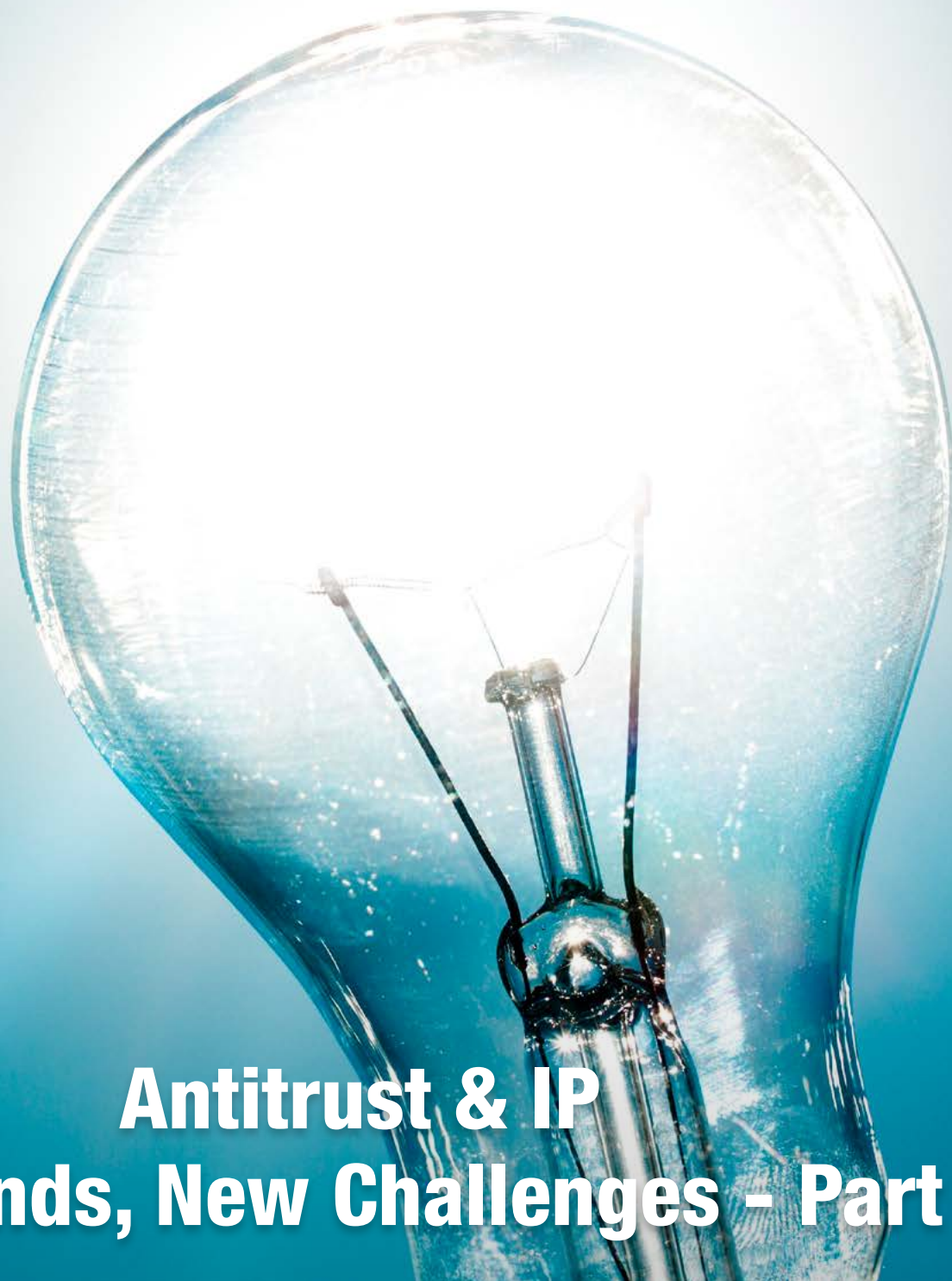


# Antitrust Chronicle

WINTER 2015, VOLUME 3, NUMBER 1



## Antitrust & IP Old Frands, New Challenges – Part I



# CPI Antitrust Chronicle

March 2015 (1)

Standard Setting, Patents,  
and Competition Law  
Enforcement—The Need for  
U.S. Policy Reform

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# Standard Setting, Patents, and Competition Law Enforcement—The Need for U.S. Policy Reform

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## I. INTRODUCTION

The setting of industry standards is widely recognized as a driver of economic growth—standards may reduce production costs; increase innovation, efficiency (through greater product interoperability, for example), and consumer choice; foster public health and safety; and facilitate international trade.<sup>2</sup> In the United States, standards development is sector-based and market-led, with American businesses typically voluntarily collaborating within private standard-setting organizations (“SSOs”) to develop standards that all firms from their sector (including firms not within the SSO) can employ. Outside the United States, governments more frequently are involved in promoting and providing guidance to particular SSOs.

Many SSOs require their members to offer to license their patents that cover technology necessary to implement a standard—standard-essential patents (“SEPs”)—on “fair, reasonable, and non-discriminatory” (“FRAND”)<sup>3</sup> terms. Standards can also be set in the marketplace, where firms compete to have their own technology accepted by users as a de facto standard (Microsoft’s Windows operating system and the Android mobile operating system currently developed by Google are examples).

Despite its substantial benefits, however, standard setting has long been a concern of antitrust (“competition”) law enforcers,<sup>4</sup> primarily because it brings together competitors that have an inherent incentive to restrict competition among themselves. In recent years, competition law has focused substantial attention on potential competitive abuses stemming from patents held by individual standard-setting participants or their transferees.

This article briefly surveys the current U.S. competition law treatment of patent rights affected by standard setting, which centers on preventing “excessive” returns to individual patent

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<sup>2</sup> See Submission of the United States to Working Party No. 2 on Competition and Regulation, DAF/COMP/WP2/WD(2010)(2) (hereinafter 2010 U.S. Submission), available at <http://www.ftc.gov/sites/default/files/attachments/us-submissions-oecd-and-other-international-competition-fora/usstandardsetting.pdf>.

<sup>3</sup> For a discussion of the meaning and application of FRAND, see, e.g., J. Gregory Sidak, *The Meaning of FRAND, Part I: Royalties*, 9 J. COMP. L. & ECON. 931 (2013), available at <http://jcle.oxfordjournals.org/content/9/4/931.full>. The term “reasonable and non-discriminatory” (RAND) is more frequently used in the United States, whereas FRAND is more typically used in other jurisdictions. For purposes of this article, it is assumed that the terms are essentially equivalent in application and the acronym FRAND is utilized to encompass both terms.

<sup>4</sup> I primarily use the term “competition law” in this article, which is used in lieu of “antitrust law” in most jurisdictions other than the United States.

holders, as contrasted to the traditional concern with forestalling collusion among competitors.<sup>5</sup> I conclude that the current approach is welfare-inimical and misplaced. It should be replaced instead with an exclusive focus on potential collusion among patentees, an approach that would better promote consumer welfare and innovation.

## II. U.S. COMPETITION LAW TREATMENT OF THE STANDARD SETTING—PATENT LAW INTERFACE

U.S. competition law treatment of the interface between standard setting and patents has developed both through case law (not all of it focused on patents) and enforcement policy initiatives of the two federal antitrust agencies—the Federal Trade Commission (“FTC”) and the U.S. Department of Justice (“DOJ”).

### A. U.S. Case Law and Agency Investigations

The U.S. federal judiciary has invoked antitrust law to strike down the collusive misuse of standard-setting processes to exclude products or technologies produced by rivals. In *Radiant Burners*<sup>6</sup> the U.S. Supreme Court held that allegations that manufacturers of gas burners conspired to manipulate their SSO’s (the American Gas Association) certification tests for such products, so as to prevent a competing product from being certified and sold (utility members of the Association agreed to refuse to sell gas for use in uncertified burners), stated a claim for violation of Section 1 of the Sherman Antitrust Act (Section 1).

The Supreme Court subsequently held in *Hydrolevel*<sup>7</sup> that an SSO itself (the American Society of Mechanical Engineers (“ASME”)) may be liable for antitrust damages if its agents or employees collude with private parties to manipulate safety or quality standards to exclude a competitor. In *Hydrolevel*, the Court affirmed a jury verdict that ASME members acting under the “apparent authority” of ASME colluded to produce a letter stating that plaintiff’s competing water boiler safety device was unsafe and thereby discouraged customers from buying that device, in violation of Section 1.

In *Allied Tube*,<sup>8</sup> producers of steel electrical conduit conspired to “pack” a meeting of the National Fire Protection Association (“NFPA”) SSO to prevent consideration of a proposal for NFPA approval of a competing polyvinyl chloride electrical conduit for inclusion in an electrical code used by builders. The Supreme Court affirmed a jury verdict that the steel conduit makers

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<sup>5</sup> Although discussion of IP and standard-setting analysis under the competition laws of other jurisdictions is beyond the scope of this article, recent OECD background papers on this topic reveal that EU and U.S. competition policies are fairly similar in this regard, and other jurisdictions’ policies are developing. See Note by the European Union on Intellectual Property and Standard Setting, DAF/COMP/WD(2014)117, available at <http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=DAF/COMP/WD%282014%29117&doclanguage=en>; Background Note by the Secretariat on Intellectual Property and Standard Setting, DAF/COMP(2014)27, available at <http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=DAF/COMP%282014%2927&doclanguage=en>.

<sup>6</sup> *Radiant Burners, Inc. v. Peoples Gas Light & Coke Co.*, 374 U.S. 656 (1961).

<sup>7</sup> *Am Soc’y of Mech. Eng’rs v. Hydrolevel Corp.*, 456 U.S. 556 (1982).

<sup>8</sup> *Allied Tube & Conduit Corp. v. Indian Head, Inc.*, 486 U.S. 492 (1988).

had subverted the NFPA standard-setting process and thereby restrained trade in violation of Section 1.

In all of these cases, firms were acting collectively within an SSO to protect their established product offerings from being undermined by new competitive offerings. Although these cases do not focus explicitly on patents, they are broadly applicable to joint anticompetitive conduct associated with SSO processes, including abusive behavior that may involve patents.

More recently, U.S. SSO-related antitrust cases have focused on single firm subversions of commitments made to an SSO with respect to standards that incorporate technologies protected by patent rights. The concern is that a firm may deceitfully induce an SSO into adopting a standardized technology covered by the firm's patents, and then subsequently demand "exorbitant" patent licensing royalties from companies that have absorbed sunk costs in building facilities that rely on that technology. Because the sunk costs effectively "lock in" those companies and raise their relative cost of switching to another standard, the deceitful patent holder is able to "hold them up" and obtain a higher licensing rate *ex post* (after standard setting and lock in) than would have been possible absent the deceit (which prevented the hapless SSO from fully considering competing technologies *ex ante* during the standard-setting process).<sup>9</sup>

Three FTC cases and one private case involve variations on this scenario.

In *Dell*,<sup>10</sup> the FTC alleged that during an SSO's deliberations concerning a particular standard, SSO member Dell had twice certified that it had no intellectual property relevant to the standard, and that the SSO adopted the standard based in part on Dell's certifications. Dell demanded royalties from firms using its technology in connection with that standard after it was adopted. The FTC accepted a consent agreement under which Dell agreed not to enforce the patent in question against firms using it as part of the standard.

In *Rambus*,<sup>11</sup> the FTC found that Rambus, a participant in a semiconductor chip SSO (JEDEC), had violated JEDEC's requirement that members disclose patents and patent applications during standard setting. The FTC further found that Rambus's actions contributed significantly to JEDEC's technology selections, and illegitimately gave Rambus monopoly power through its patents over four technologies incorporated into the standards, in violation of Section 5 of the FTC Act. The U.S. Court of Appeals for the D.C. Circuit, however, overturned the FTC's decision, holding that the FTC had failed to prove its case because it had not rejected the possibility that JEDEC would have developed the same standard even absent Rambus's deceptive conduct.

In *Unocal*,<sup>12</sup> the FTC alleged that Unocal misled the California environmental regulatory agency by claiming no proprietary interests in a proposed regulatory gasoline emissions standard. Unocal subsequently sought to enforce patent rights covering aspects of the standards

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<sup>9</sup> For a brief summary of hold-up and its effects, see, e.g., 2010 U.S. Submission, *supra* note 2, at 8-10.

<sup>10</sup> *In re Dell*, 121 F.T.C. 616 (1998).

<sup>11</sup> *Rambus Inc. v. FTC*, 522 F.3d 456 (D.C. Cir. 2008), *reh'g en banc denied* (Sept. 9, 2008), *cert. denied*, 129 S. Ct. 1318 (2009).

<sup>12</sup> Statement of the Federal Trade Commission, *In re Union Oil Company of California*, Dkt. No. 9305 and *Chevron/Unocal*, File No. 051-0125 (June 10, 2005), available at [www.ftc.gov/os/adjpro/d9305/050802statement.pdf](http://www.ftc.gov/os/adjpro/d9305/050802statement.pdf).

against refiners that had become “locked in” to the standards’ specifications, threatening to raise the cost of gasoline in California. Unocal settled this matter by agreeing not to enforce its patents related to the standard, as part of a dual consent agreement that allowed Chevron to acquire Unocal.

In *Broadcomm v. Qualcomm*,<sup>13</sup> the U.S. Court of Appeals for the Third Circuit held that it is actionable anticompetitive conduct if, in an SSO environment: (1) a patentee falsely promises to license its essential SEPs on FRAND terms, (2) the SSO relies on that promise in including the technology in a standard, and (3) the patentee subsequently breaches that promise. This decision is entirely in line with the logic of the FTC’s *Rambus* prosecution. At the same time, it is not necessarily in conflict with the D.C. Circuit’s *Rambus* holding, to the extent that it is deemed as applying to situations where the technology would have been excluded from the standard but for the false promise, and the breach of the promise allowed the patentee to achieve higher licensing fees than it would have otherwise.

Theories of single-firm deception during standard setting, while viable as a matter of theory, should be approached with great caution. SSO discussions typically are “repeat games” in which highly sophisticated companies participate time after time.<sup>14</sup> As such, sophisticated SSO members generally are able to protect themselves from potential future abuses by: (i) influencing SSO rules (such as FRAND licensing commitments); (ii) implicitly threatening to retaliate against abusers that would hold them up (by acting to disadvantage the transgressors in future rounds of negotiations); or (iii) using private law remedies (sounding in contract, patent law, or the tort of deception) to counter excessive licensing demands. Such countermeasures should suffice to deal with most problems.

In addition, given inherent ambiguities in third-party interpretation of complicated standard-setting discussions, a certain degree of enforcement agency error is inevitable. There is an inherent risk that enforcers may misdiagnose deception—for instance, by ignoring the fact that many other SSO participants may be engaging in behavior complained about, or by misunderstanding the nature of technical discussions. Possible errors by enforcers must be added to the burdens arising from very time-consuming agency investigations and prosecutions, plus the chilling effect on third-party companies that may be dissuaded from engaging in efficient SSO-related conduct that might be subject to mischaracterization. All told, these high cost burdens suggest that an emphasis on deception-related SSO antitrust investigations is problematic.

Three post-*Rambus* FTC consent decrees extended potential liability beyond cases of deceit within SSO proceedings to breaches of contract, including breaches by third parties. In all three cases, dissenting FTC Commissioners raised various concerns, including that these matters did not implicate *competition law theories* of harm, and more appropriately fell into the realm of private contract or patent law.

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<sup>13</sup> *Broadcomm Corp. v. Qualcomm Inc.*, 501 F.3d 297 (3d Cir. 2007).

<sup>14</sup> For example, sophisticated technology giants, such as Intel and IBM, participated in the JEDEC SSO in *Rambus*. Those giants, which held huge patent portfolios and productive assets, dwarfed the *Rambus* firm in size and resources. They presumably were not oblivious to the fact that *Rambus*, a pure technology company, relied critically on patent licensing fees as a source of revenue.

In *N-Data*,<sup>15</sup> a firm made a price-specific licensing commitment (a \$1,000 one-time paid-up license) within an SSO (IEEE) and then subsequently transferred its patent interests, with a subsequent transferee, N-Data, demanding far higher royalties. An FTC majority found that the transferee had engaged in patent hold-up by exploiting the incorporation of patented technology into a standard and reneging on a known commitment made by its predecessor in interest. This opportunistic activity harmed competition by raising prices for an entire industry and threatening to subvert the IEEE's standard-setting process in a way that endangered the viability of standard setting in general, according to the FTC majority. In settling these charges, N-Data agreed not to enforce the patents in question unless it first offered a \$1,000 one-time paid-up license.

In *Robert Bosch GmbH*,<sup>16</sup> an FTC majority found that SPX Service Solutions U.S. LLC harmed competition by reneging on a commitment to license SEPs on FRAND terms by seeking injunctions against willing licensees of those patents. As part of a settlement with the FTC, Bosch—which acquired SPX—agreed not to pursue claims for injunctive relief with respect to those patents.

In *Motorola Mobility LLC and Google Inc.*,<sup>17</sup> the FTC alleged that Google, which had acquired Motorola Mobility, harmed competition by reneging on Motorola Mobility's commitment to license its SEPs on FRAND terms—specifically by seeking or threatening injunctions against firms that were willing to accept FRAND licenses. In its settlement with the FTC, Google agreed not to seek injunctive relief before: (1) providing a potential licensee with a written offer containing all material terms required for an SEP license, and (2) providing the potential licensee with an offer of binding arbitration to determine specific licensing terms. The consent decree also provided potential licensees with a voluntary negotiation framework that they could opt into, and identified several narrow circumstances when Google would be allowed to seek an injunction (such as if the potential licensee refused to accept terms set by a court or an arbitrator).

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<sup>15</sup> *In re Negotiated Data Solutions, LLC*, File No. 051-0094 (Sept. 23, 2008), electronic case file available at <http://www.ftc.gov/os/caselist/0510094/index.shtm>; Dissenting Statement by Chairman Majoras, available at <http://www.ftc.gov/sites/default/files/documents/cases/2008/01/080122majoras.pdf>; Dissenting Statement of Commissioner William E. Kovacic, available at <http://www.ftc.gov/os/caselist/0510094/080122kovacic.pdf>.

<sup>16</sup> Analysis of Agreement Containing Consent Orders to Aid Public Comment, *In the Matter of Robert Bosch GmbH*, File No. 121-0081 (Apr. 24, 2013), available at <http://www.ftc.gov/sites/default/files/documents/cases/2013/04/121126boschanalysis.pdf>; Statement of Commissioner Maureen K. Ohlhausen (dissenting with respect to those portions of the consent relating to alleged conduct by the respondent involving SEPs), available at [http://www.ftc.gov/sites/default/files/documents/public\\_statements/statement-commissioner-maureen-ohlhausen/121126boschohlhausenstatement.pdf](http://www.ftc.gov/sites/default/files/documents/public_statements/statement-commissioner-maureen-ohlhausen/121126boschohlhausenstatement.pdf).

<sup>17</sup> Analysis of Proposed Consent Order to Aid Public Comment, *In the Matter of Motorola Mobility LLC and Google, Inc.*, File No. 121-0120 (F.T.C. Jan. 3, 2013), available at <http://www.ftc.gov/sites/default/files/documents/cases/2013/01/130103googlemotorolaanalysis.pdf>; Dissenting Statement of Commissioner Maureen K. Ohlhausen, available at [http://www.ftc.gov/sites/default/files/documents/public\\_statements/statement-commissioner-maureen-ohlhausen/130103googlemotorolaohlhausentmt.pdf](http://www.ftc.gov/sites/default/files/documents/public_statements/statement-commissioner-maureen-ohlhausen/130103googlemotorolaohlhausentmt.pdf).

Unlike the FTC, the DOJ has not yet brought enforcement actions arising out of broken standard-setting pledges, but it has investigated acquisitions of patents (joint conduct, not unilateral conduct) subject to licensing commitments related to standard-setting processes. Three relatively recent matters deserve brief mention.<sup>18</sup>

DOJ investigated the acquisition of Novell's patent portfolio by CPTN, a holding company owned by Microsoft, Oracle, Apple, and EMC Corp.<sup>19</sup> Prior to the acquisition, Novell had committed to cross-license its patents on a royalty-free basis for use in the open-source Linux system. DOJ determined that, as originally proposed, the deal would jeopardize the ability of open-source software, such as Linux, to continue to be made available royalty free, harming competition in the development and distribution of server, desktop, and mobile operating systems, and related products. In response to these concerns, the parties agreed that all of Novell's patents would be made available under a widely used open-source license, and the deal was consummated.

DOJ also investigated two significant patent portfolio acquisitions—Google's acquisition of Motorola's patents and Rockstar Consortium's (a partnership formed by Apple, RIM, Sony, Microsoft, and Ericsson) acquisition of Nortel's patents—to determine whether the acquired patents could be used to raise rivals' costs or foreclose competition.<sup>20</sup> Specifically, DOJ examined whether the acquiring firms might seek to hold-up implementers of the standards by: (i) demanding higher royalty rates, (ii) compelling cross licenses, (iii) charging licensees the entire portfolio rate for a subset of patents, (iv) seeking to exclude infringing products from the market, (v) or obtaining higher royalties by the threat of an injunction.

DOJ ultimately decided not to take action in these two cases. It stressed the clear commitments by Apple and Microsoft to license SEPs on FRAND terms and not to seek injunctions on SEPs; and that Google's acquisition of Motorola's patents was not likely to alter the market dynamics of ongoing Motorola SEP licensing disputes involving Apple, Microsoft, and others.

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<sup>18</sup> They are different in kind from the other cases discussed, because these matters arose during DOJ's initial review of proposed acquisitions under the U.S. antitrust merger law, Section 7 of the Clayton Act, 15 U.S.C. § 18, which prohibits acquisitions (otherwise normal forms of business conduct) that are likely to lead to an accretion of market power ("may . . . substantially . . . lessen competition"). In marked contrast, the key U.S. antitrust statute devoted to unilateral conduct, Section 2 of the Sherman Act, 15 U.S.C. § 2, does not condemn the exercise of monopoly power acquired through competition on the merits (it prohibits *bad conduct* that creates or maintains monopoly power). See *Verizon Communications Inc. v. Law Offices of Curtis V. Trinko, LLP*, 540 U.S. 398, 407 (2004) ("It is settled that th[e] [monopolization] offense requires, in addition to the possession of monopoly power in the relevant market, the willful acquisition or maintenance of monopoly power. . . . The mere possession of monopoly power, and the concomitant charging of monopoly prices, is not only not unlawful; it is an important element of the free-market system.").

<sup>19</sup> Press Release, Antitrust Div., U.S. Dep't of Justice, CPTN Holding LLC and Novell Inc. Change Deal In Order to Address Department of Justice's Open Source Concerns (Apr. 20, 2011), *available at* [http://www.justice.gov/atr/public/press\\_releases/2011/270086.htm](http://www.justice.gov/atr/public/press_releases/2011/270086.htm).

<sup>20</sup> Press Release, U.S. Dep't of Justice, Statement of the Department of Justice's Antitrust Division on its Decision to close its Investigations of Google Inc.'s Acquisition of Motorola Mobility Holdings Inc. and the Acquisitions of Certain Patents By Apple Inc., Microsoft Corp. and Research In Motion Ltd. (Feb. 13, 2012), *available at* [http://www.justice.gov/atr/public/press\\_releases/2012/280190.pdf](http://www.justice.gov/atr/public/press_releases/2012/280190.pdf).



## B. U.S. Agency Competition Policy Guidance

U.S. agencies have provided competition policy guidance through guidelines, policy statements, speeches, advisory opinions, and reports.

In 1995 the FTC and DOJ jointly issued Antitrust Guidelines for the Licensing of Intellectual Property (“IP Guidelines”).<sup>21</sup> The Guidelines deem IP, including patents, as property rights (not “monopolies”) that do not necessarily convey market power. They also characterize IP licensing contracts as generally pro-competitive and efficiency-enhancing means for the joining together of complementary factors of production.

The Guidelines, which evaluate IP licensing restrictions under the antitrust rule of reason, are primarily concerned with schemes that unnecessarily restrict competition *among* technologies (for example, among competing patented drug treatments for a disease), not with arrangements that allow an IP holder to maximize the returns to its particular technology. Indeed, consistent with this point, a central premise of the Guidelines is that licensing restrictions do not run afoul of antitrust law unless they create market power greater than the IP holder could have exercised without licensing. Thus, for example, if a patent does create monopoly power over a particular market, the patentee should be allowed to reap monopoly profits in that market. The 1995 Guidelines remain in force.

In 2007 the FTC and DOJ jointly issued a report on antitrust enforcement and IP (patent) rights that, among other topics, develops a rubric for assessing the competitive impact of licensing terms that might be disclosed and discussed by participants within SSOs.<sup>22</sup> Key conclusions of the report are as follows:

1. An IP holder’s voluntary and unilateral disclosure of its licensing terms, including its royalty rate, is not a collective act subject to antitrust scrutiny. Relatedly, a unilateral announcement of a price before “selling” a technology to an SSO, without more, does not raise antitrust problems.
2. Bilateral *ex ante* negotiations between an SSO member and an IP holder outside the SSO are merely discussions of potential individual licensing terms that are unlikely to require special antitrust scrutiny.
3. The FTC and DOJ will apply the antitrust rule of reason (presumably with a generous eye toward efficiencies and likely legality) in evaluating *ex ante* joint activity among SSO member technology “buyers” (future licensees) and “sellers” (rival IP holders) before standardization confers additional market power on the holder of the chosen technology.

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<sup>21</sup> U.S. DEP’T OF JUSTICE & FED. TRADE COMM’N, ANTITRUST GUIDELINES FOR THE LICENSING OF INTELLECTUAL PROPERTY (1995), available at <http://www.justice.gov/atr/public/guidelines/0558.htm>.

<sup>22</sup> U.S. DEP’T OF JUSTICE & FED. TRADE COMM’N, ANTITRUST ENFORCEMENT AND INTELLECTUAL PROPERTY RIGHTS: PROMOTING INNOVATION AND COMPETITION 1 (2007), available at <http://www.ftc.gov/sites/default/files/documents/reports/antitrust-enforcement-and-intellectual-propertyrights-promoting-innovation-and-competition-report.s.department-justice-and-federal-tradecommission/p040101promotinginnovationandcompetitionrpt0704.pdf>. The report referred in general terms to the broader category of “IP holders” rather than the subset of “patentees,” but as a practical matter the primary focus of the report was on patent-related issues.

The joint activity may take various forms, such as *ex ante* licensing negotiations or an SSO rule that requires IP holders to announce their intended (or maximum) licensing terms being considered for incorporation in a standard.

4. Regarding standard setting, the report observes that many SSOs have implemented policies aimed at preventing hold-up, such as having SSO participants make *ex ante* disclosures of their relevant patents and commit to FRAND licensing.
5. Furthermore, the report notes the alleged problem of “royalty stacking” (the accretion of excessive royalty licensing loads derived from the many different patents that may cover a product) associated with “patent thickets” (the myriad overlapping patents in sectors like wireless telephony to which producers may require licenses).

In 2006 and 2007, DOJ issued “business review letters” advising two SSOs that it would not challenge under antitrust law their proposed *ex ante* patent licensing policies. Those letters reflected the general approach endorsed in the 2007 FTC-DOJ IP-antitrust report, summarized above:

1. In a 2006 letter to the VMEbus International Trade Association (“VITA”),<sup>23</sup> DOJ concluded that a policy under which VITA members would be required to disclose their most restrictive licensing terms would preserve *ex ante* competition among alternative technologies.
2. In a 2007 letter to IEEE,<sup>24</sup> DOJ similarly found that a proposed IEEE policy would stimulate competition for inclusion in the standard and speed up the development, implementation, and adoption of IEEE standards. IEEE’s proposed policy: (i) allowed patentees to make voluntary assurances about their intended maximum royalty rates and most restrictive licensing terms, (ii) made all licensing assurances by patentees irrevocable, and (iii) made such assurances binding on future owners of the patents.

In a January 2011 Report on the Evolving IP Marketplace,<sup>25</sup> the FTC recommended that courts should base royalty rates for FRAND-encumbered patents on the results of an *ex ante* “hypothetical negotiation” before a standard is set and switching costs accrue. Under that framework, the FTC opined that a licensee would be unwilling to agree to a royalty that exceeded “the incremental value of the patented technology over alternatives available at the time the standard was defined.” This approach could potentially yield extremely low royalty rates, thereby weakening at the margin incentives for the making of FRAND commitments. The 2011 Report also described potential cost burdens arising from the proliferation of “patent assertion entities” (non-innovators that purchase numerous patents for purposes of licensing or litigation).

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<sup>23</sup> Letter from Thomas O. Barnett, Assistant Attorney Gen., U.S. Dep’t of Justice, to Robert A. Skitol, Esq. (Oct. 30, 2006), available at <http://www.justice.gov/atr/public/busreview/219380.pdf>.

<sup>24</sup> Letter from Thomas O. Barnett, Assistant Attorney Gen., U.S. Dep’t of Justice, to Michael A. Lindsay, Esq., Dorsey & Whitney LLP (Apr. 30, 2007), available at <http://www.atrnet.gov/subdocs/222978.pdf>.

<sup>25</sup> FED. TRADE COMM’N, THE EVOLVING IP MARKETPLACE: ALIGNING PATENT NOTICE AND REMEDIES WITH COMPETITION (2011), available at <http://www.ftc.gov/os/2011/03/110307patentreport.pdf>.

In somewhat more balanced fashion, a January 2013 Joint Policy Statement by DOJ and the U.S. Patent and Trademark Office (“USPTO”) (“Joint Statement”) gave a nod to the importance of fair compensation for SEPs. It stated that:

Although we recommend caution in granting injunctions or exclusion orders based on infringement of voluntarily F/RAND-encumbered patents essential to a standard, DOJ and USPTO strongly support the protection of intellectual property rights and believe that a patent holder who makes such a F/RAND commitment should receive appropriate compensation that reflects the value of the technology contributed to the standard. It is important for innovators to continue to have incentives to participate in standards-setting activities and for technological breakthroughs in standardized technologies to be fairly rewarded.<sup>26</sup>

The Joint Statement, however, was less helpful to U.S. SEP holders in its comments on the U.S. International Trade Commission’s (“ITC”) exercise of its authority to issue “exclusion orders” barring imported goods found to infringe U.S. patents, unless public interest considerations would counsel otherwise.<sup>27</sup> The Joint Statement concluded that exclusionary relief at the ITC to remedy infringement of FRAND-encumbered SEPs may cause competitive harm by facilitating patent hold-up and thus may be inconsistent with the public interest. The Joint Statement noted, nonetheless, that exclusion orders can be an appropriate remedy where an implementer refuses to pay what has been determined to be a FRAND royalty or refuses to engage in negotiations to determine FRAND terms. In August 2013 the United States Trade Representative’s Office discussed the Joint Policy Statement’s concerns about hold-up in exercising its legal authority to disapprove the ITC’s exclusion of certain electronic devices.<sup>28</sup>

In 2014 the U.S. Executive Branch (including DOJ), as a member of the International Telecommunications Union (“ITU”), submitted recommendations to the ITU on the conditions under which injunctive and exclusionary relief may be available to owners of FRAND-encumbered patents essential to an ITU telecommunications standard.<sup>29</sup> The United States recommended that patentees or their successors in interest should neither seek nor seek to enforce injunctive or exclusionary relief against a potential licensee willing to accept a license on FRAND terms. Injunctive relief could, however, be sought where a potential licensee refuses to accept a FRAND license.

In line with this general U.S. Government opposition to injunctive-type relief in cases involving FRAND-committed patents, the FTC took an anti-injunction position in its December

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<sup>26</sup> U.S. DEP’T OF JUSTICE & U.S. PATENT & TRADEMARK OFFICE, POLICY STATEMENT ON REMEDIES FOR STANDARDS-ESSENTIAL PATENTS SUBJECT TO VOLUNTARY F/RAND COMMITMENTS 8 (2013), available at <http://www.justice.gov/atr/public/guidelines/290994.pdf>.

<sup>27</sup> *Id.* at 6-7.

<sup>28</sup> Certain Electronic Devices, Including Wireless Communications Devices, Portable Music and Data Processing Devices, and Tablet Computers, Inv. No. 337-TA-794 (Aug. 2013), disapproved by Ltr. From Michael B.G. Froman, Amb., U.S. Trade Rep., to Irving A. Williamson, Chairman, U.S. Int’l Trade Comm’n (Aug. 3, 2013), available at [http://www.ustr.gov/sites/default/files/08032013%20Letter\\_1.PDF](http://www.ustr.gov/sites/default/files/08032013%20Letter_1.PDF).

<sup>29</sup> United States Submission to Telecommunication Standardization Advisory Group, Contribution 43 (June 2014), available at <http://www.nist.gov/standardgov/upload/T13-TSAG-C-0043-A1-r1-E.pdf>.

2012 *amicus curiae* brief filed in the *Apple v. Motorola* case.<sup>30</sup> The brief argued that an agreement to license on FRAND terms establishes a reasonable royalty as adequate compensation for patent infringement, and that issuance of an injunction in such a case would prove harmful to the public interest in promoting innovation and protecting consumers. Consistent with the FTC's filing, the Federal Circuit Court of Appeals concluded that Motorola's FRAND licensing "commitments, which yielded many licensing agreements . . . , strongly suggest that monetary damages are adequate to fully compensate [it] for any infringement."<sup>31</sup>

Representatives from DOJ and the FTC have also testified before Congress on potential competitive harm arising from SEP hold-ups that arise in light of standard setting.<sup>32</sup> In her testimony, FTC Chairwoman Ramirez urged Congress to act if necessary.<sup>33</sup>

Public presentations by FTC and DOJ officials have also highlighted the theories of competitive harm described above. For example, in a speech before an ITU patent roundtable, a senior DOJ official recommended that SSOs consider: (i) clarifying F/RAND commitments, (ii) making F/RAND encumbrances convey to subsequent owners, (iii) permitting cash-only licensing options, (iv) limiting injunction actions for F/RAND-encumbered SEP infringement claims, (v) creating guidelines or arbitration provisions to determine F/RAND rates, and (vi) attempting to determine which patents are truly essential to the standard among the patents that owners claim are essential.<sup>34</sup>

In a separate speech, that same official indicated that DOJ would "continue to look at" whether an antitrust violation may occur when a FRAND-encumbered SEP owner exercises the monopoly power that it acquired through participation in a standard-setting process in breach of

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<sup>30</sup> Brief of *Amicus Curiae* Fed. Trade Comm'n Supporting Neither Party, *Apple Inc. v. Motorola, Inc.*, Nos. 2012-1548, 2012-1549 2012 WL 6655899 at 10 (Fed. Cir. Dec. 4, 2012), available at [http://www.ftc.gov/sites/default/files/documents/amicus\\_briefs/apple-inc.and-next-softwareinc.v.motorola-inc.and-motorola-mobility-inc./121205apple-motorolaamicusbrief.pdf](http://www.ftc.gov/sites/default/files/documents/amicus_briefs/apple-inc.and-next-softwareinc.v.motorola-inc.and-motorola-mobility-inc./121205apple-motorolaamicusbrief.pdf).

<sup>31</sup> *Apple Inc. v. Motorola, Inc.*, 757 F.3d 1286, 1332 (Fed. Cir. 2014).

<sup>32</sup> Prepared Statement of the Federal Trade Commission Concerning Oversight of the Impact on Competition of Exclusion Orders To Enforce Standard-Essential Patents before the S. Comm. on the Jud, 113th Cong. (2012) (statement of Edith Ramirez, Chairwoman, Fed. Trade Comm'n) (hereinafter Ramirez Testimony), available at [http://www.ftc.gov/sites/default/files/documents/public\\_statements/prepared-statementfederal-trade-commission-concerning-oversight-impact-competition-exclusionorders/120711standardpatents.pdf](http://www.ftc.gov/sites/default/files/documents/public_statements/prepared-statementfederal-trade-commission-concerning-oversight-impact-competition-exclusionorders/120711standardpatents.pdf); Oversight of the Impact on Competition of Exclusion Orders to Enforce Standards Essential Patents: Hearing Before the S. Comm. on the Judiciary, 112th Cong. 9-10 (2012) (statement of Joseph F. Wayland, Acting Assistant Att'y Gen., Antitrust Div., DOJ), available at <http://www.justice.gov/atr/public/testimony/284982.pdf>; Prepared Statement of the Federal Trade Commission Concerning Standard Essential Patent Disputes and Antitrust Law before the S. Comm. on the Jud. Subcomm. on Antitrust, Competition Policy and Consumer Rights, 113th Cong. (2013) (statement by Suzanne Munck, Chief Counsel for Intellectual Property, Fed. Trade Comm'n), available at [http://www.ftc.gov/sites/default/files/documents/public\\_statements/prepared-statement-federal-tradecommission-concerning-standard-essential-patent-disputes-and/130730standarlessentialpatents.pdf](http://www.ftc.gov/sites/default/files/documents/public_statements/prepared-statement-federal-tradecommission-concerning-standard-essential-patent-disputes-and/130730standarlessentialpatents.pdf).

<sup>33</sup> See Ramirez Testimony, *supra* note 32, at 1-2.

<sup>34</sup> Renata B. Hesse, Deputy Assistant Att'y Gen., Antitrust Div., U.S. Dep't of Justice, Six "Small" Proposals for SSOs Before Lunch, Remarks as Prepared for the ITU-T Patent Roundtable 5 (Oct. 10, 2012), available at <http://www.justice.gov/atr/public/speeches/287855.pdf>.

the SEP owner's FRAND commitment.<sup>35</sup> FTC Chairwoman Ramirez also delivered a speech that describes the FTC's enforcement actions and policy views regarding SEPs and FRAND assessments.<sup>36</sup>

In a February 2, 2015 business review letter,<sup>37</sup> DOJ informed the IEEE that it had no plans to bring an antitrust enforcement action against SSO's proposed patent policy changes, which were then officially adopted on February 8.<sup>38</sup> Although they may not constitute an antitrust violation, these changes greatly devalue SEPs and thereby undermine incentives to make patents available for use in IEEE standards.

Key features of the policy changes are as follows:

- The new IEEE policy requires a patentee to provide the IEEE with a letter of assurance waiving its right to seek an injunction against an infringer, in order to have its patents included in an IEEE standard.
- The new policy also specifies that an analysis of comparable licenses for purposes of determining a FRAND royalty can only consider licenses for which the SEP holder has relinquished the right to seek and enforce an injunction against an unlicensed implementer.
- Moreover, under the change, an SEP holder may seek an injunction only after having fully litigated its claims against an unlicensed implementer through the appeals stage—a process that would essentially render injunctive relief highly impractical if not futile.
- In addition, the new policy precludes an SEP holder from conditioning a license on reasonable reciprocal access to non-SEP patents held by the counterparty licensee.
- Finally, the new policy straitjackets licensing negotiations by specifying that royalty negotiations must be based on the value of the “relevant functionality of the smallest saleable compliant implementation that practices the essential patent claim.” This ignores the fact that the benefit that a claimed invention provides to an end product—which is often key to determining reasonable licensing terms—depends on the specific patent and product to be licensed, and not necessarily the “smallest saleable compliant implementation” (for example, a small microchip).

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<sup>35</sup> Renata B. Hesse, Deputy Assistant Att’y Gen., Antitrust Div., U.S. Dep’t of Justice, IP, Antitrust and Looking Back at the Last Four Years, Remarks as Prepared for the Global Competition Review 2nd Annual Antitrust Law Leaders Forum 21 (Feb. 8, 2013), *available at* <http://www.justice.gov/atr/public/speeches/292573.pdf>.

<sup>36</sup> Edith Ramirez, Chairwoman, FTC, Standard-Essential Patents and Licensing: An Antitrust Enforcement Perspective, Address Before the 8th Annual Global Antitrust Enforcement Symposium, Georgetown University Law Center, Washington, D.C. (Sept. 10, 2014), *available at* [http://www.ftc.gov/system/files/documents/public\\_statements/582451/140915georgetownlaw.pdf](http://www.ftc.gov/system/files/documents/public_statements/582451/140915georgetownlaw.pdf).

<sup>37</sup> Letter from Renata B. Hesse, Acting Assistant Attorney Gen., U.S. Dep’t of Justice, to Michael A. Lindsay, Esq., Dorsey & Whitney LLP (Feb. 2, 2015), *available at* <http://www.justice.gov/atr/public/busreview/311470.htm>.

<sup>38</sup> Press Release, IEEE Statement Regarding Updating of its Standards-Related Patent Policy (Feb. 8, 2015), *available at* [https://www.ieee.org/about/news/2015/8\\_february\\_2015.html](https://www.ieee.org/about/news/2015/8_february_2015.html).

All told, the new IEEE policy creates an imbalance between the rights of innovators (whose patents lose value) and implementers of technologies, and interferes in market processes by inappropriately circumscribing the terms of licensing negotiations.

Notably, this policy is in marked contrast to the SSO proposals that were the subjects of the favorable 2006 VITA and 2007 IEEE DOJ business review letters, discussed above. Those earlier VITA and IEEE proposals enabled individual SSO participants to reveal and commit to certain individual licensing terms that they had selected, thereby reducing the scope of negotiating uncertainty and facilitating mutually beneficial bargains *free from regulatory dictates*. In marked contrast, the 2015 IEEE policy *interferes in* the scope for negotiating over key bargaining terms affecting compensation, thereby drastically constraining contractual freedom.

The press release accompanying the release of the February 2 business review letter included this statement by the letter's author, Renata Hesse, DOJ Acting Assistant Attorney General for this matter: "IEEE's decision to update its policy, if adopted by the IEEE Board, has the potential to help patent holders and standards implementers to reach mutually beneficial licensing agreements and to facilitate the adoption of pro-competitive standards."<sup>39</sup> This bland statement disregards the extent to which the updated policy limits negotiating freedom.

Regrettably, the statement may fairly be read as a DOJ endorsement of the new IEEE policy, and, thus, as implicit DOJ support for devaluing SEPs. As such, it threatens to encourage other SSOs to adopt policies that sharply limit the ability of SEP holders to obtain reasonable returns on their patents. Such limitations should be avoided. Individual contract negotiations, which take into account the full set of matter-specific factors that bear on value, are far more likely to enhance welfare when they are not artificially constrained by "ground rules" that tilt in favor of one of the two sets of interests represented at the negotiating table.

### III. PROBLEMS WITH RECENT U.S. GUIDANCE AND ENFORCEMENT POLICY

Recent FTC and DOJ competition policy approaches have emphasized almost exclusively preventing "excessively high" licensing rates for patents that cover aspects of standards. This focus on unilateral efforts by patentees to obtain high returns on their particular technologies is in marked contrast to the historical U.S. judicial concern with the exclusion or dampening of competition among rival technologies, embodied in the Supreme Court decisions surveyed above. The recent policy emphasis is unfortunate and welfare-inimical, for a variety of reasons.

First, there is a dearth of empirical evidence supporting the proposition that SEP hold-up and inflated costs due to royalty stacking are significant problems.<sup>40</sup> Moreover, the industry sector most commonly characterized as a major "victim" of these phenomena, mobile telecommunications, has provided its customers with an unprecedented level of innovative

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<sup>39</sup> Press Release, U.S. Dep't of Justice, Department of Justice Will Not Challenge Standards-Setting Organization's Proposal to Update Patent Policy (Feb. 2, 2015), *available at* [http://www.justice.gov/atr/public/press\\_releases/2015/311475.htm](http://www.justice.gov/atr/public/press_releases/2015/311475.htm).

<sup>40</sup> See generally, e.g., Note by Anne Layne-Farrar (Charles River Associates, United States), DAF/COMP/WD(2014)84, *available at* <http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=DAF/COMP/WD%282014%2984&doclanguage=en>.

products and services at relatively low prices—sure signs of vibrant competition.<sup>41</sup> To the extent that litigation and business disputes have arisen in the sector, they have not in any way detracted from its superlative economic performance. (Such disputes are not unusual in industries undergoing major changes to their business models.) Thus, FTC and DOJ support for specific policies (including competition law scrutiny) aimed at reducing hold-up and stacking by limiting the exercise of patent rights is at best unnecessary, and at worst may inadvertently undermine efficient solutions generated naturally by market processes and orderly judicial dispute resolution.

Second, existing private law institutions, including contract, tort, and patent law, are well adapted to deal with disputes involving licensors and licensees. Adding antitrust to the mix may only serve to deter potentially efficient arrangements without providing significant additional benefits.<sup>42</sup>

Third, as indicated by the previous discussion, the value of patents, and SEPs in particular, is being undermined by recent government litigation, policy pronouncements, and SSO actions aimed at limiting the negotiating freedom of SEP holders. Indeed, a singular policy emphasis on hold-up could encourage “hold-out,” whereby users of patents enjoy artificial bargaining leverage over patentees, yielding patent licenses at rates that inadequately compensate patent holders for their innovative efforts.<sup>43</sup> Over time, this would lead to lower investments in innovative activity at the margin and reduced incentives to participate actively in SSOs, dampening innovation-driven economic welfare and productivity improvements. Consistent with this conclusion, recent comparative research suggests that stronger national patent right protections are associated with higher rates of economic growth and innovation.<sup>44</sup>

Fourth, antitrust enforcement that devotes substantial resources to theoretical harms, such as unilateral SSO-related patent abuses, without adequately taking into account actual indicia of economic performance or countervailing considerations (for example, hold-out), is more likely to yield high error costs in application. This undermines optimal antitrust enforcement, which should seek to minimize the sum of error costs and administrative costs. In other words, it tends to promote bad enforcement policy.

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<sup>41</sup> See *id.* at 8.

<sup>42</sup> See generally Bruce H. Kobayashi & Joshua D. Wright, *Federalism, Substantive Preemption, and Limits on Antitrust: An Application to Patent Holdup*, 5 J. COMP. L. & ECON. 469 (2009).

<sup>43</sup> See generally Richard A. Epstein, F. Scott Kieff, & Daniel F. Spulber, *The FTC, IP, and SSOs: Government Hold-Up Replacing Private Coordination*, 8 J. COMPETITION L. & ECON. 19, 22-23 (2012); Anne Layne-Farrar, Gerard Llobet, & A. Jorge Padilla, *Preventing Patent Holdup: An Economic Assessment of Ex Ante Licensing Negotiations in Standard Setting*, 37 AIPLA Q. J. 445 (2009) (explaining how an SSO’s voting rules can grant licensees bargaining power that can lead to holdup of patent holders).

<sup>44</sup> See Alden F. Abbott, *Abuse Of Dominance By Patentees: A Pro-Innovation Perspective*, 14 (1) ANTITRUST SOURCE 1, 8-10 (Oct. 2014) (summarizing recent scholarship), available at [http://www.americanbar.org/content/dam/aba/publishing/antitrust\\_source/oct14\\_full\\_source.authcheckdam.pdf](http://www.americanbar.org/content/dam/aba/publishing/antitrust_source/oct14_full_source.authcheckdam.pdf).

Antitrust enforcers should seek to prioritize their efforts to achieve the greatest welfare gains.<sup>45</sup> In particular, collusion among direct competitors is far more likely to be anticompetitive than unilateral conduct, and less likely to erroneously be mischaracterized as harmful by enforcers. Thus, to the extent enforcers decide to devote some attention to SSOs, they are better advised to hone in on potential collusion or exclusionary behavior involving purveyors of competing technologies, in line with traditional case law and policy guidance (such as the Supreme Court case law and the 1995 IP-Antitrust Guidelines summarized above).

#### IV. RECOMMENDATIONS AND CONCLUSION

Recent FTC and DOJ actions related to standard setting promote dubious enforcement theories and favor technology implementers over innovator patentees, to the detriment of dynamic competition and innovation. The federal competition agencies, the FTC and DOJ, should revisit these actions and issue a joint policy statement announcing a change in direction, including the following:

1. The policy statement should emphasize that the agencies will devote their limited enforcement resources primarily to the area where consumer harm is greatest—collusion among purveyors of competing technologies,<sup>46</sup> including collusion aimed at the exclusion of new competitors from the standard-setting process.
2. The statement could explain that alleged efforts by a single SSO participant to extract excessive monopoly returns on its SEPs following standards “lock-in” are far less likely to harm the competitive process and should not be an enforcement priority.
3. The statement could note that SSOs, whose members include sophisticated businesses, are perfectly capable of adopting procedures (such as *ex ante* disclosure of patents and FRAND licensing commitments) that are well suited to avoid exploitation of their processes.
4. The statement could stress that *ex post* private law remedies (contract, patent, and tort law) are available to disgruntled licensees that believe they have been unfairly harmed through patentee deception or violation of licensing commitments.
5. For these reasons, the statement could conclude that explicit adoption by U.S. enforcers of an exclusive focus on collusion (including collusion to exclude rival technologies) in standard setting would reduce expected antitrust error cost and hopefully would have a salutary effect on foreign competition officials’ development of enforcement norms in this area.
6. In addition, the statement should disavow FTC and DOJ policy support for SSO actions (including SSO rules changes, such as the February 2015 IEEE patent policy changes, discussed above) that threaten to undermine the value of patents by specifying the terms

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<sup>45</sup> See generally, e.g., Joshua D. Wright, *Evidence-Based Antitrust Enforcement in the Technology Sector*, CPI ANTITRUST CHRON. 1 (Mar. 2013) (Special Issue), available at <https://www.competitionpolicyinternational.com/assets/Free/WrightMar-13Special.pdf>.

<sup>46</sup> The Supreme Court has characterized collusion as “the supreme evil of antitrust.” *Verizon v. Trinko*, *supra* note 18, 540 U.S. at 408.



of licensor-licensee negotiations, rather than merely facilitating negotiations by providing for *ex ante* information disclosures.

With these points made, the statement should—and would—reaffirm the 2013 DOJ-PTO Joint Statement’s recognition of the importance of properly compensating SEP holders to reward and incentivize innovation:

DOJ and USPTO strongly support the protection of intellectual property rights and believe that a patent holder who makes . . . a F/RAND commitment should receive appropriate compensation that reflects the value of the technology contributed to the standard. It is important for innovators to continue to have incentives to participate in standards-setting activities and for technological breakthroughs in standardized technologies to be fairly rewarded.<sup>47</sup>

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<sup>47</sup> See analysis of Joint Statement, text accompanying note 26, *supra*.

# CPI Antitrust Chronicle

## March 2015 (1)

**Carte Blanche for SSOs? The  
Antitrust Division's Business  
Review Letter on the IEEE's  
Patent Policy Update**

**Stuart M. Chemtob**  
**Wilson, Sonsini, Goodrich & Rosati**

## Carte Blanche for SSOs? The Antitrust Division's Business Review Letter on the IEEE's Patent Policy Update

Stuart M. Chemtob<sup>1</sup>

**“The U.S. government does not dictate patent policy choices to private SSOs”  
– DOJ Press Release announcing its Business Review Letter to IEEE**

### I. INTRODUCTION

The Antitrust Division of the Department of Justice (“DOJ”) failed to give adequate attention to the effects on innovation incentives when issuing a favorable Business Review Letter (“BRL”) to the Institute of Electrical and Electronic Engineers, Inc. (“IEEE”) regarding the IEEE’s Update to its patent policy (“Update”). Instead, the DOJ appears to have based its conclusion that the Update will have pro-competitive effects on policy preferences rather than a careful Rule of Reason analysis.

The DOJ’s devaluing of concerns about harm to innovation incentives has serious implications that will affect the choices made by other SSOs, as well as enforcement policies of foreign competition authorities looking to U.S. antitrust law for guidance on the proper relationship between antitrust laws and intellectual property laws.

### II. BACKGROUND

On February 2, 2015 Acting Assistant Attorney General for the Antitrust Division Renata Hesse stated in a BRL to the IEEE that it has no present intention to challenge the proposed Update to the patent policy of the IEEE Standards Association (“IEEE-SA”).<sup>2</sup> The Update changes the terms and meaning of the licensing obligations that IEEE asks holders of potentially standard-essential patent claims (“SEPs”) to accept in the form of a Letter of Assurance (“LOA”). The LOA includes a promise by the submitter to license its SEPs to implementers of an IEEE standard on reasonable and non-discriminatory (“RAND”) terms.<sup>3</sup> The IEEE requested the BRL from the DOJ after some members had expressed concerns that the Update, and the process for drafting and approving the Update, might raise antitrust risks to the IEEE and its Members.

The DOJ examined the competitive effects of four key changes made by the Update:

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<sup>2</sup> Business Review Letter to the Institute of Electrical and Electronics Engineers (Feb. 2, 2015), *available online* at <http://www.justice.gov/atr/public/busreview/311470.htm>.

<sup>3</sup> SEP claim holders may alternatively submit an LOA committing not to enforce their SEP claims against implementers of the standard, or to license their SEP claims without compensation.

- i. prioritized factors that should be considered in determining a “Reasonable Rate;”
- ii. an effective ban on submitters of LOAs seeking injunctive remedies against standards implementers;
- iii. a requirement that LOA submitters be willing to license any person or entity to make, have made, use, sell, offer to sell, or import any Compliant Implementation that practice a SEP for use in conforming with an IEEE standard;<sup>4</sup> and
- iv. limitations on when a SEP license can be made conditional on the licensee’s grant of a reciprocal license.

The DOJ determined that the revisions contemplated by the Update would have pro-competitive effects by increasing clarity about the meaning of RAND commitments. According to the Department’s BRL, this greater clarity would improve the standards-setting process, broaden *ex ante* competition among technologies for inclusion in the standard, facilitate licensing negotiations, reduce patent infringement litigation, and mitigate hold-up. The DOJ found that any anticompetitive effects were unlikely and that even if there were some anticompetitive harms that might flow from the Update, they would likely be outweighed by the Update’s pro-competitive benefits. The DOJ therefore concluded that there is no basis to take antitrust enforcement action against the proposed adoption of the Update.

One key potential competitive harm that the DOJ did not adequately address is whether the Update is likely to reduce innovation incentives to such an extent that it might lead to sub-optimal output of innovation and a lessening of dynamic competition. The BRL briefly acknowledges that, in the absence of compensation to patent holders that reflects the value of their technology, patent holders may become reluctant to contribute technology to standards or invest in future R&D that leads to innovation. However, the DOJ’s cursory analysis of that competitive risk suggests that it was giving mere lip service to that concern, as it made no serious effort to evaluate that risk in ultimately concluding that the Update would have pro-competitive effects.

Of the four key changes examined by the DOJ, the first two—prioritized factors in determining a Reasonable Rate and the effective ban on injunctive remedies—appear to have as their primary goal the elimination of hold-up risks and a reduction in the level of royalty rates that will be considered RAND. The question for antitrust enforcers in analyzing these two patent policy changes should have been whether achievement of those goals through the vehicle of this Update—which is essentially an agreement by the members of IEEE on behalf of all implementers of IEEE standards—is likely to have an adverse effect on innovation incentives that would lead to an anticompetitive reduction in innovation and, if so, whether the pro-competitive benefits of the patent policy change outweigh those anticompetitive effects. Unfortunately, the BRL does not address those issues concretely. It instead appears to assume, without empirical evidence or analysis, that the elimination of hold-up risks and a reduction in royalty rates paid by users of SEPs will always be on net pro-competitive.

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<sup>4</sup> A Compliant Implementation is defined as “any product (e.g. component, sub-assembly, or end-product) or service that conforms to any mandatory or optional portion of a normative clause of an IEEE Standard.”

### III. PRIORITIZED FACTORS FOR DETERMINING A REASONABLE RATE

The Update adds a definition of “Reasonable Rate” that requires that appropriate compensation for a SEP exclude any value resulting from the inclusion of the technology covered by the SEP in the standard. This provision appears to be an attempt to implement U.S. court decisions taking that position, such as the Federal Circuit’s holding in *Ericsson, Inc. v. D-Link Sys.* that it is necessary “to ensure that the royalty award is based on the incremental value that the patented *invention* adds to the product, not any value added by the standardization of that technology.”<sup>5</sup> An important feature of Judge O’Malley’s formulation in that decision is that it is necessary to look at the incremental value to the product from the technology, which will likely be a positive number, rather than to the incremental value over alternative technologies that may have been considered or available to the IEEE working group. This may or may not be the intent of the Update.

The new definition of Reasonable Rate also specifies three factors that “should” be considered in determining a Reasonable Rate, although the Update makes clear that other factors may be considered as well:

1. The value that the functionality contributes to the value of the smallest saleable unit (“SSU”) that practices the SEP;
2. The value contributed to the SSU in light of the value contributed by all SEPs practiced by the SSU; and
3. Existing licenses covering use of the SEP where the circumstances are sufficiently comparable and such licenses were not obtained under the explicit or implicit threat of injunctive remedies.

The first two factors go to the well-established concept of apportionment, although the reference to the value of the SSU is still a hotly debated issue that goes beyond the scope of this article. Noteworthy in the third factor above is the suggested rejection of any comparable licenses if they were obtained under the “explicit or implicit” threat of injunctive remedies. A strict reading of this factor might have the effect of excluding consideration of all prior licenses, since injunctive remedies have in the past potentially been available to patent holders, and licensees were doubtless implicitly aware of the possibility that such remedies might be sought if they were to sell infringing devices without taking a license. However, as the DOJ’s letter points out, the IEEE’s FAQ on this point makes clear that the policy “does not prevent consideration of any other licensing agreements.”<sup>6</sup>

The above three prioritized factors all weigh in the direction of lowering royalty rates; other *Georgia Pacific* factors that might weigh in the other direction are notably absent from the list. Nevertheless, the Update makes clear that parties and the courts are not precluded from considering other factors. This caveat allowed the DOJ to conclude that the Update’s definition of Reasonable Rate is unlikely to result in competitive harm.

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<sup>5</sup> *Ericsson, Inc. v. D-Link Sys., Inc.* 773 F.3d 1201, 1232 (Fed. Cir. 2014).

<sup>6</sup> Business Review Letter to IEEE, *supra* note 2, at 13, fn 49.

#### IV. THE AVAILABILITY OF INJUNCTIVE REMEDIES

As discussed below, the change in the IEEE's patent policy likely to have the most significant impact on the royalties that SEP holders will be able to negotiate, or otherwise receive as damages compensation, is the severe restriction on the availability of injunctive relief to SEP holders that submit LOAs. The Update effectively bans submitters of LOAs from seeking or enforcing any Prohibitive Order.<sup>7</sup> Submitters of LOAs would only be permitted to seek a Prohibition Order after there has been an adjudication in a court that has the authority to: (i) determine royalty rates and other reasonable terms and conditions; (ii) adjudicate patent validity; enforceability, essentiality and infringement; (iii) award monetary damages; and (iv) resolve any defenses and counterclaims, and then only if the infringer fails to participate in the adjudication—including a first-level appellate review—or fails to comply with the outcome of that adjudication.

Notably, an action at the U.S. International Trade Commission ("ITC") would not meet this precondition. The ITC is not a court and does not possess the full range of powers required by the Update, such as the authority to determine royalty rates or award monetary damages. Thus, a submitter of an LOA could seek Section 337 remedies only after (i) it obtains a judgment by a qualified court that the implementer has infringed a valid and enforceable patent, (ii) the court has awarded damages for such infringement and/or set a RAND royalty rate, (iii) that decision is upheld on appeal, and (iv) the infringer does not comply with the decision (or fails to participate in the aforementioned proceedings).

This approach creates especially difficult problems for LOA Submitters that possess a large portfolio of SEPs covering many jurisdictions and whose practice is to license on a worldwide portfolio basis. For example, one 2010 study reported that there were eight companies that had disclosed more than 100 patents as potentially essential to the 4G-LTE ETSI standard by that time.<sup>8</sup> If patents and patent applications covering 2G and 3G standards are added, those companies likely each have thousands of SEPs in their portfolios. For implementers of a standard that are unwilling to enter into license agreements, these SEP holders would have to file damage actions for infringement of every SEP and in every jurisdiction in which they own patents before they would receive full RAND compensation for their portfolio. And for jurisdictions where courts do not issue orders for on-going royalties, such actions would need to be filed over and over again.

Opportunistic users of the standard who hope to gain a competitive advantage over competitors that have taken RAND licenses will refrain from entering into licenses with these SEP holders, knowing that no company will engage in such extensive and continuous infringement litigation on all of their SEPs and that, for patents that are enforced, they will never have to pay more than a RAND royalty rate. It is for these types of situations involving

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<sup>7</sup> The Update defines a Prohibitive Order as including an "injunction, exclusion order, or similar adjudicative directive that limits or prevents making, having made, using, selling, offering to sell, or importing a Compliant Implementation."

<sup>8</sup> See, e.g. E. Stasik, *Royalty Rates And Licensing Strategies For Essential Patents On LTE (4G)*. Telecommunication Standards, Sept. 2010, available at <http://www.investorvillage.com/uploads/82827/files/leSI-Royalty-Rates.pdf>.

opportunistic unwilling licensees that the threat of injunctive remedies can play a pro-competitive role in encouraging recalcitrant users to engage in good faith negotiations for a RAND license.

The DOJ cited a number of factors in concluding that the effective ban on injunctive remedies is pro-competitive and unlikely to result in competitive harm. On the pro-competitive effects, the DOJ determined that the restriction on injunctive remedies would:

- Reduce the possibility of anti-competitive hold-up.
- Provide further clarity on the options available to SEP holders, with the pro-competitive effects of (i) facilitating licensing negotiations, (ii) reducing infringement litigation, and (iii) enabling parties to reach negotiated license agreements that “appropriately value” the patented technology.

On the other side of the ledger, the DOJ concluded that the effective ban on injunctive remedies would likely not have anticompetitive effects because:

- It is consistent with the direction of U.S. case law.
- In any event, SEP holders can avoid the Update’s requirements by simply declining to submit an LOA.
- The DOJ is not concerned that the effective ban will lead to hold-out behavior by implementers, since there already exist several incentives favoring a negotiated solution, including reduced uncertainty on product licensing costs, avoidance of litigation expenses, and insurance against the risk that a court might award a higher royalty than that offered by the SEP holder pre-litigation.

A closer look at each of the points cited by the DOJ suggests that the DOJ approached this revision from the perspective that any measure that avoids patent hold-up and leads to lower royalty rates to standards implementers will have pro-competitive benefits that will virtually always outweigh any anticompetitive effects on innovation incentives and technology contributors. However, that conclusion is not obvious and the BRL provides no empirical evidence to support that perspective.

First, the DOJ appears to have embraced the oft-heard concerns about a serious patent hold-up problem in the mobile phone market. However, there is scant evidence that hold-up is anything more than a theoretical concern, at least in that market. The Federal Circuit in its recent *D-Link v. Ericsson* decision rejected the need to instruct the jury on the possibility of patent hold-up in the absence of actual evidence of such hold-up, of which D-Link failed to provide any such evidence.<sup>9</sup>

Second, by concluding that restrictions on the availability of injunctive remedies will help parties reach license agreements, the DOJ appears to be embracing the fact that the ban on injunctive remedies will force SEP holders to lower the royalty rates that they are seeking. This may in fact be accurate, since the elimination of one of the only tools patent holders possess to

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<sup>9</sup> *Ericsson, supra* note 5 at 1234.

bring unwilling licensees to the license negotiating table will act to reduce the negotiating leverage of SEP holders. However, whether that will have pro-competitive or anticompetitive effects is not apparent.

In a similar vein, the DOJ posits that SEP holders will offer “discounted” royalty rates rather than filing infringement litigation and that implementers will be prone to take such offers rather than litigate. Again, the DOJ’s emphasis appears to be on the effect that the ban on injunctions will have on encouraging SEP holders to lower the royalty rates they are seeking, not on whether SEP holders will receive adequate compensation for their technology contributions.

In evaluating the settlement incentives for implementers, the DOJ appears to have ignored the unique nature of the licensing of RAND-encumbered patent claims—the royalty rates are already subject to the RAND limitation. Thus, ordinarily the worst outcome that a SEP user would likely face from infringement litigation is that it would be required to pay a RAND rate. Therefore, unless the SEP holder offers a license with royalty terms that are substantially below such a RAND rate, standards implementers that are recalcitrant—if not unwilling—licensees will have little incentive to take a license with a RAND royalty rate.

In other words, unlike the situation with non-RAND-encumbered patents, the limit on royalties imposed by the RAND obligation incentivizes hold-out behavior. It shifts the risks of litigation onto SEP holders who are already shouldering the sunk costs and long-term investment risks of having invested in R&D to develop technologies for possible incorporation into future standards many years before any possible payoff.

Third, the DOJ suggests that the effective elimination of injunctive remedies is unlikely to have any anticompetitive effects because the direction of U.S. case law already makes the likelihood of a SEP holder securing an injunction in the courts remote. This conclusion does not appear to be well supported by current U.S. case law. U.S. courts have not held that injunctive remedies should never be available to holders of RAND-encumbered patent claims, such as where a FRAND licensing offer has been made by the patent holder and the licensing offer has been refused by the infringer.<sup>10</sup>

Moreover, the DOJ completely ignored the fact that the Update effectively precludes SEP holders from filing a section 337 complaint with the ITC, and that the ITC has never indicated that it will not issue exclusion orders based on the infringement of SEPs. In fact, in his Initial Determination in the 337-TA-868 complaint filed by InterDigital, the Administrative Law Judge concluded that there was no evidence in that case that the Commission ought to go beyond the statute and assume that the remedy of an exclusion order should be removed from that case.<sup>11</sup>

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<sup>10</sup> *Apple, Inc. v. Motorola, Inc.*, 757 F.3d 1286, 1331 (Fed. Cir. 2014) (“To the extent that the district court applied a per se rule that injunctions are unavailable for SEPs, it erred.”); see also *Realtek Semiconductor v. LSI*, 946 F.Supp.2d 998, 1007–08 (E.D. Cal. 2013).

<sup>11</sup> *Certain Wireless Devices With 3G and/or 4G Capabilities*, Inv. No. 337-TA-868, Initial Determination and Recommended Determination (USITC June 26, 2014) at 125.



Finally, the DOJ's own Joint DOJ-PTO Policy Statement on Remedies for Standards-Essential Patents Subject to Voluntary F/RAND Commitments<sup>12</sup> specifically contemplates that it might be appropriate for the ITC to issue an exclusion order based on infringement of RAND-encumbered patents where, for example, the infringer refuses or constructively refuses to negotiate a license on RAND terms.

Thus, the DOJ's claim that the Update's effective ban on injunctions will not lead to competitive harm because such remedies are not, in actuality, available to SEP holders does not appear to accurately reflect the true legal situation in the United States.

The vigor with which companies on both sides of the debate have battled on this issue further belies the notion that injunctive remedies in the U.S. play no significant role in the dynamics of RAND-licensing negotiations. To the contrary, to the extent that the criteria for an injunction or an exclusion order can be satisfied by a SEP holder, the elimination of the threat of such remedies is likely to reduce the RAND royalty rates that they will be able to negotiate, and might even impede—rather than facilitate—negotiation of license agreements that provide reasonable compensation to SEP holders for the technologies that they have contributed to a particular standard. This effect may well have anticompetitive consequences that were not well considered by the DOJ in its BRL.

As discussed earlier, injunctive remedies may be particularly important in facilitating good faith license negotiations with companies that have large SEP portfolios that are licensed on a worldwide portfolio basis. The DOJ assumes that damages remedies are adequate for these situations, citing Judge Holderman's *Innovatio*<sup>13</sup> decision as proof that infringement litigation is an adequate mechanism for companies with large SEP portfolios to resolve RAND licensing disputes. In actuality, the *Innovatio* decision involved a portfolio of just 19 patents that were essential to the 802.11 Wi-Fi standard. No U.S. court has assessed damages for infringement of a portfolio of hundreds or thousands of SEPs, or has set a RAND royalty rate and other terms of a license agreement for such a large portfolio.

The DOJ's last rationale for determining that the Update's effective ban on injunctive remedies is unlikely to have anticompetitive effects is to point out that SEP holders can continue to participate in IEEE standards-setting activities even without submitting an LOA, and that they can always choose to leave the IEEE and join a different SSO. It is true that the Update does not require companies with SEPs to submit LOAs as a condition of participation in technical committees, and that SEP holders can potentially avoid the legal implications for submitting LOAs under the Update's new patent policy.<sup>14</sup> However, that does not mean that there will not be

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<sup>12</sup> DOJ-PTO Policy Statement on Remedies for Standards-Essential Patents Subject to Voluntary F/RAND Commitments, at 9, available at <http://www.justice.gov/atr/public/guidelines/290994.pdf>. See also, Letter from U.S. Trade Representative Michael Froman to ITC Chairman Irving Williamson, August 3, 2013, available at [http://ustr.gov/sites/default/files/08032013%20Letter\\_1.pdf](http://ustr.gov/sites/default/files/08032013%20Letter_1.pdf)

<sup>13</sup> *In re Innovatio IP Ventures, LLC Patent Litig.*, No. 11 C 9308, 2013 WL 5593609, at \*1 (N.D. Ill. Oct. 3, 2013).

<sup>14</sup> In fact, after the IEEE approved the Update, Qualcomm announced that it will not submit licensing commitments under the new policy. See, "Qualcomm Says It Won't Follow New Wi-Fi Rules on Patents," available at <http://www.bloomberg.com/news/articles/2015-02-11/qualcomm-says-new-wi-fi-standard-rules-unfair-may-not-take-part>.

consequences to SEP holders that refuse to submit LOAs. IEEE working groups will be informed when technologies proposed for inclusion in a standard are not covered by an LOA, and this may lead the working group to avoid including such technologies in the standard. And while companies participating in the IEEE may be free to leave the IEEE and join other SSOs, that fact says nothing about the competitive effects of such a decision.

Also noticeably absent from the BRL is any rigorous analysis of the competitive effects of the Update's effective ban on injunctive remedies, and of whether a patent policy change that forces innovative companies to refuse to submit commitments under the new patent policy, or to resign from the IEEE because of concerns that they will not receive adequate compensation for their technologies, will have anticompetitive consequences.

## V. CONCLUDING THOUGHTS

The DOJ's rationale for concluding that the Update's effective ban on injunctive remedies is unlikely to have anticompetitive effects appears to have been based on policy preferences, rather than on sound economic and legal analysis. The DOJ assumes that a ban on injunctive remedies will have pro-competitive effects by eliminating the possibility of hold-up and lead to lower royalty rates for users. The DOJ may be correct in that intuition, but that conclusion is not at all obvious and the DOJ's analysis in the BRL is not convincing. The BRL does not consider whether there are pro-competitive benefits of limiting reverse hold-up (or "hold-out") that will be lost as a result of the IEEE's new patent policy, or whether the resulting lower royalty rates will in fact chill innovation incentives with anticompetitive effects.

The DOJ could have based its conclusions on a careful Rule of Reason analysis of whether, and how, the Update might affect innovation incentives, and what the long-term consequences might be on innovation and dynamic competition. For example, the DOJ could have evaluated whether the ban on injunctive remedies and the lower expected royalty rates that may flow from that restriction would lead some companies to decide to reduce R&D investment and whether the structure of the market is such that such decisions would—or would not—have significant competitive effects on innovation or the potential for dynamic competition. The DOJ could have evaluated whether entry barriers are sufficiently low enough in areas covered by IEEE standards that it is a viable alternative for technology contributors to leave IEEE and start a competing standard.

Instead, the approach and rationale taken by the DOJ in the IEEE BRL could be read to call into question whether the DOJ would challenge even a blatant agreement by members of SSOs with collective monopoly power to fix the royalty rate that they will pay to patent holders. By foregoing rigorous antitrust analysis in favor of a decision based on policy preferences, the DOJ appears to be using this BRL as a vehicle for expressing its view that the patent laws and antitrust laws are not fully complementary, and that antitrust goals favor a readjustment in the form of lower compensation for patent holders, at least when standard-essential patents are involved.

The DOJ's business review letter to the IEEE may have far reaching consequences, as it provides a roadmap for other SSOs to follow in adopting similar patent policies. It will also be read with great interest by competition authorities in other jurisdictions that may hope to use

their competition laws as an instrument of a broader industrial policy to undermine the current structure of global standards-setting and holdings of standards-essential patents.

The DOJ stresses in its BRL and accompanying press release that the U.S. government “does not dictate patent policy choices to private standards setting organizations.” However, it is the job of the DOJ to engage in careful antitrust analysis to ensure that SSOs and their members do not adopt patent policies or engage in other practices that may be harmful to competition. The DOJ could have done a better job in its analysis and conclusions with respect to the competitive effects of IEEE’s effective ban on injunctive remedies.

# CPI Antitrust Chronicle

## March 2015 (1)

### Defining “Reasonable” in RAND: A Bit of Common Sense

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## Defining “Reasonable” in RAND: A Bit of Common Sense

Sean Gates<sup>1</sup>

### I. INTRODUCTION

What is RAND? It’s a simple question. Given the ubiquity of the term, one would think that the answer would be clear. After all, standard-setting organizations (“SSOs”) around the world require patent holders to declare their standard-essential patents and commit to license on RAND terms. Competition law enforcement agencies have mandated RAND licensing in remedial orders. Courts have been asked to determine whether licensing offers are consistent with RAND. Yet after more than a decade of wrangling in legal disputes, antitrust enforcement investigations, and policy debates across the globe, the definition of RAND is still, to a large degree, an open and multifaceted question.<sup>2</sup>

One of the most hotly debated aspects of the question is: What is a “reasonable” royalty for a RAND-encumbered patent? The answer to this question is vital. Millions, perhaps billions, of royalty dollars ride on the answer. Moreover, whether a particular patent holder’s licensing offers and licenses are “reasonable,” and thus consistent with a RAND commitment, has implications for the ability to obtain injunctive relief, potential liability for breach of contract, and whether the patent holder’s conduct violates competition law.

The debate over this issue is fierce.<sup>3</sup> It has recently focused on what standard-setting participants intended RAND to mean. The positions are starkly different, and weighing the divergent views is a complex and difficult task. Applying a little common sense, however, goes a long way to understanding this issue.

### II. THE DEBATE: REASONABLE ROYALTIES AND THE PURPOSES OF RAND

What is a reasonable royalty turns, in part, on the purposes underlying the RAND commitment. Some say that the purposes of requiring RAND licensing are solely to (1) provide patent holders with sufficient compensation to ensure adequate incentives to invest in innovation and to contribute their patented technology to standards and (2) ensure that licenses are available to implementers of the standard. Noting that SSOs have not defined RAND in their intellectual property rights (“IPR”) policies, advocates of this position insist that RAND terms were not intended to address supposedly “theoretical” concerns about patent holdup and royalty stacking. To use their term, RAND-encumbered patents are not “unique.” These interests contend that standard-setting participants intended that reasonable royalties for RAND-encumbered patents

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<sup>2</sup> See, e.g., European Competitiveness and Sustainable Industrial Policy Consortium, *Patents and Standards: A modern framework for IPR-based standardization*, at 184-88 (2014).

<sup>3</sup> Proponents on both sides of the aisle have vociferously promoted their views, flooding courts with amicus briefs, lobbying enforcement agencies, and stacking bar associations that may comment on the issues.

be determined by standard, off-the-shelf, patent-law methodologies, such as the *Georgia-Pacific* factors<sup>4</sup> used by U.S. courts in patent infringement damages cases.<sup>5</sup>

Certain U.S. courts, however, have held that off-the-shelf methodologies are inappropriate. These courts have significantly modified the *Georgia-Pacific* factors based on findings that the purposes behind requiring RAND licensing are to “mitigate the risk of patent hold-up”<sup>6</sup> and “address the risk of royalty stacking,”<sup>7</sup> in addition to ensuring that “holders of valuable intellectual property will receive reasonable royalties on that property,”<sup>8</sup> such that participants “have an appropriate incentive to invest in future development and to contribute their inventions to the standard-setting process.”<sup>9</sup>

### III. A FEW COMMON SENSE OBSERVATIONS

#### A. Vague IPR Policies: We’ve Been There Before

Part of the problem in defining RAND is that “there is a staggering lack of defining details” in the IPR policies.<sup>10</sup> “Without a clear policy, members form vaguely defined expectations as to what they believe the policy requires—whether the policy so requires or not.”<sup>11</sup> Proponents of off-the-shelf patent methodologies point to this lack of detail as proof that holdup and royalty stacking concerns should not affect the royalty analysis. According to these proponents, the off-the-shelf royalty damages methodology fills the gap; “reasonable,” they say, is a term of art that means *Georgia-Pacific*.<sup>12</sup>

The courts, however, have already dealt with the issue of whether patent holdup concerns underlie vague IPR policies in the context of disclosure rules. In fact, a district court reviewing the very policy that the Federal Circuit Court of Appeals deemed to have a staggering lack of detail held that a duty to disclose could nonetheless be based on a “clearly defined expectation” of standard-setting participants. The court held that a duty could be found based on (1) the expectations of individual members, (2) the behavior of members, (3) oral information shared at standard-setting meetings, (4) customs of the industry, and (5) the purpose of the SSO.<sup>13</sup>

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<sup>4</sup> See *Georgia-Pacific Corp. v. United States Plywood Corp.*, 318 F. Supp. 1116 (S.D.N.Y. 1970), *mod. and aff’d*, 446 F.2d 295 (2d Cir. 1971).

<sup>5</sup> See, e.g., Br. of Amicus Curiae American Intellectual Property Law Association in Support of Neither Party, *Microsoft Corp. v. Motorola, Inc.*, No. 14-35393 (9th Cir. filed Sept. 22, 2014).

<sup>6</sup> *Microsoft v. Motorola*, 2013 WL 2111217, at \*12 (W.D. Wash. Apr. 25, 2013) (involving ITU, ISO/IEC, and IEEE policies) see also *In re Innovatio IP Ventures*, 2013 WL 5593609, at \*9 (N.D. Ill. Oct. 3, 2013) (IEEE policy; “one of the primary purposes of the RAND commitment is to avoid patent hold-up”).

<sup>7</sup> *Microsoft*, 2013 WL 2111217, at \*12; *Innovatio*, 2013 WL 5593609, at \*9.

<sup>8</sup> *Microsoft*, 2013 WL 2111217, at \*12.

<sup>9</sup> *Innovatio*, 2013 WL 5593609, at \*9.

<sup>10</sup> *Rambus Inc. v. Infineon Technologies AG*, 318 F.3d 1081, 1102 (Fed. Cir. 2003). *Rambus* involved disclosure duties, but the same comment applies to RAND.

<sup>11</sup> *Id.*

<sup>12</sup> Proponents of this view do not explain why participants in ex-U.S. standard-setting organizations, such as the ITU, would assume that “reasonable” refers to U.S. patent law on damages.

<sup>13</sup> *Hynix Semiconductor Inc. v. Rambus Inc.*, 2008 WL 2951341, at \*2 (N.D. Cal. July 24, 2008).

Similarly, in another case involving “the consequence of silence in the face of a duty to disclose patents in a standard-setting organization,”<sup>14</sup> the Federal Circuit found such a duty despite a district court finding that the relevant IPR policies provided “no express requirement to disclose patents unless a member submits a technical proposal.”<sup>15</sup> The Federal Circuit, however, went beyond the specific language of the IPR policies, noting, “to avoid ‘patent hold-up’ many SSOs require participants to disclose and/or give up IPR covering a standard.”<sup>16</sup> The court emphasized that even if the written IPR policies did not clearly impose duty to disclose, the language of the IPR policies, coupled with evidence of participant understanding of the IPR policies, demonstrated a duty to disclose.<sup>17</sup>

With regard to the purpose of RAND commitments, the courts also have not been deterred by the lack of definition in the written IPR policies. The Third Circuit Court of Appeals, for instance, concluded that holdup concerns plainly animate RAND-commitment requirements: “To guard against anticompetitive patent hold-up, most SDOs require firms supplying essential technologies for inclusion in a prospective standard to commit to licensing their technologies on FRAND terms.”<sup>18</sup> More recently, the Federal Circuit unequivocally associated RAND licensing requirements with holdup and stacking concerns:

SEPs [(standard-essential patents)] pose two potential problems that could inhibit widespread adoption of the standard: patent hold-up and royalty stacking. Patent hold-up exists when the holder of a SEP demands excessive royalties after companies are locked into using a standard. Royalty stacking can arise when a standard implicates numerous patents, perhaps hundreds, if not thousands. If companies are forced to pay royalties to all SEP holders, the royalties will “stack” on top of each other and may become excessive in the aggregate. To help alleviate these potential concerns, SDOs often seek assurances from patent owners before publishing the standard. IEEE, for example, asks SEP owners to pledge that they will grant licenses to an unrestricted number of applicants on “reasonable, and nondiscriminatory” (“RAND”) terms.<sup>19</sup>

Given this history, the lack of defining detail in standard-setting organization IPR policies cannot support the use of off-the-shelf methodologies that do not account for patent holdup and royalty stacking concerns.

### ***B. Common Sense and Defining “Reasonable” in RAND***

Insisting that RAND commitments are intended solely to ensure adequate compensation to patent holders and licenses available to all, proponents of the off-the-shelf *Georgia-Pacific* methodology claim that holdup and stacking concerns are inconsistent with these purposes. Despite the repeated findings of the courts, these proponents contend that there is no evidence standard-setting participants intended RAND commitments to address these concerns. The implication of this position is that standard-setting participants—patent holders, implementers,

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<sup>14</sup> *Qualcomm Inc. v. Broadcom Corp.*, 548 F.3d 1004, 1008 (Fed. Cir. 2008).

<sup>15</sup> *Qualcomm Inc. v. Broadcom Corp.*, No. 05-CV-1958, U.S. Dist. LEXIS 28211, at \*34 (S.D. Cal. Mar. 21, 2007).

<sup>16</sup> 548 F.3d at 1011.

<sup>17</sup> *Id.* at 1015-16.

<sup>18</sup> *Broadcom Corp. v. Qualcomm Inc.*, 501 F.3d 297, 313 (3d Cir. 2007).

<sup>19</sup> *Ericsson, Inc. v. D-Link Sys., Inc.*, 773 F.3d 1201, 1209 (Fed. Cir. 2014).

and users—agree that “reasonable” in RAND is intended entirely to protect the interests of patent holders, ignoring the interests of others.

This view results in “reasonable” being a one-way street. It assumes that standard-setting participants expect a RAND commitment to place no upper constraint on the royalties they would be charged by patent holders different from the constraints of a royalty damages analysis under *Georgia-Pacific*. Besides making the “reasonable” in RAND superfluous, the one-way nature of this result runs counter to common sense.

### 1. Rational Licensees Avoid Buying a Pig in a Poke

Common sense says that licensees wouldn’t agree to a methodology that allows for patent holdup. RAND commitments are given during the development, or at the time of adoption, of the relevant standard, i.e., generally before implementers have made standard-specific investments. But implementers do not commonly seek licenses from holders of patents that make RAND commitments at that time. Instead, as is well understood, standard-setting participants essentially agree to negotiate at a later time subject to the RAND commitment.

If the requirement of RAND licensing does not address patent holdup concerns, implementers have bought a pig in a poke. The *Georgia-Pacific* methodology posits a hypothetical negotiation at the time infringement began (rather than at the time the technology is adopted into the standard or the time of the RAND commitment).<sup>20</sup> If implementers have agreed to this methodology, they have set themselves up to be exploited.<sup>21</sup> If this is true, standard-setting participants have essentially opted “for RAND in order to randomly and artificially increase each patent holder’s ultimate leverage.”<sup>22</sup> Common sense tells us that licensors are not so irrational.

### 2. Real-World Negotiators Don’t Assume Validity and Infringement

Common sense also says that participants would not agree to assume validity and infringement when negotiating a license pursuant to a RAND commitment. *Georgia-Pacific* posits a hypothetical negotiation between a willing licensee and a willing licensor who both assume the patent to be valid and infringed.<sup>23</sup> This assumption makes sense in the context of a damages analysis, which occurs after a finding of validity and infringement.

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<sup>20</sup> See, e.g., *Uniloc USA, Inc. v. Microsoft Corp.*, 632 F.3d 1292, 1312 (Fed. Cir. 2011).

<sup>21</sup> The “basic economics of patent holdup in the standard-setting context are well understood.” AM. BAR ASS’N, HANDBOOK ON ANTITRUST ASPECT OF STANDARD SETTING 100 (2d ed. 2011). After implementers have taken steps to produce standard-compliant products, patent holders are able to take advantage of specific investments and switching costs to demand royalties higher than could have been obtained before the adoption of the particular technology and the implementation of the standard. See, e.g., Carl Shapiro, *Injunctions, Hold-Up, and Patent Royalties*, 12 AM. L. & ECON. REV. 280, 286-301 (2010). Holdup is not limited, as some would have it, to situations in which implementers are *denied access* to necessary patents.

<sup>22</sup> Doug Lichtman, *Understanding the RAND Commitment*, 47 HOUS. L. REV. 1023, 1033 (2010); see also Thomas F. Cotter, *Comparative Law and Economics of Standard-Essential Patents and FRAND Royalties*, 22 TEX. INTELL. PROP. L.J. 311, 358 (2014) (“Using the date of infringement in this context therefore is likely to exacerbate the risk of patent holdup.”).

<sup>23</sup> See, e.g., *Lucent Technologies, Inc. v. Gateway, Inc.*, 580 F.3d 1301, 1324 (Fed. Cir. 2009).



The assumption makes absolutely no sense in the context of determining whether a royalty is consistent with a RAND commitment. Real-world negotiations take place in the shadow of uncertainty regarding validity and infringement. Assuming away that uncertainty unrealistically inflates the royalty.<sup>24</sup> Potential licensees would not have intended this outcome.

### 3. Rational Negotiators Account for External Factors That Affect Profitability

Common sense also says that royalty stacking concerns affect the reasonableness of a royalty. Proponents of the unmodified *Georgia-Pacific* methodology insist that royalty stacking concerns do not come into the analysis because such concerns are merely “theoretical.”

But experience and common sense say that licensees take into account all potential costs when negotiating a patent license. A licensee that ignores potential royalty stacking merely because other essential patent holders have not yet enforced their patents is a fool. Granted, not all declared essential patents will be enforced. And, granted, not all patent holders that seek to enforce their declared essential patents will be able to obtain royalties. Experience has nonetheless shown that producers of standard-compliant products indeed end up paying royalties to multiple patent holders. Although it may be difficult to estimate the effect of royalty stacking, a methodology that simply ignores the potential for royalty payment to multiple patent holders simply defies common sense.

## IV. CONCLUSION

Those debating what “reasonable” means in RAND have crafted intricate and complex arguments on both sides. If the touchstone for defining reasonable is what the parties intended, however, a bit of common sense can guide the way. If potential licensees intended to adopt an off-the-shelf *Georgia-Pacific* analysis, they gave away the farm. Common sense would have us conclude otherwise.

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<sup>24</sup> See Edward F. Sherry & David J. Teece, *Royalties, Evolving Patent Rights, and the Value of Innovation*, 33 RESEARCH POL'Y 179, 183-85 (2004).

# CPI Antitrust Chronicle

## March 2015 (1)

### The Next FRAND Battle: Why the Royalty Base Matters

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## The Next FRAND Battle: Why the Royalty Base Matters

Joseph Kattan, PC<sup>1</sup>

### I. INTRODUCTION

The first round of the FRAND wars was fought over injunctions. It produced a broad consensus among competition enforcement agencies that holders of FRAND-encumbered standard-essential patents (“SEPs”) may seek injunctive relief only in extraordinary circumstances.<sup>2</sup> The consensus is encapsulated in the European Commission’s determination that seeking or enforcing injunctive relief with respect to FRAND-encumbered SEPs is permissible only where the alleged infringer (1) is insolvent, (2) has no assets in jurisdictions that can enforce damages awards, or (3) is unwilling to enter into a license agreement on FRAND terms and conditions.<sup>3</sup>

The new FRAND battleground is the royalty base that may be used for calculating SEP royalties. The battle has been waged thus far predominantly in the United States. In a series of opinions rendered mostly outside the SEP context, the Court of Appeals for the Federal Circuit has ruled that the appropriate royalty base for purposes of calculating a reasonable royalty is the smallest saleable unit that practices the patented invention, unless “the patented feature drives the demand for an entire multi-component product.”<sup>4</sup> Both the Justice Department (“DOJ”) and the Federal Trade Commission (“FTC”) have endorsed this approach, particularly for complex products that incorporate numerous technologies.<sup>5</sup> The only potentially open issue, introduced

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<sup>1</sup> Partner, Gibson, Dunn & Crutcher LLP. John Hayes, Doug Melamed, Janusz Ordoover, Allan Shampine, and Allon Stabinsky provided helpful comments on an earlier draft of this paper. All errors that remain are my own.

<sup>2</sup> European Union: *See* Case AT.39985 *Motorola* (Apr. 29, 2014), ¶ 427; Case AT.39939 *Samsung* (Apr. 29, 2014); United States: *See Motorola Mobility LLC*, Analysis of Proposed Consent Order to Aid Public Comment (Jan 3, 2013), available at <http://ftc.gov/os/caselist/1210120/130103googlemotorolaanalysis.pdf>; U.S. Dep’t of Justice and U.S. Patent & Trademark Office, *Policy Statement On Remedies For Standards-Essential Patents Subject To Voluntary F/RAND Commitments* (Jan. 8, 2013), available at <http://www.justice.gov/atr/public/guidelines/290994.pdf>; Korea: *See* Korea Fair Trade Commission Guidelines for Review of Unreasonable Exercise of Intellectual Property Rights (Dec. 17, 2014).

<sup>3</sup> Case AT.39985 *Motorola* ¶ 427; Case AT.39939 *Samsung* ¶ 67. The question of when invocation of injunctive relief with respect to FRAND-encumbered SEPs may constitute an abuse of dominance under EU law is currently pending before the European Court of Justice. The court’s Advocate General has opined that seeking injunctive relief is abusive when the alleged infringer is willing and able to negotiate a license agreement. Opinion of Advocate General Wathelet in Case C-170/13, *Huawei Technologies Co. Ltd., v ZTE Corp., ZTE Deutschland GmbH* ¶ 103 (20 Nov. 2014).

<sup>4</sup> *LaserDynamics, Inc. v. Quanta Computer, Inc.*, 694 F.3d 51, 67 (Fed. Cir. 2012).

<sup>5</sup> *See* Letter from Renata B. Hesse to Michael A. Lindsay, Feb. 2, 2015, at 12, available at <http://www.justice.gov/atr/public/busreview/311470.pdf>; U.S. Federal Trade Commission, THE EVOLVING IP MARKETPLACE: ALIGNING PATENT NOTICE AND REMEDIES WITH COMPETITION at 212 (Mar. 7, 2011), available at <http://www.ftc.gov/os/2011/03/110307patentreport.pdf>.

by the Federal Circuit in its recent decision in *Ericsson Inc. v. D-Link Systems, Inc.*,<sup>6</sup> is whether the smallest saleable unit requirement is a substantive rule or an evidentiary rule for jury cases.

The United States, however, is the only jurisdiction in which the issue has received considerable vetting.<sup>7</sup> Given that SEP licenses are often worldwide in scope, many SEP holders that have based royalties on final product prices are likely to continue to do so in their worldwide licenses until the issue is resolved in more jurisdictions, at least where the relevant standard setting organization (“SSO”) has not provided for the use of the smallest saleable component as the royalty base. Thus far, one leading SSO based in the United States, the IEEE-SA, has adopted bylaws that require consideration of “[t]he value that the functionality of the claimed invention or inventive feature within the Essential Patent Claim contributes to the value of the relevant functionality of the smallest saleable Compliant Implementation that practices the Essential Patent Claim” in setting FRAND royalties.<sup>8</sup> The issue is likely to be fought in the coming months and years within SSOs, in the courts, and at competition enforcement agencies.

At first blush, it may seem puzzling why the royalty base should matter. After all, if the reasonable royalty on a patent that reads on a \$10 component is \$1, should it matter whether the royalty is expressed as 10 percent of the price of the component or 1 percent of the \$100 price of the multi-component product into which it is incorporated?

The revealed preferences of market participants suggest that the royalty base does matter. SEP holders with patent monetization businesses consistently seek to base royalties (and justify royalty levels) for SEPs that read at the component level on the price of the complete systems that incorporate those components. By contrast, standard implementers consistently advocate the use of component prices as the royalty base. Moreover, many monetizing SEP holders avoid licensing component manufacturers at all, even when the standard-compliant component manufacturers are far fewer than the final product manufacturers that use their components, such that licensing component makers offers very substantial transaction cost efficiencies. This suggests that SEP holders expect to earn greater net revenues by basing royalties on final products’ prices, even though it is virtually certain that they will collect royalties on fewer products because of the transaction costs of reaching the larger universe of device manufacturers.

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<sup>6</sup> 773 F.3d 1201, 1227 (Fed. Cir. 2014).

<sup>7</sup> The royalty base issue was one of the subjects addressed by China’s National Development and Reform Commission (“NDRC”) in connection with its antitrust investigation of Qualcomm. According to an unofficial translation of the NDRC’s decision, the NDRC determined that it was “unfair of [Qualcomm] to use as base for calculating royalty the net wholesale price of the whole device, which is beyond the coverage of the SEPs held by [Qualcomm], while insisting on a relatively high royalty rate at the same time ....” The NDRC barred Qualcomm from “insisting on comparatively high royalty rates” while using devices’ wholesale prices as the royalty base. A Qualcomm SEC filing suggests that the NDRC may have accepted Qualcomm’s use of a discounted system price as the royalty base. See Qualcomm Inc., Form 8-K (Feb. 9, 2015), available at <http://files.shareholder.com/downloads/QCOM/3959978433x0xS1234452-15-31/804328/filing.pdf>. At the same time, China’s Ministry of Industry and Information Technology has released a Template for Intellectual Property Policies in Industry Standardization Organizations that advocates that standard-setting organizations establish the smallest salable patent practicing unit as the royalty base for SEPs.

<sup>8</sup> IEEE-SA Standards Board Bylaws, ¶ 6.1 (Feb. 8, 2015), available at <http://standards.ieee.org/develop/policies/bylaws/approved-changes.pdf>.

This article surveys U.S. law on the royalty base issue and then discusses the economic evidence regarding the relevance of the royalty base to the magnitude of the final royalty. Based on this evidence, it concludes that the choice of the royalty base affects the royalty size.

## II. THE “ENTIRE MARKET VALUE RULE” IN THE UNITED STATES

In the United States, long-standing Supreme Court precedent requires that “the patentee ... must in every case give evidence tending to separate or apportion the defendant’s profits and the patentee’s damages between the patented feature and the unpatented features [of the infringing product],” or show that “the profits and damages are to be calculated on the whole machine, for the reason that the entire value of the whole machine, as a marketable article, is properly and legally attributable to the patented feature.”<sup>9</sup> This is the “entire market value” rule.<sup>10</sup>

In a series of cases involving computer and electronics products, the Federal Circuit has held that this rule requires the royalty to be based on the smallest saleable component that practices a patented feature unless the patentee proves that the patented feature is the basis for demand for the entire product. The court’s decisions represent a reaction to outsized jury awards for minor patents reading on complex products with rich feature sets. For example, in *Lucent Techs., Inc. v. Gateway, Inc.*,<sup>11</sup> the court reversed a damages award amounting to 8 percent of Microsoft’s revenues from the sales of Outlook for infringing a single patent on a date entry method. In *Uniloc USA, Inc. v. Microsoft Corp.*,<sup>12</sup> the court held that damages for a patent on a minor feature of Windows and Office could not be based on the billions of dollars in revenues that Microsoft earned from these products, on which the jury had assessed a 2 percent royalty. The court held that patent damages may be “based on the entire market value of the accused product only where the patented feature creates the ‘basis for customer demand’ or ‘substantially create[s] the value of the component parts.’”<sup>13</sup>

In *LaserDynamics, Inc. v. Quanta Computer, Inc.*,<sup>14</sup> the Federal Circuit addressed a demand for a 2 percent royalty on the price of an entire notebook computer for a single patent that read on a method for identifying the type of optical disc inserted into a disc drive. The court concluded that “[w]here small elements of multi-component products are accused of infringement, calculating a royalty on the entire product carries a considerable risk that the patentee will be improperly compensated for non-infringing components of that product.”<sup>15</sup> It held that “in any case involving multi-component products, patentees may not calculate damages based on sales of the entire product, as opposed to the smallest salable patent-practicing unit, without showing that the demand for the entire product is attributable to the patented feature.”<sup>16</sup>

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<sup>9</sup> *Garretson v. Clark*, 111 U.S. 120, 120 (1884) (internal quotation marks omitted).

<sup>10</sup> Strictly speaking, this is the “entire market value” exception to the apportionment rule.

<sup>11</sup> 580 F.3d 1301, 1332 (Fed. Cir. 2009).

<sup>12</sup> 632 F.3d 1292 (Fed. Cir. 2011).

<sup>13</sup> *Id.* at 1318 (citations omitted).

<sup>14</sup> 694 F.3d 51 (Fed. Cir. 2012).

<sup>15</sup> *Id.* at 67.

<sup>16</sup> *Id.* at 67-68.

The court said that this rule was necessary to “ensure that the royalty rate ... does not overreach and encompass components not covered by the patent.”<sup>17</sup>

In its 2014 decision in *VirnetX, Inc. v. Cisco Systems, Inc.*,<sup>18</sup> the Federal Circuit explained that the reasonable royalty may have to be apportioned even into subcomponents when a component itself incorporates multiple valuable features that are unrelated to the patent in suit. Thus, “[w]here the smallest salable unit is, in fact, a multi-component product containing several non-infringing features with no relation to the patented feature ..., the patentee must do more to estimate what portion of the value of that product is attributable to the patented technology.”<sup>19</sup>

The court reaffirmed this point in *Ericsson*, where it stated that the “realistic starting point” for royalty calculations is “the smallest salable unit and, at times, even less.”<sup>20</sup> Further, in the context of standard-essential patents, “[j]ust as we apportion damages for a patent that covers a small part of a device, we must also apportion damages for SEPs that cover only a small part of a standard.”<sup>21</sup> *Ericsson*, however, introduced a new twist to the royalty base jurisprudence by suggesting that the smallest saleable unit requirement may be an evidentiary rule for jury cases, rather than a substantive rule of patent damages.<sup>22</sup> It remains to be seen how the court will apply this requirement outside the jury context.

The Federal Circuit has rejected the argument that the royalty base should not affect the ultimate damages award because the rate may be calibrated to the size of the base. For example, in *Uniloc*, the court said that “[t]he disclosure that a company has made \$19 billion dollars in revenue from an infringing product cannot help but skew the damages horizon for the jury, regardless of the contribution of the patented component to this revenue.”<sup>23</sup> In *Ericsson*, it said that, although an appropriately apportioned royalty award theoretically could be crafted on the basis of the final product’s price by “dramatically reducing the royalty rate to be applied,” use of “the entire market value might mislead the jury, who may be less equipped to understand the extent to which the royalty rate would need to do the work in such instances.”<sup>24</sup> These were, of course, jury cases, and it remains to be seen whether the court would apply the same approach when the decision maker is a judge and not a jury.

The appropriate royalty base also was at issue in two pre-*Ericsson* judicial determinations of FRAND royalty rates. In *In re Innovatio IP Ventures, LLC Patent Litig.*, the court held that “the appropriate royalty base in this case is the Wi-Fi chip, the small module that provides Wi-Fi capability to electronic devices in which it is inserted.”<sup>25</sup> In *Microsoft Corp. v. Motorola, Inc.*, the court did not rule explicitly on the royalty base but considered a royalty rate based on the price of

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<sup>17</sup> *Id.* at 70.

<sup>18</sup> 767 F.3d 1308 (Fed. Cir. 2014).

<sup>19</sup> *Id.* at 1327.

<sup>20</sup> 773 F.3d at 1227.

<sup>21</sup> *Id.* at 1232-33.

<sup>22</sup> *Id.* at 1226-27.

<sup>23</sup> 632 F.3d at 1320.

<sup>24</sup> 773 F.3d at 1227. This view represents course reversal from the court’s earlier view that “the base used in a running royalty calculation can always be the value of the entire commercial embodiment, as long as the magnitude of the rate is within an acceptable range (as determined by the evidence).” *Lucent*, 580 F.3d at 1338-39.

<sup>25</sup> 2013 WL 5593609 at \*8 (N.D. Ill. 2013).

a Wi-Fi chip to be “an indicator of a RAND rate for Motorola’s 802.11 [Wi-Fi] SEP portfolio.”<sup>26</sup> In this regard, it is telling that the court chose to highlight testimony that “a 1% royalty on a chip placed in an \$80,000.00 Audi A8 would be \$800.00, or about 267 times the retail price of the chip.”<sup>27</sup>

### III. DOES THE ROYALTY BASE MATTER?

The Federal Circuit’s conclusion that exposure to companies’ revenues from the sale of final products is likely to produce excessive damages awards implicitly embraces the concept of “anchoring” from the behavioral economics literature. This concept posits that individuals’ estimates of uncertain values are highly sensitive to an “anchor” value to which the individuals are exposed before reaching a decision. The court’s analysis embraces the idea that juries inappropriately anchor the reasonable royalty’s magnitude to the finished product’s revenues. Anecdotal evidence of outsized jury awards, such as in *Lucent* and *Uniloc*, tends to lend credence to the theory in the jury context.

How valid is this anchoring concept and does it have any relevance outside the United States, where patent damages are assessed by judges and not juries? The concept is based on the pioneering experimental work of Amos Tversky and Daniel Kahneman, for which Kahneman won a Nobel Prize (Tversky had passed away by the time of the award of the prize), on judgments under conditions of uncertainty. In one famous experiment, individuals were asked to estimate the number of African nations in the United Nations after being shown a number that was generated in their presence by spinning a wheel of fortune. The arbitrary numbers had a marked effect on the study participants’ estimates. Subjects who were shown higher numbers gave higher estimates.<sup>28</sup>

Subsequent research has observed anchoring in a broad range of other settings under uncertainty.<sup>29</sup> One set of studies of particular relevance to the decision making by judges, rather than juries, involved sentencing decisions. In a study by German researchers, German trial judges were divided into two groups that received identical cases studies involving an alleged rape, but were given different sentencing recommendations. When asked to impose a sentence, the group that received the higher recommendation imposed a higher sentence on average.<sup>30</sup> This anchoring effect held regardless of the judges’ level of experience. Moreover, the anchoring effect held even when judges were told that the sentencing recommendations came from a computer science student. Subsequent research involving German judges and prosecutors showed an

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<sup>26</sup> 2013 WL 2111217 at \*95 (W.D. Wash. 2013).

<sup>27</sup> *Id.* at \*94. In another cases involving FRAND-encumbered Wi-Fi SEPs, the court instructed the jury to consider the contributions of the SEPs at issue to the standard and “consider the contribution of the standard as a whole to the market value of Realtek’s products utilizing the standard,” which were Wi-Fi chips. *Realtek Semiconductor Corp. v. LSI Corp.*, No. C-12-3451, ECF No. 267 at 23 (N.D. Cal. June 16, 2014) (quoted in *Ericsson*, 773 F.3d at 1229 n.6).

<sup>28</sup> See Amos Tversky & Daniel Kahneman, *Judgment under Uncertainty: Heuristics and Biases*, 185 SCIENCE 1124-31 (1974).

<sup>29</sup> A good summary of the research is found in DANIEL KAHNEMAN, THINKING FAST AND SLOW (2011).

<sup>30</sup> Birte Englich & Thomas Mussweiler, *Sentencing Under Uncertainty: Anchoring Effects in the Courtroom*, 31 J. OF APPLIED SOCIAL PSYCHOLOGY 1535 (2001).

anchoring effect in a hypothetical shoplifting case in which researchers gave the subjects a prosecutor's sentencing demand and told them that the demand was determined randomly.<sup>31</sup>

Behavioral economics, however, is a controversial discipline. One particularly cogent criticism of the research in this field is offered by Judge Richard Posner, who points out that most behavioral economics studies use university students as their subjects to assess marketplace behavior. In everyday life, these subjects, like most individuals, have no experience as sellers. Consequently "[e]xperimental situations in which the subjects are asked to trade with each other are artificial, and so we cannot have much confidence that the results generalize to real markets."<sup>32</sup> As Commissioner Joshua Wright & Judge Douglas Ginsburg argue, "many (but not all) of the behaviorists' findings are fragile and disappear when exposed to market discipline and the profit motive, which create incentives for participants to specialize and to learn to reduce their errors."<sup>33</sup>

These criticisms, however, do not appear to apply directly to the assessment of reasonable royalties in litigation. In assessing patent damages, decision makers have no financial stake in the outcome. Judges (and, of course, juries) are not directly subject to market discipline. And to the extent that a common law system of decisional law is self-correcting,<sup>34</sup> the correction process undoubtedly occurs over longer time horizons than when players with financial stakes engage in market transactions. This leaves decision makers subject to anchoring biases.

Even so, one might argue that the anchoring argument is incomplete and thus may not explain why exposure to the final product price will lead decision makers to award excessive royalties. Defense lawyers, after all, are free to present judges or juries with their own anchors and demonstrate the fallacy of patentees' anchors by furnishing evidence concerning the multitude of innovative features in a final product that are unrelated to patents in suit. If the Federal Circuit in *Lucent* was astute enough to observe that the insignificant patented feature at issue there was "but a tiny feature of one part of a much larger software program,"<sup>35</sup> why should we think that other judges and juries would be inordinately swayed by the price of a final product?

One answer may be that evidence of the contributions of other components to the final product is likely to be complex and require considerable trial time to present. Given judicially imposed time constraints on the presentation of a party's case, and the need to devote the lion's share of the allotted time to infringement, defense counsel's ability to discredit the high anchor represented by the final product price may be limited. Moreover, as Lemley & Melamed point out, "the intense focus in the trial on the patents-in-suit almost guarantees that their importance

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<sup>31</sup> Birte English, Thomas Mussweiler, & Fritz Strack, *Playing Dice With Criminal Sentences: The Influence of Irrelevant Anchors on Experts' Judicial Decision Making*, 32 PERSONALITY & SOCIAL PSYCHOLOGY BULL. 188 (2006). See also Mark A. Lemley & A. Douglas Melamed, *Missing the Forest for the Trolls*, 113 COLUM. L. REV. 2117, 2144 n.118 (2013) (summarizing research).

<sup>32</sup> Richard A. Posner, *Rational Choice, Behavioral Economics, and the Law*, 50 STAN. L. REV. 1551, 1566 (1998).

<sup>33</sup> Joshua D. Wright & Douglas H. Ginsburg, *Behavioral Law and Economics: Its Origins, Fatal Flaws, and Implications for Liberty*, 106 NW. U. L. REV. 1, 11-12 (2012).

<sup>34</sup> See George L. Priest, *The Common Law Process and the Selection of Efficient Rules*, 6 J. LEGAL STUD. 65 (1977).

<sup>35</sup> 580 F.3d at 1332.



will be exaggerated relative to that of the other technologies and, thus, that the damages award will be based on an inflated sense of the value of the patents-in-suit.”<sup>36</sup> That enhances the risk that the system price royalty base will produce an inflated royalty.

In addition, in a world in which a smartphone implements 250,000 patents<sup>37</sup> and a laptop computer implements more than 250 standards,<sup>38</sup> an appropriately apportioned royalty for a given set of patents may strike at least some decision makers as minuscule when presented as a percentage of the system price, thereby creating upward pressure on the royalty amount. This can be seen in the *Uniloc* case, where at trial the plaintiff successfully based its objection to Microsoft’s proposed royalty on the argument that it offered the inventor merely 0.00003 percent of Microsoft’s revenues from Windows and Office.<sup>39</sup> Typical announced royalty rates for telephony SEPs holders are single-digit percentages on a system-level royalty base,<sup>40</sup> which may reflect the *appearance* of single-digit rates as quite ordinary, whether the royalty base is the system price or the component price.<sup>41</sup>

In addition, the idea that the royalty rate will automatically adjust to the royalty base with a proportionally lower rate on a higher royalty base, while superficially appealing, may be overly simplistic. This is because negotiated licenses typically cover product lines rather than individual products and invariably apply a single royalty rate to all licensed products. Consequently, the use of the same standard-compliant component in two differently priced systems will result in a different royalty burden on the two systems.

Consider a telephony SEP license to a manufacturer of two smartphones, one selling for \$250 and the other for \$400, which use the same standard-compliant chipset. If the chipset price were used as the royalty base, the royalty on both phones would be the same. Use of the phone’s price, however, results in a royalty on the pricier phone that is 60 percent higher than that on the cheaper phone. Although one might argue that the negotiated royalty rate will be adjusted to something resembling a weighted average that would match the component-based royalty, SEP holders tend to demand the same royalty rate from most manufacturers (in part because of the

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<sup>36</sup> Lemley & Melamed, *supra* note 31, at 2144.

<sup>37</sup> See RPX Corp., Amendment No. 3 to Form S-1, Apr. 11, 2011, at 59, *available at* <http://www.sec.gov/Archives/edgar/data/1509432/000119312511101007/ds1a.htm>; Steve Lohr, Apple-Samsung Case Shows Smartphone as Legal Magnet, N.Y. TIMES, 25 Aug. 2012, *available at* <http://www.nytimes.com/2012/08/26/technology/apple-samsung-case-shows-smartphone-as-lawsuit-magnet.html>.

<sup>38</sup> See Brad Biddle et al., *How Many Standards in a Laptop? (And Other Empirical Questions)* (2010), *available at* [http://www.standardslaw.org/How\\_Many\\_Standards.pdf](http://www.standardslaw.org/How_Many_Standards.pdf).

<sup>39</sup> 632 F.3d at 1320-21.

<sup>40</sup> See Eric Stasik, *Royalty Rates and Licensing Strategies for Essential Patents on LTE (4G) Telecommunications Standards*, LES NOUVELLES 116 (September 2010), *available at* <http://www.investorvillage.com/uploads/82827/files/LESI-Royalty-Rates.pdf>.

<sup>41</sup> For the resulting royalty stack, see Ann Armstrong, Joseph J. Mueller, & Timothy D. Syrett, *The Smartphone Royalty Stack: Surveying Royalty Demands for the Components Within Modern Smartphones* (2014), *available at* [https://www.wilmerhale.com/uploadedFiles/Shared\\_Content/Editorial/Publications/Documents/The-Smartphone-Royalty-Stack-Armstrong-Mueller-Syrett.pdf](https://www.wilmerhale.com/uploadedFiles/Shared_Content/Editorial/Publications/Documents/The-Smartphone-Royalty-Stack-Armstrong-Mueller-Syrett.pdf).

nondiscrimination element of FRAND), so this sort of calibration is unlikely to occur in the real world.<sup>42</sup> For this reason, the same effect also occurs across manufacturers.

Evidence that royalty rates do not calibrate to the royalty base is presented by Lemley & Shapiro, whose analysis of data from trial verdicts showed that royalty rates levied on components were less than 50 percent higher than rates imposed on complete systems.<sup>43</sup> As Lemley & Shapiro observe, this ratio “does not reflect commercial reality, at least in the telecommunications and computer industries. Even if each of the litigated component inventions was part of a simple two-component product, we should expect to see a more significant reduction in the royalty rate if the system were working as intended.”<sup>44</sup>

#### IV. LICENSORS’ REVEALED PREFERENCE

The stronger evidence that the royalty base matters comes from the revealed preferences of market participants, some of which generate billions of dollars in licensing profits and thus, to paraphrase Wright & Ginsburg, are exposed to market discipline and the profit motive. One common feature of the litigated royalty base cases is that it is always the patent holder that seeks to use the price of the final product as the royalty. This revealed preference by firms that monetize patents suggests that patentees expect that using the price of a complete system as the royalty base will yield higher royalty income than basing royalties on the value of the infringing component. The revealed preference of market participants with large sums at stake suggests that the royalty base does matter.<sup>45</sup>

The *Ericsson* case that ultimately landed in the Federal Circuit, which involved Wi-Fi SEPs, yielded a wealth of evidence on the revealed preferences of one leading SEP monetization enterprise. In that litigation, Ericsson licensing executives testified that their company licensed only end-product manufacturers because it expected to obtain higher royalties by licensing them and not the chipmakers that implement the Wi-Fi standard in their chipsets, whose first sale of a licensed chipset would exhaust licensed patents.<sup>46</sup> Ericsson earns more than \$1 billion annually in licensing revenues,<sup>47</sup> so its view presumably reflects considerable marketplace experience.

Consideration of transaction costs reinforces the conclusion that using the final product price as the royalty base results in higher royalties. This can be seen from *Ericsson*, where the way to minimize transaction costs would have been to license chipmakers. This is because only a

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<sup>42</sup> This effect may be bounded to some extent by royalty caps and floors, but the existence of these bounds does not obviate the effect.

<sup>43</sup> Mark A. Lemley & Carl Shapiro, *Patent Holdup and Royalty Stacking*, 85 TEX. L. REV. 1991, 2034 (2007).

<sup>44</sup> *Id.*

<sup>45</sup> The theory of revealed preference was first developed by Paul Samuelson. See Paul A. Samuelson, *A Note on the Pure Theory of Consumers’ Behavior*, 5 ECONOMICA 61 (1938).

<sup>46</sup> For example, one senior executive testified that by licensing only end products, “the royalty income will be higher since we calculate the royalty on a more expensive product.” *Ericsson Inc. v. D-Link Systems*, Case No. 6:10-CV-473 (E.D. Tex.), trial testimony of Christina Petersson, June 4, 2013, pm session at 37. Another executive agreed that “Ericsson can demand a higher royalty income” from end product manufacturers “because those products are more expensive than for example, Wi-Fi chip.” *Id.*, testimony of Nhils Forslund, dep. transcript of Dec. 14, 2012, at 96-97.

<sup>47</sup> According to Ericsson’s annual report, the company derived 10.6 SEK from licensing activities in fiscal 2013. Ericsson, 2013 Annual Report at 37.

handful of manufacturers make Wi-Fi chips,<sup>48</sup> while thousands make end products that incorporate Wi-Fi chips.<sup>49</sup> Granting licenses to chipmakers almost certainly would have increased the number of standard-compliant products on which a royalty is paid, given the difficulty of reaching all manufacturers of end products that incorporate Wi-Fi functionality, as compared to licensing a few chipmakers. It also would have substantially eliminated the hold-out problem that some cite in support of allowing FRAND-encumbered SEP holders to obtain injunctions.<sup>50</sup>

A potential objection to licensing component manufacturers is that it leaves licensors exposed to infringement lawsuits by their licensees' customers, which will be licensed through exhaustion, and thereby defeat the licensor's right to a reciprocal SEP license.<sup>51</sup> But SEP holders may protect themselves from this outcome through defensive suspension. Under a defensive-suspension clause, a license may be suspended upon the filing of an infringement action against the licensor. This would be a valid exercise of the right to reciprocity. Moreover, many SEP holders possess arsenals of implementation patents that are not subject to FRAND commitments that they may invoke against companies that sue them for infringement.

In comments to the FTC, Qualcomm, whose preferences must reflect the considerable market experience that generates for it billions of dollars annually from licensing,<sup>52</sup> offers two other efficiency-based reasons for using the price of a finished system as the royalty base. It claims that the system price is a better royalty base because of "inefficient costs associated with attempting to calculate revenues from 'smallest saleable components', and with attempting to map individual patents to individual components."<sup>53</sup> Qualcomm does not explain what inefficiency exists in calculating revenues from the smallest saleable component for SEP licenses, such as licenses for telephony SEPs, particularly given that the inventions claimed by SEPs are typically implemented within a single component. The reference to mapping individual patents

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<sup>48</sup> A May 2014 report by ABI Research shows that six companies account for 95 percent of Wi-Fi chipset revenues.

<sup>49</sup> Wi-Fi enabled products include various types of personal computers, tablets, smartphones, eBook readers, gaming consoles, handheld gaming devices, printers, digital cameras, camcorders, network routers, network access points, televisions, set-top boxes, DVD players, Blu-ray players, 3D glasses, digital photo frames, portable music players, network hi-fi systems, speakers, thermostats, home automation products, in-car infotainment systems, and numerous other products.

<sup>50</sup> See, e.g., Anne Layne-Farrar, *Moving Past the SEP RAND Obsession: Some Thoughts on The Economic Implications of Unilateral Commitments and the Complexities of Patent Licensing*, 21 GEO. MASON L. REV. 1093 (2014).

<sup>51</sup> Standard-setting organizations that require FRAND commitments universally allow SEP holders to condition such commitments upon the receipt of a reciprocal license of SEPs for the same standard. See, e.g., ETSI Rules of Procedure at 37 (2014), available at <http://www.etsi.org/images/files/IPR/etsi-ipr-policy.pdf>; IEEE-SA Standards Board Bylaws ¶ 6.2 (2015), available at <http://standards.ieee.org/develop/policies/bylaws/approved-changes.pdf>.

<sup>52</sup> In 2014, Qualcomm earned \$7.9 billion from licensing. Qualcomm Inc., Form 10-K for period ending Sep. 28, 2014, at 36.

<sup>53</sup> Comments of Qualcomm Inc., FTC Patent Standards Workshop, at 36 (June 13, 2011), available at [http://www.ftc.gov/sites/default/files/documents/public\\_comments/request-comments-and-announcement-workshop-standard-setting-issues-project-no.p111204-00011%20A0/00011-60525.pdf](http://www.ftc.gov/sites/default/files/documents/public_comments/request-comments-and-announcement-workshop-standard-setting-issues-project-no.p111204-00011%20A0/00011-60525.pdf).

to individual components also seems fallacious, as the need to demonstrate that a patent is infringed and link the infringement to a product feature exists independently of the royalty base.

Another potential objection to the use of the infringing component's price as the royalty base is that it may undercompensate a SEP holder for the contributions of the SEP to complementary components.<sup>54</sup> For example, a fast telephony standard makes it possible to view high-resolution videos in real time and thus, in a sense, may enhance the value of a high-resolution graphics chip and display. If this is the case, use of the component as the royalty base arguably may prevent efficient price discrimination. But it is difficult to link any given SEP—as opposed to the standard to which it relates—to such an enhancement. As a leading proponent of a system-level royalty concedes, estimating such synergistic contributions would be “unlikely to inspire confidence in the accuracy of its results.”<sup>55</sup>

Moreover, while a standard as a whole may create such synergism, it is highly doubtful that individual SEPs do. When making this synergism argument, proponents of a system-level royalty base tend to conflate SEPs with the standards to which they contribute.<sup>56</sup> In any event, both value-based pricing and price discrimination are inconsistent with the concept of FRAND, which seeks to replicate the outcome of an *ex ante* competition for inclusion in a standard and expressly requires nondiscrimination.<sup>57</sup>

The synergy argument, moreover, ignores the fact that many features of complex products such as PCs or smartphones provide substantial benefits that are independent of standards for other features. This observation leads to the following thought experiment. A decade ago, before the introduction of the iPhone, mobile phones were primarily voice communication devices. Their capabilities corresponded closely to those of the telephony standards that they implemented; a phone was in large measure an embodiment of the standards. Today's mobile phones are complex computing and multimedia devices. The numerous technologies that they incorporate include, among many others, an advanced microprocessor, a graphics processor, flash memory, DRAM, location awareness technology, touch technology, voice recognition, high-definition still and video cameras, video and music replay, power management technology, and an advanced operating system. All of these technologies provide numerous benefits that are independent of a faster telephony connection. Given the evolution of the device, if royalty rates calibrated substantially to the royalty base, one would expect royalties for telephony SEPs to account for a lower percentage of the product's final price than a decade ago, as otherwise the royalties would tax these other unrelated features.

Because patent licenses are typically subject to confidentiality restrictions, publicly available evidence on royalty rates is sparse. The limited evidence that exists suggests that the

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<sup>54</sup> See J. Gregory Sidak, *The Proper Royalty base for Patent Damages*, 10 J. COMP. L. & ECON. 989, 993-95 (2014).

<sup>55</sup> *Id.* at 995. The same proponent concedes that estimating such synergistic contributions “would be cumbersome, prone to disputes, and unlikely to inspire confidence in the accuracy of its results.” *Id.*

<sup>56</sup> See *id.*; Ericsson on FRAND and SEP Litigation, submission to the International Telecommunications Union (Oct. 10, 2012), at 6, available at [www.itu.int/dms\\_pub/itu-t/oth/06/5B/T065B0000340007MSWE.docx](http://www.itu.int/dms_pub/itu-t/oth/06/5B/T065B0000340007MSWE.docx).

<sup>57</sup> See, e.g., Joseph Farrell, John Hayes, Carl Shapiro, & Theresa Sullivan, *Standard Setting, Patents, and Hold-Up*, 74 ANTITRUST L.J. 603 (2007).

system-level percentage rates have not declined.<sup>58</sup> Although this issue cannot be resolved empirically here, it can be tested empirically in any litigation. If a SEP holder seeks the same or similar percentage rate for a smartphone that it sought a decade ago for a dumb phone, it has the burden of explaining why that rate does not impermissibly tax the numerous innovative technologies that have been added to the phone in the intervening time.

## V. CONCLUSION

The insistence of companies with large patent monetization businesses on basing SEP royalties on the price of complete systems confirms that the royalty base matters. Given the existence of transaction cost *inefficiencies* in licensing only complete systems and not standard-practicing components, the conclusion that the royalty base affects the royalty amount is unavoidable.

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<sup>58</sup> See Stasik, *supra* note 40.

# CPI Antitrust Chronicle

March 2015 (1)

## The Royalty Stacking Supposition

Richard J. Stark  
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## The Royalty Stacking Supposition

Richard J. Stark<sup>1</sup>

### I. INTRODUCTION

It has become commonplace for serious people to assert in the SEP/FRAND<sup>2</sup> context that the possibility of royalty stacking is an issue that must be addressed—a concern that threatens profits, progress, and competition itself. Interested parties around the globe are hard at work seeking to enact laws, rules, and policies to address royalty stacking. Frequently the changes sought involve interpretations of or provisions added to the intellectual property rights (“IPR”) policies of standards setting organizations (“SSOs”).

The European Commission’s DG-GROW issued a report on patents and standards in March 2014 noting a concern that “[t]he growing number of patents makes the problem of royalty stacking more prominent,” and outlining a number of possible measures for addressing that perceived problem. China’s Electronic Intellectual Property Center, an entity associated with the Ministry of Industry and Information Technology, released for comment in late 2014 a draft, non-binding template for the IPR policies of SSOs. One provision of the draft effectively seeks to define a FRAND royalty as one that takes into account “the total aggregate royalties that may apply if other owners of intellectual property demand similar terms.” In the United States, a number of judicial decisions have addressed royalty stacking, and the IEEE has now revised its IPR policy to recommend that reasonable royalties take royalty stacking into account.

Yet, in all this activity, little attention has been given to the question that ought to be asked first: Has the possibility of royalty stacking manifested itself as a real-world problem? Thus it was noteworthy when, in December 2014, the U.S. Court of Appeals for the Federal Circuit ruled in *Ericsson v. D-Link* that a jury in a FRAND royalties case may consider royalty stacking only when there is “actual evidence of stacking.”

The Federal Circuit’s ruling heralds a sensible reorientation of the discussion away from mere possibilities toward focusing on realities. No matter where you stand on SEP/FRAND issues, a turn toward evidence should be greeted as a healthy development. The rational development of laws and policies, and rational decisions on individual cases, require factual development as an absolute prerequisite.

### II. GENESIS OF THE ISSUE

The foundation of much of the current discussion was laid in 2007, when Mark Lemley & Carl Shapiro gave a catchy name and an air of academic support to the arguments of manufacturers seeking to lower the royalties they pay for the use of intellectual property. In their

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<sup>2</sup> “Standard Essential Patents” and “Fair, Reasonable, and Non-Discriminatory,” respectively.

paper, *Patent Holdup and Royalty Stacking*, the authors presented a theoretical model and argued that, in their model, royalty stacking could occur with respect to products incorporating multiple patented components. They opined that royalty stacking “can be severe in the case of private standard setting,” and that it can result in products or versions of products not being brought to market due to the combined burden of royalty demands by multiple patent holders.

Underlying the Lemley & Shapiro analysis was little more than the observation that if a number of patent holders succeeded in demanding royalties from a given manufacturer, then that manufacturer would end up paying the sum of those royalties. So, for example, if 10 patent holders each demanded and got a royalty of 10 percent of the selling price of a particular end product, the manufacturer would wind up paying 100 percent of the selling price—all of its revenue—over to the patent holders. Clearly, this untenable situation would force the manufacturer out of business. Simple arithmetic, said Lemley & Shapiro.

In the years since the publication of the Lemley & Shapiro paper, a number of economists have criticized their reasoning, pointing out reasons why royalties may not stack up unduly and patent holders may not be overcompensated. But you don’t have to be an economist to appreciate the very straightforward point that the economic reasoning of Lemley & Shapiro only suggested that a royalty stacking problem could exist in the circumstances specified in their theoretical model, not that it actually does exist in the circumstances found in the real world. To complement their theoretical argument, Lemley & Shapiro collected some empirical data, but it amounted to little more than proof that some industries have a lot of patents and multiple patent holders.

Whenever an economist says that his or her model predicts a certain phenomenon, you need to understand that the model and the real world are two different—perhaps very different—things. It is worthwhile to consider a plain and simple reality test: What if Lemley & Shapiro were correct that royalty stacking is a serious problem, particularly in industries such as electronics, computers, and mobile phones? Well then, we would expect to see the streets of Silicon Valley littered with the wreckage of high-tech companies and products that failed due to excessive cumulative royalty demands.

But, of course, that isn’t reality as we know it. What we see instead are hugely profitable and vibrant enterprises. Notably, Apple is reportedly the biggest target of patent infringement suits in the United States. With all those royalty claims, the Lemley & Shapiro model would suggest that Apple must be in trouble. But, of course, Apple is hardly imperiled, and peerlessly profitable. Interestingly, Apple’s annual report for 2014 makes no mention of any danger from royalty stacking. It mentions royalties only once, and then only to state that if Apple were to lose a patent case it might have to pay damages.

None of this is to say that royalties could never be unreasonable or excessive, or that a “stack” of royalties could never grow too large. But actual examples of such seem to be scarce. Nevertheless, the notion that there is a royalty stacking problem has gained considerable traction over the past several years.

### III. CASE LAW DEVELOPMENT—MICROSOFT V. MOTOROLA

The April 2013 decision of the U.S. District Court for the Western District of Washington in *Microsoft v. Motorola* was an important early decision in the field of (F)RAND royalty



litigation and perhaps has contributed to the momentum behind royalty stacking concerns. In that case, involving the IEEE's 802.11 WiFi standard, the court pronounced that "[t]he RAND commitment also addresses royalty stacking and the need to ensure that the aggregate royalties associated with a given standard are reasonable." This conclusion, incidentally, was based on the testimony of Microsoft's experts, bolstered by the fact that Motorola itself had raised "the risk of royalty stacking" in submissions to a different SSO (ETSI).

Despite deeming the RAND obligation in question to be a contract, the court did not cite any particular language of the IEEE's IPR policy in support of its interpretation of the contract. Nor did it refer to any records of the IEEE or any other entity to suggest that the parties to the IPR policy mutually assented to an anti-stacking purpose or methodology. (It is noteworthy that, subsequent to the *Microsoft* decision, the Federal Circuit in *Ericsson* cautioned that courts should "consider the patentee's actual RAND commitment," as the terms "vary from case to case.")

Be that as it may, the *Microsoft* court went on to reason that "a proper methodology for determining a RAND royalty should address the risk of royalty stacking by considering the aggregate royalties that would apply if other SEP holders made royalty demands of the implementer." The court concluded that Motorola's royalty demands "raised significant stacking concerns" because, with respect to its 802.11 portfolio, there were "at least 92 entities" with SEPs and "[i]f each of these 92 entities sought royalties similar to Motorola's request of 1.15% to 1.73% of the end-product price, the aggregate royalty to implement the 802.11 Standard, which is only one feature of the Xbox product, would exceed the total product price."

Missing from this analysis was any discussion of the actual royalties, if any, that had been—or would be—demanded by any of those 92 entities or paid by Microsoft. Nor did the court consider the strength of those portfolios, or the business models or licensing practices of the patent holders. Not all patents are alike; some provide core functionality for a standard, while others may be of marginal value. And plainly there are significant differences among licensors. A non-practicing entity holding a few weak patents is one thing, a manufacturer who seeks cross licenses in support of its product business is another, and an R&D-focused firm that seeks to profit from its research and development investments through royalty-bearing licenses to a substantial patent portfolio is quite another.

Further, it should be noted that the types of licensing arrangements employed by patent holders vary. The scenario the *Microsoft* court posited, where the potential royalties add up to greater than 100 percent of the total product price, is an artifact of the assumption that royalties will be computed as a percentage of the selling price of the end product. But that arrangement is not foreordained. Up-front, lump-sum royalties, and fixed dollar-per-unit royalties are at least equally viable, can neatly reflect the value of the R&D investment represented by the licensed patents, and allow the costs of technology inputs to be readily incorporated into the cost of the end product.

Bringing the above points together, suppose, hypothetically, that the facts showed that (i) some of the 92 holders of 802.11 SEPs had only weak or *de minimis* portfolios; (ii) some had no history of demanding royalties; (iii) some earned up-front or dollar-per-unit royalties; and (iv) for all the rest Microsoft paid a total of, say, 2 percent of the end product price. On those facts, it

would be hard to conclude that there was a real royalty stacking concern that would weigh greatly in the hypothetical negotiation undertaken by the court to determine a RAND royalty.

Of course, we do not know what actual evidence might have shown. And that is the point. A determination made without important, relevant facts is, to that extent, speculative. In the particular case of *Microsoft v. Motorola*, we may assume that the court's decision was appropriate in view of the limited record developed by the parties. But as lawyers, policymakers, and judges, we should strive for and demand more than conjecture.

#### IV. *Innovatio*

In the case of *In re Innovatio* (October 2013), the U.S. District Court for the Northern District of Illinois, determining a RAND royalty for a different patent portfolio as against the 802.11 standard, largely followed the reasoning of the *Microsoft* court. However, with regard to royalty stacking, the *Innovatio* court took a somewhat more nuanced approach.

The court credited the concern for the risk of royalty stacking, but also took into account the testimony of the patent holder's licensing expert, who "expressed his view that stacking is only a concern if the stack does not accurately reflect the value of the patented technology." The court noted the argument that "[i]f the technology is accurately valued, stacking the royalties for each invention merely reflects the value that is created by combining many inventions into a single product." The court concluded that "royalty stacking may be a concern when setting a RAND rate," and that it should "ensure that the asserted patents are not overvalued compared to the technological contribution they make to the standard." This "requires that the court, to the extent possible, evaluate a proposed RAND rate in the light of the total royalties an implementer would have to pay to practice the standard." Ultimately, the court's RAND royalty analysis did not explicitly address royalty stacking, but rather sought to approximate the value of the contribution of the patents with reasonable accuracy given the available information.

The decision in *Innovatio*, while not markedly different than that in *Microsoft*, at least avoided speculation as to the risk posed by royalty stacking. The *Microsoft* court saw "significant stacking concerns" based on a hypothetical as to how much Microsoft might have to pay in royalties. The *Innovatio* court framed the issue more factually, as a need to take into account—to the extent possible—the amount of royalties an implementer would have to pay to implement the standard. This formulation implies that any consideration of the royalty stacking issue should be grounded on actual royalties or demands, not on what the licensee might pay in some hypothetical world.

#### V. *Ericsson v. D-Link*

The *Ericsson* case involved, yet again, the 802.11 standard. Ericsson won a jury verdict of infringement on a number of patents. At trial, D-Link requested that the district court instruct the jury to consider royalty stacking in its damages deliberations. The court declined, describing the stacking argument as "theoretical." On appeal, D-Link again argued that "the jury should have been instructed on the concepts of patent hold-up and royalty stacking because ... the jury should know the mischief that can occur if RAND royalty rates are set too high." The Federal Circuit noted that many *amici* made the same point.

The appellate court, however, affirmed the district court's decision. The Federal Circuit emphasized the importance of record evidence, holding that "[c]ertainly something more than a general argument that these phenomena are possibilities is necessary.... Depending on the record, reference to such potential dangers may be neither necessary nor appropriate." More particularly, a jury "need not be instructed regarding royalty stacking unless there is actual evidence of stacking. The mere fact that thousands of patents are declared to be essential to a standard does not mean that a standard-compliant company will necessarily have to pay a royalty to each SEP holder." D-Link's expert "never even attempted to determine the actual amount of royalties" defendants were paying for SEPs, and "D-Link failed to come forward with any evidence of other licenses it has taken on Wi-Fi essential patents or royalty demands on its Wi-Fi enabled products." The Federal Circuit concluded, "Because D-Link failed to provide any evidence of actual royalty stacking, the district court properly refused to instruct the jury on royalty stacking."

While the Federal Circuit's decision relates most directly to jury instructions, its reasoning extends more broadly. Fairly resoundingly, the court rejected theoretical arguments on royalty stacking in favor of evidence-based arguments. The Lemley & Shapiro assertion that detrimental royalty stacking is a possibility within the confines of their model would not suffice to warrant a jury instruction.

By logical extension, such an argument should not be considered when a judge determines a FRAND royalty. Merely theoretical arguments such as these are simply not worthy of consideration in a court of law. Likewise, the Federal Circuit squarely rejected the notion from the *Microsoft* case that a large number of SEPs, held by a large number of entities, implies a serious royalty stacking problem. This type of speculative assertion should not be acceptable in FRAND royalty cases going forward. In future cases, licensees, licensors, and courts will need to address royalty stacking arguments with actual evidence.

## VI. CONCLUSION

Regulators, courts, and private parties have expressed concern in recent years about the possibility of royalty stacking and the "mischief" it might engender. Little or no consideration has been given to whether there is any evidence of such mischief in the real world. In the wake of *Ericsson*, the focus must shift to evidence and facts. This change in direction will benefit all parties by properly putting the development of laws and policies on a firm, factual footing.



# CPI Antitrust Chronicle

March 2015 (1)

F/RANDly Judicial Advice to  
the Rescue:  
*Ericsson v. D-Link*

Dina Kallay  
Ericsson

## F/RANDly Judicial Advice to the Rescue: *Ericsson v. D-Link*

Dina Kallay<sup>1</sup>

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### I. INTRODUCTION

On December 4, 2014, the U.S. Court of Appeals for the Federal Circuit issued its long-awaited decision in the *Ericsson v. D-Link* matter<sup>2</sup> (“CAFC Decision” or “Decision”). The Decision marks the first U.S. appellate review guidance on the much-debated issue of determining appropriate royalties for standard-essential patents that are subject to reasonable and non-discriminatory (“RAND”) licensing commitments. This note summarizes pertinent aspects of the District Court opinion and the subsequent CAFC Decision, and examines their consistency with competition developments in this area.

### II. THE FACTUAL BACKGROUND AND THE *ERICSSON V. D-LINK* DISTRICT COURT DECISION

Ericsson filed the original patent infringement complaint that started this matter on its course through the courts in September, 2010. It did so after years of fruitless licensing negotiations with six makers of routers and other devices compliant with IEEE 802.11 (Wi-Fi) standards: D-Link, Netgear, Acer/Gateway, Dell, Toshiba, and Belkin.<sup>3</sup> Intel, the wireless chip supplier for the products in question, subsequently intervened in the case, and was thus added as a defendant. In June 2013, a jury found several of the patents infringed, and therefore awarded Ericsson damages of about U.S. \$10,000, 000.<sup>4</sup>

The jury verdict addressed only issues of validity, infringement, and damages. In addition, the defendants had asserted a counterclaim alleging that Ericsson had acted in a manner inconsistent with its RAND licensing obligations to IEEE. These claims were adjudicated in a separate bench trial before presiding Judge Leonard Davis.

On August 6, 2013, Judge Davis issued a lengthy memorandum opinion and order (“Opinion”) broadly upholding the jury verdict, and rejecting the defendants’ contentions that Ericsson’s licensing and enforcement conduct was inconsistent with its RAND commitment.<sup>5</sup>

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<sup>1</sup> Dina Kallay, SJD, is Director, Intellectual Property and Competition at Ericsson, a world leader in the rapidly changing environment of communications technology. The views expressed herein are hers alone and do not necessarily represent Ericsson’s views.

<sup>2</sup> *Ericsson, Inc. v. D-Link Sys. Inc., et al.*, 773 F.3d 1201 (Fed. Cir. 2014), available at <http://www.cafc.uscourts.gov/images/stories/opinions-orders/13-1625.Opinion.12-2-2014.1.PDF>.

<sup>3</sup> Original Compl. for Patent Infringement, *Ericsson, Inc. v. D-Link Sys. Inc. et al.* [hereinafter *Ericsson v. D-Link*], No. 6:10-00473 (E. D. Tex. Sept. 14, 2010), 2013 WL 4046225, ECF No. 1.

<sup>4</sup> Final Verdict Form, *Ericsson v. D-Link*, No. 6:10-00473 (June 13, 2013), ECF No. 508.

<sup>5</sup> Memorandum Opinion and Order, *Ericsson v. D-Link*, No. 6:10-00473, 2013 WL 2242444 (Aug. 6, 2013).

The opinion offers valuable guidance on the interpretation of a RAND commitment in a number of areas:

### **A. Basic Principles of RAND Licensing**

1. **Initial RAND licensing offer is a starting point; seeking a royalty greater than what the infringer believes reasonable is not a RAND-violation.** The court noted that RAND licensing:

creates a situation ripe for judicial resolution. If two parties negotiating a RAND license are unable to agree to the financial terms of an agreement, it is entirely appropriate to resolve their dispute in court. A patent holder does not violate its RAND obligations by seeking a royalty greater than its potential licensee believes is reasonable. Similarly, a potential licensee does not violate its RAND obligations by refusing a royalty that the patent holder believes is reasonable. Instead, both sides' initial offers should be viewed as the starting point in negotiations. Even if a court or jury must ultimately determine an appropriate rate, merely seeking a higher royalty than a potential licensee believes is reasonable is not a RAND violation." (p. 50)

2. **RAND licensing is a two-way street.** The court held that:

RAND licensing also includes an obligation to negotiate in good faith. This obligation is a two-way street. As potential licensees in a RAND negotiation, Defendants possessed an obligation to negotiate in good faith and earnestly seek an amicable royalty rate. . . . Defendants never meaningfully engaged Ericsson in RAND licensing negotiations after the initial [Ericsson] offer. Further, the fact that the RAND rate was ultimately litigated in court does not make Ericsson's initial offer unreasonable. (pp. 50-51)

### **B. Level of Licensing**

1. **No duty to assert patents.** The argument that Ericsson may have breached its RAND obligation to offer licenses to an unrestricted number of licensees "by not suing Intel, then not seeking damages against Intel after it intervened in the case" was rejected on two grounds. First, the court noted that "[a]s the plaintiff, [Ericsson] is the master of its own case... and Defendants cite no law requiring a patentee to sue all potential licensees." Second, the court noted that "Ericsson offered Intel a license prior to trial" but the latter "never meaningfully engaged in licensing talks with Ericsson after Ericsson's initial offer...[and] cannot rely on its failure to negotiate to prove Ericsson's failure to make a legitimate license offer." (pp. 32-33).

In rejecting the defendants' allegation that such behavior is equivalent to a refusal to offer somehow inconsistent with Ericsson's RAND obligations, the court effectively held that a patent holder's duty to offer a license on RAND terms applies only where it actually asserts its patents against that infringer.

2. **Licensing at the end-user product is consistent with RAND.** The court found Ericsson's policy of licensing only end-user products to be consistent with its RAND licensing commitment to IEEE, and noted that:

Participation in standard-setting organizations such as the IEEE is voluntary, and parties are free to restrict or limit their level of participation. There is nothing inherently wrong or unfair with

Ericsson's practice of licensing 'fully compliant' products, and they gave notice of this position in their initial letter of assurance. Further, other large companies have adopted similar policies of only licensing fully compliant products. (p. 47).

### C. The Establishment of RAND Royalties:

1. **Alleged use of "non-comparable" licenses.** Defendants' argument that the licenses presented by Ericsson were incomparable because "there [was] no evidence that the licenses were negotiated with Ericsson's RAND obligations in mind" was rejected, both as a matter of law and as a matter of fact. The Court saw "no binding authority that a prior license is incomparable as a matter of law if it was not negotiated within the RAND framework" and held that "[e]ven if there were binding authority on the issue, [Ericsson's expert] testified that the prior licenses were all negotiated within the framework of Ericsson's RAND obligations" (p. 35).
2. **Royalty stacking and hold-up arguments rejected as "theoretical."** The court rejected Defendants' argument that the jury's award failed to account for the "danger that royalty stacking would block or impede the 802.11 standard," dismissing the argument as "theoretical" (pp. 35-36), and noting that "Defendants did not present any evidence of an actual royalty stack on the asserted patents" (p. 49). Similarly, it found "Defendants failed to present any evidence of *actual* hold-up" (p. 36).

### III. THE COURT OF APPEALS DECISION

The defendants chose not to appeal the aforementioned RAND Opinion, thus rendering it final. Instead, their appeal raised two other issues that may be of interest to the antitrust bar: First, whether Ericsson's damages theory was presented in violation of the Entire Market Value Rule by relying on licenses that were based on the value of the end products; and, second, whether the jury was instructed properly regarding Ericsson's RAND obligations. In reviewing these issues, the Court made the following important findings:

1. **Damages may be based on end-user product.** The Court rejected the argument that a RAND royalty must always be based on the "smallest saleable unit" explaining that "where the entire market value of a machine as a marketable article is 'properly and legally attributable to the patented feature,' the damages...may be calculated by reference to that value" (pp. 40-41). The Court further explained that the "ultimate reasonable royalty award must be based on the incremental value that the patented invention adds to the *end product*." (emphasis added) (p. 40) and found that that the District court did not err in allowing Ericsson's damages theory that was based on an end-product royalty base.
2. **Use of comparable licenses as evidence.** The CAFC confirmed that "licenses may be presented to the jury to help the jury decide an appropriate royalty award" (p. 41) and noted that "the fact that a license is not perfectly analogous generally goes to the weight of the evidence, not its admissibility." (p. 42). It concluded that "when licenses based on the value of a multi-component product are admitted...the court should...ensure that the [jury] instructions fully explain the need to apportion the ultimate royalty award to the incremental value of the patented feature from the overall product," but such licenses could be admissible, comparable licenses, and were so in the case (p. 43).

3. **Actual evidence of theoretical stacking and hold-up must be presented in order to obtain a jury instruction.** The Court agreed with the District Court's finding that "D-Link failed to provide evidence of patent hold-up and royalty stacking sufficient to warrant a jury instruction" (p. 54). It explained that "the district court need not instruct the jury on hold-up or stacking unless the accused infringer presents actual evidence of hold-up or stacking." (p. 54). Additionally, it noted that "[t]he mere fact that thousands of patents are declared to be essential to a standard does not mean that a standard-compliant company will necessarily have to pay a royalty to each SEP holder" (p. 55). The Court thus concluded that "the district court did not err by refusing to instruct the jury on the general concepts of patent hold-up and royalty stacking." (p. 55).
4. **There is no one-size-fits-all modified *Georgia-Pacific* formula to calculate RAND damages.** In rejecting the *Innovatio*<sup>6</sup> and *Microsoft*<sup>7</sup> decisions' approach, the Court recognized the need to evaluate RAND commitments and conduct on a case-by-case basis:

[t]o be clear, we do not hold that there is a modified version of the *Georgia-Pacific* factors that should be used for all RAND-encumbered patents. . . . We believe it unwise to create a new set of *Georgia-Pacific*-like factors for all cases involving RAND-encumbered patents. Although we recognize the desire for bright line rules and the need for district courts to start somewhere, courts must consider the facts of record when instructing the jury and should avoid rote reference to any particular damages formula. (pp. 49-50).

5. **Value of the patented technology in the context of standardization.** The CAFC found that a "royalty award for a [standard essential patent] must be apportioned to the value of the patented invention. . . not the value of the standard as a whole" and a jury must be instructed accordingly (p. 52). It cautioned, however, that this decision "does not suggest that all standard-essential patents make up only a small part of the technology in the standard. Indeed, if a patentee can show that his invention makes up 'the entire value of the' standard, an apportionment instruction [to the jury] probably would not be appropriate." (p. 52).

In the context of apportioning "the value of the patented technology from the value of its standardization" the Court explained that "the patent holder should only be compensated for the approximate incremental benefit derived from his invention." (p. 52). It then went on to note that "widespread adoption of standard essential technology is not entirely indicative of the added usefulness of an innovation over the prior art" but that "[t]his is not meant to imply that [standard essential patents] never claim valuable technological contributions." Rather, the Court explained: "[w]e merely hold that the royalty for [standard essential patents] should reflect the approximate value of that technological contribution, not the value of its widespread adoption due to standardization." (p. 53).

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<sup>6</sup> *In re Innovatio IP Ventures*, 2013 WL 5593609 (N.D. Ill. Oct. 3, 2013).

<sup>7</sup> *Microsoft v. Motorola*, 2013 WL 2111217 (W.D. Wash. Apr. 25, 2013).



#### IV. THE DECISIONS FROM AN ANTITRUST PERSPECTIVE

The issues of whether and how a party has acted consistent with its RAND obligations have recently been the subject of interest to the antitrust community. Therefore, while the Opinion and the Decision did not address antitrust issues, it is interesting to draw some lines between them and existing antitrust jurisprudence as well as antitrust agencies' advocacy and actions. Such a review reveals some consistencies with antitrust law and policy statements, and some inconsistencies.

First, the finding that damages may be calculated based on an end-user product is consistent with views echoed by at least two competition agencies. China's National Development and Reform Commission followed this approach in February, 2015, in the settled outcome of its investigation of Qualcomm's licensing practices. The settlement suggests that basing royalties on the end device is not, in and of itself,<sup>8</sup> an antitrust or excessive pricing issue, and goes on to accept a proposed remedy formula that is in fact based on the end device. Similarly, in a September, 2014, speech, FTC Chairwoman Edith Ramirez stated that "it is important to recognize that a contractual dispute over royalty terms, whether the rate or the base used, does not in itself raise antitrust concerns."<sup>9</sup>

Second, the theoretical and unsubstantiated nature of "stacking" and "hold-up" allegations that are commonly raised by infringers as a defense strategy is reflected both in the decisions as well as in competition agencies' advocacy and enforcement records. Both the FTC 2011 *Evolving IP Marketplace* Report, and the 2007 *FTC/DOJ Antitrust Enforcement and IP Rights* Report address stacking and hold-up in theoretical terms. They do not suggest the existence of any widespread problem, let alone attempt to cite proof for the same.

Agencies' speeches and statements from the past two years are no different; they merely state that the agencies continue to closely monitor for such behavior. Thus, for example, in a July 2013 FTC statement, the Commission's discussion of hold-up was theoretical and did not point to any empirical direction.<sup>10</sup> The author is not aware of the U.S. or EC antitrust agencies ever proving hold-up or stacking in court, which leads one to wonder how these issues would have been decided by an independent adjudicator had the targets of these investigations chosen not to settle them.

Third, and on a higher level of abstraction, the CAFC determination that there is no one-size-fits-all formula to calculate RAND damages is philosophically consistent with modern

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<sup>8</sup> The decision section that discusses the supposedly excessive royalties is based on a list of multiple practices, and concludes with NDRC's view that it is the combination of these factors that led to supposedly excessive pricing.

<sup>9</sup> Edith Ramirez, Chairwoman, Fed. Trade Comm'n, Standard-Essential Patents and Licensing: An Antitrust Enforcement Perspective, Address at 8<sup>th</sup> Annual Global Antitrust Enforcement Symposium 11 (Sept. 10, 2014), [http://www.ftc.gov/system/files/documents/public\\_statements/582451/140915georgetownlaw.pdf](http://www.ftc.gov/system/files/documents/public_statements/582451/140915georgetownlaw.pdf).

<sup>10</sup> Suzanne Munck, Chief Counsel for Intellectual Property, Fed. Trade Comm'n, Standard Essential Patent Disputes and Antitrust Law: Hearing Before the Subcomm. on Antitrust, Competition Policy and Consumer Rights of the S. Comm. of the Judiciary 6 (July 30, 2013) (also recognizing "several market-based factors [that] may mitigate the risk of hold-up"), [https://www.ftc.gov/sites/default/files/documents/public\\_statements/prepared-statement-federal-trade-commission-concerning-standard-essential-patent-disputes-and/130730standardessentialpatents.pdf](https://www.ftc.gov/sites/default/files/documents/public_statements/prepared-statement-federal-trade-commission-concerning-standard-essential-patent-disputes-and/130730standardessentialpatents.pdf).

antitrust law's general coalescence towards a case-by-case *rule of reason* analysis of antitrust scenarios.

Fourth, the CAFC analysis of how to determine the value of a standard-essential patent is different from the FTC analysis of the same. As noted earlier, the CAFC held that the “ultimate reasonable royalty award must be based on the incremental value that the patented invention adds to the *end product*.” (p. 40) (emphasis added). It then went on to explain that the royalty award for a standard essential patent must be “apportioned to the value of the patented invention. . . not the value of the standard as a whole.” However, the Court cautioned that this principle “does not suggest that all standard-essential patents make up only a small part of the technology in the standard” and recognized that a patentee could possibly show that his invention makes up “the entire value of the” standard. In other words, the CAFC focuses on the total contribution the patented technology makes to the standard as a whole.

By contrast, in a 2011 Report, the FTC has suggested a formulation of the correct RAND value of a standard-essential patent to be the “ex ante value of the patented technology at the time the standard is set” and recommended that “Courts should cap the royalty at the incremental value of the patented technology over alternatives available at the time the standard was defined.”<sup>11</sup>

In adopting a very different formulation for determining the value of standard-essential patents, the CAFC thus rejected the FTC recommendation in this area.

Finally, in finding that a RAND obligation to license applies only towards standard implementers against whom a standard-essential patent holder chooses to assert its patents, the Opinion's outcome is consistent with the rationale of competition enforcers. Competition agencies have explained that a (F)RAND licensing commitment's purpose is ensuring access to the standard. For example, the FTC explains that companies “rely on a FRAND commitment to *ensure access* to SEPs”<sup>12</sup> and the European Commission Horizontal Guidelines explain that the aim of FRAND commitments is to “*ensure effective access* to the standard.”<sup>13</sup> An infringer against whom standard-essential patents are not asserted effectively enjoys free and unobstructed access to the standard even without a license. Therefore, there is no competition law reason to interfere in such a scenario.

## V. CONCLUSION

The *Ericsson v. D-Link* Opinion and Decision provide much needed guidance in the heavily contested realm of RAND licensing. They are mostly consistent with antitrust agencies' work and thinking in this area to date. However, the CAFC formulation for determining the

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<sup>11</sup> Fed. Trade Comm'n, *The Evolving IP Marketplace: Aligning Patent Notice and Remedies with Competition* 194 (Mar. 2011), <https://www.ftc.gov/sites/default/files/documents/reports/evolving-ip-marketplace-aligning-patent-notice-and-remedies-competition-report-federal-trade/110307patentreport.pdf>.

<sup>12</sup> Letter from Donald S. Clark (Sec'y, Fed. Trade Comm'n), “*Response to Commenters*” Re: *In the Matter of Motorola Mobility LLC and Google Inc.*, File No. 121 0120, Docket No. C-4410 2 at 2 (July 23, 2013), <https://www.ftc.gov/sites/default/files/documents/cases/2013/07/130724googlemotorolaletter.pdf>.

<sup>13</sup> European Comm'n, *Guidelines on the applicability of Article 101 of the Treaty on the Functioning of the European Union to horizontal co-operation agreements*, 2011 O. J. (C 11) Art. 285 (Jan. 14, 2011), [http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52011XC0114\(04\)&from=EN](http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52011XC0114(04)&from=EN).

RAND value of standard-essential patents is different from the FTC formulation of the same. As the expert authority on patent valuation, it would be useful to follow the CAFC's FRANDly advice on this matter moving forward.

# CPI Antitrust Chronicle

March 2015 (1)

An Analysis of the Federal  
Circuit's Decision in *Ericsson  
v. D-Link*

Anne Layne-Farrar (CRA)  
&  
Koren W. Wong-Ervin (FTC)

# An Analysis of the Federal Circuit’s Decision in *Ericsson v. D-Link*

Anne Layne-Farrar & Koren W. Wong-Ervin<sup>1</sup>

## I. INTRODUCTION

On December 4, 2014, the U.S. Court of Appeals for the Federal Circuit issued a decision in *Ericsson v. D-Link*, providing substantial guidance to lower courts on how to calculate royalty rates for standard-essential patents (“SEPs”) encumbered by a commitment to license on reasonable and nondiscriminatory (“RAND”) terms.<sup>2</sup> This article analyzes that decision, providing economic commentary on (i) its key holdings with respect to the appropriate methodology, (ii) the incremental value approach, (iii) when to consider concerns about hold-up and royalty stacking, and (iv) the use of the “smallest salable patent practicing unit” (“SSPPU”).

## II. BACKGROUND AND HOLDING

Ericsson sued D-Link and others alleging infringement of patents it claimed essential to the 802.11 (Wi-Fi) standard. A jury found that D-Link and the other defendants infringed the asserted claims of three patents and assigned roughly \$10M in damages—approximately 15 cents per infringing device. After post-trial motions, the district court upheld the jury’s infringement and validity finding and refused to grant a new trial based on an alleged violation of the “entire market value rule” (“EMVR”) and allegedly deficient jury instructions regarding the standard-setting context and Ericsson’s RAND licensing obligations.

The Federal Circuit vacated the jury’s damages award, finding that

the district court committed legal error in its jury instruction by: (1) failing to instruct the jury adequately regarding Ericsson’s actual RAND commitment; (2) failing to instruct the jury that any royalty for the patented technology must be apportioned from the value of the standard as a whole; and (3) failing to instruct the jury that the RAND royalty rate must be based on the value of the invention, not any value added by the standardization of that invention—while instructing the jury to consider irrelevant *Georgia-Pacific* factors.<sup>3</sup>

## III. APPROPRIATE METHODOLOGY

Thus far, the overwhelming majority of district courts that have addressed the issue of how to calculate RAND royalties have applied a modified version of the 15 factors set forth in

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<sup>2</sup> 773 F.3d 1201 (Fed. Cir. 2014).

<sup>3</sup> *Id.* at 1235.

*Georgia-Pacific*.<sup>4</sup> The Federal Circuit held that “[t]here is no *Georgia-Pacific*-like list of factors that district courts can parrot for every case involving RAND-encumbered patents.”<sup>5</sup> Instead, courts must instruct the jury only on factors that are relevant to the record developed at trial, and must instruct the jury on the actual RAND commitment at issue.

In making this determination, the Federal Circuit decision reflects how *Georgia-Pacific* factors are typically used in traditional patent infringement cases: not every factor will apply to every case and which factors should be emphasized often varies as well. That being said, though the Federal Circuit refused to provide a recommended modification of all 15 of the *Georgia Pacific* Factors for universal use in RAND cases, it did provide some further guidance on this issue.

For example, the court noted 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.”<sup>6</sup> Namely, the licensor’s established policy to maintain its patent monopoly (*Georgia Pacific* Factor 4) and the relationship between the SEP holder and the putative licensee (*Georgia Pacific* Factor 5) will never be relevant for an SEP holder who has committed to RAND licensing. While an SEP holder can legitimately charge differently situated licensees different rates reflecting the differential value those licensees receive from the patented technologies, the “ND” portion of RAND prevents SEP holders from discriminating on the basis of whether or not it competes directly with the licensee.

The Federal Circuit also added additional clarity by calling for lower courts to reference to the actual RAND commitment at issue. While the debate often refers to “the RAND commitment” as if it were a monolithic promise, there are in fact subtle, but important, differences across standard setting organizations (“SSOs”) in regards to their Intellectual Property Rights (“IPRs”) policies.

For example, some organizations require their members to sign contracts (membership agreements), while others simply require IPR declarations (such as letters of assurance).<sup>7</sup> The definition of what is and is not considered “essential” varies too, as do the details included in the RAND pledge requested, such as the requested geographic scope for the license, reciprocity in licensing, and the license duration.<sup>8</sup> Accounting for differences in terms like these could well affect the hypothetical negotiation framework that should be employed.

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<sup>4</sup> See Anne Layne-Farrar & Koren Wong-Ervin, *Methodologies For Calculating FRAND Damages*, Parts 1-3, LAW360 (Oct. 8-10, 2014), available at [http://www.ftc.gov/system/files/attachments/key-speeches-presentations/wong-ervin\\_-\\_methodologies\\_for\\_calculating\\_frاند\\_damages.pdf](http://www.ftc.gov/system/files/attachments/key-speeches-presentations/wong-ervin_-_methodologies_for_calculating_frاند_damages.pdf) (analyzing the district court cases that have determined a RAND royalty rate) [hereinafter Layne-Farrar & Wong-Ervin].

<sup>5</sup> *Ericsson*, 773 F.3d at 1235.

<sup>6</sup> *Id.* at 1230-31.

<sup>7</sup> For a comparison of RAND commitments across SSOs, see Rudi Bekkers & Andy Updegrave, *A Study of IPR policies and practices of a representative group of Standards Setting Organizations worldwide* (2012), a National Academies of Science Working Paper available at [http://home.tn.tue.nl/rbekkers/nas/Bekkers\\_Updegrave\\_NAS2012\\_main\\_report.pdf](http://home.tn.tue.nl/rbekkers/nas/Bekkers_Updegrave_NAS2012_main_report.pdf).

<sup>8</sup> *Id.*

#### IV. INCREMENTAL VALUE APPROACH AND APPORTIONMENT

The Federal Circuit held that “any royalty award must be based on the incremental value of the invention, not the value of the standard as a whole or any increased value the patented feature gains from its inclusion in the standard.”<sup>9</sup> According to the Federal Circuit, to ensure that the royalty award is based on the incremental value that the patented invention adds to the product, “the patented feature must be apportioned from all of the unpatented features reflected in the standard,” and “the patentee’s royalty must be premised on the value of the patented feature, not any value added by the standard’s adoption of the patented technology.”<sup>10</sup> The Federal Trade Commission (“FTC”) has also advocated that “courts should cap the royalty at the incremental value of the patented technology over alternatives available at the time the standard was chosen.”<sup>11</sup> While the Federal Circuit did not reject this approach, it also did not appear to address it, but rather used the term “incremental value” to refer to apportionment.<sup>12</sup>

The court held that a RAND assessment must be focused on the value to the standard and products embodying the standard that the SEP portfolio at issue has contributed—a position that is consistent with the FTC’s recommendation from its 2011 IP Report.<sup>13</sup> This finding is appropriate because proper apportionment will isolate the value of the patented technology from any value associated with hold-up or royalty stacking.

Recall that “patent hold-up” refers to the potential problem that arises when an SEP holder has made a commitment to license on RAND terms but then seeks to use standard-lock-in to obtain an unjustifiably higher royalty than would have been possible *ex ante*, before the patents were included in the standard. The royalty stacking theory, which is based on the Cournot complements problem, maintains that patent holders will set their royalty rates without regard to the other strictly complementary patent holders, such that a cumulative royalty “stack” can emerge for the good’s producer that is so high that it cripples the product market or, at a minimum, severely restricts output.

It is important to distinguish between an aggregate royalty burden that accurately reflects the cumulative value of the various SEPs included in a given standard from an aggregate royalty burden that includes at least some supra-RAND rates (individual hold-ups). The former is simply the cost of making products that benefit from valuable intellectual property, analogous to any other cost of doing business. For example, automakers face an aggregate input cost covering all of the many components needed to produce a car. There is nothing inherently anticompetitive in needing multiple inputs to produce a particular good, nor in each of those input suppliers

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<sup>9</sup> *Ericsson*, 773 F.3d at 1235.

<sup>10</sup> *Id.* at 1232.

<sup>11</sup> FTC, *The Evolving IP Marketplace: Aligning Patent Notice and Remedies with Competition* (March 2011) at 189, available at <http://www.ftc.gov/sites/default/files/documents/reports/evolving-ip-marketplace-aligning-patent-notice-and-remedies-competition-report-federal-trade/110307patentreport.pdf> [hereinafter 2011 IP Report].

<sup>12</sup> See, e.g., *Ericsson*, 773 F.3d at 1226 (“The essential requirement is that the ultimate reasonable royalty award must be based on the incremental value that the patented invention adds to the end product.”); *id.* at 1228 (“The court should also ensure that the instructions fully explain the need to apportion the ultimate royalty award to the incremental value of the patented feature from the overall product.”).

<sup>13</sup> See 2011 IP Report at 189-91.

charging a fair price for their contribution. To the best of our knowledge, no one has accused steel makers of creating a “stack” for auto production.

One of the assumptions underlying the Cournot complements problem is that each input supplier will price their inputs without regard to the price charged for other needed inputs, but there is no reason to assume that will necessarily be the case in standard-setting contexts. First, SEPs may have limited or no applications outside of the standard, in contrast to the zinc and copper inputs Cournot had in mind for brass production. With only one market in which to license their patents, SEP holders may have insufficient leverage to push supra-RAND rates.<sup>14</sup> Moreover, the SEP holders will be cooperating with one another—and all other SSO members—in the development of the standard, and are thus likely to know what patents are expected to be asserted and by whom. As a result, there is no reason to presume that SEP holders will set rates without regard to the full complement of known SEPs.

As long as the inputs for multi-component products are priced according to the value of the patented contribution to the end product, no SEP holder can be faulted for either hold up or stacking. Proper apportionment is a reasonable means to accomplish this goal. When rates are properly focused on the value that the specific patents contribute to products compliant with a standard—and not on other product features, the value of the overall standard, or implementer switching costs—then the risk of either patent hold-up or royalty stacking is eliminated.

## V. HOLD-UP AND ROYALTY STACKING

Prior to the Federal Circuit’s decision, lower courts were divided on whether concerns about hold-up and royalty stacking must be taken into consideration, or whether they must be proven with evidence as opposed to simply discussed in theoretical terms.<sup>15</sup> One popular approach had been to estimate the aggregate royalty burden assuming that all SEP holders would charge the same rate as that offered by the accused SEP holder.<sup>16</sup>

In *Ericsson*, the Federal Circuit held that to be considered as part of a RAND damages analysis, concerns about hold-up and royalty stacking must be proven, stating that “[c]ertainly something more than a general argument that these phenomena are possibilities is necessary.”<sup>17</sup> Instead, the court instructed that implementers must provide evidence that the SEP holder “used its SEPs to demand higher royalties from standard-compliant companies.”<sup>18</sup>

With respect to royalty stacking, the Federal Circuit’s decision rejects the approach taken by some of the district courts of addressing the risk of royalty stacking by considering the aggregate royalties that would apply if other SEP holders made similar royalty demands of the implementer, without requiring the implementers to show what royalties they were currently

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<sup>14</sup> This point relates to reverse hold-up, when licensees use their leverage to obtain below-RAND rates and terms, and to holdout, when licensees either refuse to take a RAND license or delay in doing so.

<sup>15</sup> Compare *Microsoft v. Motorola*, 2013 WL 2111217 at \*12 (W.D. Wash. Apr. 25, 2013); *In re Innovatio IP Ventures, LLC Patent Litig.*, 2013 WL 5593609 at \*8-10 (N.D. Ill. Oct. 3, 2013) with *Ericsson v. D-Link*, 2013 WL 4046225 at \*18 (E.D. Tex. Aug. 6, 2013).

<sup>16</sup> See, e.g., *Microsoft v. Motorola*, 2013 WL 2111217 at \*73; *In re Innovatio IP Ventures, LLC Patent Litig.*, 2013 WL 5593609 at \*9-10 (using the equal-patent approach as a check on other calculations).

<sup>17</sup> *Ericsson*, 773 F.3d at 1234.

<sup>18</sup> *Id.*



paying. Under the Federal Circuit's decision, the actual cumulative royalty paid by a particular implementer must be proven and assessed to determine whether it is excessive.

This is an important holding that recognizes the economic theory behind hold-up and royalty stacking, as discussed above. Hold-up requires lock-in, i.e., standard-implementing companies with asset-specific investments can be locked in to the technologies defining the standard.<sup>19</sup> On the other hand, innovators that are contributing to the standard-setting body can also be locked-in if their technologies have a market only within the standard. Thus, a hold-up risk is present on both sides of the licensing table. For holdup in any guise to occur, however, there must be an action by the relevant party once lock-in has occurred. The mere fact that a license agreement was signed after the patent(s) were included in a standard is not enough to establish that the patent holder is practicing hold-up.

Several market-based factors mitigate the risk of hold-up. For example, reputational and business costs may deter repeat players from engaging in hold-up and "patent holders that have broad cross-licensing agreements with the SEP-owner may be protected from hold-up."<sup>20</sup> In addition, patent holders often enjoy a first-mover advantage if their technology is adopted as the standard. "As a result, patent holders who manufacture products using the standardized technology 'may find it more profitable to offer attractive licensing terms in order to promote the adoption of the product using the standard, increasing demand for its product rather than extracting high royalties.'"<sup>21</sup> Moreover, not all patents are of equal value, and reasonable royalties should reflect the value of the SEP at issue. Thus, it does not make sense to estimate the aggregate royalty for a standard by assuming that all SEP holders would charge the same (or similar) rates.<sup>22</sup>

Royalty stacking need not occur with respect to a given standard. In addition to the points discussed above in regard to the Federal Circuit's ruling on apportionment, we also need to keep in mind the difference between the number of SEPs and the number of SEP holders. Given the prevalence of portfolio licensing, it is the latter number that we care about. Even if a license to 1,000 SEPs were required to implement a given standard, if all of those SEPs were held by a single entity who licensed on a portfolio basis, there would be no stack at all. Indeed, this is the driving force behind the creation of patent pools.

It is important as well to note that not all SEP holders seek any license payments: "The mere fact that thousands of patents are declared to be essential to a standard does not mean that

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<sup>19</sup> For a discussion of the theoretical roots of the hold-up theory, see F. Scott Kieff & Anne Layne-Farrar, *Incentive Effects From Different Approaches to Holdup Mitigation Surrounding Patent Remedies and Standard-Setting Organizations*, 0(0) J. COMPETITION L. & ECON. 1-33 (2013).

<sup>20</sup> Prepared Statement of The Federal Trade Commission Before the U.S. Senate Committee on the Judiciary Concerning "Standard Essential Patent Disputes and Antitrust Law" at 6 (July 30, 2013), available at [http://www.ftc.gov/sites/default/files/documents/public\\_statements/prepared-statement-federal-trade-commission-concerning-standard-essential-patent-disputes-and/130730standarlessentialpatents.pdf](http://www.ftc.gov/sites/default/files/documents/public_statements/prepared-statement-federal-trade-commission-concerning-standard-essential-patent-disputes-and/130730standarlessentialpatents.pdf).

<sup>21</sup> *Id.* (quoting Fed. Trade Comm'n & U.S. Dep't of Justice, *Antitrust Enforcement and Intellectual Property Rights: Promoting Innovation and Competition* at 40-41 (2007), available at <http://www.ftc.gov/sites/default/files/documents/reports/antitrust-enforcement-and-intellectual-property-rights-promoting-innovation-and-competition-report.s.department-justice-and-federal-trade-commission/p040101promotinginnovationandcompetitionrpt0704.pdf>).

<sup>22</sup> See Layne-Farrar & Wong-Ervin, *supra* note 4, Part 1 at 4 for a mathematical explanation.

a standard-compliant company will necessarily have to pay a royalty to each SEP holder.”<sup>23</sup> Thus, the existence of royalty stacking should not be presumed, but rather should be evaluated on a case-by-case basis by considering evidence of other licenses taken by a potential licensee on patents essential to the relevant standard. Lastly, as explained above, a RAND assessment focused on the value to the standard and products embodying the standard that the SEP portfolio at issue has contributed will necessarily avoid hold-up and royalty stacking.

## VI. SSPPU

The Federal Circuit in *Ericsson* reiterated its prior statements from *LaserDynamics* that the SSPPU (“smallest salable patent-practicing unit”) was created as an evidentiary rule “to help our jury system reliably implement the substantive statutory requirement of apportionment of royalty damages to the invention’s value.”<sup>24</sup> The court went on to explain that:

[l]ogically, an economist could do this [apportionment] in various ways—by careful selection of the royalty base to reflect the value added by the patented feature, where that differentiation is possible; by adjustment of the royalty rate so as to discount the value of a product’s non-patented features; or by a combination thereof. The essential requirement is that the ultimate reasonable royalty award must be based on the incremental value that the patented invention adds to the end product.<sup>25</sup>

The Federal Circuit held that the jury could hear evidence about comparable licenses based on the end product rather than the SSPPU, reasoning that “[m]aking real world, relevant licenses inadmissible ... would often make it impossible for a patentee to resort to license-based evidence.”<sup>26</sup>

The FTC has recommended that “[c]ourts should identify as the appropriate base that which the parties would have chosen in the hypothetical negotiation as best suited for accurately valuing the invention.”<sup>27</sup> Although the FTC went on to state that “[t]he practical difficulty of identifying a royalty rate that accurately reflects the invention’s contribution to a much larger, complex product often counsels toward choosing the smallest priceable component that incorporates the inventive feature,” the FTC clearly recommended that the focus should be on the basis for determining royalties that the parties would have used.

Importantly, for some technology, using the smallest component or device as the royalty base may under- or over-value the technology. For example, some technology may technically be implemented by a single component part, yet its value may exceed the component itself such that using an appropriately apportioned end-user product price as the royalty base may provide a more accurate means to value the technology at issue.

Moreover, the value of a given SEP portfolio as realized by a licensee also may vary depending on the final product in which the licensee incorporates the technology. For example, a

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<sup>23</sup> *Ericsson*, 773 F.3d at 1234.

<sup>24</sup> *Id.* at 1226.

<sup>25</sup> *Id.*

<sup>26</sup> *Id.* at 1228.

<sup>27</sup> 2011 IP Report at 212.

given SEP portfolio may deliver very different value to a mobile infrastructure manufacturer as compared to a handset maker as compared to a network operator.

With respect to using comparable licenses that rely on the end-user device as the royalty base, the context of those licenses is often important. There are a number of considerations that may dictate private parties' selection of a royalty base in a freely negotiated license agreement. Industry practice and the convenience of the parties is one such consideration; other commercial dealings between the parties is another. In order to reduce administrative costs, a royalty base is often selected to allow for easy monitoring or verification of units sold; end product prices are often chosen for these reasons. Indeed, as a practical matter, we have found that most licenses in many high-tech markets, including smartphones, are negotiated on a patent portfolio basis using the end-user device as the royalty base.

## VII. GOING FORWARD

Given that the Federal Circuit, which has nationwide appellate jurisdiction over patent disputes, is often the last word on patent issues, the court's *Ericsson* decision provides important guidance to lower courts on how to determine RAND royalty rates. While the decision is binding on lower courts calculating RAND rates in patent infringement cases, whether lower courts will follow the decision in determining RAND rates in contract disputes (such as Judge Robart's decision in *Microsoft v. Motorola*) remains to be seen.



# CPI Antitrust Chronicle

## March 2015 (1)

### A Brief Overview of *Qualcomm v. Korea Fair Trade Commission*

Yoonhee Kim & Hui-Jin Yang

## A Brief Overview of *Qualcomm v. Korea Fair Trade Commission*

Yoonhee Kim & Hui-Jin Yang<sup>1</sup>

### I. INTRODUCTION

The Korea Fair Trade Commission (“KFTC”) has been at the forefront of public enforcement of Korean competition law. Delegated by the Monopoly Regulation and Fair Trade Act<sup>2</sup> (“MRFTA”) with the independent authority to investigate and remedy competitive harm, the KFTC is uniquely situated to pursue the mission to protect the marketplace from abuse of dominant market power and unfair trade practices.

As the IT sector constitutes the critical mass of the Korean economy, the KFTC’s considerable interest in guarding the IT sector free from competitive injury is warranted. For example, in the 1990s when competition law enforcers in the United States and the European Union were investigating Microsoft’s business practices that had allegedly driven new competitors out of the markets, the KFTC concluded that Microsoft violated the MRFTA by abusing its dominant position, ordered structural changes in Windows, and levied a 32.5 billion won fine (approximately \$33.5 million at the time). One literature called the KFTC’s remedial approach in the Microsoft investigation “creative,” commenting that the remedy was praiseworthy for its potentials not only to effectively restore competition, but also to re-empower consumers.<sup>3</sup>

Viewed in this light, the KFTC’s enforcement action against Qualcomm should create little surprise. All the more so, because Korea was the first country that successfully commercialized Qualcomm’s CDMA (Code Division Multiple Access) technology in the 1990s, leading to Qualcomm’s dominant position in the IT sector. Unable to compete in the Korean market despite the capability to produce CDMA chips, Texas Instrument and Broadcom petitioned the KFTC in 2006 to investigate Qualcomm’s licensing practices. The KFTC’s investigation was concluded in 2009 with the finding that Qualcomm had abused its dominant position in the CDMA markets. On appeal, the Seoul High Court in 2013 affirmed the KFTC’s determinations and remedial orders for the most part. The case is currently pending before the Korea Supreme Court.

This paper walks through the KFTC’s enforcement action against Qualcomm and reviews why the KFTC and the court concluded that Qualcomm violated the MRFTA by abusing its

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<sup>2</sup> An English translation of the Monopoly Regulation and Fair Trade Act is available at [http://eng.ftc.go.kr/bbs.do?command=getList&type\\_cd=62&pageId=0401](http://eng.ftc.go.kr/bbs.do?command=getList&type_cd=62&pageId=0401).

<sup>3</sup> ANDREW I. GAVIL & HARRY FIRST, THE MICROSOFT ANTITRUST CASES 230-31, 306 (2014).

dominant position in the CDMA markets, focusing on how they interpreted Qualcomm's FRAND commitments. Part II looks into the KFTC's findings of fact and conclusions of law in the administrative proceeding. Part III examines the Seoul High Court's reasoning that the KFTC's action was justified.

## II. THE ADMINISTRATIVE PROCEEDING BEFORE THE KFTC

After a lengthy investigation and administrative adjudication lasting for more than three years, the KFTC concluded that Qualcomm had abused its dominant position in the CDMA markets in three ways: (i) discriminatory patent licensing, (ii) conditional rebating, and (iii) demanding post-patent term royalty payments.<sup>4</sup> This paper focuses on the charge of discriminatory patent licensing because implications of Qualcomm's standard-essential patents ("SEPs") and fair, reasonable, and non-discriminatory ("FRAND") commitments were explored therein.<sup>5</sup>

In licensing CDMA technology to Korean mobile phone makers, Qualcomm was found to have charged "discriminatorily" higher royalty rates to the domestic firms who purchased CDMA chips from its competitors and to have offered a rebate (for example, 3 percent) to firms on the condition that they fill most of their chip demand from Qualcomm. Qualcomm's chips read on its SEPs, and after the Korean government in 1993 adopted CDMA technology as the national standard, Qualcomm promised to license SEPs on FRAND terms.

Underlying the KFTC's finding of liability were three patent licensing practices that Qualcomm was charged as having engaged in:<sup>6</sup>

1. A royalty discount program discriminating against export-model mobile phones using non-Qualcomm chips—where Qualcomm charged a 5.75 percent royalty rate for these users while offering a discount of up to 5.0 percent royalty rate for Qualcomm chip users.
2. A royalty cap program imposing a \$30 cap on non-Qualcomm chip users while imposing a \$20 cap on Qualcomm chip users.
3. A price-netting program discriminating against domestic-model mobile phones using non-Qualcomm chips by providing for Qualcomm chip users only a deduction of the chip value from a phone price when accounting the royalty.

The KFTC held that such licensing practices violated Article 3-2(1)(iii) of the MRFTA, which prohibits "unjustly hindering the business undertaking of others," and further violated Article 23(1)(i) which prohibits "unjustly treating a trading party in a discriminatory manner." The KFTC also held that Qualcomm's conditional rebating and post-patent term licensing practices violated the MRFTA. With an eye shifted toward remedying competitive harms arising from the violations as found, the KFTC ordered Qualcomm to cease and desist all of such

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<sup>4</sup> KFTC Decision and Order No. 2009-281, 2009JiSik0329, Dec. 30, 2009 (S. Kor.).

<sup>5</sup> For the same reason, this paper discusses the charge of conditional rebating only to the extent related to the charge of discriminatory patent licensing and does not discuss the charge of post-patent term royalty demands.

<sup>6</sup> Il Kang & Hee-Eun Kim, *Enforcement of Competition Law in Standardization and Abuse of Intellectual Property Rights in Korea and Europe*, 161 J. OF COMPETITION 68, 78 n.31 (2012).

practices and levied a fine of 273 billion won (approximately \$208 million at the time), creating a record-high fine level against a single firm.

Because Article 3-2(1) prohibits “abuse of dominant market position,” the KFTC first had to define the relevant market and resolve whether Qualcomm was in a dominant position in that market. The KFTC defined the market as the “CDMA technology market” and found that Qualcomm had “complete” monopoly power therein. The CDMA technology market was characterized as encompassing all patented technologies owned by Qualcomm and incorporated into the national CDMA standard. In this market definition, the KFTC reasoned that standard implementers could not switch to viable alternatives in response to a significant royalty increase for a non-transitory period, because no other technologies could enter the CDMA technology market due to their inability to realize the CDMA standard.

Next, the KFTC determined—pursuant to its Guidelines for the Abuse of Market Dominant Position—that Qualcomm’s licensing program had “unjustly discriminated a price or condition against a trading party”<sup>7</sup> in violation of Article 3-2(1)(iii). The KFTC reasoned that Qualcomm owned the standardized CDMA technologies and that Qualcomm was a “vertically integrated” firm engaged in both manufacturing CDMA chips and licensing CDMA technologies. It concluded that, with its dominant market power in the CDMA technology licensing market, Qualcomm had restricted competition in the CDMA chip market by charging “unjustly discriminatory” royalty rates to non-Qualcomm chip users. In this narrative, Qualcomm was perceived as extending or “leveraging” its market power in the licensing market to demand higher royalties from non-Qualcomm chip users, in an attempt to interfere with the business of chip market competitors.

The KFTC further held that Qualcomm’s conduct had “unjustly” hindered the business undertaking of others. The three licensing practices in combination, the KFTC found, were “intended” to restrain competition in the CDMA chip market with the “objective probability” of success. The KFTC inferred the “intent” to restrain competition from the following facts:

1. Qualcomm had been charging discriminatory royalties since 2004, when the license at issue was entered into, coinciding with the timing of when the market share of non-Qualcomm chips was growing.
2. Qualcomm incorporated into the 2004 license a termination clause under which Qualcomm could terminate the license should a licensee fail to purchase from Qualcomm a certain proportion of the chips it needed.
3. At the time of standardization, Qualcomm voluntarily promised to abide by FRAND commitments to license all of its SEPs.
4. Qualcomm’s internal documents revealed that the licensing program was geared towards driving competitors out of the CDMA chip market.

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<sup>7</sup> Korea Fair Trade Comm’n, Guidelines for the Abuse of Market Dominant Position, Part IV.3.D(2). An English translation of the KFTC Guidelines is *available at* [http://eng.ftc.go.kr/bbs.do?command=getList&type\\_cd=62&pageId=0401](http://eng.ftc.go.kr/bbs.do?command=getList&type_cd=62&pageId=0401).

Turning to the “objective probability” of anticompetitive effect, the KFTC again provided a list of facts in support of its conclusion. The list included:

1. that Qualcomm reneged on its FRAND commitments by imposing discriminatory royalty rates,
2. that the discriminatory licensing practice would likely hinder entry to the chip market as Qualcomm is a vertically integrated firm dominant in both chip and licensing markets,
3. a degree of royalty discrimination,
4. that Qualcomm’s licensing program was in effect for more than five years,
5. competitive conditions of the mobile phone market, and
6. the effects from coupling royalty discounts with conditional rebates.

Significantly, Qualcomm’s failure to abide by FRAND conditions appears to have weighed more heavily than other facts. Articulating about the importance of implementing FRAND commitments, the KFTC highlighted that “the conduct of SEP owners reneging on FRAND commitments may *per se* raise competitive concerns” and that “the FRAND commitment is a critical measure to prevent the abuse of monopoly power gained by virtue of standardization.” However, the KFTC also appears not to have precisely interpreted the boundary of Qualcomm’s FRAND obligation, nor it did provide clear guidance as to how Qualcomm’s royalty scheme was a FRAND violation.

In this light, perhaps an equally pivotal fact was that Qualcomm was a dominant firm in the CDMA licensing market who was also practicing its own technologies in chip manufacture, thereby vertically integrating the licensing market with the chip market. The KFTC repeatedly took the position that Qualcomm’s discriminatory licensing program, combined with conditional rebating, was intended to suppress new competition from “low-end” chip markets in which Qualcomm was known to be less competitive.

In assessing competitive concerns arising out of Qualcomm’s vertical integration, the KFTC started by noting that both phone makers and chip makers would need to acquire patent licenses from Qualcomm, because Qualcomm owned the standardized CDMA technologies. The KFTC also observed that when new chip makers typically focus, as they should, on making market entry through the “low-end” chip market, they would likely regard price competitiveness as the critical factor. Under Qualcomm’s licensing program, however, those new chip makers were forced to have a lower profit margin because they would have to add the royalty they paid to Qualcomm to the royalty discount offered to phone makers using Qualcomm chips. As a result, the KFTC concluded, Qualcomm’s licensing program in practice served as an entry barrier deterring new or nascent competitive threats to Qualcomm.

Finally, the KFTC found anticompetitive effects generated from Qualcomm’s licensing program. First, the program was found to have excluded competitors from the market. The KFTC noted that, for the duration of the licensing program, the record showed that the share of non-Qualcomm chips used by two phone makers experienced a sharp decline in 2004 (the year when the license came into effect). Moreover, the record showed initially successful, but ultimately failed, entry into the CDMA chip market by some competitors, such as Samsung



Electronics, EoNex, VIA Telecom, and Texas Instrument (who took a sharp increase in CDMA chip demand beginning 2003 as a market entry opportunity). However, based on statistics showing that Qualcomm had maintained a nearly 100 percent market share in the CDMA chip market from 2002 to 2006, the KFTC concluded that Qualcomm had engaged in discriminatory royalty discounts to meet the increased demand, thereby maintaining its market position and excluding new rivalry from the chip market.

Second, the licensing program was found to have harmed consumers by causing product-variety losses and limiting price competition. Taking as evidence that a price drop of CDMA chips was lower than that of GSM chips in the years following 2004, the KFTC predicted that had Qualcomm's royalty rate not been discriminatory against non-Qualcomm chips, new chip makers would have emerged as stronger competitors capable of lowering prices to the benefit of consumers.

Qualcomm countered that the record showed no causal connection between Qualcomm's discriminatory royalty rates and the decreased chip sales by its competitors. Qualcomm instead posited as a more probable cause that a superior quality of Qualcomm chips accounted for the sales decrease of non-Qualcomm chips. However, the KFTC noted data concerning one phone maker that showed a pattern of increasing sales by Qualcomm's competitors after Qualcomm's licensing program ceased to discriminate against the maker's export-model phones using non-Qualcomm chips. Also, the record showed that Qualcomm itself was aware of its lack of competitiveness in the low-end chip market. The record further contained a Qualcomm executive's remark to the effect that a VIA chip was of a superior quality to one model of Qualcomm chips. Taken together, the KFTC concluded that at least some chip makers could have been viable competitive threats to Qualcomm in terms of price and quality in the low-end chip market.

Further, the KFTC went on to hold that Qualcomm also violated Article 23(1) of the MRFTA which prohibits unfair trade practices, including the conduct of "unjustly treating a trading party in a discriminatory manner." Article 23(1) entails a similar analysis to Article 3-2(1) except that the KFTC need not find that the accused firm is in a dominant market position. Citing the same records as used to establish the violation of Article 3-2(1), the KFTC concluded that Qualcomm's licensing program constituted unfair price discrimination intended to secure competitive advantages in the CDMA chip market by using its dominant position in the CDMA technology licensing market.

### III. THE SEOUL HIGH COURT'S AFFIRMANCE OF THE KFTC'S FINDINGS AND ORDERS

In June 2013, the Seoul High Court held that the KFTC was justified in issuing remedial orders against Qualcomm.<sup>8</sup> In doing so, the court affirmed the KFTC's finding of facts almost in their entirety and looked to a similar set of evidence (described below) in support of its legal opinion. However, the court canceled part of KFTC's imposed order as in excess of Qualcomm's unlawful conduct, but this may amount to an inconsequential amount in the KFTC's fine

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<sup>8</sup> Seoul High Court [Seoul High Ct.], 2010Nu3932, June 19, 2013 (S. Kor.).

calculation. Both parties have appealed their respective adverse rulings to the Korea Supreme Court.<sup>9</sup>

Specifically, the Seoul High Court held that Qualcomm's discriminatory licensing program violated Article 3-2(1)(iii) (abuse of dominant market position), although it did not pass judgment on the violation of Article 23(1) (unfair trade practice). It is unclear why the court chose to remain silent on Article 23(1), but the reason may well be judicial efficiency because affirming the Article 3-2(1)(iii) violation suffices to uphold the KFTC's determination. The three licensing practices (discriminatory royalty discount, royalty cap, and price netting) were all under scrutiny before the court.

The court first agreed with the KFTC that Qualcomm was a monopolist in the domestic CDMA technology market, reasoning that under Article 4 of the MRFTA, market dominance is presumed on a showing that the market share of a single firm is "50% or more." The court dismissed Qualcomm's arguments that the relevant technology should be all mobile telecommunications technologies, including GSM and W-CDMA, and that the geographic market should be worldwide. It reasoned that mobile phone makers facing a significant royalty increase in CDMA technology would be unlikely to switch to manufacturing non-CDMA phones or replace Qualcomm with another foreign chip supplier.

Denying the conduct of "unjustly discriminating a price or condition against a trading party" under the KFTC Guidelines interpretive of Article 3-2(1)(iii),<sup>10</sup> Qualcomm argued that the licensing program could not be found to be discriminatory because the program applied the same conditions to all purchasers and did not differentiate royalties based on the purchaser. However, the court ruled that the provision was not limited to the situation where different prices are set among a group of firms, and that setting a different price to even a single firm pursuant to specific conditions may count as discrimination. Consequently, the court determined that differentiating the royalty upon whether a trading party used Qualcomm chips fell within the conduct of "discriminating a price against the party."

For such price discrimination to be "unjust" under Article 3-2(1)(iii), the Korea Supreme Court has required that the accused firm, for the purpose of restraining competition, must have engaged in conduct that, viewed objectively, has generated an anticompetitive effect or has a dangerous probability of doing so.<sup>11</sup> The Seoul High Court viewed that Qualcomm's conduct met both of the subjective and objective prongs.

Related to the purpose of restraining competition, the court first premised that the FRAND commitment is a safeguard to prevent abusive conduct like discriminatory licensing by a SEP owner who acquires market power by virtue of the standardization. The court then found the intent to restrain competition from the following facts:

1. Prior to making FRAND commitments in 1997, Qualcomm had deducted its own chip value in setting a royalty basis for domestic-model phones; it continued that practice without modification after the FRAND commitments were in place.

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<sup>9</sup> Supreme Court [S. Ct.], 2013Du14726 (S. Kor.) (pending).

<sup>10</sup> See *supra* text accompanying note 7.

<sup>11</sup> Supreme Court [S. Ct.], 2008Du17707, Apr. 8, 2010 (S. Kor.).

2. Despite the FRAND commitments, Qualcomm's 2004 licenses: (i) differentiated royalty rates based on whether an export-model phone was using Qualcomm chips, (ii) lowered the royalty cap for "high-end" mobile phones using Qualcomm chips, and (iii) inserted the termination clause.

In finding the "objective probability" of anticompetitive effect, the court did not conclude solely on the basis of royalty discrimination in breach of FRAND commitments. The court evaluated independently anticompetitive effects in the market. Because as a SEP owner Qualcomm was a monopolist with a "100 percent" market share in the CDMA technology market, the court was concerned less about the anticompetitive probability in the CDMA technology market. Guided by Korea Supreme Court precedent, the court was more concerned about competitive harms in upstream and downstream markets to the CDMA technology market.<sup>12</sup> Similar to the KFTC, the court was more attentive to the fact that Qualcomm's royalty discrimination gave rise to anticompetitive effects in the "CDMA chip market" downstream from the CDMA technology licensing market. The court found that Qualcomm's competitors were excluded from the downstream chip market as a result of the royalty discrimination that occurred in concert with the conditional rebating.

#### IV. CONCLUSION

Although what it means to be "FRAND" is not entirely clear, the KFTC and the Seoul High Court may not have to wrestle with the defining boundaries of FRAND, because the record showed that Qualcomm was a monopolist in the CDMA technology market trying to leverage its market power to the downstream chip market. On the one hand, the KFTC and the court did not hesitate to find the "intent to restrain competition" from Qualcomm's conduct in violation of its FRAND commitment. On the other hand, taking a more holistic approach to dealing with the "objective probability of anticompetitive effect," the KFTC and the court required more than a FRAND violation and examined how Qualcomm's licensing practices as a whole caused competitive harms in the CDMA chip market downstream to the technology licensing market.

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<sup>12</sup> Supreme Court [S. Ct.], 2007Hu2827, Sept. 24, 2009 (en banc) (S. Kor.).