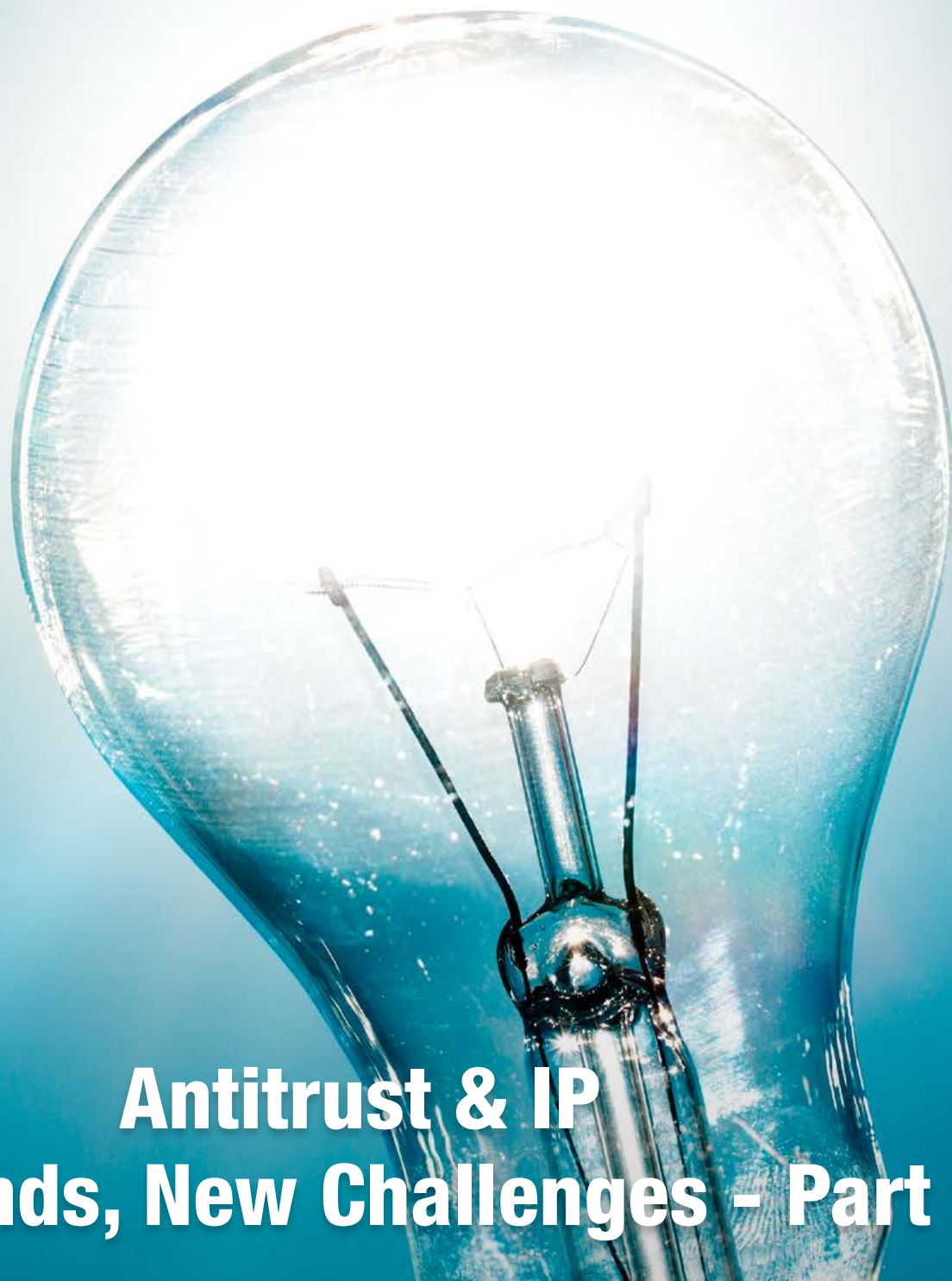


Antitrust Chronicle

WINTER 2015, VOLUME 3, NUMBER 2



Antitrust & IP Old Frands, New Challenges – Part II

CPI Antitrust Chronicle

March 2015 (1)

Standards, Royalty Stacking, and Collective Action

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Standards, Royalty Stacking, and Collective Action

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I. INTRODUCTION

It is well known that modern computing, telecommunications, and consumer electronics devices are covered by multitudes of patents. In 2011, patent aggregator RPX estimated that an average smartphone is covered by at least 250,000 different patents, up from only 70,000 in 2000.² To the extent that the multiple owners of patents covering a single standard or device charge royalties to the manufacturer, the cumulative effect of those royalty demands can be appreciable. This phenomenon is often called royalty “stacking.”

As recently explained by the Federal Circuit, “[r]oyalty stacking can arise when a standard implicates numerous patents, perhaps hundreds, if not thousands. If companies are forced to pay royalties to all [patent] holders, the royalties will “stack” on top of each other and may become excessive in the aggregate.”³ One 2013 study estimated that the size of the royalty stack for a hypothetical \$400 smart phone was \$120 (excluding the value of cross-licenses and other non-monetary compensation), or 30 percent of the overall product price.⁴

Though royalty stacking is often characterized as affecting only standardized technologies, it is equally important in many non-standardized technologies. The perception that royalty stacking particularly affects standardized technologies is likely created by the many well-known examples of standards as to which thousands of patents have been declared as essential, primarily in the wireless telephony and computer networking markets.⁵ This perception is reinforced by the fact that the manufacturer of a product complying with a particular standard must include all technical features required by the standard in its product, thereby infringing each of the patents that are essential to the standard.

With technical features that are not required by a standard, manufacturers sometimes have the flexibility to include or exclude them based, at least in part, on patent royalty burden. Nevertheless, given the thousands of patents covering non-standardized features of modern

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² RPX Corp., Registration Statement on Form S-1 at p. 55 (Jan. 21, 2011).

³ *Ericsson, Inc. v. D-Link Systems, Inc.*, 773 F.3d 1201, 1209 (Fed. Cir. 2014).

⁴ Ann Armstrong, Joseph J. Mueller, & Timothy D. Syrett, *The Smartphone Royalty Stack: Surveying Royalty Demands for the Components Within Modern Smartphones* (Working Paper, May 29, 2014), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2443848.

⁵ See KNUT BLIND ET AL., STUDY ON THE INTERPLAY BETWEEN STANDARDS AND INTELLECTUAL PROPERTY RIGHTS (IPRS), FINAL REPORT 62 (2011), available at http://ec.europa.eu/enterprise/policies/european-standards/files/standards_policy/ipr-workshop/ipr_study_final_report_en.pdf (reporting the numbers of patents believed to be essential to standards including WCDMA (1000 patent families), LTE (1000 patent families), MPEG-2 and MPEG-4 (800 patents in 160 patent families), optical disc drive standards (2200 patent families), and DVB-H (30 patent families)).

consumer devices, not all of which can be excluded from a product that has any hope of commercial viability, royalty stacking affects both standardized and non-standardized technologies equally.⁶

This article summarizes economic and legal theories regarding royalty stacking in view of recent U.S. case law that has addressed the impact of stacking on the reasonableness of patent royalty rates. It critiques the Federal Circuit's decision in *Ericsson v. D-Link*, holding that actual evidence of stacked payments must be proffered to support a jury instruction on stacking. It concludes with a proposal for reducing the impact of royalty stacking through collective royalty cap negotiation and a call for antitrust agencies to confirm that such negotiations would have pro-competitive benefits and be analyzed under a rule of reason standard.

II. THE ECONOMIC DEBATE OVER STACKING

For nearly a decade scholars have debated the potential impact of royalty stacking on products in the wireless telecommunications and computer networking markets. One school of thought, exemplified by the writings of Mark Lemley and Carl Shapiro, argues that stacking will result in higher prices for consumers.⁷ They predict this outcome both because (1) patent holders and product manufacturers are expected to maximize their margins (the phenomenon known as “double marginalization”), and (2) the holders of multiple complementary patents will each raise their royalties to a level that will depress sales of the end product and potentially reduce their individual profits (the well-known problem of “Cournot complements”).⁸ They also argue that stacking is likely to exacerbate and amplify the rent-increasing potential of patent hold-up behavior (i.e., by introducing multiple patent holders with potential hold-up power).⁹

Others, notably Greg Sidak, Damien Geradin, and Anne Layne Farrar,¹⁰ have challenged this line of reasoning. In addition to disagreement over the theoretical conclusions drawn by Lemley and Shapiro, they observe that despite the large number of patents covering standards for technologies such as 3G wireless telephony and Wi-Fi wireless networking, these technologies have flourished in the marketplace, suggesting that in practice royalty stacking is not as large an

⁶ See Jorge L. Contreras & Richard J. Gilbert, *A Unified Framework for RAND and other Reasonable Royalties*, __ BERKELEY TECH. L.J. __ (2015, forthcoming).

⁷ Mark A. Lemley & Carl Shapiro, *Patent Holdup and Royalty Stacking*, 85 TEX. L. REV. 1991 (2007); Carl Shapiro, *Navigating the Patent Thicket: Cross-Licenses, Patent Pools, and Standard Setting*, in 1 INNOVATION POLICY AND THE ECONOMY 119, 124 (Adam B. Jaffe et al. eds., 2001).

⁸ See Lemley & Shapiro, *supra* note 7, at 2013-14.

⁹ *Id.* at 2011.

¹⁰ See J. Gregory Sidak, *Holdup, Royalty Stacking, and the Presumption of Injunctive Relief for Patent Infringement: A Reply to Lemley and Shapiro*, 92 MINN. L. REV. 714, 718 (2008); Damien Geradin, Anne Layne-Farrar, & Jorge Padilla, *The Complements Problem within Standard-Setting: Assessing the Evidence on Royalty Stacking*, 14 BOSTON U.J. SCI. TECH. L. 144 (2008); Damien Geradin & Miguel Rato, *Can Standard-Setting Lead to Exploitative Abuse? A Dissonant View on Patent Hold-Up, Royalty Stacking and the Meaning of FRAND*, 3 EURO. COMP. J. 101 (2007).

issue as once feared.¹¹ Even more provocatively, Einer Elhauge has argued that stacking leads not to royalties that exceed optimal rates, but to royalties that are at or below optimal rates.¹²

III. STACKING AND REASONABLENESS OF ROYALTIES

The economic debate highlighted above focuses on the potential impact of royalty stacking on consumer prices, firm profits, and market efficiency. But legal questions have also emerged with respect to royalty stacking, particularly when patent holders are obligated to charge no more than “reasonable and nondiscriminatory” (“RAND”) royalties for patents essential to industry standards. Both under a RAND obligation, and when a court is determining a “reasonable royalty” to calculate patent damages, the royalty charged for any given patent must be viewed as part of the larger patent royalty burden of the overall product.

That is, under well-established principles of patent damages law, a reasonable royalty should be based on the incremental value of the patented technology to the overall product.¹³ The incremental value of a particular patented technology to a larger product must, it seems, depend on the number of additional patented and non-patented technologies that exist side-by-side with the technology under consideration. Thus, the existence and extent of stacking is important to the determination of reasonable patent royalty levels.

Thus, in *Microsoft Corp. v. Motorola, Inc.*, the federal district court was required to determine whether Motorola’s demand for royalties on patents covering the 802.11 Wi-Fi standard complied with its obligation to grant licenses on a RAND basis.¹⁴ In analyzing the level of Motorola’s proposed royalties, the court found “significant stacking concerns.”¹⁵ Specifically, it observed that

[t]here are at least 92 entities that own 802.11 [standard-essential patents]. If 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.¹⁶

On this basis, the court determined that the royalty Motorola sought was unreasonable, because “if everyone wanted the same deal [as Motorola], it would quickly make the end-product price untenable commercially.”¹⁷ The court also noted that, in this case, stacking concerns were heightened because Motorola’s patents made only “minimal contribution” to the 802.11 standard.¹⁸

¹¹ See, e.g., Geradin & Rato, *supra* note 10, at 128; Geradin, Layne-Farrar & Padilla, *supra* note 10, at 159-63.

¹² Einer Elhauge, *Do Patent Holdup and Royalty Stacking Lead to Systematically Excessive Royalties?* 4 J. COMP. L & ECON. 535 (2008).

¹³ *Ericsson, Inc. v. D-Link Systems, Inc.*, 773 F.3d 1201, 1232, 1235 (Fed. Cir. 2014).

¹⁴ *Microsoft Corp. v. Motorola, Inc.*, Findings of Fact and Conclusions of Law, 2013 U.S. Dist. LEXIS 60233 (W.D. Wash., Apr. 25, 2013).

¹⁵ *Id.* at 213.

¹⁶ *Id.*

¹⁷ *Id.* at 213-14 (quoting testimony of Dr. Matthew Lynde).

¹⁸ *Id.* at 214.

In *In re Innovatio IP Ventures, LLC*,¹⁹ the court was required to calculate the “reasonable” royalty for patents covering different aspects of the 802.11 standard. In doing so, it expressly recognized that it must “evaluate a proposed RAND rate in the light of the total royalties an implementer would have to pay to practice the standard” and “consider whether the overall royalty of all standard-essential patents would prohibit widespread adoption of the standard.”²⁰ Accordingly, the existence of royalty stacking as to the 802.11 standard played a significant role in the court’s fixing the upper limit on the applicable royalty at the manufacturer’s existing profit margin.²¹

IV. EVIDENCE OF STACKING?

Like the district courts in *Microsoft* and *Innovatio*, the Federal Circuit in *Ericsson, Inc. v. D-Link Systems, Inc.* acknowledged the patent holder’s obligation to license its patents essential to the 802.11 standards on RAND terms.²² Unlike the earlier cases, however, the RAND royalty determination in *Ericsson* was made by a jury rather than the court. In its charge to the jury, the trial court declined to issue any instructions specifically regarding royalty stacking.²³ On appeal, among other things, D-Link challenged the trial court’s refusal to instruct the jury as to royalty stacking.

The Federal Circuit rejected D-Link’s challenge and held that the district court did not err by refusing to instruct the jury on royalty stacking.²⁴ It reasoned that:

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 [patent] holder. In this case, D-Link’s expert ‘never even attempted to determine the actual amount of royalties Defendants are currently paying for 802.11 patents.’²⁵

Thus, because D-Link did not produce specific evidence that it was paying royalties to multiple patent holders for the 802.11 standard, the court found that stacking was not “relevant” to the case.²⁶ This reasoning is both surprising and at odds with that of the lower courts in *Microsoft* and *Innovatio*. Most importantly, it misconstrues the actual risk associated with royalty stacking.

There is a world of difference between Product A, which is priced at \$100 and covered by one patent bearing a 1 percent royalty (\$1 royalty burden), and Product B, which is also priced at \$100 but is covered by fifty patents each bearing a 1 percent royalty (\$50 royalty burden). Assuming that each patent holder is subject to a RAND licensing commitment, the 1 percent royalty charged by the holder of the patent covering Product A is far more likely to be

¹⁹ 2013 U.S. Dist. LEXIS 144061 (N.D. Ill. Oct. 3, 2013).

²⁰ *Id.* at 69-70.

²¹ *Id.* at 166-67.

²² 773 F.3d 1201, 1229 (Fed. Cir. 2014).

²³ *Id.*

²⁴ *Id.* at 1234.

²⁵ *Id.*

²⁶ *Id.* at 1234-35.

“reasonable” than any of the 1 percent royalties charged by the holders of the patents covering Product B. A fact finder assessing the reasonableness of the 1 percent royalty charged on Product B must be made aware of the fact that there are forty-nine other patents covering Product B. Without this information, the fact finder would have no way to differentiate between the reasonableness of the royalty rates charged on Product A and Product B.

Thus, assuming that these two products are in the same general industry and market category, the fact finder could determine that a 1 percent royalty was perfectly reasonable in each case. But, as most would agree, 1 percent is probably *not* reasonable as to Product B (assuming that all of the patented technologies contribute comparable value to the overall product).

For this reason, the court’s dismissal in *Ericsson* of “[t]he mere fact that thousands of patents are declared to be essential to a standard”²⁷ is puzzling. This “mere” fact is, in actuality, highly relevant to the reasonableness of the royalty levied on the relevant standard. That is, as discussed above, a reasonable royalty should be based on the incremental value of the patented technology to the overall product.²⁸ A relevant factor in determining the incremental value of a particular patented technology must be the number of additional patented technologies included in the same product. Or, in other words, the level of stacking experienced by the product.

What is less relevant is whether the accused infringer is then paying royalties to other patent holders, and in what amounts. The answer to this question depends on a host of factors, including the willingness of other patent holders to assert patents against the accused infringer—which may hold an arsenal of its own patents that they are not willing to face—and whether the accused infringer is intentionally violating those other patents without paying royalties.

Most importantly, whether the accused infringer is paying other patent holders depends in large part on the timing of different infringement suits. Thus, in the above example, when the first of fifty patent holders enforces its patent against the infringer, it may be paying no other royalties. When the second patent holder sues, the infringer may be paying royalties to the first patent holder. And when the third sues, the infringer may be paying royalties to the two prior patent holders. And so forth. Does this mean that, in the first suit, the infringer can introduce no evidence of stacking while in the second suit, it can introduce evidence of the amounts paid to the first patent holder, and so on?

Such a result makes little sense and, if anything, will encourage a “race to the courthouse” by patent holders wishing to capture the maximum royalty before the infringer is burdened by other royalty obligations. To avoid these nonsensical scenarios, the jury should be instructed in each suit that there are fifty patents covering the relevant product. This fact will help the jury to determine whether each asserted royalty is reasonable, independently of the timing of the enforcement suit.

V. STACKING AND COORDINATION

The principal risk associated with royalty stacking is that multiple independent royalty demands on a single product will result in an aggregate royalty that is above the optimal level.

²⁷ *Id.* at 1234.

²⁸ *Id.* at 1232, 1235. See also note 13, *supra*, and accompanying text.

This situation is most likely to occur when royalty demands are made in an independent and uncoordinated manner, as they typically are, with each patent holder seeking to maximize its own gain. But if coordination of royalty rates were to occur among patent holders and manufacturers *ex ante* (before manufacturers have invested significant resources in standardized products), such issues could potentially be avoided.

One well-known method for addressing competing royalty demands on a single standard or product is the creation of patent pools. In patent pools, patent holders agree on a single royalty that will be charged for a license to all of the patents in the pool, and then divide the royalty among themselves according to an agreed formula.²⁹ Patent pools exist for several important industry standards, including 802.11, though these pools often contain only a subset of the patents that are essential to the standard. Likewise, there are many standards for which the required essentiality analysis to form a pool would be cost-prohibitive.³⁰ Accordingly, patent pools have not proven to be a useful general solution to the risk of royalty stacking, though they work well in some circumstances.³¹

Outside of patent pools, collective agreement on maximum aggregate per-product or per-standard royalty caps could eliminate the unpredictable and unbounded escalation of royalty demands above optimal levels. Numerous such proposals have been made in the past.³² One of the primary reasons that such proposals have not been widely adopted, however, is a fear that joint discussion and agreement on royalty rates among competitors could preclude price competition and thereby violate the antitrust laws.³³ Several commentators have expressed concern that such coordination could lead to a manufacturer-based oligopsony that could improperly exert market power to depress patent royalties, possibly to zero.³⁴

These critiques, however, disregard the potentially pro-competitive benefits of the royalty cap agreements described above. Were such arrangements analyzed under a “rule of reason” approach, then any actual anticompetitive harms could be appropriately weighed against these pro-competitive benefits. Such an approach was advocated a decade ago by FTC Chairman Deborah Platt Majoras, who explained that “joint *ex ante* royalty discussions . . . can be a sensible

²⁹ Jorge L. Contreras, *Fixing FRAND: A Pseudo-Pool Approach to Standards-Based Patent Licensing*, 79 ANTITRUST L.J. 47, 75-78 (2013); Carl Shapiro, *Navigating the Patent Thicket: Cross-Licenses, Patent Pools, and Standard Setting*, in 1 INNOVATION POLICY AND THE ECONOMY 119, 124 (Adam B. Jaffe et al. eds., 2001).

³⁰ See Contreras, *Fixing FRAND*, *supra* note 29, at 77-78.

³¹ One promising new approach has been developed by Intellectual Property Exchange Intl. (IPXI), which offers unitized licenses of pools of patents essential to standards such as 802.11n. IPXI, Offerings—WFN1 ULR Contract Overview, <https://www.ipxi.com/offerings/wfn1/wfn1.html>.

³² See Contreras, *Fixing FRAND*, *supra* note 29, at 88 (discussing various aggregate royalty capping proposals and making a new proposal based on a “pseudo-pool” structure). See also EUROPEAN COMMISSION, PATENTS AND STANDARDS – A MODERN FRAMEWORK FOR IPR-BASED STANDARDIZATION 140 (Mar. 25, 2014) (noting potential promise of pseudo-pool approach to simultaneously address hold-up and stacking issues).

³³ Contreras, *Fixing FRAND*, *supra* note 29, at 88.

³⁴ See J. Gregory Sidak, *Patent Holdup and Oligopsonistic Collusion in Standard-Setting Organizations*, 5 J. COMPETITION L. & ECON. 123, 126, 142–51 (2009) (“*ex ante* collective action that is privately undertaken in an SSO to counteract potential patent holdup may facilitate, if not serve as an outright façade for, horizontal price fixing by oligopsonists of the patented input”).

way of preventing hold up, which can itself be anticompetitive.”³⁵ Michael Carrier also discounts the risk of anticompetitive oligopsonistic behavior by manufacturers of standardized products for several reasons. These include (i) the participation of patent holders in royalty cap discussions, (ii) the influence that patent holders wield in the standardization process, (iii) unpredictability regarding the precise patents that will ultimately be included in a standard, and (iv) the practical difficulty faced by manufacturers who might otherwise wish to reduce their purchases to depress prices.³⁶

VI. CONCLUSION

Despite ongoing academic debate, courts, regulators, and the private sector have recognized royalty stacking as a potentially significant factor affecting the adoption of technical standards and the price and availability of consumer products. Courts have diverged, however, regarding requirements for introducing evidence of stacking at trial.

This inconsistency should be corrected, and the Federal Circuit should explicitly recognize the presence of royalty stacking as a factor impacting the potential reasonableness of patent royalties—both in terms of private RAND commitments and patent damages analysis. To encourage agreements establishing aggregate royalty caps that can reduce the potential for royalty stacking, antitrust authorities should clarify that such arrangements will be analyzed under a rule of reason approach weighing pro-competitive benefits against actual competitive harms.

³⁵ Deborah Platt Majoras, Remarks at the Standardization and the Law Conference: Recognizing the Procompetitive Potential of Royalty Discussions in Standard Setting 7-8 (Sept. 23, 2005), *available at* <http://www.ftc.gov/speeches/majoras/050923stanford.pdf>.

³⁶ MICHAEL A. CARRIER, INNOVATION FOR THE 21ST CENTURY: HARNESSING THE POWER OF INTELLECTUAL PROPERTY AND ANTITRUST LAW 337-38 (2009).

CPI Antitrust Chronicle

March 2015 (2)

The Application of China's Anti-Monopoly Law to Essential Patent Licensing: The NDRC/QUALCOMM Action

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The Application of China's Anti-Monopoly Law to Essential Patent Licensing: The NDRC/QUALCOMM Action

James F. Rill & James Kress¹

I. INTRODUCTION

With last month's widely anticipated conclusion of the investigation by China's National Development and Reform Commission ("NDRC") of Qualcomm, Inc.'s licensing practices, the Chinese antitrust authority announced its intention to wade into the worldwide battles between holders of standard-essential patents and those companies that implement those standards in their devices, such as smartphones or tablets.

Although reports of the approximately \$975 million settlement, equal to 8 percent of Qualcomm's 2013 Chinese revenues, have garnered most of the attention, it is the range of behavioral remedies agreed to that may well have the greatest long-term significance for Qualcomm and other companies engaged in licensing standard-essential patents.

II. THE INVESTIGATION AND CONCERNS

Qualcomm, a leading provider of chips for mobile telephones and a leading innovator in related software technology, was notified of NDRC's active inquiry into the company's patent licensing practices in November of 2013. The ensuing investigation that culminated in the February settlement apparently encompassed evidence provided by mobile device manufacturers, rival chip makers, raids on Qualcomm facilities, and cooperative interaction with Qualcomm executives.

According to reports, the NDRC was concerned that through a series of interrelated technology licensing practices affecting Chinese mobile device manufacturers, Qualcomm had violated China's anti-monopoly law ("AML") by abusing a dominant market position in both the 3G and 4G wireless communications standard-essential patent licensing markets and also in the baseband chip market. These alleged abuses fit broadly into three categories:

1. **Charging Excessive Patent Licensing Fees:** The allegations of excessive pricing were not based on any one discrete element of conduct or license term, but rather included concerns that: (i) Qualcomm's licensing offerings charged for expired patents, (ii) Qualcomm insisted on royalty-free grant-backs to the licensee's patents, (iii) Qualcomm charged a higher rate to licensees forced to accept a package that included non-essential patents, and (iv) Qualcomm based its royalties on the value of the end product.
2. **Tying or Bundling of Essential Patents and Non-Essential Patents:** Qualcomm was alleged to have used its dominant position in wireless standard-essential patents to force

¹ Senior Counsel and Partner, respectively, in the Antitrust and Competition Law practice at Baker Botts L.L.P.

licensees to accept package licenses that included non-essential patents without justification.

3. **Abuses Related to the Sale of Qualcomm's Baseband Chips:** Qualcomm was alleged to have conditioning the sale of baseband chips on an agreement that its customers enter a patent license that included the allegedly abusive terms described above and also agree not to challenge that agreement. In this manner, Qualcomm was alleged have used its dominant position in chipsets to force the acceptance of the allegedly unfair license agreements.

III. REMEDIES

In addition to its agreement to pay a fine equal to approximately \$975 million, Qualcomm agreed to implement several behavioral-type remedies related to the conduct that was the focus of the investigation. Going forward, Qualcomm will be required to license its standard essential Chinese patents at 5 percent for 3G mobile devices and 3.5 percent for 4G devices, based on 65 percent of the net selling price of devices sold for use in China.

In addition, Qualcomm:

1. will provide a list of patents during negotiations and not charge a fee for expired patents,
2. will not require royalty-free grantback or reverse license from licensees,
3. will refrain from tying non-wireless communication standard-essential patents in licensing packages (without justification), and
4. will not condition the supply of chips on customers' agreement to entering a licensing agreement with unreasonable terms, including no-challenge clauses.

IV. COMMENTARY

According to various public reports, a focal point of the NDRC investigation had been Qualcomm's use of the value of the end product as the base for the application of its royalty rates. Significantly, while the NDRC remedy can be fairly described, as *Forbes* does, as having achieved a "35% price reduction," the NDRC accepted the selling price of the end device as the appropriate royalty base.² This resolution may reflect either the agency's recognition that the value of the intellectual property in question is appropriately realized by reference to the end product, notwithstanding the 65 percent limitation, or simply the agency's view that market forces and customary practice—not antitrust policy—should control in this area.

Also of significance is the limitation of the remedy's application to devices sold for use in China by Chinese manufacturers. An issue frequently raised in national agency enforcement activities related to intellectual property licensing is the potential extraterritorial reach of remedial orders. The action by NDRC appears to address that concern head-on.

² Patrick Moorhead, *Qualcomm Settlement With China's NDRC Removes Major Speedbump*, FORBES (Feb. 10, 2015), available at <http://www.forbes.com/sites/patrickmoorhead/2015/02/10/qualcomm-settlement-with-chinas-ndrc-removes-major-speedbump/>.

As the formal remedial order becomes public, it will be interesting to undertake further examination and to assess the extent to which its apparent underlying rationale may be considered and applied by agencies in other jurisdictions.

CPI Antitrust Chronicle

March 2015 (2)

Updating a Patent Policy: The IEEE Experience

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Updating a Patent Policy: The IEEE Experience

Michael A. Lindsay & Konstantinos Karachalios¹

I. INTRODUCTION

The pages of this two-part issue of the *CPI Antitrust Chronicle* provide one more example of the continuing and wide-ranging debate about the intersection of patents and standards. Debate can certainly be healthy, but standards development organizations (“SDOs”) live in the real world—one in which courts² and regulators³ have criticized existing SDO policies as lacking clarity. At some point, an SDO must decide whether its existing patent policy provides sufficient clarity to the holders of potentially essential patents and to the companies that implement its standards—or whether an update of that SDO’s patent policy is warranted.

The IEEE Standards Association (“IEEE-SA”) recently completed an update of its patent policy, and the update took effect on March 15, 2015. Many other SDOs either have been

¹ Mr. Lindsay is a partner at Dorsey & Whitney LLP, and he was one of IEEE’s advisors during the development of the patent policy update discussed in this article. Mr. Karachalios is Managing Director of the IEEE Standards Association.

² See, e.g., *Ericsson Inc. v. D-Link Sys., Inc.*, No. 6:10-CV-473, 2013 WL 4046225, at *25 (E.D. Tex. Aug. 6, 2013) (“The paradox of RAND licensing is that it requires a patent holder to offer licenses on reasonable terms, but it offers no guidance over what is reasonable.”), *aff’d in part, rev’d in part, vacated in part*, 773 F.3d 1201 (Fed. Cir. 2014); *Microsoft Corp. v. Motorola, Inc.*, No. C10-1823, 2013 WL 2111217, at *10 (W.D. Wash. April 25, 2013) (IEEE-SA’s 2007 patent policy does not clarify “what constitutes a reasonable royalty rate or what other terms and conditions are reasonable or nondiscriminatory for any license between interested parties”).

³ For examples of regulatory critiques, see Christine A. Varney (Assistant Attorney General, Antitrust Division, U.S. Department of Justice), *Promoting Innovation Through Patent and Antitrust Law and Policy*, Remarks as Prepared for the Joint Workshop of the U.S. Patent and Trademark Office, the Federal Trade Comm’n, and the Dep’t of Justice on the Intersection of Patent Policy and Competition Policy: Implications for Promoting Innovation 8 (May 26, 2010), available at <http://www.justice.gov/atr/public/speeches/260101.htm> (“Clarity alone does not eliminate the possibility of hold-up . . . but it is a step in the right direction.”); Renata Hesse (Deputy Assistant Attorney General, Antitrust Division, U.S. Department of Justice), *Six “Small” Proposals for SSOs Before Lunch (“Six Proposals”)*, Remarks as Prepared for the ITU-T Patent Roundtable 11 (Oct. 10, 2012), available at <http://www.justice.gov/atr/public/speeches/287855.pdf> (SDOs should consider taking steps to “eliminate some of the ambiguity that requires difficult ex post deciphering of the scope of a F/RAND commitment”); Edith Ramirez (Chair, U.S. Federal Trade Commission), *Standard-Essential Patents and Licensing: An Antitrust Enforcement Perspective*, Address at 8th Annual Global Antitrust Enforcement Symposium, Georgetown University Law Center, Washington, DC 9, 11 (Sept. 10, 2014), available at http://www.ftc.gov/system/files/documents/public_statements/582451/140915georgetownlaw.pdf; (“[A]dditional clarity on a framework for determining FRAND royalties would benefit industry stakeholders and consumers alike. . . Greater clarity on the terms of a FRAND license is likely to facilitate private negotiations and limit the need to seek a third-party determination of a FRAND rate.”); Joaquín Almunia (Vice President of the European Commission responsible for Competition Policy), *Competition Enforcement in the Knowledge Economy*, Address at Fordham University, New York City 6 (Sept. 20, 2012), available at http://europa.eu/rapid/press-release_SPEECH-12-629_en.htm (stating that “there is a growing consensus on both sides of the Atlantic on the damage that the misuse of standard-essential patents can do to competition” and that the European Commission’s receipt of “many complaints related to standards-essential patents also shows that there is a great need for guidance”).

engaged in similar reviews or may soon do so. Each SDO starts from a different baseline (its own existing policy), and each SDO has its own procedures for policy updates. The IEEE-SA experience, however, may provide some useful guidance as other SDOs address the issues under their own policies and procedures.

II. BACKGROUND

IEEE-SA is an organizational unit of IEEE, the world's premier professional organization for engineers in electrical engineering, information science, and related fields. IEEE-SA is a leading developer of global industry standards in a broad range of electro-technical subjects, including power and energy, biomedical and healthcare, information technology, telecommunications, transportation, nanotechnology, and information assurance. IEEE-SA is governed by a Board of Governors. The Board of Governors appoints the members of the Standards Association Standards Board ("Standards Board"), which oversees the process for initiating, developing, and revising standards. The Standards Board has a Patent Committee ("PatCom") that provides oversight for the use of any patents and patent information in IEEE standards. The standards themselves are then developed through a variety of working groups with internal IEEE sponsors (such as one of IEEE's societies).

IEEE-SA adopted a policy, more than two decades ago, governing the use of patented technologies in IEEE standards, and that policy has been updated periodically since then. IEEE-SA's policy permits the use of "Essential Patent Claims" ("SEPs"), but if IEEE receives notice that a proposed standard "may require the use of a potential Essential Patent Claim," then IEEE requests "licensing assurance, on the IEEE-SA Standards Board approved Letter of Assurance form." Thus, the policy includes two key processes: disclosure and licensing assurance.

IEEE-SA **requires** every participant in an IEEE standards development activity to disclose the identity of anyone that the participant believes may hold an "Essential Patent Claim" for the standard under development.

Once a participant identifies such a holder, the Working Group chair writes to the holder and **requests** that the holder state its licensing intentions, using the IEEE-SA form "Letter of Assurance." Using this form, a patent holder can (a) assure that it will license its SEP to implementers of the standard (either for a reasonable royalty or, at the holder's election, royalty-free), (b) assure that it will not enforce its SEP against implementers, (c) state that it does not have SEPs, or (d) decline to provide assurance.

III. UPDATING THE POLICY

In October 2012, ITU organized a roundtable entitled "High-level ITU talks address rampant patent litigation," with the subtitle "Innovation-stifling use of intellectual property to be tackled." ITU Secretary-General Dr. Hamadoun Touré stated: "We are seeing an unwelcome trend in today's marketplace to use standards-essential patents to block markets. There needs to be an urgent review of this situation: patents are meant to encourage innovation, not stifle it."⁴ At

⁴ This ITU press release (dated 6 July 2012) is *available at* http://www.itu.int/net/pressoffice/press_releases/2012/45.aspx#.VRCPyNa2Lr4. The press release referred to "recent patent disputes that have caused shipments of goods to be impounded at docks" and "the worldwide increase

the same event Deputy Assistant Attorney General Renata Hesse delivered her *Six Proposals* speech. Shortly after this event, the IPR groups of ETSI, ITU, and (somewhat later than the other two) IEEE-SA started to review their respective patent policies.

IEEE-SA's consideration of a possible update to its patent policy began in early 2013. IEEE-SA followed a thorough process for considering whether to update its patent policy and, if so, how. At its March 2013 meeting, the IEEE-SA PatCom discussed the six suggestions of Deputy Assistant Attorney General Renata Hesse (not as a mandate, of course, but as a useful framing of issues). The PatCom chair appointed an Ad Hoc committee ("Ad Hoc"), which reviewed the six suggestions. The Ad Hoc reported back at PatCom's June 2013 meeting and recommended that IEEE-SA update the patent policy in several areas.

Over the course of the following 15 months, the Ad Hoc proceeded to develop a draft policy update. Early in the process, IEEE-SA created a public website where drafts were published for public review and comment, once the Ad Hoc was satisfied with a draft. The Ad Hoc released a total of four public review drafts. Interested parties were asked to make comments using a comment tool (which permitted the Ad Hoc to review, sort, process, and act more efficiently on the 680 comments that were submitted on the drafts). IEEE-SA also provided an email reflector to enable further public dialog during the process. In addition, PatCom invited comments on each of the four public review drafts at its public meetings held over the 15-month period. In June 2014, PatCom approved a revised version of the fourth public draft and forwarded this draft to the Standards Board for consideration.

The policy update then passed through three further stages. In August 2014, the Standards Board considered the proposed policy after receiving live and written input from various stakeholders. The Standards Board approved the proposed policy update and recommended its adoption to the Board of Governors. In December 2014, the Board of Governors considered the proposed policy after receiving live and written input from various stakeholders. Finally, the IEEE Board of Directors decided (although not required to do so under the rules) to review the policy. The Board approved the policy at its February 2015 meeting, and the policy went into effect on March 15, 2015.

IV. SUBSTANCE OF UPDATES

The update addresses four key areas of the patent policy:

1. The update provides a definition of "reasonable" rate as "appropriate compensation to the patent holder for the practice of an Essential Patent Claim excluding the value, if any, resulting from the inclusion of that Essential Patent Claim's technology in the IEEE Standard." The update provides additional clarity by recommending consideration of

in standard essential patent (SEP) litigation" as the basis for ITU's decision to "host a high-level roundtable discussion between standards organizations, key industry players and government officials" in October 2012. ITU describes itself as "the leading United Nations agency for information and communication technologies, driving innovation in ICTs together with 193 Member States and a membership of over 700 private sector entities and academic institutions." See *Newsroom—About ITU*, available at http://www.itu.int/net/pressoffice/press_releases/about.aspx#.VRGEIK3QdGE.

three factors in determining a reasonable rate,⁵ but these factors are not mandatory. Parties (and, in litigation, courts) are free to consider other factors.

2. The update defines “Compliant Implementation” to ensure that makers of **components** that implement an IEEE standard can benefit from Letters of Assurance—but only for use of the component in conforming with the standard. Patent holders cannot refuse to honor their commitment to IEEE to grant licenses to an **unrestricted** number of applicants, and product makers cannot force a patent owner to grant a license beyond the scope of that commitment.
3. The update describes the circumstances in which the patent holder agrees that it will not seek injunctions (from a court) or exclusion orders (from an international trade commission). The update states that parties should negotiate over license terms and makes clear that a patent holder is not prohibited from seeking an injunction if an implementer declines to participate in or comply with the outcome of an adjudication (as specified in the policy).
4. The update provides that a patent holder cannot **require** an implementer to take a license to a non-essential patent or require an implementer to grant to a patent holder a license to the implementer’s own patents (except essential patents on the same IEEE standard). Patent holders and implementers are free, however, to **negotiate** any kind of cross-license or portfolio license that they wish.⁶

V. U.S. DEPARTMENT OF JUSTICE BUSINESS REVIEW LETTER

As it had with its 2007 policy update, IEEE sought and received a favorable business review letter from the U.S. Department of Justice. IEEE submitted a letter describing the policy update and the process for its development. The Justice Department conducted its investigation and on February 2, 2015 issued the requested letter.⁷

The Justice Department acknowledged that IEEE’s policy update created “the potential to benefit competition and consumers by facilitating licensing negotiations, mitigating hold up and royalty stacking, and promoting competition among technologies for inclusion in standards.” The Justice Department concluded that it had no present intention to take antitrust enforcement action against the policy update.

⁵ The three factors are: (1) the value contributed “to the value of the relevant functionality of the smallest saleable Compliant Implementation that practices the Essential Patent Claim,” (2) the value contributed “in light of the value contributed by all Essential Patent Claims for the same IEEE Standard practiced in that [smallest saleable] Compliant Implementation,” and (3) “Existing licenses” that “were not obtained under the explicit or implicit threat of a Prohibitive Order” and “otherwise sufficiently comparable” circumstances and resulting licenses.

⁶ Stakeholders took different positions on whether the policy update merely restates in clearer language what the existing policy already provides or represents a substantive change (a disagreement that itself provided an additional reason for updating the policy). IEEE made clear that it did not seek to amend retroactively the terms of any previously submitted Letter of Assurance, and that it was not expressing a view as to whether any specific provision in the draft policy did—or did not—represent a substantive change from the current policy.

⁷ Business Review Letter from Acting Assistant Attorney General Renata B. Hesse to Michael A. Lindsay (Feb. 2, 2015), available at <http://www.justice.gov/atr/public/busreview/311470.htm>.

VI. SOME CONSIDERATIONS FOR SDOs

As we noted at the outset, each SDO must start with its own existing policy and work through its own procedures. Using its procedures, IEEE-SA was able to achieve consensus on its policy update (with approval by three-quarters of the Board of Governors, and a further approval by the IEEE Board of Directors). Here are four considerations for other SDOs:

1. **Establish and follow a rigorous and consistent governance process.** IEEE has governance processes based on the concept of fiduciary duty to IEEE, independent of any other professional affiliation that its directors or other governance members may have. These principles were applied rigorously throughout the development of the patent policy update.
2. **Use a rigorous process for policy development.** In IEEE's case, the idea for updating the policy came through IEEE's normal process—a proposal at PatCom. PatCom then essentially followed the process that it used in its previous policy update (which took effect in 2007). PatCom developed drafts that it released for public review, provided a commenting tool for reviewers to articulate specific concerns and propose modifications to the text, opened an email reflector for additional public discussion, and held public meetings to entertain further public input. This process provided for a thorough consideration of issues, and the repeated iterations of drafts resulted in significant improvements to the text.
3. **Seek input from stakeholders.** IEEE sought public input as part of its policy-development process, and that input improved the draft. For example, some commenters pointed out that the draft as originally written might prevent (because of local procedural rules) a patent holder from conditionally seeking an injunction in an initial pleading even in circumstances where the patent holder has not agreed, in its Letter of Assurance, to refrain from seeking an injunction. The draft was revised to address this concern. As another example, the definition of “Reasonable Rate” evolved significantly between the first draft and the final draft.
4. **Provide clarity without rigidity.** The policy update provides a core definition of “Reasonable Rate” as excluding “the value, if any, resulting from the inclusion of that Essential Patent Claim's technology in the IEEE Standard.” The update also recommends three considerations in determining a reasonable rate in particular circumstances but does not mandate their use or prohibit other considerations. The updated policy now expressly states that a patent holder and implementer should engage in good faith negotiations without unreasonable delay, and the updated policy better enables the parties to do exactly that.

CPI Antitrust Chronicle

March 2015 (2)

IEEE Business Review Letter: The DOJ Reveals Its Hand

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IEEE Business Review Letter: The DOJ Reveals Its Hand

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I. INTRODUCTION

Collaboratively set voluntary technology standards, which are developed by private standard development organizations (“SDOs”), are greatly beneficial and ever more significant in our modern economy that relies on rapid innovation and product interoperability to thrive. Many SDO participants contribute proprietary cutting edge technology solutions to standards and, as a result, hold standard-essential patents (“SEPs”) that technology users may need to implement a standard.

Many SDOs maintain a balance between technology contributors and technology users through the use of voluntary commitments to license SEPs on fair, reasonable, and non-discriminatory (“F/RAND”) commitments. In determining the content of those voluntary commitments, SEP holders and technology users were, until now, left to the free market with parties negotiating their own agreements unconstrained by any mandated SDO requirements. Recently, however, an SDO named the Institute of Electrical and Electronics Engineers, Inc. (“IEEE”) voted to change its patent policy, incorporating drastic changes that will directly impact negotiations over what constitutes a F/RAND royalty rate.

On February 2, 2015, the Department of Justice Antitrust Division (“DOJ”) issued a Business Review Letter in response to an IEEE request for one stating that it does not have the present intention to challenge the IEEE’s proposed revision to its patent policy.² This is the IEEE’s second Business Review Letter request. It previously made a request in 2007, when the SDO last changed its patent policy.³ At issue in 2007 was its then-proposed IEEE-SA Letter of Assurance (“LOA”) policy and form, which did not require any specific terms for licensing negotiations or royalty rates, but only that the patent holders had the option to disclose and commit to their most restrictive licensing terms. This time, the IEEE proposed two main revisions to its patent policy that do provide for specific terms.

First, the IEEE suggested how a F/RAND royalty rate should be determined: based on the smallest salable compliant implementation and the value of existing licenses covering the use of the essential patent claim. Second, the policy now prohibits injunctive relief as an option for patent holders “unless the implementer fails to participate in, or to comply with the outcome of,

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² DOJ Business Review Letter to Michael A. Lindsay, Esq. on behalf of IEEE (Feb. 2, 2015), *available at* <http://www.justice.gov/atr/public/busreview/311470.pdf> [hereafter 2015 IEEE Ltr.].

³ DOJ Business Review Letter to Michael A. Lindsay, Esq. on behalf of IEEE (Apr. 30, 2007), *available at* <http://www.justice.gov/atr/public/busreview/222978.pdf>.

an adjudication, including an affirming first-level appellate review”⁴ This time around, therefore, the IEEE is making policy choices on behalf of its members, and the DOJ was not simply “offering guidance” about its “enforcement priorities” in issuing its February 2015 Business Review Letter but was making stark policy choices, as well.

Given the impact of technology standards, greater transparency into the mechanics of private SDOs is ultimately very valuable, as are the government’s publicized views of those standard setting activities. As explained by Bill Baer, Deputy Attorney General of the DOJ: “[o]ffering guidance about our enforcement priorities, whether through formal guidelines, business review letters, or speeches, helps [businesses] make plans and provides a good opportunity for the Division to educate businesses, the courts, and the public about our current approach to antitrust analysis.”⁵ But there is a vast difference between providing guidance and transparency as opposed to forcing parties to apply specific terms. With mandatory terms, there are inevitable consequences that may ultimately favor one of the parties in F/RAND negotiations. In this case, the changes appear to reflect a policy choice that favors technology users at the expense of patent holders.

II. SMALLEST SALEABLE COMPLIANT IMPLEMENTATION

According to the revised policy, a “reasonable” royalty must be set with reference to the “smallest saleable Compliant Implementation that practices [an] Essential Patent Claim.”⁶ The DOJ praises this change for providing additional clarity to what is meant by reasonable rate. Specifically, the DOJ explains: “The Update’s Reasonable Rate definition provides additional clarity regarding the IEEE RAND Commitment, which could help speed licensing negotiations, limit patent infringement litigations, enable parties to reach mutually beneficial bargains that appropriately value the patented technology, and lead to increased competition among technologies for inclusion in IEEE standards.”⁷

Of course, no one could disagree that these are all benefits that could arise from additional clarity on what constitutes a F/RAND commitment in a given SDO’s view. Nevertheless, the industry has already evaluated the smallest salable compliant implementation as a potential benchmark for a F/RAND royalty rate, along with many other rate reference points. Resulting industry practice, however, is to primarily reference the value of the end-use device. This was always deemed as most efficient by both technology users and patent holders because it better reflects consumer valuation of the technology—a neutral market-setting reference point.

As one court recently explained, the problem with basing royalties on the smallest saleable compliant implementation, like chip prices, is that it separates the value of the invention from any meaningful reference to consumer benefit:

⁴ 2015 IEEE Ltr. at 9.

⁵ Bill Baer, Deputy Attorney Gen., Antitrust Division, U.S. Dep’t of Justice, “Remarks as Prepared for Delivery at the Global Competition Review Fourth Annual Antitrust Leaders Forum” (Feb. 6, 2015), *available at* <http://www.justice.gov/atr/public/speeches/311710.pdf>.

⁶ 2015 IEEE Ltr. at 12.

⁷ 2015 IEEE Ltr. at 14.

[t]he benefit of the patent lies in the idea, not in the small amount of silicon that happens to be where that idea is physically implemented . . . Basing a royalty solely on chip price is like valuing a copyrighted book based on the costs of the binding, paper, and ink needed to actually produce the physical product. While such a calculation captures the cost of the physical product, it provides no indication of its actual value.⁸

Accordingly, in the face of this precedent, the IEEE (endorsed by the DOJ) very definitely chose the smallest salable compliant implementation as their appropriate rate reference point.

The DOJ went on to cite a number of cases as precedent for its endorsement of the use of the smallest saleable compliant implementation.⁹ But the precedent is not clear-cut. For example, in support of the IEEE's selection of the smallest salable compliant implementation standard, the DOJ references the U.S. Court of Appeals for the Federal Circuit's ("Federal Circuit") decision in *VirnetX*. However, in that case, the Federal Circuit did not sanction basing a royalty on only the smallest saleable compliant implementation. It labeled such an approach as "wrong," because this:

mistakenly suggests that when the smallest salable unit is used as the royalty base, there is necessarily no further constraint on the selection of the base. *That is wrong* In other words, the requirement that a patentee identify damages associated with the smallest salable patent-practicing unit is simply a step toward meeting the requirement of apportionment.¹⁰

The Federal Circuit had reached a similar conclusion in *Lucent Technologies, Inc. v. Gateway, Inc.* There, the Federal Circuit explained that using a product's end price as a royalty base makes sense as:

sophisticated parties routinely enter into license agreements that base the value of the patented inventions as a percentage of the commercial products' sales price. There is nothing inherently wrong with using the market value of the entire product . . . so long as the multiplier accounts for the proportion of the base represented by the infringing component or feature.¹¹

Many scholars argue that there is little significance to whether parties begin their negotiations with the smallest salable compliant implementation, or the end price of the product, or any other reference rate. Their point of view is that it is only a matter of metrics; ounces or kilograms do not ultimately change the weight. This is true in a purely scientific context, but in business negotiations the opportunity to bid high and subsequently move one's bid lower as negotiations progress is considered inherently beneficial.

In another case cited by the DOJ, *Ericsson v. D-Link*, the court recognized that "a patent holder does not violate its RAND obligations by seeking a royalty greater than its potential

⁸ *Commonwealth Scientific and Indus. Research Orgs v. Cisco*, No.6:11-cv-343, 2014 WL 2805817, at *11 (E.D. Tex. July 23, 2014).

⁹ The DOJ specifically cited *LaserDynamics, Inc. v. Quanta Computers, Inc.* 694 F.3d, 51, 67 (Fed. Cir. 2012), *VirnetX, Inc. v. Cisco Sys., Inc.*, 767 F.3d 1308, 1327 (Fed. Cir. 2014) and *Ericsson v. D-Link Sys., Inc.*, 773 F.3d 1201 (Fed. Cir. 2014).

¹⁰ *VirnetX*, 767 F.3d at 1327. (emphasis added).

¹¹ *Lucent Techns., Inc. v. Gateway, Inc.*, 580 F.3d 1301, 1339 (Fed. Cir. 2009).

licensee believes is reasonable. . . both sides' initial offers should be viewed as the starting point in negotiations."¹² The court also explained that there is "nothing inherently wrong or unfair with Ericsson's practice of licensing 'fully compliant' products."¹³ There is real significance, therefore, to defining a reference rate, and the IEEE and DOJ—given its approval of the IEEE's policy change—have selected a reference rate that favors technology users at the risk of undercompensating SEP patent holders.

III. INJUNCTIVE RELIEF

Just as the DOJ's reasoning for recommending the use of the smallest salable compliant implementation reflects a policy choice that rests on shaky ground, so too does its logic underlying its support for prohibiting injunctive relief until the parties have litigated to the appellate level. The DOJ reasons as follows:

The threat of exclusion from a market is a powerful weapon that can enable a patent owner to hold up implementers of a standard. Limiting this threat reduces the possibility that a patent holder will take advantage of the inclusion of its patent in a standard to engage in patent hold up, and provides comfort to implementers in developing their products.¹⁴

But there is no market evidence of hold-up. No economist has been able to provide data to show that hold-up even exists. As a theoretical concept it could happen but, in reality, it is very unlikely.¹⁵ Patent holders will not hold up technology users if they plan to do repeat business with them. Certainly, a once-off arrangement where a monopolist squeezes out every last drop from a technology user could occur without a F/RAND commitment, but the reputational cost and consequences work against such an incentive to seek supra-competitive rates.

SDOs and technology users would surely not include such patentee's future patents in any new standard if the patent holder engages in this type of bad faith negotiation. This point was recognized by the FTC in a statement before a Senate Judiciary Subcommittee.¹⁶ Citing an earlier FTC report, the testimony explains that "patent holders who manufacture products using the standardized technology 'may find it more profitable to offer attractive licensing terms in order

¹² Mem. Op. and Order, No. 6:10-00473, 2013 WL 2242444, at *50 (E.D. Tex., Aug. 6, 2013), *affirmed* *Ericsson v. D-Link, Sys., et al.*, 773 F.3d 1201 (Fed. Cir. 2014). For a useful discussion of these decisions, see Dina Kallay, *F/RANDly Judicial Advice to the Rescue: Ericsson v. D-Link*, 3(1) CPI ANTITRUST CHRON. (Mar. 2015) (publ. forthcoming).

¹³ *Id.* at 47.

¹⁴ 2015 IEEE Ltr. at 9.

¹⁵ Despite Defendants' arguments regarding hold up in *Ericsson v. D-Link*, Judge Davis held that "Defendants had failed to present any evidence of actual hold-up." Mem. Op. and Order, No. 6:10-00473, 2013 WL 2242444 at *36 (E.D. Tex. Aug. 6, 2013), *affirmed* *Ericsson v. D-Link, Sys., et al.*, 773 F.3d 1201 (Fed. Cir. 2014).

¹⁶ Prepared Statement of the Fed. Trade Comm'n Before the United States Senate Committee on the Judiciary Subcommittee on Antitrust, Competition Policy and Consumer Rights Concerning "Standard Essential Patent Disputes and Antitrust Law", 6 (July 30, 2013), *available at* https://www.ftc.gov/sites/default/files/documents/public_statements/prepared-statement-federal-trade-commission-concerning-standard-essential-patent-disputes-and/130730standardessentialpatents.pdf

to promote the adoption of the product using the standard, increasing the demand for its product rather than extracting royalties.”¹⁷

Even if the DOJ is not chasing ghosts, any hold-up concerns are solved by the F/RAND safety valve. The DOJ notes that U.S. patent courts have accepted the principle that a F/RAND commitment means that the patent holder is bound “not to exclude these implementers from using the standard unless they refuse to take a RAND license.”¹⁸ If that is the case, then whatever problem the DOJ seeks to solve is purely theoretical. Not only is there no data supporting the existence of hold-up, but the courts do not allow injunctions to be issued in infringement cases, unless there is an unwilling licensee.

The DOJ goes on to say that prohibiting a F/RAND encumbered SEP holder from seeking an injunction, “in practice, . . . will not be significantly more restrictive than current U.S. case law.”¹⁹ But this is in error. In fact, the most recent court to speak on the issue, the Federal Circuit, held in its April 2014 *Apple v. Motorola* ruling that an SEP holder does not give up its right to seek an injunction merely because of F/RAND commitments; the district court had erred in suggesting a *per se* rule barring SEP holders from seeking injunctions.²⁰

According to the Federal Circuit, there is no reason to establish a separate rule or framework for cases involving SEPs and the four-factor test for injunctions announced in *eBay Inc. v. MercExchange, L.L.C.* applies for SEPs just as it applies in all other patent cases.²¹ The *eBay* test “provides ample strength and flexibility for addressing the unique aspects of FRAND committed patents and industry standards in general.”²²

What DOJ is proposing by endorsing the IEEE’s policy change approach is thus much more restrictive than U.S. case law. It prevents even “seeking” an injunction in court, which is the only remedy a patent holder has against an unwilling licensee—to stop it from continuing to infringe its patent without a license. The DOJ does recognize the possibility of an unwilling licensee who may delay “paying reasonable compensation for a portfolio of patents until a patent holder has litigated each patent in its portfolio individually.”²³ This conduct is otherwise known as hold-out. But, as a solution, the DOJ merely “encourages patent holders and implementers to negotiate licensing agreements that are mutually acceptable”²⁴

As a result, the DOJ has identified a problem that no one is sure really exists, or still exists, and has endorsed a solution that is more restrictive than U.S. case law, even though the DOJ erroneously believes it is in line with current case law. Ironically, in addressing the real problem of an “unwilling licensee,” an obviously real problem in the patent-licensing world

¹⁷ *Id.* at 6 citing Fed. Trade Comm’n & U.S. Dep’t of Justice, *Antitrust Enforcement and Intellectual Property Rights: Promoting Innovation and Competition 2* (2007), available at <http://www.ftc.gov/reports/innovation/P040101PromotingInnovationandCompetitionrpt0704.pdf>.

¹⁸ 2015 IEEE Ltr. at 9.

¹⁹ *Id.* at 10.

²⁰ *Apple, Inc. v. Motorola, Inc.*, 757 F.3d 1286, 1331-32 (Fed. Cir. Apr. 25, 2014).

²¹ *Id.*

²² *Id.* at 1332.

²³ 2015 IEEE Ltr. at 10.

²⁴ *Id.*

where intellectual property can be easily copied and infringed, the DOJ only “encourages” the parties to solve the problem themselves. The DOJ also regularly praises the change in IEEE policy as adding additional “clarity” to the IP landscape. Ultimately, it is doubtful whether this additional clarity was needed in the first place and the proposed solution will likely result in more harm than good.²⁵

IV. PAST BUSINESS REVIEW LETTERS

Business Review Letters are important policy-making tools available to the DOJ. They merit careful consideration, especially the careful weighing of all the evidence and points of view. Unfortunately, the DOJ’s latest IEEE Business Review Letter appears to be based more on opinion than on fact. In an area where speculative harm is rife, and consequences uncertain, the DOJ may have been better advised to refuse IEEE’s request for a Business Review Letter.

There is precedent for such refusals. The DOJ noted in its response to a proposal from the American Welding Society in 2002 that the “Department does not possess the information it would need to determine whether the standard that the [applicant] is considering would have a net anticompetitive effect under the rule of reason.”²⁶ The DOJ went even further in its IP Exchange business review letter in 2013.²⁷ In response to the applicant’s request that DOJ state its present enforcement intentions regarding the planned exchange for unit license rights to defined sets of patents, the DOJ declined to provide this. The DOJ explained that

[d]ue to the inherent uncertainties and potential competitive concerns associated with IPXI’s novel business model that are discussed in detail below, the Department declines to state its present enforcement intentions regarding IPXI’s proposal at this time. We simply do not know enough to conclude that IPXI’s activities, once operational, will not raise competitive concerns.²⁸

Additionally, in the 1970s, in response to a request from the American Importers Association, the DOJ responded that the request was inappropriate for its Business Review Letter procedure.²⁹ It explained that the “potential means of accomplishing the council’s proposed

²⁵ In its 2007 IEEE letter the DOJ noted that “[t]he Department likely would challenge under section 1 of the Sherman Act any activities that reduced competition by using IEEE-SA’s proposed patent policy as a cover to fix the prices of downstream standardized products.” See 2007 IEEE Ltr. at 11. The 2015 IEEE Letter notes that there were parties who expressed the concern that the process at the IEEE was ultimately biased in favor of technology users. In response, the DOJ explained that the development of the policy was ultimately voluntary and there were many opportunities for other interests to express “divergent views.” *Id.* at 7. By definition, however, there are more technology users than patent holders and, as such, a democratic solution could still be biased in favor of technology users. The fact that the development of this policy was public and voluntary does not eliminate section 1 concerns.

²⁶ DOJ Business Review Letter to Douglas W. MacDonald, Esq. on behalf of American Welding Society (Oct. 7, 2002), available at <http://www.justice.gov/atr/public/busreview/200310.htm>.

²⁷ DOJ Business Review Letter to Garrard R. Beeney, Esq. on behalf of Intellectual Property Exchange International, Inc. (Mar. 26, 2013), available at <http://www.justice.gov/atr/public/busreview/295151.htm>.

²⁸ *Id.* at 1.

²⁹ DOJ Business Review Letter to Keith I. Clearwaters, Esq. on behalf of American Importers Association, Inc., B.R.L. 77-13 (D.O.J.), 1977 WL 22850 (Jul. 12, 1977).

objectives could be so varied that it was not possible to predict their competitive consequences fully.”³⁰

With the level of factual uncertainty surrounding the issues raised by the IEEE letter, the better approach for the DOJ might have been to refuse to state its present enforcement intentions. The DOJ could then have gone on to explain the agency’s view on F/RAND, etc., but would have been free not to endorse the smallest salable compliant measure or its view on prohibiting injunctions as a resolution of theoretical hold-up concerns. In this case, however, the DOJ chose in both instances to support the option most favorable to technology users.

V. CONCLUSION

There is no hiding the fact that the DOJ has made very apparent policy choices in its 2015 IEEE Business Review Letter—a letter it need not have issued in the first place. Instead of concluding that there is insufficient evidence to reach a conclusion, the DOJ based its findings on ambiguous precedent and little-to-no evidentiary support. This amounts to the DOJ making a clear choice to favor technology users at the expense of technology developers who contributed their technology into an open standard. Whether one believes this to be the correct choice will likely depend on which side of the fence one is on, i.e., with the technology users or patent holders. But it is now clear that the DOJ has sided with technology users.

³⁰ *Id.*

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The 2015 DOJ IEEE Business
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The Triumph of Industrial
Policy Preferences Over Law
and Evidence

Roy E. Hoffinger

The 2015 DOJ IEEE Business Review Letter: The Triumph of Industrial Policy Preferences Over Law and Evidence

Roy E. Hoffinger¹

I. INTRODUCTION

IEEE is a private standard-setting association (“SSO”) that develops, adopts, and revises standards in certain industries, including accepted and highly successful standards incorporating wireless technologies such as Wi-Fi. The membership of IEEE includes many employees of providers of consumer electronics products and their suppliers.

On February 2, 2015, the Antitrust Division of the U.S. Department of Justice (“DOJ”) issued a Business Review Letter (the “IEEE BRL”)² stating that it does not intend to take any enforcement action under U.S. antitrust law against an agreement among powerful companies under the auspices of IEEE on a controversial set of amendments to IEEE’s rules concerning the licensing of patents essential to IEEE standards (“the Revised Rules”). These rules are expressly aimed at driving down the compensation—i.e., price—that holders of “standard essential patents” (“SEPs”) will receive for licensing patents essential to any IEEE standard. In February 2015, the board of directors of IEEE approved the Revised Rules, which went into effect on March 15, 2015.

The IEEE BRL is deeply flawed and even disturbing. Tellingly, the IEEE BRL says little or nothing about the policies reflected in patent law, decades of settled antitrust law applicable to coordinated action on buyer prices, BRLs issued by DOJ during prior administrations regarding coordinated conduct within SSOs by buyers of intellectual property rights (“IPR”), and the evidence and arguments submitted to the Division by multiple patent-holder companies who are the targets of the Revised Rules. When ignoring relevant law, arguments and evidence is not enough to reach the conclusion desired by today’s Antitrust Division—its IEEE BRL misstates the provisions of the rules to make them more defensible.

For these reasons, the IEEE BRL thus should not be viewed as an interpretation of antitrust law or its relationship to patent law. Rather, the IEEE BRL is an expression of the industrial policy preference of today’s DOJ for potential short-term price reductions at the expense of providing long-term incentives to engage in R&D for technologies useful in standards, contrary to the key premise underlying patent law—a premise that historically has been accorded great respect by antitrust courts.

¹ Vice President, Legal Counsel, Qualcomm, Inc., J.D. University of Chicago 1982. This article reflects the views of the author and these views are not necessarily the same as those of his current or former clients or employers.

² Business Review Letter from Acting Assistant Attorney General Renata B. Hesse to Michael A. Lindsay (Feb. 2, 2015), available at <http://www.justice.gov/atr/public/busreview/311470.htm>, hereinafter “IEEE BRL.”

Nor can the IEEE BRL be defended as an exercise by the DOJ of “competition policy advocacy” as opposed to “antitrust law enforcement.” Most fundamentally, the IEEE BRL is a statement of the DOJ’s intention not to enforce decades of settled antitrust law prohibiting coordination among powerful buyers on the prices they are willing to pay for inputs needed by the buyers’ businesses. If that is not an issue of enforcement, then what else would be?

In addition, many foreign governments do not understand that U.S. agencies, unlike foreign agencies, have no authority to make antitrust law and that U.S. agency views on questions of antitrust law are given little—if any—more weight by U.S. courts than those of private parties. Accordingly, foreign agencies may view the IEEE BRL as an authoritative interpretation of U.S. antitrust law legalizing buyer cartel behavior towards licensors of SEPs. Because business review letters may not be appealed to U.S. courts, the harm inflicted by this misunderstanding cannot easily be undone. Even if the IEEE BRL were properly viewed as “policy advocacy,” it is difficult to understand how DOJ advocacy inconsistent with U.S. law and policy on issues that may also be subject to the jurisdiction of multiple foreign agencies can be reconciled with the duty of DOJ to “uphold the laws of the United States.”

To place this matter in context, Part II will review briefly patent law and its underlying policy, antitrust law against concerted action by buyers, prior DOJ BRLs on intellectual property rights (“IPR”) and standard-setting, and the changes to IEEE’s rules and policies concerning the licensing of patents essential to IEEE standards, including the process by which those changes were developed and adopted. Part III will then assess against this background the “analysis” in the IEEE BRL.

II. BACKGROUND

A. Patent Law and its Underlying Policy

Patent law grants inventors the right, for a limited time, to exclude others from using their inventions, or license the use of their inventions in return for cash or other compensation. Patent law reflects a deliberate determination by Congress that the public interest is best-served by providing inventors and their investors a state-sanctioned “monopoly” on their invention—and at least the potential for market power and monopoly profits, depending on the invention and available alternatives—as an incentive to invest labor and capital in costly and risky R&D through an opportunity to earn real market-based rewards for successful inventions. Thus, as the Supreme Court has stated, “[a] patent empowers the owner to exact royalties as high as he can negotiate.”³ U.S. antitrust law places no limits on that right, including in the standard-setting context.⁴

The IEEE BRL allows, if not encourages, patent users to use their collective power to deny licensors the opportunity provided them by patent law. It does so without discussing patent law, its underlying policy, and how these have been interpreted by the U.S. Supreme Court. The absence of such a discussion is one of the circumstances raising an inference that the IEEE BRL is the result of considerations other than current U.S. law or policy.

³ *Brulotte v. Thys. Co.*, 379 U.S. 29, 33 (1964) (emphasis added).

⁴ *Rambus, Inc. v. F.T.C.*, 522 F.3d 456, 469 (D.C. Cir. 2008), cert. denied, 129 S. Ct. 1318 (2009).

B. Antitrust Law and Concerted Action by Buyers

The IEEE Revised Rules are the product of an express collective effort by prospective licensees under the auspices of an SSO to depress prices they might otherwise be required to pay for a license to use patented technologies incorporated in IEEE standards. The proponents of the Revised Rules were buyers (licensees) of non-exclusive rights to use the patented technology of sellers (licensors) that depend on licensing revenues to recover their R&D costs and attract capital. Such buyer cartel-behavior, like seller cartel-behavior, is in most settings strongly condemned by U.S. antitrust law as *per se* illegal. Recently, for example, DOJ brought an enforcement action against six technology companies that had entered into agreements that they would not directly recruit each other's employees, describing these agreements as "facially anticompetitive" and as "naked" restraint[s] of trade that [were] *per se* unlawful under Section 1 of the Sherman Act, 15 U.S.C. 1."⁵

Importantly, coordination on price can be anticompetitive where the coordination concerns a methodology or principles for establishing prices rather than an agreement on the prices themselves. This includes coordination among buyers regarding the prices they will pay to their suppliers.⁶ And, as noted by the eminent economist Roger Noll, there is and should be no special exception in the case of intellectual property to the rule against coordinated action by powerful buyers on the prices they will pay their suppliers.⁷ Indeed, it would be surpassing strange to uniquely permit buyer cartel-behavior to curb the exercise of the one class of market power that has been expressly authorized by Congress for the purpose of creating incentives for investment and innovation.

The law concerning concerted action by buyers on the prices they will pay is, like patent law and its underlying policy, not mentioned in the IEEE BRL. This omission may reflect doubts on the part of today's DOJ that its policy preferences reflected in the IEEE BRL are reconcilable with patent and antitrust law as adopted by Congress and construed by courts.

C. Prior DOJ BRLs on Coordinated Action by Buyers of IPR Essential to Standards

While collective action within SSOs on technology choices is generally subject to a rule of reason analysis, the legal standard for collective action on the price of technology chosen by an SSO is not clear. Many SSOs have adopted FRAND policies pursuant to which SEPs are required or requested to commit to license those patents on terms that are reasonable and non-discriminatory. Those policies have not been scrutinized as potential antitrust violations, presumably because they reflected a consensus of both sellers and buyers and/or merely reflected existing patent law on damages for infringement. Neither explanation, however, applies to the IEEE's Revised Rules imposed through collective action of IPR buyers. Here the sellers opposed vigorously the Revised Rules, which depart markedly from patent law.

⁵ DOJ Competitive Impact Statement at 3, *U.S. v. Adobe Systems, Inc.*, No. 10-cv-01629 (D. Col. Sept. 24, 2010).

⁶ *See, e.g., Mandeville Island Farms, Inc. v. Am. Crystal Sugar Co.*, 334 U.S. 219, 223-37 (1948).

⁷ Roger G. Noll, *Buyer Power and Economic Policy*, 72 ANTITRUST L. REV. 589, 591 (2005).

When legitimate explanations for other SSO IPR rules and policies are unavailable, DOJ officials in prior administrations had expressed concern that joint purchaser action within SSOs may have anticompetitive effects. For example, Hill Wellford, while Counsel to the Assistant Attorney General, Antitrust Division, stated publicly “SDO buyer-cartel behavior has the real potential to damage innovation incentives, and therefore is properly the subject of antitrust scrutiny.”⁸ Gerald Masoudi, while Deputy Assistant Attorney General, Antitrust Division, warned of a “serious” concern that SDO patent policies . . . could drive down the rewards to patent holders, thereby reducing innovation incentives⁹ Accordingly, he cautioned that antitrust law should not be used to “limit” patent rights or to “reflexively rein[] in the power of whatever player has developed pricing power at a particular time.”¹⁰

In light of these important and complex considerations, DOJ on at least three occasions has declined to provide a blanket endorsement of joint efforts by IPR buyers to negotiate or set license fees.

In November 2002 DOJ issued a BRL regarding a proposal by the 3G Patent Platform Partnership—comprised of multiple companies interested in 3G wireless standards—to establish organizations (“Platforms”) to, among other things, develop interim license agreements for the use of SEPs pending completion of bilateral license negotiations between individual licensors and licensees. DOJ premised its statement that it had no present intent to take enforcement actions against the Partnership or the Platforms on, among other things, its understanding that prices in interim agreements would largely be determined by SEP licensors, and prices in final agreements would be established through the aforementioned bilateral negotiations. DOJ therefore concluded that the Platform would “operate[] in a procompetitive manner, not unduly allowing the interests of those patent holders whose primary interest is as licensors to be adversely affected by a collective action through a [Platform] of those patent holders who also have significant interests as licensees.”¹¹

In its October 2006 business review letter concerning a proposal by VITA—an international trade association—to require standard-setting participants to declare their “most restrictive licensing terms,” DOJ predicated its “no present intent” decision on a representation that the proposal would not permit joint action to drive down royalty rates.¹² It noted:

The proposed policy should not permit licensees to depress the price of licenses for patented technologies through joint action because it prohibits any joint negotiation or discussion of licensing terms among the working group members

⁸ Hill B. Wellford, *Antitrust Issues in Standard Setting*, China Electronics Standardization Institute 2d Annual Seminar on IT Standardization and Intellectual Property, at 15 (Mar. 29, 2007), available at <http://www.justice.gov/atr/public/speeches/222236.pdf>.

⁹ Gerald F. Masoudi, *Objective Standards and the Antitrust Analysis of SDO and Patent Pool Conduct*, Annual Comprehensive Conference on Standards Bodies and Patent Pools, at 14- 15 (Oct. 11, 2007), available at <http://www.justice.gov/atr/public/speeches/227137.pdf>.

¹⁰ *Id.*

¹¹ Business Review Letter from Assistant Attorney General Charles A. James to Ky P. Ewing (Nov. 12, 2002), at 11, available at <http://www.justice.gov/atr/public/busreview/200455htm> (“VITA BRL”).

¹² Business Review Letter from Assistant Attorney General Thomas O. Barnett to Robert J. Skitol (Oct. 30, 2006), available at <http://www.justice.gov/atr/public/busreview/219380htm> (“2007 IEEE BRL”).

or with third parties at all [standards-development committee] and working group meetings. Moreover, working group members will not set actual licensing terms. The patent holder and each prospective licensee will negotiate separately, subject only to the restrictions imposed by the patent holder's unilateral declaration of its most restrictive terms.¹³

In its April 2007 business review letter regarding IEEE's proposed policy to permit patentees to publicly disclose licensing terms, DOJ again expressly refused to issue a "no present intent" statement with respect to any joint discussion or negotiation of licensing terms by standards-development working groups:

The Department observes in this regard that IEEE's current policies permit limited discussions of costs related to proposed standards. Such discussion, could, in certain circumstances, rise to the level of joint negotiation of licensing terms. You have not requested, and we are not providing, the Department's views on joint negotiations that might take place inside or outside such standards development meetings or IEEE sponsored meetings.¹⁴

DOJ concluded in these prior BRLs that it would review coordinated action by SEP users on the license fees they would pay on a case-by-case basis under the rule of reason. This conclusion properly reflects the fact that such coordination may, in some circumstances and on balance, harm competition.

The new IEEE BRL does not mention (i) the risks identified by Messrs. Wellford and Masoudi, (ii) DOJ's warnings in the prior BRLs about coordinated action of IPR buyers that might depress prices payable for SEP licenses, or (iii) DOJ's prior statements that it would consider such conduct under a fact-intensive rule of reason inquiry, requiring the balancing of anticompetitive and pro-competitive effects. Needless to say, the IEEE BRL does not and could not find that the joint buyer conduct within IEEE would not "depress" prices for SEPs, as this is the avowed purpose of the conduct. Conspicuously, however, the IEEE BRL indicates no consideration by today's DOJ of its predecessors' concerns that depressing the price of SEPs through the exercise of monopsony power may harm consumer welfare and competition. This raises questions about relying on the IEEE BRL to justify conduct that may attract the attention of future administrations at DOJ.

D. Changes to IEEE's IPR Policy: Process and Substance

From the outset, the development and adoption of the proposed changes to IEEE's IPR Policy was dominated and controlled by individuals seeking to advance the commercial interest of a discrete subset of companies—that is, by IEEE members which are major users (not producers) of technology incorporated in standards. These interests engaged in a coordinated effort to use IEEE structures to depress the royalties for such IPR. Their agenda was implemented through changes to IEEE policy and the Letters of Assurance ("LOA") that owners of patents essential to IEEE standards are asked to provide about their willingness to license SEPs in

¹³ *Id.* at 9-10.

¹⁴ Business Review Letter from Assistant Attorney General Thomas O. Barnett to Michael A. Lindsey (Apr. 30, 2007), at 11, available at <http://www.justice.gov/atr/public/busreview/222978htm>.

accordance with certain principles, the receipt of which almost always is a condition to incorporation of a patented technology in a standard.

The development of the proposed changes began at a March 2013 meeting of the IEEE Standard Association's Standard Board's Patent Committee ("PatCom"). At that meeting, without advance notice, PatCom created the Ad Hoc Committee, purportedly to consider whether modifications to the IEEE patent policy should be recommended. At that time, PatCom was almost exclusively composed of individuals affiliated with manufacturers and sellers of standard-compliant products that have systematically advocated in multiple fora for policies that would compel lower royalties for SEPs, including precisely the substantive provisions included in the Proposal. PatCom appointed its members to the Ad-Hoc, and added to the Ad-Hoc another IEEE member whose views were known to be consistent with those of the PatCom members.

As one would expect from the teaching of antitrust law that firms and individuals act in accordance with their economic interests rather than altruism, the outcome of the process designed and implemented by PatCom and the Ad Hoc was thoroughly in line with the public and litigation positions of the major licensees with which the majority of their members was affiliated. Following approval by PatCom and the Ad Hoc, the proposed changes were approved in closed sessions by successively higher levels of the IEEE hierarchy, two of which included four individuals who were also members of PatCom and the Ad Hoc.

The changes adopted by IEEE at the behest of the IPR licensees center on two mandatory licensing terms and one evidentiary rule, each of which is well calculated to depress the price patentees will receive for licenses to SEPs, as explained in part III below:

"Prohibitive Order." Under the terms of the proposed changes, a SEP-holder that undertakes a reasonable and non-discriminatory ("RAND") licensing commitment would be prohibited from seeking an injunction or exclusion order (a "Prohibitive Order," under the Proposal)

unless the implementer fails to participate in, or to comply with the outcome of, an adjudication, including an affirming first-level appellate review . . . by one or more courts that have the authority to: determine Reasonable Rates and other reasonable terms and conditions, adjudicate patent validity, enforceability, essentiality, and infringement; award monetary damages; and resolve any defenses and counterclaims.

"Reasonable Rate." The Proposal seeks to impose a mandatory definition as to the meaning of a "Reasonable Rate" under RAND. Specifically, a "Reasonable Rate:"

- must be limited to "appropriate compensation to the patent holder for the practice of an Essential Patent Claim excluding the value, if any, resulting from the inclusion of that Essential Patent Claim's technology in the IEEE Standard;"
- must be set with reference to the "smallest saleable Compliant Implementation that practices [an] Essential Patent Claim;"
- must be set "in light of the value contributed by all Essential Patent Claims for the same IEEE Standard practiced in that Compliant Implementation; "and

- may be calculated with reference to royalties received under other licenses only “where such licenses were not obtained under the explicit or implicit threat” of an injunction or exclusion order—thereby allowing exclusion of essentially all historical and market-based evidence of what an industry considers to be “reasonable.”

“**Reciprocal Licensing.**” The Proposal prohibits a SEP-holder from “condition[ing]” a license on a licensee’s agreement “to grant a license to any of the Applicant’s Patent Claims that are not Essential Patent Claims for the referenced IEEE standard.”

This one-sided cookbook of patent devaluation recipes was not the product of any process intended to—or capable of—arriving at an outcome that reflected a consensus among all interested stakeholders, including SEP licensors dependent on license revenue. Indeed, in response to literally hundreds of stakeholder complaints about the process, absence of consensus, and the substance of the proposed changes, IEEE responded that adoption of its proposals “does not require consensus of all material affected parties.”¹⁵ Among other things:

- **Vote-stacking.** The IPR-buyer interests that controlled PatCom and the Ad Hoc excluded or ignored other interests and voices during the process that produced the new Rules. In contrast to prior practices in PatCom, there was no general invitation to the IEEE membership to participate in the Ad Hoc Committee. Indeed, throughout 2013, the Ad Hoc rejected requests from interested stakeholders to open its membership. Only in 2014 did PatCom add to the Ad Hoc two individuals affiliated with companies critical of the Proposal, but PatCom made sure the dissenters lacked the voting power to achieve any meaningful changes in the Proposal’s terms.
- **No transparency.** The Ad Hoc conducted its meetings privately and published no minutes, allowing its members to avoid the scrutiny that their deliberations would have otherwise received under more formalized procedures. The absence of transparency continued through the end of the process, with deliberations at each successive level of the IEEE hierarchy undertaken in private, closed sessions with no indication of whether—and if so how—the objections of SEP licensors and others not adequately represented during the process were considered. IEEE even refused to share with its members a copy of the BRL request to DOJ
- **No meaningful responses to or explanations for rejecting concerns of other stakeholders.** DOJ notes in the IEEE BRL that the Ad Hoc sought and received from other IEEE members comments on its Proposal. The IEEE BRL fails to note the absence of any meaningful responses, in the form of either substantive modifications or non-cryptic, responsive explanations, to those comments. It is very difficult to conclude that the comment process had any purpose other than to give an illusory appearance of openness. For example, the Ad Hoc and PatCom:

¹⁵ PatCom Ad Hoc Committee Comment Disposition Report for IEEE-SA Standards Board Bylaws Draft 05-Aug-15 (Nov. 13, 2013), Proposed Responses to Comments 5, 7, 9, 23, 82, 88, 98, 100, and 101, *available at* http://grouper.ieee.org/groups/pp-dialog/drafts_comments/PatCom_sort_by_commentID_141113.pdf

- Refused uniformly to respond to comments requesting identification of any evidence of any need for changes to the existing and long-standing IEEE IPR policy, stating, “It is not necessary to cite a specific IEEE instance of a problem in order to make policy clarifications or even changes.”¹⁶
- Never identified any problem, distortion, or defect in the content or real-world operation of the existing IEEE policy that would justify the proposed changes, or gave any indication whether or how stakeholders other than IPR buyers would be impacted, including the impact on incentives to engage in R&D for technologies beneficial to its standards.
- Rejected the overwhelming majority of comments that disagreed with the substantive provisions of the Proposal. Indeed, despite hundreds of objections to various aspects of the Proposal, every policy change initially included in the Proposal remained substantively unaltered between the first draft in August 2013 and the final draft in June 2014.
- **No independent review by upper levels of IEEE hierarchy.** The private, closed sessions of the upper levels of the IEEE hierarchy included, among others, the same four individuals affiliated with IPR buyers comprising the majorities of PatCom and the Ad Hoc. The hierarchy was advised by the same in-house and outside counsel selected by PatCom and the Ad-Hoc, notwithstanding requests that the hierarchy obtain independent advice and counsel. No information was given members about the documents and information provided to the hierarchy, or the content of any discussion at the closed sessions.

None of these facts are mentioned in the IEEE BRL.

III. ANALYSIS

Contrary to DOJ’s prior statements that it would review “joint negotiation or discussions of licensing terms among [SSO] working group members,”¹⁷ and joint negotiations that might take place insider or outside standards development meetings¹⁸ on an individualized rule-of-reason basis,¹⁹ IEEE invited—and DOJ gave a blanket endorsement for (effectively deeming legal *per se*) new mandatory license terms and principles that are clearly intended to depress pricing for all patents essential to any IEEE standard.

The IEEE action approved by DOJ is not even a joint negotiation: It is an agreement by users of SEPs on new license terms and principles that will depress royalties, made possible by the exclusion of SEP owners from meaningful participation in their development or approval. IEEE did not provide—and DOJ did not consider—important categories of evidence that would

¹⁶ PatCom Ad Hoc Committee Comment Disposition Report for IEEE-SA Standards Board Bylaws Draft 05-Aug-15 (Nov. 13, 2013), Proposed Responses to Comments 3 and 4, *available at* http://grouper.ieee.org/groups/pp-dialog/drafts_comments/PatCom_sort_by_commentID_141113.pdf.

¹⁷ VITA BRL, *supra* note 11, at 9.

¹⁸ 2007 IEEE BRL, *supra* note 12, at 11.

¹⁹ *See* VITA BRL, *supra* note 11, at 9 & n. 27.

have been absolutely essential for a meaningful “rule of reason” inquiry. For example, IIEEE did not provide—and DOJ did not consider—any evidence with regard to the existence of any problem arising under any particular IIEEE standard, or any particular SEP. IIEEE did not provide evidence concerning—and DOJ did not consider—potential alternatives to buyer cartel conduct (e.g., *ex ante* bilateral negotiations), or the feasibility of alternatives other than IIEEE available to licensors desiring to commercialize their technologies, but unwilling to capitulate to the cartel’s demands. IIEEE did not provide—and DOJ did not consider—any evidence on the impact of the new rules on incentives to invest in R&D for disruptive technologies.

The potential anticompetitive effects of the changes to the IIEEE IPR policy, which DOJ should have but failed to weigh against their alleged pro-competitive effects, are described in more detail below.

A. The Revisions to IIEEE’s Rules are Manifestly Anticompetitive

Many of the new IIEEE rules are uncertain in meaning and application.²⁰ But no one has disputed that their underlying intent is consistent with the view of the Chinese People’s Supreme Court that royalties for SEPs “should be lower than normal.”²¹

1. Prohibition Orders

One of the primary goals of the Ad Hoc members in a variety of fora has been to limit the remedies available for infringement of SEPs. Continuing this theme, the new rules add a prohibition that an SEP owner “shall neither seek nor seek to enforce [an injunction or exclusion order] . . . unless the implementer fails to participate in, or to comply with the outcome of, an adjudication, including an affirming first-level appellate review . . . by one or more courts”²² The bar on injunctive relief is flat and unconditional, lacking any feature designed to protect the legitimate interests of SEP owners or licensees in good standing. The ban applies even if the infringer has not denied infringement or validity of the patent but nevertheless refuses outright to negotiate a license.

To be clear, the scenario at issue is an extreme one: an infringer has refused to negotiate license terms; an independent court has found the terms offered by the licensor to be consistent with the IIEEE IPR Policy after a full trial; yet the infringer continues to refuse to accept a license and pay royalties on the court-approved terms. Even then, the revised rules say, the patentee may not seek to enjoin the ongoing and uncompensated infringement.

If, as DOJ asserts in the IIEEE BRL,²³ the automatic ban on injunctions through an appeal “will not be significantly more restrictive than current case law,” then one might ask why the IPR buyers even bothered crafting and imposing a new rule to begin with. But that question need not be answered because, in fact, the new rule differs from current law, and radically so, in two critical respects.

²⁰ See, e.g., pp. 12, 13, 16, 20-21, *infra*.

²¹ Chinese People’s Supreme Court, *Interpretation on Implementation of Patents Adopted in Industrial Standard* (July 2008 Ming San Ta Zi No 4).

²² See *supra* at 7.

²³ IIEEE BRL, *supra* note 2 at 10.

1. While current law precludes injunctions against infringement of SEPs by prospective licensees that had been engaged in efforts to obtain a license, few if any courts have rejected requests for injunctions against infringers that had, for example, refused to negotiate or respond to a request to negotiate a license—a remedy that is critical to encourage voluntary, bilateral license negotiations.
2. The ban on injunctions through completion of an appeal is equivalent in operation and effect to an automatic stay pending appeal of a district court decision. Such stays, however, are very rare, as DOJ’s lawyers surely know.

The effect intended by the IPR buyers is clear: Prolong the already lengthy period during which IPR buyers may infringe SEPs without making any payments to SEP holders, putting them to the choice between capitulating to the license terms demanded by the infringer or waiting for four or more years for an infusion of cash or other compensation thus reducing the revenues available for a return on prior investment or to fund new R&D.

The risk of this sort of licensee “hold-out” was recently discussed by a U.S. International Trade Commission Administrative Law Judge (“ALJ”). As the ALJ found, even the status quo FRAND rules and legal environment permit IPR buyers to sell infringing products and, without seeking a license, wait to see whether they are sued and then the outcome of the lawsuit. IPR buyers are thereby

able to exert a pressure on the negotiations with the IPR holder to try to make the agreement in the lower range of FRAND, or perhaps even lower than a reasonable FRAND rate.” They also are able to shift the risk involved in patent negotiation to the patent holder. *By not paying for a FRAND license and negotiating in advance of the use of the IPR, they force the patent holder to take legal action. In this action, the patent owner can lose the IPR they believe they have, but if the patent holder wins it gets no more than a FRAND solution, that is, what [it] should have gotten under the agreement in the first place.*

There is no risk to the exploiter of the technology in not taking a license before they exhaust their litigation options if the only risk to them for violating the agreement is to pay a FRAND based royalty or fee. *This puts the risks of loss entirely on the side of the patent holder, and encourages patent hold-out . . .*²⁴

The ALJ found²⁵ that this “hold-out” problem “is as unsettling to a fair solution as any patent hold up might be.” The elimination of any incentive of an infringer to negotiate a license, and the automatic stay mandated by IEEA and approved by DOJ, will only exacerbate the “hold-out” problem. Indeed, the only way an automatic stay could “help parties reach agreement more quickly,” as DOJ asserts, is if SEP owners offer license terms that a licensee would find more favorable than the terms it could obtain in a FRAND adjudication by an amount that offsets the value of a deferral of license payments that the prospective licensee could otherwise obtain.

²⁴ *Certain Wireless Devices With 3G and/or 4G Capabilities and Components Thereof*, USITC Inv. No. 337-TA-868, 2014 WL 2965327, at *78 (U.S. Intern. Trade Com’n June 13, 2014) (“*Certain Wireless Devices*”)(*emphasis added*).

²⁵ *Id.*

Nowhere does the IEEE BRL explain how magnifying incentives for hold-out, and increasing materially the pressure on SEP owners to accept less than what their technology is worth, could preserve “the pricing freedom in bilateral licensing negotiations” AAG Baer “termed critical for intellectual property owners.”²⁶ Nowhere does the BRL explain why barring injunctions until completion of an appeal of a court’s FRAND decision—the most radical feature of the changes regarding the availability of injunctions—is necessary to prevent theoretical or other patent “hold-up,” or otherwise promote competition.

And what the BRL does say about the protracted ban on injunctions is factually inconsistent with the actual language of the IEEE Revised Rules that IP buyers have now imposed on licensors. Specifically, the BRL states, “tools are available to ensure that patent holders are appropriately compensated and that potential licensees do not act unreasonably,” such as by “requiring an alleged infringer to post a bond or make escrow payments.”²⁷

This unsupported statement is foreclosed by the unequivocal language of the new rule, which says nothing about bonds or escrow payments. Notably, IEEE did not provide—and DOJ apparently did not seek—any assurance that the Revised Rules allow SEP owners to seek or enforce a court order requiring an infringer to post a bond or make payments into escrow. It would be legal malpractice for counsel for an infringer not to oppose on this ground any such request.

In sum, notwithstanding DOJ’s attempt to rewrite the IEEE Revised Rules to make them appear more defensible, the rule imposed by the IPR buyers makes unavailable to SEP owners the usual “tools” for protecting the interests of a seller in cases of prolonged litigation.

2. Shrinking the Royalty Base

The Proposal provides that a “Reasonable Rate” must be measured against “the smallest saleable Compliant Implementation that practices the Essential Patent Claim.” This is neither economically appropriate nor practically possible. The part of a product in which an invention is implemented is a technical matter that, in most cases, tells little or nothing about the invention’s value. In many cases, moreover, the full value even of an innovation that physically resides within a component (e.g., a chip) may only be fully exploited, and measureable, in the context of a complete and operational device. As one court has explained:

Basing a royalty solely on chip price is like valuing a copyrighted book based only on the costs of the binding, paper, and ink needed to actually produce the physical product. While such a calculation captures the cost of the physical product, it provides no indication of its actual value.²⁸

Further, the long-standing practice in many industries is to license SEPs on a portfolio basis, using the value of the finished product as the royalty base. By contrast, the changes to the IEEE policy require that SEP-owners calculate royalties on a patent-by-patent basis against the value of a bewildering range of differing royalty bases to be identified on a per-patent basis. In

²⁶ William J. Baer, Assistant Attorney General, U.S. Department of Justice Antitrust Division, *International Antitrust Enforcement: Progress Made; Work to be Done* (Sep. 12, 2014).

²⁷ IEEE BRL, *supra* note 2 at 11.

²⁸ *CSIRO v. Cisco Systems, Inc.* 2014 WL 3805817, at *11 (E.D. TX. 2014).

the common case of a diverse portfolio and a complex product, the transaction costs of attempting a per-patent royalty base analysis and royalty rate negotiation would be overwhelming, destroying the widely recognized efficiencies of portfolio licensing. Indeed, DOJ never even considers the possibility that the increased transaction costs would overwhelm the *de minimis* royalties that the Revised Rules allow, prevent innovators from capturing appropriate returns on the full value they create, and discourage investment in standardized technologies.

DOJ's only response to concerns expressed about this provision of the Revised Rules is that it does not "mandate the use of the smallest saleable Compliant Implementation["SSCI"] as the correct [royalty] base," but states only that it "should" be "considered."²⁹ This linguistic hair-splitting is unconvincing given, *inter alia*, the absence of any language in the changes (i) requiring or allowing consideration of other factors, (ii) suggesting what those other factors would be, or (iii) indicating the circumstances under which they could or should be considered. In any event, if words like "should" and "considered" created legitimate doubts about the requirement's mandatory nature and the admissibility of other evidence, then this would only undermine DOJ's conclusion³⁰ that the changes are pro-competitive because they create "reduce uncertainty" for licensors and licensees.

3. Proportionality

Preliminarily, the idea of mandatory rate-setting on the basis of the "value contributed by all essential patent claims" (proportionality) is no less arbitrary than requiring a division of rents by all providers of hardware inputs—or inputs beginning with the letter "P." Neither IEEE nor DOJ offers any legal or economic basis for capping and then dividing rents among owners of different technologies.

Proportionality rests on the false premise that there is some fixed total IPR value contribution that should be divided among the various patentees according to some principle such as an arithmetic allocation proportional to numbers of essential patents ("proportionality"). As a standard grows technically richer, the standardized product provides more value to the user. Adding an additional invention to a capability-rich product does not inherently reduce the value provided to the user by other inventions embodied in that product. Adding hand-upholstered leather to a car does not reduce the value contribution of the engine; there is no fixed "value" to the car to be carved up according to some principle of "proportionality."

Further, the value of each individual component of a product (both hardware and IP) is by no means a fixed quantity that can be pinned down and measured. On the contrary, that value can vary widely and complexly depending on the presence of other inputs. For example, a beautiful "HD" screen may have great value in consumers' eyes when supported by high data-rate LTE technology, while it would have little value in an older "feature phone" that is unable to download video or take high-definition photographs, and only intermediate value in a 3G device with intermediate data transmission rates. In short, and as courts have noted:

²⁹ IEEE BRL, *supra* note 2, at 12.

³⁰ E.g., IEEE BRL, *supra* note 2, at 10.

It is no[t] . . . realistic to think that [a] court could arrive at a fair valuation of . . . patents simply by applying the percentage of intellectual property rights approach³¹.

Also,

If a patent holder owns ten out of a hundred patents essential to a given standard, it does not automatically mean that it contributes 10% of the value of the standard.³²

The theoretical difficulty with determining a technology's value in comparison to all other essential patents is compounded by the practical reality that there is no way to determine the total number of patents actually essential to a given standard. Lists of patents declared as potentially essential are of little use, because "The Declaration is never confirmed, and often patents that are declared as perhaps reading on a standard will, at a later date, be shown not to be Standard Essential Patents."³³ Indeed, "[t]his has happened with a certain degree of frequency in such matters."³⁴

DOJ's sole statement in defense of the proportionality requirement is that it "addresses royalty stacking."³⁵ However, the proponents of the proportionality requirement at IEEE—who know what royalties they pay and are in possession of the true facts—have never identified any factual royalty-stacking issue with any IEEE standard. "Experts" testifying at trial on behalf of one of the IPR buyers with whom a member of the Ad Hoc and PatCom is affiliated were unable to identify an actual instance of royalty stacking.

Likewise, DOJ has not in its IEEE BRL, or elsewhere, demonstrated the existence of a royalty-stacking problem for any standard. It is indeed notable that, while alarms about "royalty stacking" have been featured in academic and policy debate for at least a decade, no manufacturer-licensee affected by any major standard has yet stepped forward with factual information disclosing a real-world royalty burden that shocks (or even disturbs) the conscience. The Federal Circuit recently held that a jury evaluating a "reasonable royalty" could not properly be instructed about "royalty stacking" concerns absent actual evidence of royalty stacking.³⁶ If evidence-based analysis is important to a reasoned evaluation of "reasonableness" in one particular litigation, it should be all the more mandatory in the case of approval of an IPR policy that will affect every patent essential to any IEEE standard.

4. Prohibition on Consideration of Existence Licenses in Determining Reasonable Royalties

Among the most probative evidence of reasonableness of fees payable under a proposed license are the fees negotiated and set forth in "comparable" licenses (i.e., licenses for the same or similar patented technology). One of the IEEE Revised Rules imposed by IPR buyers is that

³¹ *Apple Inc. v. Motorola Mobility, Inc.*, No. 11-cv-178-bbc, 2012 WL 7989412, at *5 (W.D. Wis. Nov. 8, 2012).

³² *In re Innovation IP Ventures, LLC Patent Litig.*, MDL Docket No. 2303, 2013 WL 5593609, at *10 (N.D. Ill. Oct. 3, 2013).

³³ See *Certain Wireless Devices*, *supra* at ADD, 2014 WL 2965327, at *76.

³⁴ *Id.*

³⁵ *Id.* at 13.

³⁶ See *Ericsson, Inc. v. D-Link, Sys.*, 773 F.3d 1201, 1234 (Fed. Cir. 2014)]

courts may consider comparable licenses in determining “reasonableness” of an offer only “where such licenses were not obtained under the threat, “explicit or implicit,” of an injunction. This new rule is at best extraordinarily unclear and, at worst, a massive overreach.

In most jurisdictions, injunctive relief against patent infringement is a remedy authorized by law, though very rarely granted in the SEP absent egregious conduct by the infringer. Every license negotiation is conducted against this legal background, in which the possibility of injunction if no agreement is reached is arguably “implicit” albeit remote. What the group of IPR purchasers behind the new IEEE rule is seeking to accomplish is to erase history and all existing market-based evidence of the value of patents essential to IEEE standards, in order to clear the way for royalty-depressing expert theorizing detached from the real world.

The remarkable (and false) implication, of course, is that for decades the terms for licenses to patents essential to IEEE (and other) standards, negotiated by sophisticated parties fully aware of their rights to “reasonable” terms, in fact have been systematically unreasonable. Now, the implication continues, royalty rates for SEPs to be “reasonable” must be systematically lower than has been true up to the present, because up to the present most licenses have been negotiated with the patentee having a right to seek an injunction, no matter how remote the possibility the injunction request would be granted.

DOJ’s sole and baffling response to these concerns is that “[t]he [change] does not prevent consideration of agreements other than those specifically identified therein.”³⁷ By no stretch of the imagination, however, can it be concluded that the new rule “specifically” identifies any agreement. The revised rule is intentionally broad, raising the distinct possibility that it will sweep in essentially all existing, privately negotiated license agreements. Indeed, an “FAQ” document issued by IEEE states that the mere request to a court for an injunction is an “explicit threat” while a statement to an infringer about the possibility of such a request is an implicit threat.”³⁸ The IP buyer beneficiaries of the new rule will surely argue that merely the right to seek an injunction requires under the new IEEE rules the exclusion of evidence of prior market acceptance of particular rates for a license—no matter how widespread and long-standing the rates, no matter how successful the industry has been under existing licensing terms, and no matter how unlikely an injunction request would be granted—to demonstrate that those terms are “reasonable.”

If, as DOJ apparently contends, the new rule does not ban all consideration of comparable license agreements, it is at best question-begging, and yet another indication that something other than a desire for “certainty”³⁹ or “clarity”⁴⁰ is behind the IEEE BRL.

5. Prohibition on Demands for Cross-Licenses to Non-Essential Patents

The IEEE’s Revised Rules include a prohibition against SEP licensors requiring cross-licenses to non-SEPs as a condition to granting an SEP license. This *per se* prohibition on one

³⁷ IEEE BRL, *supra* note 2, at 13.

³⁸ IEEE-SA, *Understanding Patent Issues During IEEE Standards Development* (2015), at 13, available at <http://standards.ieee.org/faqs/patents.pdf>.

³⁹ IEEE BRL, *supra* note 2 at 4, 10.

⁴⁰ *Id.* at 6, 11, 14, 15.

particular form of “compensation in-kind” may appear reasonable at first glance. In fact, it is novel and clearly intended to strengthen the bargaining hand of parties that expend resources on non-essential patents to the detriment of those that are responsible for developing the core technologies needed to enable standards projects—and standardized products—to succeed.

As to novelty few, if any, SSO licensing policies have a *per se* rule against demands for a cross-license. And no court has ever held that it is inconsistent with patent or antitrust law for a licensor to demand a non-exclusive cross-license from a licensee, regardless of the existence or amount of any market power conferred by the licensor’s patents.

And there are sound reasons why this is the right answer. Companies that have invested primarily in developing core technologies may be quite willing to contribute those technologies to standards and to commit to license them freely. Yet, at the same time, they may be worried that—unless they receive broad cross-licenses back—they will be “unilaterally disarming” with respect to companies that have invested in more peripheral (and thus non-standardized) yet important technologies. If major contributors to standards find themselves unable to obtain cross-licenses when they grant SEP licenses—and are thus defenseless against lawsuits from their own licensees asserting non-essential patents against them, then contributing to standards and making RAND commitments will become a risky proposition indeed.

This, of course, would undermine the efficiencies and benefits that standards are supposed to provide. It could easily become standard operating procedure for implementers to first negotiate and accept an SEP license, then promptly file suit asserting non-essential patents and demand cheaper terms for their inbound SEP license as a condition of granting a license to the implementer’s non-essential patents.

This is not to say that demanding a cross-license to non-SEPs may not indeed be unreasonable in some settings. The point here is merely that there is no legitimate basis for a *per se* prohibition of such requests without regard to the facts and circumstances of a particular case.

The response to these concerns in the IEEE BRL⁴¹—that the new rules do not *prohibit* licensees from granting cross-licenses to holders of SEPs—is no response. The issue here is not whether licensees may “voluntarily” grant cross-licenses, but whether SEP licensors can protect themselves from the assertion by licensees of powerful, although not technically essential, patents, the assertion of which may in some cases impact competition no less than a refusal to license an SEP. The IEEE BRL offers no explanation why it is appropriate to require licensors to license all of their SEPs, including SEPs that may confer no market power on their owners, but to prohibit them from demanding cross-licenses to non-essential patents that may confer substantial market power.

B. The New IEEE Rules Offer No Pro-competitive Benefits to Balance Against the Anticompetitive Effects

In order to justify sanctioning under a rule of reason analysis what amounts to coordination by IPR buyers on the prices they will pay, a court would have to determine, based on concrete empirical evidence, at least the following:

⁴¹ *Id.* at 15.

- a) that RAND policies in their current form do not negate market power, such that patent “holdup” as measured by real world prices is systematically inflating license prices of patents essential to all IEEE standards;
- b) that the supposed solutions to “hold-up” adopted by the IPR buyers will appropriately remedy the real-world anticompetitive costs that “holdup” purportedly imposes; and
- c) that the collateral damage of reduced incentives for innovation and SSO contribution will be consistently outweighed—across all of the standards and all of the industries affected by IEEE standards—by a greater good of eliminating these “holdup” costs.

In the absence of any justifying data, and in light of the extensive history of standards promulgated by IEEE that have enjoyed tremendous commercial success and consumer adoption, it is not possible to reach any of these conclusions.

The IEEE BRL does not even engage with these issues, much less attempt any serious rule of reason analysis. Instead, the BRL offers two purportedly “pro-competitive” justifications for the IEEE changes, and one explanation why the rule against coordinated conduct by buyers on the prices they will pay does not apply to them. None have merit.

1. “Mitigation of Holdup”

Much of the clamor that led to the IEEE changes has been about so-called patent “holdup,” which has been defined in various theoretical ways that are of little help in determining its existence, much less how to measure it. A fundamental premise of holdup theory is that once a patent is incorporated in a standard, the patentee obtains an increment of market power because it is no longer economically rational for a seller of standard-compliant products to switch to an alternative to the patent. “Holdup” as used in this context is the exercise of the alleged increase in market power.

In the IEEE BRL,⁴² DOJ cites mitigation of holdup as justification for its decision not to enforce the law against coordinated action by powerful buyers on the prices they will pay for a license to SEPs. However, even as a theoretical matter, there is no market power that SEP owners may use to holdup SEP users.

The textbook consensus definition of market power is “unilateral power over price.” Most SEPs, and virtually all SEPs for IEEE standards, are subject to enforceable contractual commitments to license them on reasonable and nondiscriminatory terms. SEP owners thereby relinquish whatever unilateral power over price they otherwise might have: license fees and other terms are determined either through bilateral negotiations between licensor and licensee or, in the event negotiations fail, by a court or other tribunal.⁴³ Principles of contract, equity, and patent law have almost entirely eliminated the possibility of an injunction prior to the completion of a FRAND adjudication, allowing negotiations to establish real market-based prices.

⁴² *Id.* at 5, 9, 12, 15, and 16.

⁴³ See Dennis W. Carlton & Allan L. Shampine, *Identifying Benchmarks for Applying Non-Discrimination in FRAND*, 8(1) CPI ANTITRUST CHRON. (August 2014), at 3-6.

Indeed, a thought experiment suggests that, under existing law, FRAND commitments interpose such serious obstacles to successful assertion of an SEP against an infringer that the fact of being made “essential” to a standard (if also made subject to a FRAND commitment) substantially decreases the value of “market power” otherwise conferred by the statutory patent grant.

Suppose a recalcitrant infringer refuses to enter into negotiations for a license to an innovator’s strong patent portfolio, which was developed by investing hundreds of millions of dollars in high risk R&D. The innovator wishes to bring an infringement action to motivate the infringer to begin license negotiations. A variety of patents in the innovator’s portfolio are clearly infringed. Does the innovator bring suit on its SEPs or on its non-essential patents?

The answer is obvious: The patentee who asserts SEPs hands the infringer additional defensive weapons, increases the cost and complexity of the trial (since there must be FRAND adjudication), limits the potential damages, almost certainly forecloses the possibility of injunction (the threat that would actually drive the infringer to the negotiating table), and even creates a risk of hostile action by regulatory agencies. In today’s legal environment, a lawyer who recommends to the innovator the assertion of its SEPs in lieu of its non-essential patents would almost certainly be committing malpractice.

It is thus hardly surprising that throughout the period the IPR buyers were developing and defending the patent devaluation measures they pushed through IEEE, they refused consistently to identify any instance of holdup. IEEE identified no such instances in its BRL request to DOJ. DOJ fails to identify in the IEEE BRL any instance of holdup in connection with any IEEE or other standard. The most that DOJ can do with holdup theory is refer to an example of “potential” holdup that was prevented by enforcement of the patentee’s FRAND commitment.⁴⁴

Indeed, passing the point that the exercise of market power by charging “high” prices does not violate U.S. antitrust law,⁴⁵ it is telling that during all the years of fretting about holdup, DOJ and other antitrust agencies have failed to identify a single instance in which the inclusion of a patent defeated or delayed the adoption or implementation of a standard, or otherwise harmed competition. The reason is clear: FRAND commitments obtained by SSOs—including FRAND commitments to IEEE pursuant to its IPR policy before the adoption of the revised rules—have successfully negated exercise of market power the SEP owner might otherwise have, exactly as intended. That the FRAND regime has resulted in so many agreements arrived at through bilateral negotiations, and so few arrived at by litigation, is a tribute to the balance of interests—now jettisoned by IEEE with the support of DOJ—it embodies.

No other proponent of changes to address purported holdup has filled this evidentiary void. In fact, the industry that has become the “poster child” for theories and assertions of holdup, the wireless industry, is thriving. Wireless standards have been hugely successful. Wireless devices and service have been steadily declining in price while their capabilities, quality,

⁴⁴ IEEE BRL, *supra* note 2, at 6-7 n.28.

⁴⁵ Rambus, *supra* note 4.

and reliability have increased radically, due in large part to dynamic innovation that the incentive scheme created by patent law was designed to promote.⁴⁶

Perhaps no circumstantial evidence that the IEEE BRL was driven by something other than antitrust law or principle is more compelling than DOJ's conspicuous and consistent failures to (i) explain how the owner of a patent subject to a FRAND commitment could have unilateral power over price, and (ii) identify any impact on competition from the inclusion of a patent in a standard. The inference that the IEEE BRL was driven by the current DOJ's industrial policy preferences, and not antitrust principle as applied to evidence, is warranted unless and until DOJ remedies these failures.

2. "Reducing Uncertainty"

The IEEE BRL⁴⁷ also justifies its acceptance of buyer cartel conduct with regard to SEP licenses on the ground that there is "broad problem of uncertainty" about the meaning of "reasonableness" as that term is used in FRAND policies and commitments. This rationale is no more persuasive than the one about mitigation of holdup.

First, the vagueness argument is impossible to reconcile with the numerous legal, regulatory, and contractual regimes that have employed successfully concepts of "reasonableness" with no further elaboration. Most obviously, the contention that "reasonable" is too vague ignores the widespread and long-standing reliance on a standard of "reasonableness" to define the value of patents in the most closely analogous context as possible: calculating infringement damages. Parties to bilateral negotiations and courts may turn to that extensive body of law to inform their positions and decisions. And it is especially ironic that DOJ has now embraced the "vagueness" rationale, given that when concerned about the possibility of supra-competitive prices for IPR due to horizontal arrangements, DOJ has settled investigations and cases through consent decrees establishing a general obligation for each licensor to offer a "fee which it deems reasonable," with no further elaboration.⁴⁸

Second, the argument that the term "reasonable" in RAND commitments cannot restrain unilateral pricing power is a non-sequitur. Uncertainty of definition may increase the likelihood that parties will be unable to agree on what is "reasonable" and will thus require recourse to a court, but it remains true that a court or other third party ultimately determines RAND license terms (or indeed has the power to do so if invoked by the infringer), meaning that the patentee is no more able to unilaterally determine price than is the prospective licensee.

⁴⁶ See K. Gupta, *Technology Standards and Competition in the Mobile Wireless Industry*, GEORGE MASON U. L. REV. (to be published, 2015) (demonstrating that "the empirical success story of the mobile wireless industry—the most patent—and standard-heavy of all industries—is entirely at odds with the bleak picture painted by some commentators"); also summarizing empirical data showing that the standards-intensive wireless industry "features high levels of SSO participation and R&D, stable profit margins, falling consumer prices, constant entry and exit, equal and fluctuating market shares, and sustained growth and innovation in products and features").

⁴⁷ IEEE BRL, *supra* note 2, at 4, 10.

⁴⁸ See Final Judgment ¶ XIV(A), *United States v. Broadcast Music, Inc.*, No. 64-Civ-3787 (S.D.N.Y. Nov. 18, 1994); *United States v. Am. Soc'y of Composers, Authors and Publishers*, 309 F. Supp. 2d 566, 575 (S.D.N.Y. Jun. 11, 2001). (emphasis added).

Third, DOJ's unsupported assertion that uncertainty is a "broad problem" in SEP licensing is refuted by the facts. Literally thousands of license agreements for SEPs have been negotiated without the aid of any clarification or supplementation of FRAND policies and commitments, or intervention by courts or agencies. Legal cases resolving disputes over SEP license terms remain few and far between.

Fourth, the revisions to IEEE rules will not reduce uncertainty. Virtually all the revisions introduce new elements of uncertainty and create new issues of interpretation and application to argue about in negotiations and litigation.⁴⁹ Yet another source of uncertainty is the provision in the new IEEE policy that "excludes" from the royalty rate "the value, if any, resulting from the inclusion of" the patented technology in an IEEE standard.

The meaning of this provision is as unclear as it is critical. Some parties have argued outside of IEEE that the "value of patented technology isolated from the value derived from incorporation in the standard would ideally be determined by calculating the incremental value of the technology compared to the alternatives that could have been written into the standard instead."⁵⁰ Under this interpretation, if the patented technology selected for inclusion in the standard has a value of ten, and the next best alternative available prior to adoption of the standard has a value of eight, then the incremental value of the selected technology is two. No real world market operates this way. Subjecting SEP licensing to an incremental value cap could not be more antithetical to the fundamental logic underlying the patent system.⁵¹

Licensor members of IEEE, alarmed by the possibility and potential consequences of an interpretation mandating an incremental value cap, formally requested the Ad-Hoc to clarify or at least explain the provision and state whether it supported such a cap. The Ad-Hoc's most cogent response to this inquiry is that the proposed (since adopted) new rule "neither proposes nor rejects the 'incremental value test.'"⁵² Unsurprisingly, neither the IP buyers nor DOJ have sought to explain how this new rule *reduces* uncertainty.

And if increased certainty about "reasonable" license terms was, in fact, the DOJ's goal, it would not have approved a rule that excludes from consideration all—or most—prior comparable licenses—historically the gold standard for establishing (or disproving) "reasonableness."

In sum, the only thing reasonably "certain" under the new IEEE policy is that fees for a license to patents essential to an IEEE standard will be lower than they would be under the prior policy due to a combination of the radical expansion of incentives for licensee "holdout" and the value-emasculating principles included in the policy governing determination by courts or other tribunals of a reasonable fee.

⁴⁹ See, e.g., *supra* at 12, 13, 16.

⁵⁰ Pl. Microsoft Corp.'s Post-Trial Proposed Findings of Fact and Conclusions of Law ("Microsoft Proposed Findings"), *Microsoft Corp. v. Motorola Inc.*, No. C10-1823-JLR, Doc. No. 625 (W.D. Wash. Dec. 17, 2012) at ¶ 66.

⁵¹ See *supra* at 3-4.

⁵² PatCom Ad Hoc Committee Comment Disposition Report for IEEE-SA Standards Board Bylaws Draft 19-Nov-15 (Mar. 4, 2014), Proposed Responses to Comments 29 and 30, *available at* http://grouper.ieee.org/groups/pp-dialog/drafts_comments/PatCom_sort_by_commentID_040314.pdf.

But the ultimate question for antitrust purposes, whether as a matter of enforcement or simply advocacy on competition policy, is not whether imposition of licensing terms by a cartel will result in short-run consumer savings. It is whether such a practice will expand output and increase dynamic efficiency over the long term:

Notwithstanding numerous statements to the effect that the primary or even exclusive concern of antitrust is ‘consumer’ welfare, upstream, or monopsony, injury to suppliers is treated in largely the same way as injury to consumers. . . . Clearly mistaken is the occasional court that thinks low buying prices are procompetitive regardless of the restraints on competition that lead to such prices⁵³

Dynamic efficiency and long-term effects on output are entitled to at least as much weight as short-term cost savings. And, in innovation-driven industries in particular, dynamic efficiency “accounts for the lion’s share of efficiency/welfare gains.”⁵⁴

3. Potential Safeguards Against Buyer Cartel Conduct

In addition to alleging (without empirical support or analysis) pro-competitive effects of coordinated action by IPR buyers on prices they will pay for SEP licenses, the IEEE BRL asserts that the potential for anticompetitive effects is eliminated or mitigated by the process followed by IEEE in devising and approving the new rules, which included affording all IEEE members an opportunity to provide comments on drafts of the rules, and allowing licensors to refuse to provide a conforming licensing commitment and/or depart the IEEE. None of this is consistent with governing legal principles.

a. The “Process” followed by IEEE

The one-sided “talk to the hand” process engaged in at IEEE intuitively cannot—and under controlling case law does not—afford a defense to what otherwise would be a paradigmatic violation of Section 1 of the Sherman Act. The Supreme Court has cautioned that private standard-setting by associations comprising firms with horizontal and vertical business relations “is permitted . . . under the antitrust laws only on the understanding that it will be conducted in a nonpartisan manner offering procompetitive benefits”⁵⁵ Participants in standard-setting “may not . . . (without exposing [themselves] to possible antitrust liability for direct injuries) . . . bias the process by . . . stacking the private standard-setting body with decisionmakers sharing their economic interest in restraining competition.” Thus, the most relevant consideration is the composition of the decision-making bodies, not merely the process they follow.

Here, IEEE did exactly what the Supreme Court has cautioned against. It stacked the decision-making bodies with representatives of interests of IP buyers, pre-ordaining the outcome. When PatCom created the Ad-Hoc, four of the six members of PatCom were affiliated with IP buyers that also happen to be among the largest users of SEPs in the world today and that

⁵³ PHILLIP E. AREEDA & HERBERT HOVENKAMP, *ANTITRUST LAW: AN ANALYSIS OF ANTITRUST PRINCIPLES AND THEIR APPLICATION* § 2011 (3rd & 4th Ed. 2010-2014).

⁵⁴ Thomas O. Barnett, Assistant Attorney General, *Maximizing Welfare Through Technological Innovation*, Geo. Mason Univ. L. Rev. 11th Annual Symposium on Antitrust, at 7 (Oct. 31, 2007), available at <http://www.justice.gov/atr/public/speeches/227291.pdf>.

⁵⁵ *Allied Tube & Conduit Corp. v. Indian Head, Inc.*, 486 U.S. 492, 502 (1988).

have for years been actively advocating for measures to devalue SEPs. These four PatCom members appointed themselves, and another individual affiliated with another IP Buyer, to fill five of the seven slots on the Ad-Hoc.

Predictably, the comment process had no impact. The Ad-Hoc and PatCom provided no meaningful responses to comments, and every revised rule initially included in the Proposal remained substantively unaltered between the first and final drafts. Throughout the process, moreover, the IP buyers made clear their view that IEEE was not required to and did not seek a consensus of all economic interests. To the contrary, the Ad Hoc stated repeatedly, “adoption of the recommendations does not require consensus of all materially affected parties.”⁵⁶

In the IEEE BRL, DOJ cites none of the facts about the membership of the Ad-Hoc or PatCom or how those bodies responded to comments. DOJ states only that comments were allowed and their number. No one without an industrial policy agenda would contend that the mere number of comments is probative of the effectiveness of the process at IEEE to address the concerns about standard-setting expressed by the Supreme Court.

The lack of consensus at lower levels of the IEEE hierarchy was not addressed (let alone ameliorated) by “consideration” of the Proposal at higher levels of the IEEE. Each of the IP buyer-affiliated Ad Hoc Committee members held voting positions on at least one of the higher levels of the IEEE hierarchy, allowing them to advocate in closed sessions and vote for the policy they had previously written. The higher levels of the IEEE hierarchy were advised by the same outside counsel who were selected by, and advised, PatCom and the Ad-Hoc.

Because the deliberations by the IEEE hierarchy were secret, DOJ is unable in its BRL to say anything about them, including what the hierarchy was told and by whom. So the BRL relies again on circular reasoning: because “[a]ll those serving in a governance role at IEEE have a fiduciary duty to act in the best interests of IEEE when exercising their governance responsibilities,”⁵⁷ IEEE’s decisions must have been consistent with those duties.

Further undermining reliance on consideration by the upper levels of IEEE was the understanding that the new rules would not take effect unless IEEE received a favorable BRL from DOJ. It is far from inconceivable that this condition caused at least some members of the IEEE hierarchy to refrain from an in-depth consideration of objections to the proposed changes.

In any event, it is not enough to rely on a “fiduciary duty” to an organization where, as here, the organization is comprised of those with different interests, and the decision-making process is dominated by those with a shared economic interest. Modern antitrust enforcement rarely—if ever—relies on promises by others to act in a manner that is inconsistent with their economic self-interest. That DOJ would do so here again supports the inference that industry policy preferences, not antitrust law or policy, drove the IEEE BRL.

b. Refusal to submit LOAs to and departure from IEEE

⁵⁶ (PatCom Ad Hoc Committee Comment Disposition Report for IEEE-SA Standards Board Bylaws Draft 05-Aug-15 (Nov. 13, 2013), Proposed Responses to Comments 5, 7, 9, 23, 82, 88, 98, 100, and 101, *available at* http://grouper.ieee.org/groups/pp-dialog/drafts_comments/PatCom_sort_by_commentID_141113.pdf.

⁵⁷ IEEE BRL, *supra* note 2, at 8.

Finally, the fact that a patent owner is not legally required to provide a licensing commitment conforming to the IEEE revised rules and may “depart to other SSOs”⁵⁸ provides no basis for a *per se* legal treatment of coordinated action by buyers on the prices for a license to SEPs, for numerous reasons:

First, DOJ cites no case that excuses coordination by either a group of powerful sellers on the prices they will charge or a group of powerful buyers on the prices they will pay on the ground that the victims of the cartel behavior can take their business elsewhere.

Second, as several parties told DOJ during its consideration of the BRL request, refusing to submit a license commitment conforming to the revised IEEE rules, and leaving IEEE for another existing or new SSO, is not often a realistic possibility for a licensor desiring widespread commercialization of its technology. As a general principle, some SSOs and standards will have market power that will preclude competition, and some will not.

The IEEE is not a new startup SSO whose experimentation with royalty-free licensing or other terms could never be shown to have an imminent anticompetitive effect due to the SSO and its standards having no significant market presence. To the contrary, the IEEE is a well-established SSO with a very strong brand. It possesses significant market power for many standardization projects, including its 802.11 family of standards. The IEEE is distinct from consortia or other SSOs where IPR policies are adopted at the outset and there is a realistic opportunity for competitive organizations. In contrast, for many companies that develop and contribute technology for IEEE standards, there is significant sunk investment and market power of entrenched standards.

Third, DOJ’s advice to aggrieved licensors that they may depart IEEE for another existing or new SSO ignores the likelihood that the same major IP buyers responsible for the changes in the IEEE policy will likewise boycott the alternative standard and technology incorporated therein unless SEP owners capitulate to their collective demands on price. This will, among other things, make it difficult for a new standardization project to attract a critical mass of SEP owners needed to get the project off the ground. The point here is that DOJ’s focus on the theoretical possibility of aggrieved licensors leaving IEEE, as opposed to the powerful IPR buyers responsible for the new IEEE policy, is myopic and ignores reality.

Fourth, the IEEE BRL likewise conducts no analysis whether in any or all instances the possibility of competition from a standard developed and promulgated by another organization will ever, much less always, be sufficient to prevent a small but significant non-transitory decrease in price. This is a serious issue given the difficulty of establishing a new SSO, initiating a new standardization project, and developing and finalizing a standard.

Fifth, the route suggested by DOJ to aggrieved licensors is not, ironically, without antitrust risk. A licensor may very well be reluctant to launch and commit to a new organization or standardization project to compete with IEEE without assurance that other licensors will join it, and not undermine the endeavor by contributing their technology to an IEEE standard. Yet licensors who attempt to seek that assurance from other licensors may be met with antitrust

⁵⁸ *Id.*, at 6.

complaints alleging unlawful coordinated action including a group boycott. The absence of even a hint in the IEEE BRL of concern for the interests of SEP licensors suggests that such a complaint might even be prosecuted by DOJ, if not other antitrust agencies or private parties. In this regard, DOJ provides in the IEEE BRL no assurance that it will take no action against licensors who seek through coordination among themselves to frustrate the IPR buyers' goal of devaluing SEPs.

IV. CONCLUSION

In the United States, law is made and interpreted by Congress and the courts. Agencies do not make or give authoritative interpretations of law; they are supposed to enforce it. Due to resource limitations, etc., agencies necessarily have some enforcement discretion. An agency that does not support a particular law or its application to a given set of circumstances will naturally be inclined to exercise its discretion not to enforce it.

DOJ's statement in the IEEE BRL of its enforcement intentions with regard to coordination by IPR buyers on the license fees they are willing to pay does not and cannot change the law, however. Any "aggrieved party" generally may challenge before a court conduct it believes to violate antitrust law, even if the government agencies charged with enforcing it have refrained from challenging the very same conduct. So-called "private rights of action" are, among other things, a safeguard against an agency's decision not to enforce a law with which it disagrees.

A BRL will be given by courts only the weight warranted by its underlying analysis. Under that measure, the IEEE BRL should have little if any impact on private litigation. The BRL also does not bind new administrations of DOJ, which may hold views different than those held by the current administration. Companies that seek to use their joint power to dictate the license fees that patentees may charge enjoy no immunity from antitrust law based on the IEEE BRL, and should take from it little comfort.

On the other hand, SEP owners have every reason to be concerned that the industrial policy preferences reflected in the IEEE BRL will further encourage SEP devaluation by foreign governments and agencies hostile to protection of IP.

CPI Antitrust Chronicle

March 2015 (2)

Original Sin

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Original Sin

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I. INTRODUCTION

In 1810, a British man named Frederick Hasselborough discovered a small uninhabited island halfway between New Zealand and Antarctica while looking for new sealing grounds. He named it Macquarie Island, after the Governor of New South Wales. At the time it was a beautiful and lush island full of penguins, seals, and sea birds. When Hasselborough and his sealers departed, they left a growing army of rats, mice (from the ships), and rabbits (bred for food), none of which faced a natural predator on the Island. Cats were then introduced to kill the assorted rodents, which they did with glee, as well as an estimated 60,000 seabirds a year.²

In the 1980s, bird lovers had enough, and they petitioned the Government of Australia to kill the feral cats until by 2001 the island was feline-free. Unfortunately, this left rabbits with no natural predator and soon the entire island was completely overrun with 130,000 rabbits (and even more rats). As every gardener knows, rabbits, unlike cats, like vegetables. And soon the rabbits on Macquarie Island ate the vegetation that had previously stabilized the steep slopes of the island and provided shelter for burrow-nesting seabirds. The resulting ecological damage was severe, leading to the extermination of nine species of birds and several penguin-killing landslides.³

The above example illustrates how even well-intentioned governmental efforts to eliminate what is perceived as a predator (cats) in order to protect something else (seabirds) may throw a market into disequilibrium, resulting in adverse unintended consequences that may harm the very thing the government wanted to protect.

In the last few years, antitrust regulators throughout the world have tried to kill something they perceived to be a predator, namely holdup via Standard Essential Patents (“SEPs”). In the United States, the Federal Trade Commission (“FTC”) did so directly in the consent decree that it reached with Motorola Mobility, which largely prevented Motorola from obtaining injunctions on SEPs. Similarly, the U.S. Department of Justice, Antitrust Division (“DOJ”) did so indirectly in stating that it did not intend to challenge the IEEE patent policy that provided that the royalty base on SEPs should not be calculated on the entire device but rather on the smallest salable unit that practices the claim, typically the chipset within the phone.

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² Keith Springer, *Planning processes for eradication of multiple pest species on Macquarie Island – an Australian case study*, available at http://www.issg.org/pdf/publications/Island_Invasives/pdfHQprint/2Springer.pdf.

³ Australian Dept. of the Env’t, *Macquarie Island: from rabbits and rodents to recovery and renewal* (2014), available at <http://www.environment.gov.au/system/files/pages/f47bc054-b46d-40f2-85a5-7825525bfb48/files/fs-macquarie-island.pdf>.

Like the Australian Government, however, these regulators only took aim at a subset of the problem. For example, U.S. regulators have done nothing to hold companies to the RAND commitments that they made on software patents outside of the standard-setting context, even when the underlying technology had market power and was, in fact, essential to the commercial success of smartphones. These patents are known as Rand Encumbered Patents (or “REPs”). Moreover, U.S. regulators have taken no action to limit the power of software patents, which read on relatively trivial user interface features such as “swipe-to-open,” or even less significant design patents, such as the rounded corners of the iPhone and iPad.

The dissimilar treatment of SEPs on one hand, and REPs and design and UI software patents on the other hand, was dramatically illustrated by President Obama’s intervention to lift the exclusion order that Samsung obtained against Apple (on SEPs), but his failure to take action to lift the exclusion order that Microsoft had obtained against Motorola (on REPs).

While SEPs could be a potential predator in the hands of a firm that wants to raise the costs of its rivals, the Administration’s intervention on SEP enforcement, while doing nothing with respect to non-SEPs, can have three unintended consequences:

1. Because cross-licenses are determined on a portfolio-wide basis, with SEPs being used to offset royalty demands on non-SEPs within the counterparty’s portfolio, the elimination of SEPs as a counterweight means non-SEP software patents are now increased in value in a negotiation or litigation with an SEP holder. If we assume that in the status quo the exclusive power of non-SEP software patents are set at an optimal level, this increase in the value of non-SEP patents vis-à-vis SEP holders can lead to higher prices and diminished innovation in the market.
2. Because firms can no longer obtain injunctions if they declare their patents as essential to SSOs, but can obtain injunctions if they do not, firms can have increased incentives to invest in proprietary technologies outside of the standard-setting context. As a result, technologies that would have been protected by enforceable RAND commitments may no longer be so protected.
3. Because operating companies bringing lawsuits on SEPs are now subject to antitrust scrutiny, there is an increased risk that operating companies will sell their SEP portfolios to trolls who can monetize these patents with less antitrust risk.

II. THE PURPOSE OF PATENTS

Ideas are thought of as public goods because everybody can copy them (consumption is non-excludable) and their use by one person does not diminish the amount of the idea available for others (consumption is non-rivalrous). Thus, it is argued that in the absence of government intervention, ideas are less likely to be expressed and exploited because the innovator cannot fully enjoy the fruits of his or her labor.

Government intervention in the form of patent policy is intended to solve this market imperfection by allowing inventors either to exclude others from copying their work, or to charge royalties to those whom they permit to copy their work. Thus, the purpose of patents is to create innovation that would not exist in the absence of protection. As Section 8 of Article One of

the Constitution provides, the purpose of providing exclusive rights for a limited time to inventors is to “promote the Progress of Science and useful Arts.”

But neither the Constitution, nor economic theory, provides an easy answer to the question of how much exclusivity is appropriate to incentivize innovation. Indeed, it is a very difficult task to determine an optimal scope and duration of a patent that will balance the loss in static efficiency (higher prices for consumers) against a gain in dynamic efficiency (as we increase exclusivity towards the optimal point) or a loss of dynamic efficiency (if we increase exclusivity beyond the optimal point).

Instead, regulators and courts seem to solve this problem through assumption—that Congress has set the optimal duration and scope and therefore that any increase in duration or scope beyond that point harms consumer welfare.

III. THE PROBLEM WITH SOFTWARE PATENTS

There are very good reasons to believe that patents are necessary to incentivize firms to create the next great drug or medical device. That is because such inventions have historically required large teams that spend billions of dollars in research and development (“R&D”). Who would undertake such an investment if their efforts could be copied by others?

Take the case of pharmaceutical companies. Today, U.S. pharmaceutical companies on spend about \$51.1 billion on R&D, representing approximately 17.8 percent of their total sales.⁴ Given that only two of every ten marketed drugs earn sales in excess of their R&D expenditures,⁵ few would spend billions to create a new drug, complete years of double-blind tests, and achieve FDA approval if others would be free to immediately copy the approved drug.

The same argument does not hold true with respect to software.

First, as James Bessen and Nobel Laureate Eric Maskin point out, innovation in software is typically sequential and complementary, building upon the work of others in incremental steps. This is in contrast with the pharmaceutical model, where innovation is discrete—for example, the creation of an entirely new molecule. Bessen and Maskin explain that “[f]or industries like software or computers, theory suggests that imitation may *promote* innovation and that strong patents (long-lived patents of broad scope) may actually *inhibit* it.”⁶ In fact, these authors report that “firms that obtained the most software patents (largely firms in the computer and electronics hardware industries) actually *reduced* their R&D spending relative to sales after patent protection was strengthened.”

Second, unlike pharmaceutical R&D, which typically takes place within a single organization, software innovation can take place between unaffiliated programmers working together on different pieces of a single project on a virtual team. This can result in an efficient

⁴ Pharmaceutical Research and Manufacturers of America, 2014 Biopharmaceutical Research Industry Profile 27 (2014), available at http://www.phrma.org/sites/default/files/pdf/2014_PhRMA_PROFILE.pdf.

⁵ *Id.* at 50.

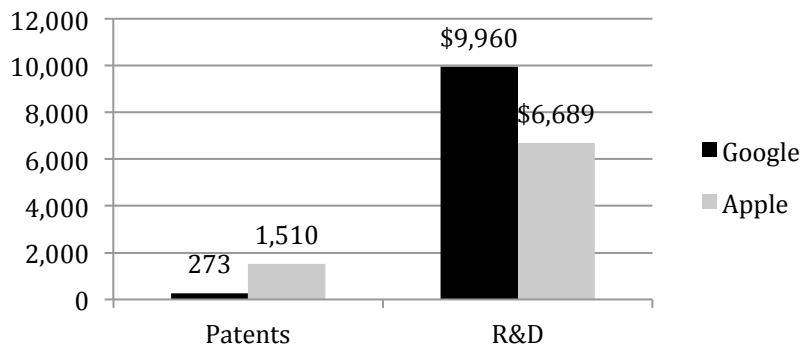
⁶ James Bessen & Eric Maskin, *Sequential innovation, patents, and imitation*, 40 RAND J. ECON. 611, 612 (Winter 2009), available at http://scholar.harvard.edu/files/maskin/files/sequential_innovation_patents_and_imitation.pdf.

organizational structure, without a physical plant, without an HR department, made up of volunteers who are passionate about their project. As even Microsoft has acknowledged, “a key long term advantage that Linux will enjoy is the massive pool of developers willing to improve areas of the core platform. Microsoft will never be able to employ a similar head count.”⁷

Third, because software is a complement both to hardware and to service, there exist a number of organizations who are willing to subsidize software innovation. It is for this reason that the largest contributors to Linux are companies like IBM, Intel, Cisco, and Red Hat, each of which makes more money the better and cheaper software becomes. IDC, for example, estimated that the open source Linux operating system generated over \$14 billion in hardware sales in 2013 alone.⁸

While Microsoft and Apple, the two most vocal proponents of software patents, may argue that they are unlikely to invest in new software products without exclusivity granted by patents, the truth is that they have. For example, Microsoft’s first patent application was dated 1985, well after the commercialization of DOS, Excel or Word.

In fact, Apple, a company widely praised as one of the most innovative technology companies in the world, spends far less in R&D than Google, a firm that until its acquisition of Motorola Mobility had few software patents. Specifically, Apple spent \$6.7 billion on R&D between 2001 and 2009 (approximately 4 percent of sales), while amassing a patent portfolio of over 1,510 patents. In contrast, Google, generally considered an equal in terms of innovation, spent \$9.96 billion on R&D during the same time (approximately 12.3 percent of sales) while only amassing a total of about 273 patents.



As Steve Jobs said, “[i]nnovation has nothing to do with how many R&D dollars you have.”⁹ Indeed, the most important operating systems in history were developed without any patent (or even copyright) protection and were both spearheaded by a single individual, who was then joined by others in a fragmented team based entirely on volunteer labor.

⁷ Tom Adelstein, *Do Linux advocates have anything to fear from Microsoft?*, LINUXTODAY (May 27, 1999), <http://www.linuxtoday.com/developer/1999052701010NWSM>.

⁸ Darren Yates, *Matching databases to Linux distros*, itnewslabs (Sept. 1, 2014), <http://www.itnews.com.au/Lab/391529,matching-databases-to-linux-distros.aspx>.

⁹ Stephen Nale, *The 100 Greatest Steve Jobs Quotes*, Complex (Oct. 5, 2012), <http://www.complex.com/pop-culture/2012/10/steve-jobs-quotes/its-about-the-people-you-have>.

For example, UNIX was developed by a Bell Laboratory programmer named Ken Thompson in three months over the summer of 1969. Over the next year, Thompson refined the program with the help of his friend and co-worker Dennis Ritchie (who had earlier invented the C language by himself).

Because Bell Labs was forbidden by a 1956 Consent Decree with the DOJ to enter any business other than telephony, neither Ritchie nor Thompson were allowed to charge for or even support UNIX. They did both, distributing copies of the source code as well as bug fixes throughout academia, where the best programmers in the world worked on UNIX for free. This led directly to the development of Mach at Carnegie Melon (which later was used for Windows NT and iOS), BSD at Berkeley and later Sun Solaris.

The spread of Linux mirrored the spread of UNIX, with a Finnish undergraduate named Linus Torvalds releasing a free version of the PC-based operating system under Richard Stallman's General Purpose License ("GPL"). Known as Copyleft (as opposed to Copyright) protection, the GPL provided that anyone was free to copy, modify, and distribute Linux, provided that others would be permitted to copy the modifications they distributed. In other words, the GPL mandates the freedom to copy as opposed to the freedom from copying. Notably, because the GPL prohibits preventing others from copying innovations, the GPL actually mitigates one free-riding problem—the prospect that somebody will make a fortune from another's innovation and then close the code.

And despite this mandated copying, more than 11,000 developers from more than 1,200 different companies have contributed to Linux.¹⁰ IDC estimated that the Linux kernel was worth \$40 billion in 2010, and it is worth significantly more now.¹¹ Today, 97 percent of the most powerful computers in the world use Linux,¹² and 75 percent of enterprises use Linux as their primary cloud platform.¹³ Linux powers TiVo, Android, the Kindle Fire, and virtually all smart devices in the world.

And it's not just operating systems. The world-wide-web (developed by Tim Berners-Lee) and the TCP/IP protocol (developed by Vint Cerf and Bob Kahn) were both open source projects. Today, 80 percent of all web-servers are run by open source software. Basically, the software that powers the entire modern economy was developed without patents.

So much for patents being required to incentivize software innovation.

¹⁰ Linux Foundation, *Who Writes Linux: Linux Kernel Development: How Fast it is Going, Who is Doing It, What They are Doing, and Who is Sponsoring It* (2014), <http://www.linuxfoundation.org/publications/linux-foundation/who-writes-linux-2015>.

¹¹ Bryce Royer, *Gift Economy for Business owners: The \$40 billion enterprise?*, Gift Economy (Aug 31, 2014), <http://www.gifteconomy.ca/gift-economy-for-business-owners-the-40-billion-enterprise/>.

¹² Steven J. Vaughan-Nichols, *Linux dominates supercomputers as never before*, ZDNET (June 24, 2014), <http://www.zdnet.com/article/linux-dominates-supercomputers-as-never-before/>.

¹³ Linux Foundation, *World's Largest Linux User Trends, Enterprise End User Report* (2014), available at <http://www.linuxfoundation.org/publications/linux-foundation/linux-end-user-trends-report-2014>.

IV. THE PROBLEM WITH DESIGN PATENTS

Although design patents have a much longer history than software patents, they are equally problematic. At the outset, it is important to note that design patents are intended to protect only purely aesthetic innovations. If the innovation has any utility, it is, by definition, not able to be protected by a design patent.

It is very difficult to make the argument that significant periods of exclusivity are necessary to incentivize the creation of a beautiful object. While good design is rare, it is not something that is expensive or something that you get more of when you pay the artist more money. Indeed, as noted above, Apple, who by all accounts produces some of the most beautiful objects in the world, spends less money on R&D than other leading software companies.

In fact, it is easy to see how patents actually retard innovation in design. Consider the example of fashion design, an area where designers readily copy each other with little fear of patent infringement litigation. Yet, it is the threat of copying that forces designers to come up with new styles each year and to differentiate their designs in terms of quality material and construction. Do we believe that design would change as rapidly as it does in the absence of copying?

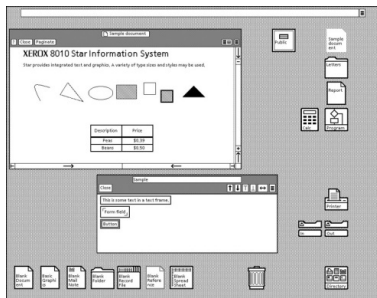
The same is true with respect to smartphones, where no consumer could mistake the craftsmanship and quality of the glass and metal iPhone with the plastic encased Samsung phone. Even Apple would acknowledge that Samsung never copied what Jobs would describe as the soul of the iPhone. And yet, instead of redoubling its efforts to differentiate the iPhone through real innovation (instead of simply making it larger like the Samsung device), Apple chose to petition the government and courts for help.

What's more, copying design is not a bad thing. Consider, for example, how Jony Ives copied many of Apple's most famous designs from Dieter Rams at Braun.

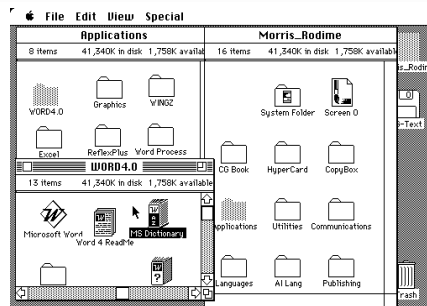


Braun (1958) Apple (2001) Braun (1960) Apple (2007)

Copying ideas from others was not, of course, a new thing for Apple, as a quick comparison between the Xerox Star and Macintosh reveals.



Xerox Star (1981)



Macintosh Apple (1984)

As Steve Jobs, quoting Pablo Picasso, once said: “Good artists copy. Great artists steal.”¹⁴ Again, this is not to criticize Jobs, Ives, or even Picasso, all of whom not only made faithful and great copies of the original, but also substantially innovated in doing so. It is simply to point out that copying isn’t always a bad thing. Especially if you do a good job.

V. THE PROBLEM WITH SEPS

SEPs are patents that read upon various standards like 3G and 4G. They are declared essential to various standard-setting organizations like ETSI or IEEE, which means that in the view of the declarant the standard cannot be practiced without infringing upon the patent. In the case of ETSI and IEEE, the declarant promises that he or she will make the patent available on (Fair) Reasonable and Non-Discriminatory (“FRAND”) terms.

Telecommunication protocols are quite complex with hundreds—if not thousands—of pages of documentation. It is not surprising, then, that there are thousands of patents that are declared as essential to protocols like 4G, with each declared patent representing only a small piece of the standard.

While the vast number of SEPs may seem significant, 90 percent of SEPs are held by ten companies. As a result, the value of an individual SEP is quite small, though the value of an entire portfolio may be significant. However, because firms cannot bring patent infringement litigation on hundreds of patents at once, the only way to bring a counterparty to the negotiating table is to threaten an injunction.

Prior to 2012, firms were able to obtain injunctions on valid and infringed SEPs. In theory, this presented a significant problem because there was a risk that a firm holding a single SEP would be able to threaten an injunction against a rival, thus forcing the rival to pay up to its entire expected profit stream to avoid being enjoined. Knowing this, the argument went, firms would be unlikely to invest in designing and marketing smartphones that implemented SEPs.

There was, of course, little empirical evidence that this had occurred given that no smartphone had ever been excluded from the United States by way of injunction on an SEP and the threat of such injunctions had not actually forced Apple to either pay royalties on SEPs or

¹⁴ Dan Farber, *What Steve Jobs really meant when he said 'Good artists copy; great artists steal'*, CNET (Jan. 28, 2014), <http://www.cnet.com/news/what-steve-jobs-really-meant-when-he-said-good-artists-copy-great-artists-steal/>.

dissuaded them from designing and marketing a smartphone chock full of differentiating features. Still, the threat remained.

VI. PATENT BALANCE

The smartphone patent wars pitted Apple and Microsoft, two firms that held a significant number of non-SEP software and design patents, against members of the Android ecosystem, including firms like Samsung, Motorola and LG, all of whom held a significant number of SEPs.

These competing portfolios were used against each other in litigation, with Apple suing Samsung on patents such as swipe to unlock and the rounded corners of the iPhone and iPad, and Samsung countersuing with patents that read on 3G and other telecommunication protocols.

Meanwhile Microsoft threatened dozens of Android OEMs with exclusion orders and injunctions for allegedly violating a series of non-SEP software patents such as those related to Exchange ActiveSync. Significantly, Microsoft had earlier made a unilateral but enforceable commitment to make the Exchange Active Sync patents available on RAND terms under the so-called Interoperability Principles.¹⁵

Motorola Mobility responded to Microsoft's threats by bringing its own patent infringement action on a series of SEPs in the Western District of Washington. At the same time, Motorola sought an exclusion order against Microsoft for infringing upon these SEPs.

Motorola Mobility argued that its SEPs were worth approximately 2.25 percent of the end device price, which in the case of a \$500 smartphone represented about \$10. Although Microsoft and Apple argued that the royalty rates that Motorola sought for its significant portfolio of SEPs were too high, the truth was that Motorola's rates were either comparable to or lower than what these firms wanted for their non-SEPs. In fact, Microsoft argued that its SEPs were worth between \$5 and \$10 per unit¹⁶ and Apple argued that its design patents were worth up to \$40 per unit.¹⁷

VII. UPSETTING THE ECOSYSTEM

The FTC intervened, commencing an investigation and later obtaining an Order against Motorola Mobility under Section 5 of the FTC Act, arguing that seeking injunctions on SEPs violated Motorola's FRAND obligations.

The IEEE then implemented a patent policy that expressed the view that the royalty base for SEPs should be based upon the smallest salable unit that implemented the patent's claim. This was a position long supported by Microsoft and Apple in litigation and would result in a

¹⁵ Microsoft, *Microsoft Interoperability Principles*, <https://msdn.microsoft.com/en-us/openspecifications/dn646764>.

¹⁶ Adnan Riaz, *Microsoft Will Earn Billions From Android Smartphone Sales*, SEEKING ALPHA (Jan. 7, 2014), <http://seekingalpha.com/instablog/15378722-adnan-riaz/2556211-microsoft-will-earn-billions-from-android-smartphone-sales>.

¹⁷ Kyle Russell, *Apple Has "Objectively Insane" Patent Demands For Samsung*, BUS. INSIDER (Mar. 11, 2014), <http://www.businessinsider.com/apples-insane-patent-demands-for-samsung-2014-3>.

substantial reduction in the value of SEPs. The IEEE then submitted the patent policy for a business review at the DOJ, and the agency said that it would take no action against the policy.¹⁸

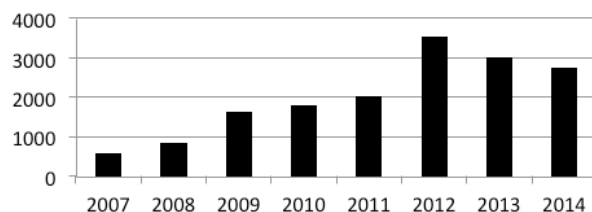
While the FTC and DOJ reduced the value of SEPs, they have taken no action against REPs. Specifically, neither the FTC nor the DOJ has taken any action against Microsoft for seeking an injunction on its own RAND encumbered patents. Moreover, the Head Economist at the DOJ wrote that Apple's incentives to innovate would be dulled if they weren't free to seek injunctions on their software and design patents.¹⁹ There was no empirical evidence cited for that proposition.

Let's look at the results of this policy shift.

First, because the combined effect of the inability to obtain injunctions along with the DOJ's endorsement of a rule that royalties should be based on the smallest salable unit was to substantially reduce possible royalties on SEPs, one might expect that firms would reduce the number of patents that they are willing to declare as essential to SSOs. Firms would potentially be better off not participating in standard setting and instead seek injunctions against firms whose devices infringed upon their broadly written non-SEP patents.

Indeed, Qualcomm, Nokia, and Blackberry have stated that members like them may "reduce participation or withdraw from IEEE-SA altogether, no longer submit contributions, or not file LoAs,"²⁰ which are the Letters of Assurance that constitute the RAND commitment. It is probably too early to see an effect on actual declarations to SSOs for existing protocols, but it is interesting to note that the number of 4G patents declared to ETSI declined significantly in 2013, right after the SEP order was signed between Motorola Mobility and the FTC.

LTE/4G ETSI Declarations



A second potentially negative effect is that SEP holders, fearing antitrust liability for monetizing their SEPs, may transfer them to trolls believing that enforcement of SEPs would expose them as operating companies to antitrust liability. Indeed, in the middle of the SEP

¹⁸ Letter from Renata B. Hesse, Acting Ass't Attorney Gen., Dept. of Justice, Antitrust Division, to Michael A. Lindsay, Esq., (Feb. 2, 2015), <http://www.justice.gov/atr/public/busreview/311470.htm>.

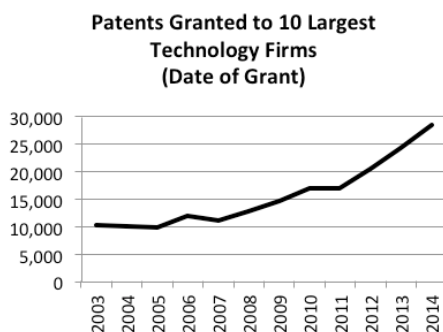
¹⁹ Fiona M. Scott-Morton, Deputy Assistant Attorney General for Economic Analysis, Dept. of Justice, Antitrust Division, *The Role of Standards in the Current Patents Wars*, available at <http://www.justice.gov/atr/public/speeches/289708.pdf>.

²⁰ Email from Qualcomm, Nokia, NSN and Blackberry to the Members of the SASB (June 5, 2014), available at <http://grouper.ieee.org/groups/pp-dialog/email/msg00284.html>.

investigation of Motorola Mobility, Ericsson sold 753 SEPs to Unwired Planet.²¹ Then Nokia sold thousands of SEPs to MOSAID²² and then sold the vast majority of its operating business to Microsoft, effectively becoming a troll itself.²³

Third, without the threat of countersuit on SEPs, firms like Microsoft may have an even greater ability to use the threat of injunctions on their own REPs. That's exactly what happened, with Microsoft forcing Android OEMs to pay it between \$5 and \$10 for each Android device they sell or face exclusion from the U.S. market. Over the last three years, it is anticipated that this has made Microsoft (and cost consumers) approximately \$5.15 billion,²⁴ all without objection from any antitrust regulator.

Fourth, by removing the counterweight of SEPs, non-SEP software patents are now even more valuable than before. This could further spread the proliferation of software patents, both offensively and defensively. Looking at patent grants to the largest U.S. tech firms, this appears to be occurring.



Sadly, even open source firms like Google have been forced to obtain thousands of patents a year. This seems to be the worst example of defensive patenting, which Richard Posner describes as “a social waste.”²⁵

VIII. CONCLUSION

For those of us that believe in free markets, government intervention in the economy should always bear a heavy burden of providing clear empirical and theoretical evidence that there is a market imperfection and that government intervention is better than the status quo.

²¹ Ingrid Lunden, *Unwired Planet Has Bought 2,400+ Wireless Patents From Ericsson To Beef Up Its Patent Fights Against Google, Apple And RIM*, TECHCRUNCH (Jan. 10, 2013), <http://techcrunch.com/2013/01/10/unwired-planet-has-bought-2400-wireless-patents-from-ericsson-to-beef-up-its-patent-fights-against-google-apple-and-rim/>.

²² Omar Al Akkad & Boyd Erman, *Mosaid to manage major patent portfolio for Nokia, Microsoft*, GLOBE AND MAIL (Sept. 1, 2011), available at <http://www.theglobeandmail.com/globe-investor/mosaid-to-manage-major-patent-portfolio-for-nokia-microsoft/article592881/>.

²³ Simon Phipps, *Microsoft plus Nokia: Pending patent troll?*, INFOWORLD (Sept. 3, 2013), <http://www.infoworld.com/article/2612346/patents/microsoft-plus-nokia--pending-patent-troll-.html>.

²⁴ Liam Tung, *Microsoft is making \$2bn a year on Android licensing - five times more than Windows Phone*, ZDNET (Nov. 7, 2013), <http://www.zdnet.com/article/microsoft-is-making-2bn-a-year-on-android-licensing-five-times-more-than-windows-phone/>.

²⁵ Richard A. Posner, *Why There Are Too Many Patents In America*, ATLANTIC (July 12, 2014), available at <http://www.theatlantic.com/business/archive/2012/07/why-there-are-too-many-patents-in-america/259725/>.

And the reason is not just because markets, like ecosystems, are complex. Rather it is because in seeking the right answer, well-intentioned regulators are going to hear most from those who earn rents from the market imperfection. Thus, any intervention is not likely to make the market competitive; rather, it is likely to exacerbate or create another market imperfection. This is especially true in the case of patents, which have diffuse costs to consumers and rivals but concentrated benefits to patentees. Indeed, the principal complainants in the SEP dispute were two of the largest companies in the world—both of whom have maintained their market positions for decades by way of their strong patent portfolios.

Government intervention in the form of software patents does not meet this heavy burden. There has been no empirical evidence that exclusivity was necessary to incentivize useful and cool software or beautiful design. Nor has there been any evidence that increasing the power of non-SEPs by reducing the value of SEPs would increase output.

This is not to suggest that banning injunctions on SEPs is a bad idea. Certainly, there is a risk that SEPs could be used to transfer profits from implementers to SEP holders. And certainly it is true that damages on SEPs, like all other software patents, need to be reduced. Yet, in both cases, these interventions have been on the side of those who earned outsized profits from their own patents, which is, of course, exactly what public choice theory would predict. Indeed, let's recall the history of patents. They were granted by the English Monarchy to stimulate foreign investment in industries like silk by shielding investors from competition from local merchants.²⁶ They soon devolved into government granted monopolies over commodities like starch and salt and imposed a (not so) hidden tax on consumers. Consumer outrage led to the passage of the Statute of Monopolies in 1624 that made all previously issued patents null and void and imposed a requirement that all new patents actually require a new invention.

And yet despite these reforms, the Economist, a paper founded in part to critique patents, wrote in 1851, "The granting [of] patents 'inflames cupidity', excites fraud, stimulates men to run after schemes that may enable them to levy a tax on the public, begets disputes and quarrels betwixt inventors, provokes endless lawsuits . . . The principle of the law from which such consequences flow cannot be just."²⁷

Thus we return to the Macquarie Island. The original sin was the introduction of an invasive species: the cats, the rabbits, and the mice. The introduction of the cats killed the rabbits and the rats, but also the birds. The selective intervention to kill the cats killed the vegetation, the soil, along with a few penguins and even more birds. The solution, in the end, was to return to kill the rabbits and the mice as well.

Hopefully, software patents are next.

²⁶ CHRISTINE MACLEOD, *INVENTING THE INDUSTRIAL REVOLUTION: THE ENGLISH PATENT SYSTEM, 1660-1800* 11 (1988) (citing letter from Sir Antonio Guidotti to Thomas Cromwell).

²⁷ Iman Lordgooei, *Bear Market Litigation: Showing the Relationship Between Patent Litigation and a Down Economy*, 27 U. PA. J. INT'L ECON. L. 1077 (2006) (citing *The Economist*).



CPI Antitrust Chronicle

March 2015 (2)

**Apples and Oranges:
Comparing Assertions of
SEPs and Differentiating
Patents from an Antitrust
Perspective**

Jay Jurata & Adya Baker
Orrick, Herrington & Sutcliffe LLP.

Apples and Oranges: Comparing Assertions of SEPs and Differentiating Patents from an Antitrust Perspective

John (“Jay”) A. Jurata, Jr. & Adya Baker¹

I. INTRODUCTION

Intellectual property and antitrust laws share a common goal of fostering innovation while protecting competition.² In the United States, the Patent Act bestows on the patent holder the right to exclude others from making, using, selling, or importing the patented invention, as well as the right to exploit the patented invention through licensing it to others.³ The Sherman Antitrust Act, while targeted toward anticompetitive conduct, does not restrict the long recognized right to freely exercise one’s independent discretion to deal, or to announce in advance the circumstances under which he or she will refuse to deal.⁴ Indeed, the possession of monopoly power, and the concomitant charging of monopoly price, is not only lawful; it is an important element of the free-market system.⁵

Consequently, patent rights are as fundamental to preserving research and innovation as the antitrust laws are to preserving free market competition. Together these complementary bodies of law form a system that rewards risk taking and entrepreneurialism necessary for economic growth.

Intellectual property and antitrust laws also share a common goal of preventing conduct that harms competition. In the ordinary course, obtaining, licensing, and enforcing patents is beneficial conduct that should be encouraged, not impeded, by antitrust law. There are situations, however, where separating conduct that is harmful from conduct that is beneficial is difficult because there is the potential for both anticompetitive harms and economically beneficial effects.

Collaborative standards-setting activities—where companies come together in a forum to agree on industry standards that require the use of patented technology—is a perfect example of a such situation. Accordingly, the formal standards-setting process warrants strong protection

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² See, *Atari Games Corp. v. Nintendo of Am., Inc.*, 897 F.2d 1572, 1576 (Fed. Cir. 1990) (“The aims and objectives of patent and antitrust laws ... are actually complementary, as both are aimed at encouraging innovation, industry, and competition”).

³ See, 35 U.S.C. § 154(a)(1). According to the Supreme Court, “[a] patent empowers the owner to exact royalties as high as he can negotiate with the leverage of that monopoly.” *Brulotte et al. v. Thys Co.*, 85 S. Ct. 176, 179 (1964).

⁴ See, *U.S. v. Colgate & Co.*, 250 U.S. 300, 307-08 (1919).

⁵ *Verizon Communications, Inc. v. Law Offices of Curtis V. Trinko, LLP*, 540 U.S. at 407-08 (“To safeguard the incentive to innovate, the possession of monopoly power will not be found unlawful unless it is accompanied by an element of anticompetitive conduct.”)

against related anticompetitive conduct by holders of standard-essential patents (“SEPs”) that have expressly committed to license those patents on fair, reasonable, and non-discriminatory (“FRAND”) terms in return for their adoption in a standard. This is especially true today, when licensing rates for SEPs are growing out of proportion as some SEP holders demand increasingly exorbitant rates.⁶

It is even more important, however, that the rationale for imposing antitrust-based limits on patents in the standards context be well-understood and distinguished from the application of antitrust-based limits on the ordinary assertion and enforcement of patents relating to non-standard essential patents (*e.g.*, differentiating, proprietary technology). Differentiating patents, unlike SEPs, affirmatively promote innovation and thus the ordinary enforcement of such patents should not be constrained under antitrust laws, no matter how valuable those patents may be. Indeed, where these circumstances exist, the holder of a differentiating patent should be free to license and exploit its patents as it sees fit so as to ensure that the incentive-creating function of the exclusive patent rights are maintained.

II. SEPARATE PATHS TO PATENT MARKET POWER

A patent grants the patent holder a right to exclusively practice an invention for a limited period of time, or to license it for a royalty that reflects the value of the invention. While a patent has sometimes been described as granting a “monopoly,” in practice very few patents provide their owners with significant “market power” in the antitrust sense, which is defined as the ability to raise prices above those that would be charged in a competitive market.⁷ This is an especially important distinction for patented inventions in technical fields such as software, where there are almost always alternative ways to achieve a given functionality or result. Indeed, software is accurately described as “plastic” because it can be designed and used in a variety of ways.

Patents in general achieve market power by one of two divergent paths. First, a patented invention may enjoy high demand because it is technically superior, or it is in high demand with consumers, *and* the relevant patent or patents cannot easily be designed around. Such inventions (especially those that are software-based) are rare but patents on them can be very valuable to their owners, either as a means to differentiate their products from the competition by reserving the patented invention for themselves, or by monetizing the invention by licensing broadly to competitors for use in their products. The possibility to create and patent such “differentiating” inventions forms the bedrock for the patent system of incentives and rewards for innovation in our economy. Innovation-based competition and differentiation in turn provide consumers with better, more diverse, products to choose from.

This is also why, in the absence of any indication of activities such as illegal tying, fraud on the Patent and Trademark Office, or sham litigation, a patent holder may enforce the statutory right to exclude others from making, using, or selling its proprietary technology, or

⁶ See, “SEP License Fees Are Getting Out of Hand, Officials Say,” http://www.law360.com/ip/articles/631607?nl_pk=f8fe6c87-d8fa-4aaa-bffc-d31217e013d5&utm_source=newsletter&utm_medium=email&utm_campaign=ip

⁷ See *e.g.*, *Ill. Tool Works Inc. v. Indep. Ink, Inc.*, 547 U.S. 28, (2006).

refuse to license the claimed invention, free from liability under the antitrust laws.⁸ And because a patent grants the right to exclude, a patent owner has the legal right to charge a monopoly price for licensing that technology: “A patent empowers the owner to exact royalties as high as he can negotiate with the leverage of that monopoly.”⁹ Indeed, compulsory licensing of patents is rare in the United States; it has “often has been proposed, but it has never been enacted on a broad scale.”¹⁰ In Europe, a refusal to license may be illegal only in “exceptional circumstances.”¹¹

On the other hand, a patent holder can achieve market power if the patented invention is included in a technical specification or standard and implementers of the standard are then “locked in” to using the invention in order to conform to the standard.¹² When this occurs, the patent becomes a SEP. Because a SEP is technically essential to the implementation of (or compliance with) a standard, alternative approaches that were not reflected in the standard cannot constrain the market power of the SEP. If the standard is widely adopted, such as 4G, LTE, 802.11 (WiFi), or H.264 (video streaming), a patent that enjoyed little or no market power before inclusion in the standard gains significant market power after the standard’s adoption because implementers become locked in to the standard. This is true even if the technology covered by the SEP is a minor part of the standard.

When the standard becomes widely used, the holders of SEPs obtain substantial leverage to demand more than the value of their specific patented technology. This is so even if there were equally good alternatives to that technology available when the original standard was adopted. After the standard is widely implemented, switching to those alternatives is either no longer viable or would be very costly.¹³

⁸ *In re Indep. Serv. Orgs. Antitrust Litig.*, 203 F.3d 1322, 1327 (Fed. Cir. 2000). See also *Abbott Labs. v. Teva Pharms. USA, Inc.*, 432 F. Supp. 2d 408, 430 (D. Del. 2006); *Intergraph Corp. v. Intel Corp.*, 88 F. Supp. 2d 1288, 1293 (N.D. Ala. 2000).

⁹ *Brulotte et al. v. Thys Co.*, 85 S. Ct. 176, 179 (1964).

¹⁰ Fiona Scott-Morton, Deputy Assistant Atty Gen., Antitrust Div., U.S. Dep’t of Justice, *Speech: “The Role of Standards in the Current Patent Wars*, at 2 (Dec. 5, 2012), available at <http://www.justice.gov/atr/public/speeches/289708.pdf> (last accessed 3/13/2015) (hereinafter “Scott-Morton”); See e.g., *Dawson Chem. Co. v. Rahm & Haas Co.*, 448 U.S. 176, 215 (1980).

¹¹ See, *IMS Health GmbH & Co. OHG v. NDC Health GmbH & Co. KG*, Case C-418/01 [2004] ECR I-5039.

¹² Standards exist as a necessary exception to the competitive marketplace. See U.S. D.O.J. & F.T.C., *Antitrust Enforcement and Intellectual Property Rights: Promoting Innovation and Competition*, at 33 (April 2007) (hereinafter “Joint Agency Policy Statement”). Antitrust Div., U.S. Dep’t of Justice, Business Review Letter Submitted to the IEEE, at 5 (Dated Feb. 2, 2015) (hereinafter “IEEE Review Letter”). See also Christine A. Varney, Assistant Atty Gen., Antitrust Div., U.S. Dep’t of Justice, *Speech: Promoting Innovation Through Patent and Antitrust Law and Policy*, at 5-6 (May 26, 2010), available at <http://www.justice.gov/atr/public/speeches/260101.htm> (last accessed 3/14/2015) (hereinafter “Varney”); Renata Hesse, Deputy Assistant Atty Gen., Antitrust Div., U.S. Dep’t of Justice, *Speech: Six “Small” Proposals for SSOs Before Lunch*, at 7-8 (Oct. 10, 2012), available at <http://www.justice.gov/atr/public/speeches/287855.pdf> (last accessed 3/14/2015) (hereinafter “Hesse”).

¹³ *Microsoft Corp. v. Motorola, Inc.*, 2013 U.S. Dist. LEXIS 60233, *37 (W.D. Wash. Apr. 25, 2013). See also European Commission Competition Policy Brief on Standard Essential Patents (June, 2014) (http://ec.europa.eu/competition/publications/cpb/2014/008_en.pdf) (last accessed 3/14/2015) (“SEPs can, however, confer significant market power on their holders. Once a standard has been agreed and industry players have invested heavily in standard-compliant products, the market is de facto locked into both the standard and the relevant SEPs. This gives companies the potential to behave in anti-competitive ways, for example by “holding up”

When a patent is standard-essential, the focus is no longer on the preclusive effect of the patent itself, but rather the competitive impact of not being able to implement the entire standard.

III. ANTITRUST CONCERNS RAISED BY SEPS

Some SEP owners demand more than the value of the patented technology in an attempt to capture the total value of the standard itself. Other SEP owners choose to leverage the value of complementary investments. *i.e.*, the negative “value” of avoiding switching costs. Both situations are referred to as “patent holdup.”¹⁴

In the standards context, patent holdup raises antitrust concerns because “incorporated, or standard-essential, patents are selected as part of a collaborative process, as opposed to the normal functioning of a competitive market.”¹⁵ “A standard ... by definition, eliminates alternative technologies. As a result, a patent’s value is significantly enhanced after the patent is incorporated in a standard.”¹⁶ The Standard Setting Organization’s (“SSO”) decision alters the competitive conditions of the market because it marginalizes potential substitutes to the technology adopted in the standard and locks implementers into using the standardized technology. In such circumstances, the potential of SEP owners breaching a FRAND promise (discussed below) and exploiting the *ex post* market power conveyed by the collaborative standardization process implicates antitrust concerns. By way of contrast, differentiating patents do not automatically confer significant market power because alternative technologies usually exist. Further, even where such patents have market power, the patent holder has a basic right to exploit the patent for full value, including a monopoly price.

Holdup harms competitors and consumers alike because competition is harmed when SEPs are asserted as a means to exclude companies from the downstream markets in an effort to benefit the SEP owner’s downstream products. Alternatively, competition is harmed when a SEP owner exploits the *ex post* market power conveyed by the standards-setting process to charge supra-competitive royalties to standards implementers (many of whom are competitors of the patent holder). Holdup also threatens the diffusion of valuable standards, undermines the standard-setting process, and harms consumers to the extent that excess costs are passed on to them.¹⁷ In contrast, so-called “hold out” (*i.e.*, refusing to take a license to valid and infringed SEPs) by a potential licensee acting alone does not typically raise an antitrust concern.

Competition is not harmed, however, when a potential licensee disputes whether licensing terms are FRAND, including related issues such as patent validity, infringement, or enforceability. In such circumstances, the licensor is simply forced to pursue whatever legal remedies it would pursue with any other patent. In addition, a FRAND royalty awarded as damages (as well as a compulsory future royalty) in a patent infringement enforcement action is

users after the adoption of the standard by excluding competitors from the market, extracting excessive royalty fees, setting cross-licence terms which the licensee would not otherwise agree to, or forcing the licensee to give up their invalidity or non-infringement claims against SEPs.”)

¹⁴ *See id.*

¹⁵ Joint Agency Policy Statement at 33-39; *Scott-Morton* at 5-7.

¹⁶ *Research in Motion Ltd. v. Motorola, Inc.*, 644 F. Supp. 2d 788, 793 (N.D. Tex. 2008).

¹⁷ *Microsoft Corp. v. Motorola, Inc.*, 2013 U.S. Dist. LEXIS 60233, *37-39 (W.D. Wash. Apr. 25, 2013).

available as a complete remedy for “hold out” to any SEP holder able to prove infringement and defend the validity of its SEP—the very compensation to which the SEP holder has pledged to limit itself when making a FRAND commitment. That enforcement burden is no greater on the holder of an SEP than on the holder of any other patent.

Holdup is a classic *ex ante/ex post* problem with standards. *Ex ante*, implementers had access to technology alternatives but industry representatives collaboratively agreed to include the SEP in the standard based on the agreement that such SEPs would be available on FRAND terms. *Ex post*, if the SEP owner who has gained market power reneges on its agreement to license to implementers on FRAND terms, it may leverage that power to insist on unreasonable licensing terms and conditions. If the implementers refuse to comply with the SEP holder’s unreasonable demands, the holder may threaten injunctive or other exclusionary relief in order to pressure the implementers to accept exorbitant royalty demands and other unreasonable terms.¹⁸ Companies engaged in holdup know that many potential licensees, especially less resourceful implementers, will capitulate to the demands of heavily resourced and litigation-capable SEP holders rather than risk exclusion from the market.¹⁹

As has recently been reiterated by U.S. antitrust regulators, holdup is not—as some have suggested—a strictly theoretical problem.²⁰ There are a number of court decisions, as well as investigations by competition regulators, that highlight questionable conduct by a number of large SEP holders. In recent public testimony at the United States International Trade Commission, an economic expert for InterDigital (a large publicly traded patent assertion entity) testified that InterDigital believes that it is entitled to seek and obtain a premium over the pre-standardization value of its declared SEPs. According to the testimony, this is a reward for having “won” the standardization “tournament.”²¹ InterDigital also sought ITC exclusion orders to pressure the implementer to accept such licensing terms.

Similarly, the European Commission found that Motorola violated EU competition laws by demanding unreasonable terms and seeking injunctive relief against Apple, a willing licensee, on the basis of Motorola’s SEPs. Apple’s clear indication of its willingness to enter into a licensing agreement and to pay adequate compensation, meant there was no need or justification for Motorola to have recourse to an injunction to protect its commercial interests. It also ran counter to public interest when Apple had to renounce its legitimate rights to challenge the validity and infringement of Motorola’s SEPs. Royalty payments for SEPs that are either invalid or not used may unduly increase production costs, which in turn may lead to higher prices for consumers.²²

¹⁸ *Ericsson, Inc. v. D-Link Sys.*, 773 F.3d 1201, 1209 (Fed. Cir. 2014); See also Analysis of Proposed Consent Order to Aid Public Comment, *In the Matter of Robert Bosch GmbH*, FTC No. 1210081 (Apr. 24, 2013) at 4, available at <https://www.ftc.gov/sites/default/files/documents/cases/2013/04/121126boschanalysis.pdf> (hereinafter “Bosch”).

¹⁹ See generally *Competition Policy Brief*, Amicus Brief Submitted by the U.S. Federal Trade Commission in *Apple Inc. et al. v. Motorola, Inc. et al.*, available at http://www.ftc.gov/sites/default/files/documents/amicus_briefs/apple-inc.and-next-software-inc.v.motorola-inc.and-motorola-mobility-inc./121205apple-motorolaamicusbrief.pdf (last accessed on 3/15/2015)

²⁰ Mlex, “DOJ, FTC Officials Defend Focus on Patent Hold Up”, March 13, 2015.

²¹ ITC No. 337-TA-613.

²² European Commission Competition Policy Brief on Standard Essential Patents (June, 2014) (http://ec.europa.eu/competition/publications/cpb/2014/008_en.pdf) (last accessed 3/14/2015).

More recently, China's NDRC found that Qualcomm's SEP-related licensing practices violated its FRAND commitments and were anticompetitive.²³

In addition to patent holdup, another threat imposed by SEPs is royalty stacking. "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."²⁴

IV. THE FRAND COMMITMENT FOR SEPS: A PRO-COMPETITIVE EXCEPTION TO THE GENERAL RIGHT NOT TO DEAL WITH OTHERS OR TO CHARGE A MONOPOLY PRICE ON A PATENT

These and other similar concerns are why most SSOs have an IPR policy that seeks a commitment from contributors to the standard that they will offer licenses to their SEPs on FRAND terms. FRAND is a voluntary agreement by the SEP holder to all potential licensees to cap royalty rates at reasonable levels and not engage in unreasonable discrimination.²⁵ "FRAND commitments by SSO members are critical to offsetting the potential anticompetitive effects of standards setting while preserving its procompetitive aspects."²⁶ "Such rules help to ensure that standards do not allow essential patent owners to extort their competitors or prevent competitors from entering the marketplace."²⁷

FRAND commitments restrain the exercise of market power gained by a firm when its patent is included in a standard and the standard is widely adopted in the market.²⁸ This includes the recognition that under a FRAND promise the SEP holder forgoes the right to exclude through an injunction against a potential licensee that is willing to take a truly FRAND license,

²³ "NDRC found Qualcomm guilty of abuse of market dominance and implementing monopolistic activities that eliminate and restrict competition. The following activities were deemed illegal: (1) charging unfairly excessive patent royalties, (2) tying patents that are not standard-essential patents in the telecom industry without a legitimate reason, and (3) imposing unreasonable conditions in the sale of baseband chips. During the investigation, Qualcomm cooperated with the authorities and raised a series of rectification measures including the following: (1) calculating patent royalties on the basis of 65 percent of net wholesale price of the device sold in China, (2) when Qualcomm licenses its patent to Chinese licensees it will provide a list of patents and not charge royalties over patents that have already expired, (3) Qualcomm will no longer require that Chinese licensees provide a compulsory (and royalty-free) cross-license for Qualcomm customers, (4) where wireless standard-essential patents are concerned, Qualcomm will not tie in non-standard-essential patents without a legitimate reason, and (5) unreasonable conditions will not be included in the licence agreements when selling baseband chips, such as conditions prohibiting licensees from challenging the terms in the licence agreement." Excerpts from article by Peter Korne at <http://www.law360.com/articles/632623/china-s-qualcomm-decision-sends-mixed-messages>.

²⁴ *Ericsson, Inc. v. D-Link Sys.*, 773 F.3d 1201, 1209 (Fed. Cir. 2014).

²⁵ *Microsoft Corp. v. Motorola, Inc.*, 864 F. Supp. 2d 1023, 1032-33 (W.D. Wash. 2012) ("These commitments are clearly designed to benefit potential licensees of Motorola's standard essential patent by ensuring that such patents are readily accessible to everybody at reasonable rates.")

²⁶ Analysis of Proposed Consent Order to Aid Public Comment, *In the Matter of Motorola Mobility, Inc. v. Google, Inc.*, FTC No. 1210120, at 2 (Jul. 24, 2013), available at <https://www.ftc.gov/sites/default/files/documents/cases/2013/01/130103googlemotorolaanalysis.pdf> (last accessed on 3/15/2015) (hereinafter "Google").

²⁷ *Microsoft Corp. v. Motorola, Inc.*, 864 F. Supp. 2d 1023, 1027 (W.D. Wash. 2012).

²⁸ See *Google* at 2.

because a FRAND promise is recognition that monetary damages will sufficiently compensate the SEP owner in the event an agreement is not reached.²⁹

Nonetheless, there are a relatively small but vocal number of companies whose corporate revenues are largely dependent on leveraging SEPs of only marginal importance within an adopted standard to seek to force implementers to agree to a range of unreasonable licensing terms.³⁰ Increasingly, however, private actions brought against SEP owners making excessive royalty demands have resulted in a number of helpful decisions by courts and have triggered investigations by competition regulators in multiple countries (e.g., Europe, the United States, India, China, and Brazil).

For example, after a bench trial in *Microsoft Corp. v. Motorola Mobility, Inc.*, the court concluded that the appropriate FRAND royalty for a license to Motorola's patents, based on their value independent from their adoption in the relevant standards, would be about \$2 million annually. Following that determination, a jury concluded that Motorola's initial royalty demand of \$4 billion for those patents was so grossly excessive that it breached the promise made by Motorola to license its SEPs on FRAND terms. Seeking injunctions on SEPs, unreasonable rates for SEPs, non-SEPs for SEPs reciprocity demands, and other unacceptable terms can be treated as a breach of the FRAND obligation,³¹ as an unfair deceptive trade practice,³² as an abuse of a dominant position,³³ as unsupported by damages principles,³⁴ and as a Section 2 antitrust claim.³⁵

Excessive royalty demands for SEPs of marginal value are also a growing concern among regulatory agencies.³⁶ Competition agencies in the United States and Europe have generally encouraged SSOs to clarify their patent policies and the effect of a FRAND commitment in order

²⁹ See, *Realtek Semiconductor Corp. v. LSI Corp.*, 2013 WL 2181717, at *6-7 (N.D. Cal. May 20, 2013) ("While an injunction may be warranted where an accused infringer of a standard-essential patent outright refuses to accept a RAND license, contrary to defendants' assertion here, there is no indication that Realtek is not willing to accept a RAND license."). Over the past several years, global competition authorities (particularly the United States and Europe) have brought actions against SEP abusers in an effort to address market distortions resulting from SEP abuse. For example: *In the Matter of Motorola Mobility, Inc. v. Google, Inc.*, FTC No. 1210120 (Decision and Order) (Jul. 24, 2013), available at <https://www.ftc.gov/sites/default/files/documents/cases/2013/07/130724googlemotorolado.pdf> (requiring Google to stop seeking injunctions in the United States for SEPs, if the prospective licensee agrees to have the dispute adjudicated); *Case COMP/M.6381, Google/Motorola Mobility* (requiring Google/Motorola to stop seeking injunctions in the E.E.A. for SEPs, unless against unwilling licensees), and EC April 29, 2014 Press Release "Antitrust: Commission Accepts Legally Binding Commitments by Samsung Electronics on Standard Essential Patent Injunctions," available at http://europa.eu/rapid/press-release_IP-14-490_en.htm (requiring Samsung to stop seeking injunctions in the E.E.A. for SEPs, if the prospective licensee agrees to have disputes adjudicated).

³⁰ The analysis, of course, is different for patents that possess *ex ante* market power prior to adoption in the standard, as well as patents that form the core of a given standard.

³¹ See *Research in Motion Ltd. v. Motorola, Inc.*, 644 F. Supp. 2d 788, 797 (N.D. Tex. 2008).

³² See *Google* at 4-6.

³³ See *Case COMP/M.6381, Google/Motorola Mobility* at ¶¶113, 132.

³⁴ See *Apple Inc. v. Motorola, Inc.*, 757 F.3d 1286, 1332 (Fed. Cir. 2014).

³⁵ See generally Greg Sivinski, *Patently Obvious: Why Seeking Injunctions on Standard-Essential Patents Subject to a FRAND Commitment Can Violate Section 2 of the Sherman Act*, CPI ANTITRUST CHRON. (Oct. 2013)

³⁶ See, e.g., *Ericsson, Inc. v. D-Link Sys.*, 773 F.3d 1201, 1209 (Fed. Cir. 2014); *Scott-Morton* at 5-8; *Varney* at 5-7; *Hesse* at 4-5.

to minimize the risk of patent holdup. Among other things, they have advocated that SSOs should consider a “safe harbor” approach whereby the SEP holder cannot seek injunctive relief if the prospective licensee is willing to be bound by a court adjudication of FRAND terms and related issues.

In response, a well-resourced group of prominent SEP holders aggressively opposes any changes to SSOs’ policies that would provide any such clarity regarding FRAND commitments, including limits on their ability to seek injunctive relief against licensees—even those who are willing to take a truly FRAND license but who want to raise objections to the SEP holder’s licensing demands and related issues. This group of SEP holders also opposes high-level principles framing what is “reasonable” compensation that are consistent with several court decisions, including the recent Federal Circuit decision in *Ericsson v. D-Link*, and limits on cross-licensing demands.

These companies—several of whom have been or are currently under investigation by competition regulators in different countries for allegedly abusing FRAND-encumbered SEPs—have been particularly critical of the Institute of Electrical and Electronics Engineers’ (IEEE) activities. The IEEE recently requested and received a Business Review Letter from the U.S. Department of Justice (“DOJ”) stating it had no intention of challenging an update to IEEE’s IPR Policy. This policy update clarifies the effect of a FRAND commitment in ways that are largely consistent with current case law and competition authorities’ public statements. Among other changes, the policy was clarified to prohibit SEP holders who made a FRAND commitment from seeking to exclude implementers from using the standard until a court has adjudicated related disputes between the parties, and to define a ‘Reasonable Rate as appropriate compensation . . . excluding the value, if any, resulting from the inclusion of [the patent claim’s] technology in the IEEE standard.’³⁷

This group also criticizes the DOJ’s conclusion that, “the [IEEE] Update has the potential to benefit competition and consumers by facilitating licensing negotiations, mitigating hold up and royalty stacking, and promoting competition among technologies for inclusion in standards. The Department cannot conclude that the Update is likely to harm competition.”³⁸ InterDigital, for example, has “advised the IEEE that [it] objects to their entirely new policy on patents and, going forward, on a case-by-case basis, will provide alternative licensing assurances to those specified in the 2015 policy.”³⁹

To the extent a few members push the IEEE into shelving its new policy and backing away from effective safeguards against patent holdup, they become a sellers’ cartel—a combination aimed at keeping license royalties at supra-competitive levels. The same could be said in the unlikely event these members are allowed to act collectively to submit individualized non-conforming assurances as a *de facto* policy exception to salvage opportunities for patent holdup.

³⁷ *IEEE Review Letter* at 11.

³⁸ *Id.* at 16.

³⁹ <http://www.iam-media.com/Blog/Detail.aspx?g=8c9676dd-6bbd-4d6c-b3e5-9a5ddeb36581>.

Despite this opposition, the fact remains that the FRAND principle—when adhered to—mitigates the risk of patent holdup based on SEPs contributed to collaboratively developed standards. This principle deserves strong enforcement and support by agencies and the courts to protect implementers and consumers, and support the value and objectives underlying collaborative standards efforts.

V. DIFFERENTIATING PATENTS AS “DE FACTO” SEPS: A DANGEROUS INTRUSION INTO THE GENERAL RIGHT NOT TO DEAL WITH OTHERS OR TO CHARGE A MONOPOLY PRICE ON A PATENT

The FRAND principle and other antitrust limits on enforcement and assertion of SEPs, while important, are necessarily exceptions that grow out of particular circumstances of collaborative industry standard-setting. Where those circumstances do not exist, the patent owner should be free to license and exploit its patents as it sees fit so as to ensure that the incentive-creating function of the exclusive patent rights are maintained. Avoiding confusion between SEPs and differentiating patents is critical to ensuring that the goals of both the antitrust and patent systems are achieved.

This confusion manifests itself when some companies that lack a significant patent portfolio, or that profit from advertising as opposed to selling products and therefore want the platforms for their advertisements to be distributed to consumers as the lowest possible cost (*e.g.*, unburdened by patent royalties), advocate that a differentiating patent holder’s rights to exclude others or to exploit the patented invention for a royalty must be curtailed by the imposition of FRAND principles. The stated rationale is that such differentiating patents—which are not SEPs in connection with any collaborative, SSO standards-setting efforts— are what these companies call “commercially essential” patents because they are seen as valuable inventions in the marketplace, sometimes associated with “*de facto* standards” Google, for example, wrote a letter to the U.S. Senate Judiciary Committee in 2012 contending that numerous Apple differentiating patents are so crucial to consumer preferences that treating them as anything other than a SEP would be harmful to competition.⁴⁰

Efforts such as these, which conflate FRAND-encumbered SEPs that were subject to a collaborative, standards-setting process with differentiating patents, strain competition law analysis and are a transparent attempt to circumvent narrowly drawn exceptional circumstances tests traditionally used to consider when, if ever, a patent holder should be compelled to license a patent to a competitor. Unlike an industry standard, in which various constituents collaborate to agree on a common standard to facilitate a common objective, a so-called “*de facto*” standard results when the marketplace gravitates naturally towards a single technology. Even if a patented proprietary invention can become a “*de facto* standard” because it is technologically superior or because consumers value it in the marketplace, it nonetheless remains a proprietary invention

⁴⁰ See, John Paczkowski, “Google Says Some Apple Inventions Are so Great They Ought to be Shared,” available at <http://allthingsd.com/20120720/google-claims-popularity-has-made-some-apple-patents-de-facto-essentials/> (last accessed on March 13, 2015) (hereinafter “*Google Letter*”).

and any patents on it remain differentiating patents. In this context, any market power that may arise in such patents is lawfully acquired.⁴¹

In other words, unlike differentiating patents with market power achieved through competition with available substitutes, many SEPs achieve their market power through collective agreements that, as a practical matter, eliminate these substitutes. FRAND commitments are a special, unique treatment for SEPs designed to mitigate or prevent exploitive behavior that can come about as a result of artificially granted power.⁴² “[M]eaningful safeguards” against abuse, include the FRAND commitment, are therefore the foundation for the judge-made exemption under which those participating in SSO standard-setting operate.⁴³ FRAND commitments relating to differentiating patents play no such role, and attempts to equate them to FRAND-encumbered SEPs are fundamentally at odds with the basic tenet that market power alone does not “impose on the intellectual property owner an obligation to license the use of that property to others.”⁴⁴

There are other serious problems with imposing or inferring the existence of FRAND licensing commitments with regard to proprietary patent-protected technologies. Under this scenario, the patent at issue is not essential to implementation of a voluntarily joined collaborative standard, but instead is deemed to be essential to marketability of a product (most likely a competitor’s product). This destroys the potential to compete or differentiate products based on innovation, which is a “strong driver of competition and innovation that can facilitate the development of leap frog technologies.” It also ignores the “big difference between technology that became powerful because it was adopted as part of a formal standard when alternatives may have been available and technology that become popular because it differentiated a device in a way consumers desired.” And finally, it ultimately fails to appreciate that “non-standardized technologies differentiate devices, create competition and drive innovation in the marketplace.”⁴⁵

Convenient but misleading labels such as “commercially essential patent” or “*de facto* SEP” thus inappropriately blur the important lines between the role, scope, and framework of collaborative standards development within an industry (which can, absent safeguards, raise legitimate competition concerns). Such labels also impede the individual development of

⁴¹ See, e.g., *United States v. Grinnell Corp.*, 384 U.S. 563, 570-571 (U.S. 1966) (“The offense of monopoly under §2 of the Sherman Act [requires] the willful acquisition or maintenance of [market] power, as distinguished from growth or development as a consequence of a superior product, business acumen, or historic accident.”)

⁴² See, *Morton* at 5-8.

⁴³ *Broadcom Corp. v. Qualcomm, Inc.*, 501 F.3d 297, 309-10, 313-14 (3d Cir. 2007 (violation of FRAND license commitment “is actionable anticompetitive conduct”); *Allied Tube & Conduit Corp. v. Indian Head, Inc.*, 486 U.S. 492, 501 (1988) (“[S]tandard-setting organizations have traditionally been objects of antitrust scrutiny” and must operate “through procedures that proven the standard-setting process from being biased by members with economic interests in stifling production competition”); *Am. Soc. Of Mech. Engineers, Inc. v. Hydrolevel Corp.*, 456 U.S. 556, 571-72 (1982) (SSOs “can be rife with opportunities for anticompetitive activity,” especially if operated “without any meaningful safeguards.”).

⁴⁴ DOJ and FTC, Antitrust Guidelines for the Licensing of Intellectual Property at 4 (1995).

⁴⁵ See, *Morton* at 8.

innovative, proprietary, and differentiating technology by companies that allows them to offer superior products that better satisfy the needs of their customers.

Furthermore, companies make the choice to participate in voluntary, collaborative standards and agree to license their SEPs on FRAND terms with full knowledge of the constraints associated with this promise. It would be wholly inappropriate, and bad policy, to apply those same constraints outside of the standards-setting context to a patent holder's successful, proprietary, patented technology—just because competitors want to copy it, or get it for free. This unjustifiably undermines the fundamental tenants of patent law, reduces firms' ability to compete based on differentiating technologies, and ultimately leads to less choice and fewer innovative products for consumers.

Competition agencies in the United States and Europe have a firm grasp on the reasons why antitrust law constrains exploitation of SEPs while at the same time allowing assertions of differentiating patents, even those with market power. The DOJ, for example, recognizes that the holdup power of a differentiating patent owner does not stem from a collective decision by competitors: “Rather, it springs only from a single innovation deployed unilaterally by its owner, [and] this is the difference that causes F/RAND encumbered SEPs to be of concern to competition authorities including the Department of Justice.”⁴⁶

Unfortunately, competition agencies in China, Taiwan, and South Korea appear to be taking a different approach. They advocate that compulsory licensing and FRAND obligations should apply to differentiating patents that are “unavoidable” or “commercially essential” to competing products, without reference to traditional valuation methods and established antitrust standards for compulsory licensing elsewhere in the world.

In Microsoft's acquisition of Nokia Devices & Services, for example, MOFCOM found that certain Microsoft differentiating patents are essential to Android because “the vast majority of Android phone manufacturers in the Chinese market have difficulty avoiding ... the patents due to their own technical limitations.”⁴⁷ While Microsoft had widely licensed the affected patents under a longstanding voluntary licensing programs before the transaction, and thus was presumably willing to continue to license these patents under and at current programmatic rates, the important precedent for all patent holders is that Microsoft's differentiating patents were deemed indispensable and thus subject to compulsory license and price regulation out of purely commercial parochial interests of Chinese smartphone manufacturers.

Of even greater concern, on December 28, 2014, the South Korea FTC—without prior notice or an opportunity for public comment—revised its Guidelines on the Unfair Exercise of Intellectual Property.⁴⁸ The revised Guidelines define a “Standard Essential Patent” as a patent necessary to implement a “Standard Technology”. They further define a “Standard Technology”

⁴⁶ *Id.*

⁴⁷ MOFCOM Public Notice 2014 No. 24, Public Notice on Anti-Monopoly Review Decision re Approving the Undertakings Concentration with Restrictive Conditions for Microsoft's Acquisition of Nokia's Devices & Services Business Case, April 8, 2014 at 7.

⁴⁸ See generally KFTC, Review Guidelines on the Unfair Exercise of Intellectual Property Rights, available at http://eng.ftc.go.kr/bbs.do?command=getList&type_cd=62&pageId=0401 (No. 21) (last accessed on 3/14/2015).

as any technology essential to a standard promulgated by a standards-setting organization, but also any technology that is “designated by the government” as a standard. This means that any proprietary technology within the grasp of the KFTC is subject to being “standardized” by government fiat. Also included in “Standard Technology” are any “technologies designated by a group of enterprises possessing technology of the same type” and “technologies actually used widely as the *de facto* standard in the relevant technology field.”

These categories include any proprietary technology that has become, or is included in, other technology that is used widely, even if such use happened without the owner’s knowledge or consent. If the proprietary technology is patented, the Guidelines arguably subject those patents to a compulsory license and other constraints under Korean antitrust law on the ground that they are “essential” to a “standard.” The Guidelines ignore the key distinction described above, that the patents have not been standardized through an SEP owner’s participation in a standards-development process or voluntarily contributed to a recognized standards body subject to a promise to license on FRAND terms.

It is possible perhaps that the KFTC will rethink this aspect of its guidelines and open them up to public comment and revision. If not, the effect of this action—whether or not unintended—rewards free-riders and harms innovation in several key ways. First, it weakens the patent system globally by eroding patent owners’ rights to exclude or exploit, and their ability to choose how to utilize their valid patent rights. Second, it removes a source of valuable new innovation by eliminating the responsibility of would-be infringers to “innovate around” any patent they do not want to license. Third, there are significant unintended effects. These revisions also have the potential to harm national competitiveness in Korea because they apply not only to foreign patent holders who are the nominal targets of the KFTC 2015 enforcement agenda, but also to large Korean industrial companies with their own significant patent portfolios in Korea.

This strikes at the heart of a differentiating patent holder’s rights and may run afoul of existing international obligations, including the World Trade Organization (“WTO”) requirements related to transparency as well as various provisions of the Agreement on Trade-Related Aspects of Intellectual Property Rights or the TRIPS Agreement. While TRIPS permits countries to implement measures to prevent the abuse of intellectual property rights, undue regulation of differentiating patents in circumstances such as these may exceed the authority contemplated by TRIPS and contravenes the spirit of the agreement.⁴⁹ Moreover, the regulatory efforts of these authorities could also run afoul of transparency obligations that are core to general WTO obligations and discipline.⁵⁰ Similarly, in the case of Korea, the provisions of the U.S.-Korea Free Trade Agreement expand on some of these provisions, including a required notice and comment period that were not followed in the case of the Guidelines.

⁴⁹ See TRIPS Articles 8 and 40 (allowing adoption of measures to prevent anticompetitive licensing practices but only “consistently with the other provisions of this Agreement” regarding establishment of patent rights) as well as Article 31 (Other Use Without Authorization of the Right Holder) or compulsory licensing).

⁵⁰ See Chapters 18 and 21 of the US-Korea Free Trade Agreement. Regarding transparency and publication.

VI. CONCLUSION

Collaborative standards-setting activities are an important exception to the right to exploit a patent's market power and necessitate strong protections against related anticompetitive conduct by SEP holders subject to a FRAND commitment. This is especially true today, when licensing rates for SEPs appear to be growing and, in many instances, premised on the holdup value of such patents as opposed to their *ex ante* value prior to standardization.

This well-recognized problem, however does not provide a basis for imposing antitrust-based limits on the ordinary assertion and enforcement of patents relating to differentiating proprietary technology, which promotes innovation and should be encouraged under antitrust laws. Indeed, where these circumstances exist, the patent owner should be free to license and exploit its patents as it sees fit so as to ensure that the incentive-creating function of the exclusive patent rights are maintained.