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The Troubling Use of Antitrust to Regulate FRAND Licensing

Judge Douglas H. Ginsburg, Koren W. Wong-Ervin, & Joshua D. Wright¹

I. INTRODUCTION

In the last year, we have seen a growing—and troubling—trend as courts and competition agencies around the globe propose and impose antitrust sanctions on holders of standard-essential patents (“SEPs”) for seeking injunctive relief against alleged infringers and for reneging on their commitment to license their patents on fair, reasonable, and non-discriminatory (“FRAND”) terms. These new rules, recently adopted in the European Union and in Korea, proposed in Canada and Japan, and favored by some government officials in the United States, are premised upon the erroneous beliefs that (1) patent “holdup” is a widespread problem that results in significantly adverse consequences for competition and innovation and (2) whatever the magnitude of the problem, it requires an antitrust remedy.

Patent holdup occurs when an SEP holder that has made a commitment to license its patents on FRAND terms instead uses the essential nature of its patent (“standard-lock-in”) to charge an unjustifiably higher royalty than would have been possible before its patent was included in the standard. Proponents of the new rules suggest the risk that *ex post* royalty rates will be higher than the *ex ante* rate was or would have been reflects a market failure requiring an antitrust response rather than a problem that could be resolved readily by standard-setting organizations (“SSOs”) themselves or by ordinary remedies for breach of contract. In other words, the underlying assumption is that the SSO process in general, and FRAND licensing in particular, is broken and in need of fixing. The assumption is wrong and the proposed antitrust remedy is likely to do more harm than good.

First, as to the assumption, there simply is no empirical evidence to substantiate the claim that patent holdup is a systemic problem for competition and consumers. In fact, evidence from the smartphone market, which may be the most patent- and standard-intensive market, shows no signs of diminished competition or adverse effects upon consumers. In fact, it shows wireless service prices declining, output growing exponentially, innovation continuing at a rapid pace, vigorous dynamic competition among mobile device manufacturers with meaningful entry over time, and diminishing market concentration. In other words, the empirical evidence does not support the notion that FRAND licensing is somehow broken and in need of fixing. Instead, the thriving nature of the wireless market suggests caution prior to disrupting the carefully balanced

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FRAND ecosystem.

Second, as for the remedy, imposing antitrust liability for patent holdup and a patent holder's refusals to issue a license on FRAND terms is not only unnecessary, given that the law of contracts is sufficient to provide optimal deterrence, it is likely to be harmful to both competition and consumers by diminishing the value of patents and hence reducing incentives to innovate and to participate in standard setting.²

II. THE NEW ANTITRUST RULES FOR SEP HOLDERS

Within the last year, several jurisdictions have issued final or draft guidelines on SEP issues. For example, in December 2014, the Korea Fair Trade Commission (without providing an opportunity for public comment) issued final guidelines, which are scheduled to be revised in late 2015 or early 2016. In June 2015, the Canadian Bureau of Competition released its revised intellectual property ("IP") guidelines for public comment and the next month the Japan Fair Trade Commission released its draft IP guidelines for public comment. These new antitrust rules would impose an antitrust sanction on SEP holders who either (1) seek an injunction to stop an infringing manufacturer from selling their standardized product, or (2) engage in *ex-post* contractual opportunism by attempting to renegotiate or deviate from the original FRAND commitment in order to obtain higher royalty rates.

Also in July 2015, the European Court of Justice ("ECJ") held that seeking injunctive relief with respect to a FRAND-encumbered SEP may constitute a violation of the European Union's competition law, specifically Article 102 of the Treaty on the Functioning of the European Union.³ The court created a safe harbor from Article 102 liability, however, for a SEP holder that (1) prior to initiating an infringement action, alerts the alleged infringer of the claimed infringement and specifies the way in which the patent has been infringed; and (2) after the alleged infringer has expressed its willingness to conclude a license agreement on FRAND terms, presents to the alleged infringer a specific, written offer for a license, specifying the royalty and calculation methodology. The ECJ then put the burden on the alleged infringer to "diligently respond" to that offer "in accordance with recognised commercial practices in the field and in good faith," by promptly providing a specific written counter-offer that corresponds to FRAND terms, and by providing appropriate security (e.g., a bond or funds in escrow) from the time at which the counter-offer is rejected and prior to using the teachings of the SEP.⁴

These new rules are premised upon the mistaken belief that holdup is both frequent and results in significant consumer harm. For example, Japan's Draft Amendment to its IP Guidelines concludes that a SEP's holder seeking injunctive relief "generally makes it difficult to research & develop . . . products adopting the standards," which in turn deters widespread adoption of

² See, e.g., Bruce H. Kobayashi & Joshua D. Wright, *The Limits of Antitrust and Patent Holdup: A Reply to Cary, et al.*, 78 ANTITRUST L.J. 505 (2012).

³ Case C-170/13, Huawei Technologies Co. v. ZTE Corp. (July 16, 2015), available at <http://curia.europa.eu/juris/document/document.jsf?text=&docid=165911&pageIndex=0&doclang=EN&mode=lst&dir=&occ=first&part=1&cid=603775>.

⁴ *Id.* ¶¶ 65-67.

standards.⁵ This assertion notwithstanding, the empirical evidence does not suggest patent holdup is a frequent or systemic problem and, even if it were, there are substantial weaknesses in the argument that antitrust is the right tool to fine-tune any problems with SEP licensing negotiations or SSOs.

III. NO EMPIRICAL EVIDENCE SUGGESTS A SYSTEMIC PROBLEM WITH HOLDUP

Although there is serious and important scholarly work exploring the theoretical conditions under which patent holdup might occur, this literature merely demonstrates the possibility that an injunction (or the threat of an injunction) against infringement of a patent can in certain circumstances be profitable for the licensor and potentially harmful to consumers. This same theoretical literature has also recognized, with respect both to intellectual and to tangible property, the threat of both reverse holdup and holdout. Holdup requires lock-in, and standard-implementing companies with asset-specific investments can be locked in to the technologies defining the standard. On the other hand, innovators that are contributing to an SSO can also be locked-in, and hence susceptible to holdup, if their technologies have a market only within the standard. Thus, incentives to engage in holdup run in both directions.

There is also the possibility of holdout by an implementer. While reverse holdup refers to the situation in which a licensee uses its leverage to obtain rates and terms below FRAND, holdout refers to a licensee either refusing to take a FRAND license or delaying doing so.

It is important to distinguish the hypotheses generated in the theoretical literature on patent holdup from such empirical evidence as would substantiate those hypotheses. The existing empirical evidence is not consistent with the view that holdup is a prevalent or systemic problem and is causing harm to consumers.⁶ The evidence required to support the new antitrust rules requires that there be a probability, not a mere possibility, of higher prices, reduced output, and lower rates of innovation.

In fact, as mentioned above, evidence from the smartphone market is to the contrary: Output has grown exponentially, while market concentration has fallen, and wireless service prices have dropped relative to the overall consumer price index (“CPI”).⁷ More generally, prices

⁵ Guidelines for the Use of Intellectual Property Under the Antimonopoly Act, Draft Amendment Parts 3(1)(e) and 4(2)(iv), available at <http://www.jftc.go.jp/en/pressreleases/yearly-2015/July/150708.files/Attachment1.pdf>.

⁶ See, e.g., J. Gregory Sidak, *The Antitrust Division’s Devaluation of Standard-Essential Patents*, 104 GEO. L.J. ONLINE 48, 61 (2015) (collecting studies at n.49) (“By early 2015, more than two dozen economists and lawyers had disapproved or disputed the numerous assumptions and predictions of the patent-holdup and royalty-stacking conjectures.”), available at <https://www.criterioneconomics.com/docs/antitrust-divisions-devaluation-of-standard-essential-patents.pdf>; ANNE LAYNE-FARRAR, PATENT HOLDUP AND ROYALTY STACKING THEORY AND EVIDENCE: WHERE DO WE STAND AFTER 15 YEARS OF HISTORY? (Dec. 2014), available at <http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=DAF/COMP/WD%282014%2984&doclanguage=en> (surveying the economic literature and concluding that the empirical studies conducted thus far have not shown holdup is a common problem).

⁷ According to data from Gartner, worldwide smartphone sales to end-users have increased over 900 percent between 2007 to 2014, and 320 percent between 2010 to 2014. Market concentration in smartphones, as measured by HHIs, went from “highly concentrated” in 2007, as defined by the U.S. Antitrust Agencies’ Horizontal Merger Guidelines, to “unconcentrated” by the end of 2012. See Keith Mallinson, *Theories of Harm with SEP Licensing Do Not Stack Up*, IP FIN. BLOG (May 24, 2013), available at <http://ipfinance.blogspot.com/2013/05/theories-of-harm->

in SEP-reliant industries in the United States have declined faster than prices in non-SEP intensive industries.⁸ A recent study by the Boston Consulting Group found that globally the cost per megabyte of data declined 99 percent from 2005 to 2013 (reflecting both innovation making data transmission cheaper as well as the healthy state of competition); the cost per megabyte fell 95 percent in the transition from 2G to 3G, and 67 percent in the transition from 3G to 4G; and the global average selling price for smartphones decreased 23% from 2007 through 2014, while prices for the lowest-end phones fell 63 percent over the same period.⁹ All of this indicates a thriving mobile market as opposed to a market in need of fixing.

Economic analysis provides the basis upon which to understand the apparent disconnect between holdup theory and the available evidence. As economic theory would predict, patent holders and those seeking to license and implement patented technologies write their contracts so as to minimize the probability of holdup.

In addition, several market mechanisms are available to transactors to mitigate the incidence and likelihood of patent holdup. For example, reputational and business costs may deter repeat players from engaging in holdup and “patent holders that have broad cross-licensing agreements with the SEP-owner may be protected from hold-up.”¹⁰ Also, patent holders often enjoy a first-mover advantage if their technology is adopted as the standard. “As a result, patent holders who manufacture products using the standardized technology ‘may find it more profitable to offer attractive licensing terms in order to promote the adoption of the product using the standard, increasing demand for its product rather than extracting high royalties’” per unit.¹¹ This is not surprising. The original economic literature upon which the patent holdup theories are based was focused upon the various ways that market actors use reputation, contracts, and other institutions to mitigate the inefficiencies associated with opportunism in transactions involving tangible property.¹²

[with-sep-licensing-do.html](#). According to the U.S. Bureau of Labor Statistics, the ratio of the CPI for wireless telephone services to the overall CPI has dropped 34% from 2007 to 2014.

⁸ Alexander Galetovic, Stephen Haber, & Ross Levine, *An Empirical Examination of Patent Hold-Up* (Nat'l Bureau of Econ. Research, Working Paper No. 21090, Apr. 2015), available at <http://www.nber.org/papers/w21090.pdf>.

⁹ JULIO BEZERRA ET AL., THE MOBILE REVOLUTION: HOW MOBILE TECHNOLOGIES DRIVE A TRILLION DOLLAR IMPACT 3, 9 (The Boston Consulting Group Jan. 15, 2015), available at https://www.bcgperspectives.com/content/articles/telecommunications_technology_business_transformation_mobile_revolution/#chapter1.

¹⁰ See, e.g., Prepared Statement of the Federal Trade Commission Before the U.S. Senate Committee on the Judiciary Subcommittee on Antitrust, Competition Policy and Consumer Rights Concerning “Standard Essential Patent Disputes and Antitrust Law” at 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.

¹¹ *Id.* (citation omitted).

¹² Benjamin Klein, *Why Hold-Ups Occur: The Self-Enforcing Range of Contractual Relationships*, 34 ECON. INQUIRY 444, 449-50 (1996); Benjamin Klein, Robert G. Crawford & Armen A. Alchian, *Vertical Integration, Appropriate Rents, and Competitive Contracting Process*, 21 J.L. & ECON. 297, 303-07 (1978); OLIVER E. WILLIAMSON, *MARKETS AND HIERARCHIES: ANALYSIS AND ANTITRUST IMPLICATIONS* 26-30 (New York: Free Press 1975); see also Joshua D. Wright, Comm’r, Fed. Trade Comm’n, remarks before George Mason University School of Law: SSOs, FRAND, and Antitrust: Lessons Learned from the Economics of Incomplete Contracts at 2-3 (Sept. 12, 2013)

Recognizing the theoretical nature of holdup concerns, the United States Court of Appeals for the Federal Circuit has held that a claim of holdup must be substantiated with “actual evidence,” and that the burden is on the accused infringer to show the patent holder used injunctive relief to gain undue leverage and demand supra-FRAND royalties.¹³

IV. AN ANTITRUST SANCTION FOR BREACH OF CONTRACT IS UNNECESSARY AND IS LIKELY TO REDUCE INCENTIVES TO INNOVATE AND DETER PARTICIPATION IN STANDARD SETTING

A FRAND commitment is a contractual commitment.¹⁴ Economists have long understood that a contractual relationship involving asset-specific investments creates the potential for opportunism. Similarly, a patentee participating in the standard-setting process can, once the standard is adopted by an SSO, “holdup” potential licensees by exploiting asset-specific investments to demand a higher royalty rate than would have prevailed in a competitive setting. The view that contractual opportunism alone gives rise to an antitrust problem rather than a contract problem is in tension with substantial economic literature on the subject.¹⁵ Consistent with this view, no United States court has held that seeking injunctive relief on a FRAND-encumbered SEP violates the antitrust laws. Instead, every United States court that has addressed the issue has done so under contract law principles.

With respect to reneging on a FRAND commitment, as the Supreme Court explained in *NYNEX Corp. v. Discon, Inc.*, while the evasion of a pricing constraint may hurt consumers, it

(explaining that “the economics of hold-up began not as an effort to explain contract failure, but as an effort to explain real world contract terms, performance, and the enforcement decisions starting with the fundamental premise that contracts are necessarily incomplete”), available at https://www.ftc.gov/sites/default/files/documents/public_statements/ssos-frand-and-antitrust-lessons-economics-incomplete-contracts/130912cpip.pdf. There is empirical evidence that SSO contract terms vary both across organizations and over time in response to changes in the perceived risk of patent holdup and other factors. See Joanna Tsai & Joshua D. Wright, *Standard Setting, Intellectual Property Rights, and the Role of Antitrust in Regulating Incomplete Contracts*, 80 ANTITRUST L.J. 157 (2015).

¹³ See, e.g., *Ericsson, Inc. v. D-Link Sys.*, 773 F.3d 1201, 1234 (Fed. Cir. 2014) (“In deciding whether to instruct the jury on patent hold-up and royalty stacking, again, we emphasize that the district court must consider the evidence on the record before it. The district court need not instruct the jury on hold-up or stacking unless the accused infringer presents actual evidence of hold-up or stacking. Certainly something more than a general argument that these phenomena are possibilities is necessary.”); see also Anne Layne-Farrar & Koren W. Wong-Ervin, *An Analysis of the Federal Circuit’s Decision in Ericsson v. D-Link*, CPI ANTITRUST CHRONICLE, Mar. 2015, at 5-7, available at <http://www.crai.com/sites/default/files/publications/An-Analysis-of-the-Federal-Circuits-Decision-in-Ericsson-v-D-Link.pdf>.

¹⁴ See, e.g., *Innovatio IP Ventures, LLC Patent Litig.*, No. 11 C 9308, 2013 WL 5593609, at *4 (N.D. Ill. Oct. 3, 2013); *Microsoft Corp. v. Motorola, Inc.*, No. C10-1823JLR, 2013 WL 2111217, at *1 (W.D. Wash. Apr. 25, 2013), *aff’d* 795 F.3d 1024 (9th Cir. 2015); *Apple, Inc. v. Motorola Mobility, Inc.*, 886 F. Supp. 2d 1061, 1083-84 (W.D. Wis. 2012); *Microsoft Corp. v. Motorola, Inc.*, 854 F. Supp. 2d 993, 999-1001 (W.D. Wash. 2012), *reaffirmed*, 864 F. Supp. 2d 1023, 1030-33 (W.D. Wash. 2012), *aff’d in relevant part*, 696 F.3d 872, 884 (9th Cir. 2012).

¹⁵ See, e.g., Joshua D. Wright & Douglas H. Ginsburg, *Patent Assertion Entities and Antitrust: A Competition Cure for a Litigation Disease*, 79 ANTITRUST L.J. 501, 509 (2014); see also Benjamin Klein, *Market Power in Antitrust: Economic Analysis After Kodak*, 3 SUP. CT. ECON. REV. 43, 62-63 (1993) (“Antitrust law should not be used to prevent transactors from voluntarily making specific investments and writing contracts by which they knowingly put themselves in a position where they may face a ‘hold-up’ in the future [C]ontract law inherently recognizes the pervasiveness of transactor-specific investments and generally deals with ‘hold-up’ problems in a subtle way, not by attempting to eliminate every perceived ‘hold-up’ that may arise.”).

does not harm the competitive process.¹⁶ The Court distinguished the mere breach of a pricing commitment from the unlawful exercise of monopoly power by pointing out that, with the breach, the “consumer injury naturally flowed not so much from a less competitive market as . . . from the exercise of market power lawfully in the hands of a monopolist.”¹⁷

Moreover, an antitrust sanction is not only unnecessary to protect consumer welfare given that the law of contracts is sufficient to provide optimal deterrence,¹⁸ but is likely to be harmful.¹⁹ First, significant monetary sanctions are likely to over-deter procompetitive participation in SSOs; FRAND-encumbered SEP holders need the credible threat of an injunction if they are to recoup the value added by their patents and have no other adequate remedy against an infringing user. Indeed, excessive deterrence is particularly likely because, with liability turning upon whether the infringing user was truly a “willing licensee”²⁰—a factual determination that may be far from clear in many cases—the outcome of an antitrust case will necessarily be uncertain. The prospect of penalizing a FRAND-encumbered SEP holder for seeking injunctive relief diminishes the value of its patents and hence reduces its incentive to innovate.

Second, the prospect of antitrust liability for a patentee seeking injunctive relief would enable an infringing user to negotiate in bad faith, knowing its exposure is capped at the FRAND royalty rate; in this way, an unscrupulous or a judgment-proof infringing user can force the SEP holder to take a below-FRAND rate. Indeed, when the worst penalty an SEP infringer faces is not an injunction but merely paying, after a neutral adjudication, the FRAND royalty that it should have agreed to pay when first asked, then reverse holdup and holdout give implementers a profitable way to defer payment—or if they are judgment proof, to avoid payment altogether—and puts SEP holders at a disadvantage that reduces the rewards from, and can only discourage innovation and participation in, standard setting.²¹

Third, antitrust liability is likely to deter patent holders from contributing their technology to an SSO under FRAND terms if doing so will require them to forfeit their right to protect their intellectual property by seeking an injunction against infringing users. These possibilities, far from protecting the public interest in competition and innovation, actually threaten to reduce the gains from innovation and standardization.

¹⁶ *NYNEX Corp. v. Discon, Inc.*, 525 U.S. 128, 135-37 (1998). *See also* Kobayashi & Wright at 519-20, *supra* note 2.

¹⁷ *NYNEX Corp.*, 525 U.S. at 129.

¹⁸ Douglas H. Ginsburg, Taylor M. Owings & Joshua D. Wright, *Enjoining Injunctions: The Case Against Antitrust Liability for Standard Essential Patent Holders Who Seek Injunctions*, ANTITRUST SOURCE at 5-6 (Oct. 2014).

¹⁹ *Id.*; *see also* Kobayashi & Wright, *supra* note 2.

²⁰ *See, e.g.*, Case C-170/13, *Huawei Technologies Co. v. ZTE Corp.*, ¶ 77 (July 16, 2015), *available at* <http://curia.europa.eu/juris/document/document.jsf?text=&docid=165911&pageIndex=0&doclang=EN&mode=lst&dir=&occ=first&part=1&cid=603775>; Analysis of Proposed Consent Order to Aid Public Comment, In the Matter of Motorola Mobility LLC and Google, Inc., File No. 121-0120, at 2, 6 (F.T.C. Jan. 3, 2013), *available at* <http://www.ftc.gov/sites/default/files/documents/cases/2013/01/130103googlemotorolaanalysis.pdf>.

²¹ The effect of such delaying tactics is magnified when the patent owner has a large worldwide portfolio of SEPs requiring it to file lawsuits around the world in order to adjudicate a FRAND royalty on a patent-by-patent basis. In that circumstance, international arbitration on a portfolio basis would appear to be the most efficient and realistic means of resolving a FRAND dispute.

V. CONCLUSION

The new antitrust rules are troubling not only because they are wholly unsupported by empirical evidence, but also because they threaten to deter participation in standard setting and reduce the incentive to innovate. Antitrust enforcers around the globe should be wary of upsetting the carefully balanced FRAND-ecosystem, and should consider the unintended consequences of their proposed solution to the largely theoretical problem of patent holdup.