

**COMMENT OF THE GLOBAL ANTITRUST INSTITUTE,
GEORGE MASON UNIVERSITY SCHOOL OF LAW, ON THE NATIONAL
DEVELOPMENT AND REFORM COMMISSION’S QUESTIONNAIRE ON
INTELLECTUAL PROPERTY MISUSE ANTITRUST GUIDELINES**

September 30, 2015

This comment is submitted in response to the National Development and Reform Commission’s (NDRC’s) Questionnaire on Intellectual Property Misuse Antitrust Guidelines. We appreciate the opportunity to comment and commend the NDRC for its transparency. We submit this comment based upon our extensive experience and expertise in antitrust law and economics generally, and specifically with respect to the intersection of intellectual property and antitrust.¹

This comment responds to the NDRC’s questions relating to the general approach to antitrust matters involving: intellectual property rights (IPRs) (Questions 1-3); standard-essential patents (SEPs) (Questions 9, 16-18); cross-licenses and grantbacks (Question 15); and non-practicing entities (Question 21).

Questions 1-3 – General Principles

The U.S. antitrust agencies, which once treated a host of licensing restraints as per se unlawful, has for the last 35 years analyzed almost all licensing restraints under the rule of reason, that is, an effects-based approach under which licensing restraints are condemned only when any anticompetitive harm they cause outweighs any procompetitive benefits they create. Under the old approach, which was developed in the 1970s and set forth in a document known as the “Nine No-Nos,” the U.S. antitrust agencies prohibited as per se unlawful:

- requiring the purchase of unpatented materials (tying) as a condition of the license;
- requiring the licensee to assign back subsequent patents;
- minimum resale price provisions for the licensed product;
- royalty provisions not reasonably related to the licensee’s sales;
- mandatory package licenses (i.e., bundling);

¹ The Global Antitrust Institute (GAI) at George Mason University is a leading international platform for research and education that focuses on the legal and economic analysis of key antitrust issues confronting competition agencies and courts around the world. The Director of the GAI is Professor of Law Joshua D. Wright, Ph.D. (economics), a former U.S. Federal Trade Commissioner. The GAI’s International Board of Advisors is chaired by the Honorable Douglas H. Ginsburg, a Senior Judge on the United States Court of Appeals for the District of Columbia, former Assistant Attorney General in charge of the Antitrust Division of the United States Department of Justice, and a Professor of Law. Bruce H. Kobayashi, Ph.D. (economics), is a GAI Senior Scholar and Founding Director, and a Professor of Law. Koren W. Wong-Ervin is a former Attorney Advisor to then-Federal Trade Commissioner Joshua D. Wright and an author of this comment.

- restricting the resale rights of the purchaser of the product practicing the patent;
- restricting the licensee’s ability to deal in products outside the scope of the patent; and
- a licensor’s agreement not to license others.²

The U.S. antitrust agencies’ modern approach to patent licensing is set forth in the 1995 Joint Department of Justice and Federal Trade Commission *Antitrust Guidelines for the Licensing of Intellectual Property* (“DOJ-FTC IP Guidelines”).³ These Guidelines are based upon the following principles:

- antitrust and intellectual property law are complementary bodies of law that both seek to promote innovation and enhance consumer welfare;
- IPRs do not necessarily confer market power; that depends upon whether there are substitutes that might prevent the IPRs from exercising market or monopoly power;
- for the purpose of antitrust analysis, we treat IPRs as essentially comparable to any other form of property, tangible or intangible;
- the vast majority of licensing restraints have procompetitive effects and therefore are analyzed under the rule of reason; and
- competitive effects must be analyzed in comparison to what would have happened in the absence of a license.

While the U.S. antitrust agencies apply the same general antitrust analysis to matters involving IPRs as to any form of tangible or intangible property, that is not to say that they do not recognize the important distinguishing characteristics of IPRs. For example, the inventions and works protected by IPRs are non-rivalrous. Thus, one firm using a specific IPR does not diminish the ability of another firm to use the same IPR. Also, the cost of having another firm use an existing IPR is effectively zero. As a consequence, from a static welfare perspective, it is desirable to disseminate IPRs to every firm (or consumer) that has a positive valuation for the IPR. Of course, doing so would create a strong disincentive to innovate in the first place, to the great detriment of dynamic efficiency, which refers to the gains that result from entirely new ways of doing business. While static efficiency may increase consumer welfare in the short run,

² Bruce B. Wilson, Deputy Assistant Att’y Gen., Antitrust Division, Remarks Before the Michigan State Bar Antitrust Law Section (Sept. 21, 1972), *reprinted in* 5 CCH Trade Reg. Rep. ¶ 50,146.

³ Available at <http://www.justice.gov/atr/public/guidelines/0558.pdf>.

economics teaches us that dynamic efficiency, including societal gains from innovation, are an even greater driver of consumer welfare.⁴

After the investments and competitive effort required to spur breakthrough inventions have been made and proven successful, it can be tempting to carve up the benefits and distribute them throughout the economy. Doing so, however, would harm competition, innovation, and consumers. If the government is too willing to step in and appropriate the gains from innovation and dynamic competition, then potential innovators will have weak incentives. For example, rivals will have greater incentives to devote their resources to lobbying the Anti-Monopoly Law agencies to intervene and to litigation than to creating innovations of their own. Instead, firms should be encouraged to innovate on their own because innovation expands the wealth of society and generates significant benefits for consumers. This is important because antitrust law does not protect competition for its own sake; instead, it protects competition as a force that leads to increased efficiency, growth, and consumer welfare. As such, we strongly recommend that the NDRC adopt an effects-based approach to matters involving IPRs and avoid the use of any presumptions that certain conduct is anticompetitive.

Question 9 – SEPs and Dominant Position

Question: What impact do standard essential patents have on the market position of IPR holders? Please briefly state the reasons. What factors need to be considered in determining whether the standard essential patent holder has a dominant position in the market? Please briefly state the reasons.

Under U.S. law, it is well-established that patents and other IPRs, including SEPs, are not presumed to convey “market power,”⁵ that is, the ability profitably to maintain prices above, or output below, competitive levels for a significant period of time. Instead, market power must be established on a case-by-case basis after a fact-specific inquiry, including an evaluation of whether there are actual or potential close substitutes to prevent the exercise of market power.

⁴ Robert Solow won the Nobel Prize in economics for demonstrating that gains in wealth are due primarily to innovation—not to marginal improvements in the efficiency of what already exists. See Press Release (Oct. 21, 1987), available at http://www.nobelprize.org/nobel_prizes/economic-sciences/laureates/1987/press.html.

⁵ See, e.g., *Illinois Tool Works Inc. v. Independent Ink, Inc.*, 547 U.S. 28, 31 (2006) (“The question presented to us today is whether the presumption of market power in a patented product should survive as a matter of antitrust law despite its demise in patent law. We conclude that the mere fact that a tying product is patented does not support such a presumption.”); *Chrimar Sys. v. CISCO Sys.* Case No. 4:13-cv-01300 at 6 (N.D. Cal. Oct. 29, 2014) (rejecting the contention that it is sufficient to allege that if a patent is essential, then the patent holder has market power). See also generally Bruce H. Kobayashi, *Spilled Ink or Economic Progress: The Supreme Court’s Decision in Illinois Tool Works v. Independent Ink*, 53 ANTITRUST BULL. 5 (2008); Joshua D. Wright, *Missed Opportunities in Independent Ink*, 5 CATO SUP. CT. REV. 333 (2006).

And, even if a patent or other form of IPR does confer market power, that alone does not offend the antitrust laws. As the U.S. Supreme Court has explained, market power (or even a monopoly) that is solely “a consequence of a superior product, business acumen, or historic accident” does not violate the U.S. antitrust laws.⁶

Furthermore, there has been a movement in the United States away from focusing upon market definition and market power—and in particular, a movement away from inferring market power from high market shares—and towards a greater focus upon the direct assessment of competitive effects, as evidenced by the U.S. antitrust agencies’ 2010 Horizontal Merger Guidelines. This shift in antitrust analysis is consistent with modern economics and is particularly important in matters involving IPRs; IPR holders may need relatively high margins (prices above marginal cost) merely to recoup their upfront investment and compensate for the substantial risks associated with seeking to create and commercialize IPRs. Prices well above their low or even zero marginal cost, therefore, may result in no more than the competitive rate of return on the investment necessary to create the IPR. Relatedly, the lines between markets may not be clearly delineated in high-tech markets involving IPRs. To infer a firm has market power based merely upon its high market share or its ability to charge a price greater than marginal cost is to invite frequent errors.

Question 10 – Unfairly High Royalty Fees

Question: How to determine that IPR holders with a dominant market position charged unfairly high royalty fee? What is the basic principle of determining whether the royalty fee is unfairly high? What are the specific factors that should be considered?

The U.S. antitrust agencies do not regulate price.⁷ Rather, in the United States, firms are free unilaterally to set or privately to negotiate their prices; it follows that a monopolist is free to

⁶ *United States v. Grinnell Corp.*, 384 U.S. 563, 571 (1966); see also *United States v. Aluminum Co. of America*, 148 F.2d 416, 430 (2d Cir. 1945) (Sherman Act is not violated by the attainment of market power solely through “superior skill, foresight and industry”).

⁷ See, e.g., Bill Baer, Assistant Att’y Gen., Antitrust Division, Prepared Remarks at the 19th Annual International Bar Association Competition Conference (Sept. 11, 2015) (“We don’t use antitrust enforcement to regulate royalties. That notion of price controls interferes with free market competition and blunts incentives to innovate. For this reason, U.S. antitrust law does not bar ‘excessive pricing’ in and of itself. Rather, lawful monopolists are perfectly free to charge monopoly prices if they choose to do so. This approach promotes innovation from rivals or new entrants drawn by the lure of large rewards.”), available at <http://www.justice.gov/opa/speech/assistant-attorney-general-bill-baer-delivers-remarks-19th-annual-international-bar>; Edith Ramirez, Chairwoman, Federal Trade Commission, Prepared Remarks at the 8th Annual Global Antitrust Enforcement Symposium, Georgetown University Law Center at 8 (Sept. 10, 2014) (“In contrast to the FTC’s and EC’s approach, media reports indicate that China’s antitrust authorities may be willing to impose liability solely on the royalty terms that a patent owner demands for a license to its FRAND-encumbered SEPs, as well as royalty demands for licenses for

charge monopoly prices, which induces the risk-taking and entrepreneurial behavior by firms that lead to innovation and economic growth.⁸

Requiring by law that prices be “fair” or “reasonable,” or prohibiting a firm from charging “unfairly high” or “unfairly low” prices risks punishing vigorous competition. In general, competition policy should not prohibit a monopolist from charging whatever price for its products and its IPRs it believes will maximize its profits. It is axiomatic in economics and in antitrust law that the “charging of monopoly prices . . . is . . . what attracts ‘business acumen’ in the first place; it induces risk taking that produces innovation and economic growth.”⁹ That is especially so in the case of IPRs; the very purpose for which nations create and protect IPRs is to induce investment in risky and costly research and development. To achieve a balance between innovation and the protection of competition, monopoly prices should only be unlawful if they are the result of conduct that is unlawful on other grounds.

Furthermore, economics teaches that it is especially difficult to identify a “fair” price. Indeed, it is particularly difficult to assess the “fairness” of prices associated with licensing IPRs both because there is no marginal cost to which the price may be compared, and because IPRs themselves are highly differentiated products making price comparisons difficult, if not impossible. The risk of placing too strict limitations on IPR prices is that the return to innovative behavior is reduced, and consumers suffer in the form of less innovation. With such limits in place, IPR holders will face significant uncertainty in determining whether their licensing practices violate China’s Anti-Monopoly Law (AML).

In addition, in order to determine whether a particular price is excessive, the NDRC would need to calculate a reasonable royalty as a baseline against which to compare the allegedly excessive price. In our experience, competition agencies are generally ill-equipped to calculate royalty rates, a task that is best left to the market or, as a last resort, to the courts.¹⁰

Finally, we strongly urge that the NDRC not use the “smallest salable patent practicing unit” (SSPPU) approach as the basis of an AML violation. The U.S. Court of Appeals for the Federal Circuit (which has nationwide jurisdiction over patent disputes) in *Ericsson v. D-Link* reiterated its prior statements from *LaserDynamics* that the SSPPU was created as an evidentiary

other patents that may not be subject to a voluntary FRAND commitment.”), *available at* https://www.ftc.gov/system/files/documents/public_statements/582451/140915georgetownlaw.pdf.

⁸ See, e.g., *Verizon Commc’ns Inc. v. Law Offices of Curtis V. Trinko, LLP*, 540 U.S. 398, 407 (2004).

⁹ *Id.*

¹⁰ For a discussion of the difficulties of court-determined rate setting, see Anne Layne-Farrar & Koren W. Wong-Ervin, *Methodologies For Calculating FRAND Damages*, LAW360 (Oct. 8-10, 2014), *available at* https://www.ftc.gov/system/files/attachments/key-speeches-presentations/wong-ervin_-_methodologies_for_calculating_frand_damages.pdf.

rule “to help our jury system reliably implement the substantive statutory requirement of apportionment of royalty damages to the invention’s value.”¹¹ As the court went on to explain:

Logically, an economist could do this [apportionment] in various ways—by careful selection of the royalty base to reflect the value added by the patented feature, where that differentiation is possible; by adjustment of the royalty rate so as to discount the value of a product's non-patented features; or by a combination thereof. The essential requirement is that the ultimate reasonable royalty award must be based on the incremental value that the patented invention adds to the end product.¹²

In other words, mathematically, the selection of the royalty base is irrelevant. Instead, it is the relationship between the royalty base and the royalty rate that matters.

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

Moreover, the value of a portfolio of SEPs to a particular licensee also may vary depending upon the final product in which the licensee incorporates the technology. For example, a given portfolio of SEPs may deliver very different value to a mobile infrastructure manufacturer as compared to a handset maker or a network operator.

There are a number of considerations that may dictate the parties’ selection of a royalty base in a freely negotiated license agreement. Industry practice and the convenience of the parties are two such considerations; other commercial dealings between the parties may also affect their negotiation. In order to reduce administrative costs, a royalty base is often selected to allow for easy monitoring or verification of the number of units sold; end product prices are often chosen for these reasons. Indeed, as a practical matter, we have found that most licenses in many high-tech markets, including smartphones, are negotiated on a patent portfolio basis using the end-user device as the royalty base.¹³

Lastly, we note that the U.S. Department of Justice’s Antitrust Division (DOJ) issued a Business Review Letter on February 2, 2015, in response to a request by the Institute of

¹¹ 773 F.3d 1201, 1226 (Fed. Cir. 2014).

¹² *Id.*

¹³ See Anne Layne-Farrar & Koren W. Wong-Ervin, *An Analysis of the Federal Circuit’s Decision in Ericsson v. D-Link*, CPI ANTITRUST CHRONICLE at 7-8 (Mar. 2015), available at <http://www.crai.com/sites/default/files/publications/An-Analysis-of-the-Federal-Circuits-Decision-in-Ericsson-v-D-Link.pdf>.

Electrical and Electronics Engineers, Incorporated (the IEEE), which addressed the recommended use of the SSPPU approach.¹⁴ Most important for the question at hand, in its letter, the DOJ correctly recognized that its

task in the business review process is to advise the requesting party of the Department's present antitrust enforcement intentions regarding the proposed conduct. It is not the Department's role to assess whether IEEE's policy choices are right for IEEE as a standards-setting organization (SSO). SSOs develop and adjust patent policies to best meet their particular needs. It is unlikely that there is a one-size-fits-all-approach for all SSOs, and, indeed, variation among SSOs' patent policies could be beneficial to the overall standards-setting process. Other SSOs, therefore, may decide to implement patent policies that differ from [the IEEE's policy].¹⁵

In other words, the DOJ did not endorse the SSPPU approach as a requirement for all SSOs, and certainly did not suggest that a patent holder's failure to base a royalty on the SSPPU would constitute an antitrust violation; it concluded only that the IEEE's adoption of this recommended approach did not violate U.S. antitrust laws. The DOJ further noted that the IEEE's Policy itself merely recommends the use of the SSPPU approach, but "does not mandate" its use by IEEE members as the only correct royalty base.¹⁶

Question 15 – Cross-Licensing and Grantbacks

Question: What is your opinion as to demands of reverse licensing and grant back by licensors? Under what circumstances do you think that reverse licensing and grant back demands may affect innovation and competition?

Cross-licenses and grantbacks, like other licensing restraints, are generally procompetitive because they may facilitate the integration of complementary technologies, promote the dissemination of a technology, reduce transaction costs, clear blocking positions, and avoid costly patent infringement litigation.¹⁷ Grantbacks also provide a means for the licensee and the licensor to share risks and to reward the parties for possible further innovations based upon or informed by the licensed technology. Finally, the prospect of a grantback is an incentive both for innovation in the first place and for the subsequent licensing of the results of that innovation.¹⁸ As such, grantbacks promote both innovation and licensing.

¹⁴ Available at <http://www.justice.gov/sites/default/files/atr/legacy/2015/02/02/311470.pdf>.

¹⁵ *Id.* at 2-3.

¹⁶ *Id.* at 12-13.

¹⁷ See, e.g., DOJ-FTC IP GUIDELINES, *supra* note 3 at §§5.5-5.6.

¹⁸ *Id.* at § 5.6.

Especially with a royalty-free cross license, each firm is free to compete, both in designing its products without fear of infringement and in pricing its products without the burden of a per unit royalty due to its counterparty. Therefore, cross-licenses can solve the complements problem,¹⁹ at least as between two firms, and be highly procompetitive. Similarly, portfolio licenses may encourage long-term investments in both manufacturing capacity and research and development because the parties do not fear unforeseen and unforeseeable patent infringement litigation.

On the other hand, cross-licenses can have anticompetitive effects in certain limited circumstances, such as when they are used as a cover for price-fixing or market division. Grantbacks may also adversely affect competition if they substantially reduce the licensee's incentives to engage in research and development and thereby limit rivalry in innovation. Like other licensing restraints, therefore, cross-licenses and grantbacks should be analyzed case by case, under an effects-based approach.

Question 16 – FRAND Licensing Commitments

Question: How to evaluate the legal effect of FRAND licensing commitment made by standard essential patent holders? What is the relationship between the commitment and anti-monopoly regulations? How should the guideline improve such systems?

A FRAND commitment is a contractual commitment.²⁰ Economists have long understood that a contractual relationship involving an asset-specific investment creates the potential for opportunism by one or both of the parties. Similarly, once a patent is adopted by an SSO, the patentee may try to “hold up” potential licensees with asset-specific investments by demanding a higher royalty rate than would have prevailed in a competitive setting. The view that contractual opportunism alone gives rise to an antitrust problem, as opposed to a contract problem, is in tension with the substantial economic literature on the subject.²¹ Consistent with

¹⁹ The complements problem, or the “tragedy of the anti-commons,” arises when there are multiple gatekeepers, each of which must grant permission before a resource can be used, the result of which can be to prevent the resource from being used and hence stifle innovation.

²⁰ See, e.g., *In re Innovatio IP Ventures, LLC Patent Litig.*, 2013 WL 5593609 at *4 (N.D. Ill. Oct. 3, 2013); *Microsoft Corp. v. Motorola, Inc.*, 2013 WL 2111217 at *1 (W.D. Wash. Apr. 25, 2013), *aff'd* 2015 WL 4568613 (9th Cir. July 30, 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).

²¹ 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

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.

Specifically, in analyzing the contractual nature of the FRAND commitment, courts have held that: (1) a commitment to an SSO to license on FRAND terms constitutes a binding contract between the SEP holder, the SSO, and its members²²; (2) potential users of the standard are third-party beneficiaries of the agreements with standing to sue²³; (3) seeking injunctive relief on a FRAND-encumbered SEP may violate the universal duty of good faith and fair dealing when an SEP holder has made a contractual commitment to license on FRAND terms²⁴; and (4) FRAND licensing “includes an obligation to negotiate in good faith,” and that obligation is “a two-way street.”²⁵

Question 17 – Injunctive Relief for FRAND-Encumbered SEPs

Question: How to determine whether IPR holders seeking injunction is justified? Under what circumstances such act of seeking injunction constitute abuse of dominant market position? Do you think whether it is necessary to impose restrictions on the applications for injunctive relief of standard essential patent holders? What conditions should be set? Please briefly state the reasons.

For the following reasons, we respectfully recommend against imposing a sanction under

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.”).

²² See, e.g., *Innovatio*, 2013 WL 5593609 at *4 (citing *In re Innovatio IP Ventures Patent Litig.*, 2013 WL 427167 at *17 (N.D. Ill. 2013)); *Microsoft Corp.*, 854 F. Supp. 2d at 999; *Apple, Inc.*, 886 F.Supp.2d at 1083-85.

²³ See, e.g., *Innovatio*, 2013 WL 5593609 at *17; *Microsoft Corp.*, 854 F. Supp. 2d at 999; *Apple, Inc.*, 886 F.Supp.2d at 1083-84; *Research In Motion Ltd. v. Motorola, Inc.*, 644 F.Supp.2d 788, 797 (N.D. Tex. 2008); *ESS Technology, Inc. v. PC-Tel., Inc.*, 1999 WL 33520483, *4 (N.D. Cal. Nov. 4, 1999).

²⁴ See, e.g., *Realtek Semiconductor Corp. v. LSI Corp.*, 2013 WL 2181717, at *7 (N.D. Cal. May 20, 2013) (holding that it was a breach of the RAND commitment to seek injunctive relief in another forum (there, the U.S. International Trade Commission) before offering a license to an implementer of a standard willing to accept a RAND license); Verdict Form at 3, *Microsoft v. Motorola*, Case No. C10-1823JLR (Sept. 4, 2013) (the jury found that Motorola’s conduct in seeking injunctive relief violated its duty of good faith and fair dealing with respect to its contractual commitments to the IEEE and the ITU); *Apple v. Motorola, Inc.*, 869 F. Supp. 2d 901, 913-14 (N.D. Ill. 2012); see also *Microsoft Corp. v. Motorola, Inc.*, 696 F.3d 872, 884-85 (9th Cir. 2012).

²⁵ *Ericsson Inc. v. D-Link Systems, Inc.*, 2013 WL 4046225 at *25 (E.D. Tex. Aug. 2013), *aff’d-in-part, reversed-in-part, and vacated-in-part on other grds by Ericsson v. D-Link Sys.*, 773 F.3d 1201 (Fed. Cir. 2014).

the AML for seeking injunctive relief.

First, as explained below, there is no empirical evidence to support the concerns that injunctive relief results in harm to innovation or consumers. Second, imposing an AML sanction is likely to reduce incentives to innovate and deter SEP holders from participating in standard setting, thereby depriving consumers of the substantial procompetitive benefits of standardized technologies.

In the alternative, should the NDRC decide to adopt an AML sanction for seeking injunctive relief—which we strongly urge it not to do—at the very least, it should limit liability to situations in which there is proof that a FRAND-encumbered SEP holder has engaged in patent holdup, i.e., that the patent holder used the threat of injunctive relief to demand supra-competitive royalties that are not consistent with prior commitments by the SEP holder. This is necessary to avoid the presumption that an SEP holder who seeks injunctive relief will necessarily use that relief (or the threat of it) to demand supra-competitive royalties.²⁶ That presumption would be unwarranted because market mechanisms impose a number of constraints that militate against acting upon the opportunity for 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.”²⁷ In addition, patent holders often enjoy a first-mover advantage if their technology is adopted as the standard. “As a result, patent holders who manufacture products using the standardized technology ‘may find it more profitable to offer attractive licensing terms in order to promote the adoption of the product using the standard, increasing demand for its product rather than extracting high royalties’”²⁸ per unit.

Furthermore, any liability theory that would require an SEP holder to prove that an accused infringer is an unwilling licensee threatens to deter participation in standard setting, particularly if an accused infringer can prove willingness simply by agreeing to be bound by terms determined by neutral adjudication. If the worst penalty an SEP infringer faces is not an injunction but merely paying, after neutral adjudication, the FRAND royalty that it should have

²⁶ See Anne Layne-Farrar & Koren W. Wong-Ervin, *Methodologies For Calculating FRAND Damages*, LAW360 at 3-4 (Oct. 8-10, 2014) (explaining that “the actual practice of hold-up requires two elements: opportunity and action,” listing a number of market mechanisms that militate against the opportunity for holdup), available at <https://www.ftc.gov/system/files/attachments/key-speeches-presentations/wong-ervin - methodologies for calculating frand damages.pdf>.

²⁷ 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.

²⁸ *Id.*

agreed to pay when first asked, then reverse holdup and holdout²⁹ 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 to, and therefore can only discourage, both innovation and participation in standard setting.³⁰

A. Empirical Evidence Suggests No 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 *reverse holdup* and *holdout*.

It is important to distinguish the hypotheses generated in the theoretical literature on patent holdup from such empirical evidence as would substantiate those hypotheses. Our own assessment and that of other close students of the subject is that the existing empirical evidence is not consistent with the view that holdup is a prevalent or systemic problem and is causing harm to consumers.³¹ The evidence required to support an AML sanction for the mere seeking of injunctive relief—which is likely to deter procompetitive conduct including participation in standard setting—requires that there be a probability, not a mere possibility, of higher prices, reduced output, and lower rates of innovation.

²⁹ 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 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. While reverse holdup refers to the situation when licensees use their leverage to obtain rates and terms below FRAND, holdout refers to licensees either refusing to take a FRAND license or delaying doing so.

³⁰ Such delay tactics are magnified when the patent owner has a large worldwide portfolio of SEPs requiring it to file lawsuits around the world to adjudicate a FRAND royalty on a patent-by-patent basis. In such cases, international arbitration on a portfolio basis would appear to be the most efficient and realistic means of resolving FRAND disputes.

³¹ See, e.g., J. Gregory Sidak, *The Antitrust Division's Devaluation of Standard-Essential Patents*, 104 GEORGETOWN 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).

In fact, evidence from the smartphone market, which is both patent and standard intensive, 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).³² A recent study by the Boston Consulting Group found that globally the cost per megabyte of data declined 99% 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% in the transition from 2G to 3G, and 67% in the transition from 3G to 4G; and the global average selling prices for smartphones decreased 23% from 2007 through 2014, while prices for the lowest-end phones fell 63% over the same period.³³ More generally, prices in SEP-reliant industries in the United States have declined faster than prices in non-SEP intensive industries.³⁴ In other words, the empirical evidence does not suggest 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 FRAND ecosystem.

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, as explained above, several market mechanisms are available to transactors to mitigate the incidence and likelihood of patent holdup. 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 transaction involving property.³⁵

³² According to data from Gartner, worldwide smartphone sales to end-users have increased over 900% between 2007 to 2014, and 320% 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 FINANCE BLOG (May 24, 2013), available at <http://ipfinance.blogspot.com/2013/05/theories-of-harm-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.

³³ 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.

³⁴ 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>.

³⁵ 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

Recognizing the theoretical nature of holdup concerns, the United States Court of Appeals for the Federal Circuit has held that claims 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.³⁶

B. An AML Sanction is Likely to Reduce Incentives to Innovate and Deter Participation in Standard Setting

AML remedies prohibiting or limiting the ability of a FRAND-encumbered SEP holder to seek injunctive relief are not likely in the public interest for the following three reasons.

First, an AML remedy is not only unnecessary to protect consumer welfare given that the law of contracts is sufficient to provide optimal deterrence, it is likely to be harmful.³⁷ 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—a factual determination that may be far from

IMPLICATIONS 26-30 (New York: Free Press 1975); *see also* Joshua D. Wright, Comm’r, Fed. Trade Comm’n, remarks before George Mason University of Law: SSOs, FRAND, and Antitrust: Lessons Learned from the Economics of Incomplete Contracts at 2-3 (Sept. 12, 2013) (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 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*, forthcoming 80(1) ANTITRUST L.J. (2015), *available at* http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2467939.

³⁶ *See, e.g.*, *Ericsson 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 at 5-7 (Mar. 2015), *available at* <http://www.crai.com/sites/default/files/publications/An-Analysis-of-the-Federal-Circuits-Decision-in-Ericsson-v-D-Link.pdf>.

³⁷ Douglas H. Ginsburg, Taylor M. Owings, & Joshua D. Wright, *Enjoining Injunctions: The Case Against Antitrust Liability for Standard Essential Patent Holders Who Seek Injunctions*, THE ANTITRUST SOURCE 1, 5-6 (Oct. 2014) (explaining, among other things, that the law of contracts is sufficient to provide optimal deterrence); *see also* 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).

clear in many cases—the outcome of a competition law 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.³⁸

Second, the prospect of AML 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; an unscrupulous or judgment-proof infringing user can force the SEP holder to take a below-FRAND rate.³⁹

Third, the prospect of AML 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.

Question 18 – Huawei v. ZTE Decision

Question: What is your opinion about the injunction rules as set by the European Court of Justice in Huawei v. ZTE case regarding SEPs? What would be your suggestions and advice to improve such rules?

Although we strongly recommend against adopting an AML sanction for seeking injunctive relief, we note that in *Huawei v. ZTE* the European Court of Justice created a safe harbor from competition law liability for an 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

³⁸ See, e.g., Luke Froeb & Mikhael Shor, *Innovators, Implementers, and Two-sided Hold-up*, THE ANTITRUST SOURCE at 3 (Aug. 2015) (explaining that curtailing injunctive relief serves “to shift bargaining power and profits from innovators to implementers,” which “weakens the value of patents and can significantly reduce the incentive to innovate”), available at http://www.americanbar.org/content/dam/aba/publishing/antitrust_source/aug15_froeb_7_21f.authcheckdam.pdf; Bernhard Ganglmair, Luke M. Froeb & Gregory J. Werden, *Patent Hold Up and Antitrust: How a Well-Intentioned Rule Could Retard Innovation*, 60 J. INDUS. ECON. 249 (2012) (finding that “enforcement of a FRAND commitment, with damages awarded for excessive license fees, solves the holdup problem, but can retard innovation, and it is even possible that this solution is worse than the problem”) [hereinafter Ganglmair et al.].

³⁹ See generally Ganglmair et al., *supra* note 38 (finding that the innovator’s and the implementer’s holdup problems are not directly comparable as it is possible for negotiations to occur prior to the implementer’s investment in the standard, but negotiations always occur after the innovator had made its investment in research and development).

court then put the burden on the alleged infringer to “diligently respond” to that offer, “in accordance with recognized 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.⁴⁰

Should the NDRC decide to adopt an AML sanction for the seeking of injunctive relief—which we strongly urge against—we recommend that, at the very least, the NDRC adopt a safe harbor approach similar to the one set forth by the court in *Huawei v. ZTE*.

Question 21 – Non Practicing Entities

Question: What special considerations do you think should be considered in the cases of merger review where IPR issues are involved? What are effective remedies?

We recommend against adopting an approach that would treat non-practicing entities (NPEs) differently than other entities. Instead, we recommend focusing upon the anticompetitive effects of the conduct and not the type of entity at issue.

Furthermore, we note that the rise of the frequency and cost of litigation involving NPEs is largely the result of a litigation problem and has little to do with the NPE business model; that litigation problem and its social costs are not new and should be resolved by more narrowly tailored means.⁴¹ Indeed, there is no evidence at this point that NPEs create a new or unique antitrust problem, that their business model warrants more or less scrutiny than others as a matter of antitrust analysis, or that competition enforcement agencies would be coming to the aid of consumers by devising creative extensions of or departures from the standard antitrust framework in order to address NPE’s conduct and business arrangements. If and when NPEs present legitimate antitrust problems, the standard antitrust framework is fully capable of preventing and providing adequate remedies for any anticompetitive conduct. Therefore, we recommend against adopting any new substantive antitrust standards or enforcement policies to reach NPEs, and instead recommend that the NDRC operate under the reasonable presumption that any inefficiencies associated with NPEs are the result of problems in the litigation system that are best addressed through litigation reform and not through the adoption of an AML remedy.

We appreciate the opportunity to comment and would be happy to respond to any questions the NDRC may have regarding this comment.

⁴⁰ *Id.* ¶¶ 66-67.

⁴¹ 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, 505 (2014).