

**COMMENT OF THE GLOBAL ANTITRUST INSTITUTE,
GEORGE MASON UNIVERSITY SCHOOL OF LAW,
ON THE INDIA DEPARTMENT OF INDUSTRIAL POLICY AND PROMOTION'S
DISCUSSION PAPER ON STANDARD ESSENTIAL PATENTS**

March 31, 2016

This comment is submitted in response to the India Department of Industrial Policy and Promotion's Discussion Paper on Standard Essential Patents and Their Availability on FRAND Terms. We appreciate the opportunity to comment and commend the Department 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

INTRODUCTION

Overall, we are concerned with the Discussion Paper's emphasis on holdup by patent holders, while omitting any concerns about holdup and holdout by implementers. Although there is serious and important scholarly work exploring the theoretical conditions under which holdup by patent holders 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 holdup and holdout by implementers. 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 a standard-development or standard-setting organization (SDO or 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.²

There is also the possibility of holdout by an implementer. While holdup by implementers refers to the situation in which a licensee uses its leverage to obtain rates and terms

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² Douglas H. Ginsburg et al., *The Troubling Use of Antitrust to Regulate FRAND Licensing*, COMPETITION POLICY INTERNATIONAL ANTITRUST CHRONICLE VOL. 10 NO. 1 (Oct. 15, 2015), http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2674759.

below FRAND (fair, reasonable, and nondiscriminatory) levels, holdout refers to a licensee either refusing to take a FRAND license or delaying its doing so.

It is important to distinguish the various hypotheses in the theoretical literature on patent holdup from the empirical evidence that would substantiate the theories underlying those hypotheses. Theories of anticompetitive harm predict systematic opportunism by patent holders and price increases across output markets that depend upon patented technology as an input. The anticompetitive theories in that literature also predict, in addition to higher prices, reduced output and less innovation.

The evidence required to justify a competition law sanction for seeking or enforcing injunctive relief requires that there be a probability, not a mere possibility, of higher prices, reduced output, and lower rates of innovation. In contrast to the predictions of the theories that such injunctions will have anticompetitive effects, we note products that intensively use SEPs have seen robust innovation as well as falling prices and increased output when compared to industries that do not rely upon SEPs.³

For example, evidence from the smartphone market, which is both standard and patent 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).⁴ More generally, prices in SEP-reliant industries in the United States have declined faster than prices in non-SEP intensive industries.⁵ 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 innovations making data transmission cheaper and the healthy state of competition); the cost per megabyte fell 95 percent in the transition from 2G to 3G, and 67

³ 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.”), <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) (surveying the economic literature and concluding that the empirical studies conducted thus far have not shown holdup is a common problem), <http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=DAF/COMP/WD%282014%2984&doclanguage=en>.

⁴ 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), <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.

⁵ 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), <http://www.nber.org/papers/w21090.pdf>.

percent in the transition from 3G to 4G; and the global average selling price for smartphones decreased 23 percent from 2007 through 2014, while prices for the lowest-end phones fell 63 percent over the same period.⁶ All of this indicates a thriving mobile market as opposed to a market in need of fixing and suggests caution prior to disrupting the carefully balanced FRAND ecosystem.

As evidence of holdup, some point to a small number of court cases in which the court-determined FRAND royalty was lower than the patent holder's demand. Among the numerous flaws with this argument—even holding aside the reasonable debate over whether the courts correctly determined reasonable royalty damages in those cases—is that the outcome of a handful of litigated cases says nothing about whether holdup is a widespread problem for competition and consumers.⁷ Economists have long understood the shortcomings of making inferences about a population from a sample of litigated cases.⁸

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. Indeed, 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.⁹

⁶ JULIO BEZERRA ET AL., THE MOBILE REVOLUTION: HOW MOBILE TECHNOLOGIES DRIVE A TRILLION DOLLAR IMPACT 3, 9 (The Boston Consulting Group Jan. 15, 2015), https://www.bcgperspectives.com/content/articles/telecommunications_technology_business_transformation_mobile_revolution/#chapter1.

⁷ It is worth noting that the district courts in the cases relied upon by commentators (e.g., *Microsoft v. Motorola* and *Innovatio*) employed methodologies that presumed the prevalence of both holdup and royalty stacking without requiring proof that either exists in a particular case. See *Microsoft Corp. v. Motorola, Inc.*, 2013 WL 2111217 at *12, *73-74 (W.D. Wash. Apr. 25, 2013); *In re Innovatio IP Ventures, LLC Patent Litig.*, 2013 WL 5593609 at *8-10 (N.D. Ill. Oct. 3, 2013). This approach was squarely rejected by the Federal Circuit Court of Appeals in *Ericsson v. D-Link Systems*, which held that to be considered as part of a FRAND damages analysis, concerns about holdup and royalty stacking must be proven rather than presumed. 773 F.3d 1201, 1234 (Fed. Cir. 2014). See also Sidak, *supra* note 3 at 65 (explaining that the adjudicated rates in *Microsoft v. Motorola* and *Innovatio* were not necessarily high enough to be FRAND, and that “[t]he methodologies used to determine the final rates in those two decisions contained significant economic flaws”); Anne Layne-Farrar & Koren W. Wong-Ervin, An Analysis of the Federal Circuit’s Decision in *Ericsson v. D-Link*, CPI ANTITRUST CHRONICLE at 5-6 (Mar. 2015) (explaining the Federal Circuit’s rejection of the approach taken by some of the district courts), <http://www.crai.com/sites/default/files/publications/An-Analysis-of-the-Federal-Circuits-Decision-in-Ericsson-v-D-Link.pdf> [hereinafter Layne-Farrar & Wong-Ervin].

⁸ See, e.g., George L. Priest & Benjamin Klein, *The Selection of Disputes for Litigation*, 13 J. LEGAL STUDIES 1 (1984).

⁹ 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

Several market mechanisms are available to transactors to mitigate the incidence and likelihood of patent holdup. 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 result is not surprising given the incentives of patent holders and implementers to reach efficient solutions that minimize the risk of opportunism.

Some have asserted that the theoretical predictions of holdup models cannot be tested and thus it is only prudent to assume a systemic holdup problem. This is incorrect. Were ex post opportunism in licensing SEPs a systematic problem—that is, were market failure preventing firms from efficiently contracting to minimize their risk, one would expect to observe one-sided SDO contracts that do not reflect the risk of opportunism and protect primarily SEP holders rather than potential licensees. However, the empirical evidence shows that SDO contract terms vary both across organizations and over time in response to changes in the perceived risk of patent holdup and other factors.¹²

Recognizing the theoretical nature of holdup concerns, the United States Court of Appeals for the Federal Circuit (which has nationwide jurisdiction over patent disputes) 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

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) (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”), https://www.ftc.gov/sites/default/files/documents/public_statements/ssos-frand-and-antitrust-lessons-economics-incomplete-contracts/130912cpip.pdf.

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), 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.* (internal citation omitted).

¹² *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

We are also concerned with the Discussion Paper’s summary of U.S. and EU law. In particular, in the United States, there is no per se rule or presumption against injunctive relief on a FRAND-assured SEP. Instead, as the U.S. Court of Appeals for the Federal Circuit explained in *Apple v. Motorola*, there is “no reason to create . . . a separate rule or analytical framework for addressing injunctions for FRAND-committed patents. The framework laid out by the Supreme Court in *eBay* [*v. MercExchange*], as interpreted by subsequent decisions of this court, provides ample strength and flexibility for addressing the unique aspects of FRAND-committed patents and industry standards in general.”¹⁴ Under *eBay*, for an injunction to issue, a court must find that the patent holder established: “(1) that it has suffered an irreparable injury; (2) that remedies available at law, such as monetary damages, are inadequate to compensate for that injury; (3) that, considering the balance of hardships between the plaintiff and defendant, a remedy in equity is warranted; and (4) that the public interest would not be disserved by [an] injunction.”¹⁵ This critical gatekeeping by courts minimizes the risk of harm to competition and consumers. As such, the mere seeking of injunctive relief alone does not monopolize the market because courts independently assess whether an injunction is warranted, taking into consideration whether the public interest would be disserved by an injunction.

In addition, no U.S. court has held that seeking or enforcing injunctive relief on a FRAND-assured SEP constitutes an antitrust violation. Instead, every U.S. court that has addressed the injunction issue has done so under contract, not antitrust, principles.¹⁶

With respect to the European Union, in *Huawei v. ZTE* (July 2015), the European Court of Justice adopted a safe harbor from antitrust liability.¹⁷ Specifically, 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, should be free of liability. The Court quite properly put the burden on the alleged infringer to “diligently respond” to the SEP holder’s 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

something more than a general argument that these phenomena are possibilities is necessary.”); *see also* Layne-Farrar & Wong-Ervin, *supra* note 7, at 5-7.

¹⁴ *Apple Inc. v. Motorola, Inc.*, 757 F.3d 1286, 1332 (Fed. Cir. 2014) (“To the extent that the district court applied a *per se* rule that injunctions are unavailable for SEPs, it erred.”), *overruled on other grounds by Williamson v. Citrix Online, LLC*, 792 F.3d 1339 (Fed. Cir. 2015).

¹⁵ *eBay Inc. v. MercExchange, L.L.C.*, 547 U.S. 388, 391 (2006).

¹⁶ *See, e.g., Realtek Semiconductor Corp. v. LSI Corp.*, 2013 WL 2181717, at *7 (N.D. Cal. May 20, 2013); 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); *Microsoft Corp. v. Motorola, Inc.*, 696 F.3d 872, 884-85 (9th Cir. 2012).

¹⁷ Case C-170/13, *Huawei Technologies Co. v. ZTE Corp.* (July 16, 2015), <http://curia.europa.eu/juris/document/document.jsf?text=&docid=165911&pageIndex=0&doclang=EN&mode=lst&dir=&occ=first&part=1&cid=603775>.

bond or funds in escrow) from the time at which the counter-offer is rejected and prior to using the teachings of the SEP.¹⁸

In its decision, the Court recognized that SEP holders have “the right to bring an action for prohibitory injunction or for the recall of products,” and made clear that the SEP holder’s right can be limited only in particular and exceptional circumstances.¹⁹ The decision recognizes concerns about reverse-holdup, stating that the Court will not tolerate infringers’ “delaying tactics.”²⁰ The Court reiterates, in multiple places throughout the decision, that its competition analysis relates to a situation between two *competitors*, which suggests that the Court’s holding and analysis is limited to matters involving competitors. Lastly, the Court analyzed the seeking of injunctive relief as possibly *exclusionary* as opposed to *exploitative* conduct, such as charging excessive or unfairly high royalties.

In sum, we strongly recommend against imposing an antitrust law sanction for seeking or enforcing injunctive relief, which would likely reduce incentives to innovate and deter SEP holders from participating in standard setting, thereby depriving consumers of the substantial procompetitive benefits of standardized technologies.²¹ Should the Department decide to adopt such a sanction, however, at the very least it should adopt a safe harbor approach similar to that crafted by the European Court of Justice in *Huawei v. ZTE*.

ANSWERS TO QUESTIONNAIRE

Question A – IPR Legislation

a) Whether the existing provisions in the various IPR related legislations, especially the Patents Act, 1970 and Anti-Trust legislations, are adequate to address the issues related to SEPs and their availability on FRAND terms? If not, then can these issues be addressed through appropriate amendments to such IPR related legislations? If so, what changes should be affected.

We respectfully urge the Department not to adopt or recommend special legislation or amendments to regulate SEPs or licensing on FRAND terms.

First, existing intellectual property and antitrust laws are adequate to address the issues relating to FRAND licensing. Indeed, one of the main benefits of relying upon existing antitrust law in particular is that it proceeds primarily by applying, on a case-by-case basis, a uniform

¹⁸ *Id.* ¶¶ 66-67.

¹⁹ *Id.* ¶¶ 65-66, 71.

²⁰ *Id.* ¶ 65.

²¹ See 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 1, 5-6 (Oct. 2014) (explaining, among other things, that the law of contracts is sufficient to provide optimal deterrence) [hereinafter Ginsburg, Owings, & Wright]; 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).

methodology grounded in economic analysis and sensitive to the facts of the particular case. This approach has proven over time more likely to maximize consumer welfare than ex ante regulation. Contract law also provides a means to resolve disputes arising from FRAND licensing given that a FRAND commitment is a contractual commitment and contract remedies are sufficient optimally to deter holdup.²² Specifically, in analyzing the contractual nature of the FRAND commitment, U.S. courts have held that: (1) a commitment to an SDO to license on FRAND terms constitutes a binding contract between the SEP holder, the SDO, and its members²³; (2) potential users of the standard are third-party beneficiaries of the agreements with standing to sue²⁴; (3) seeking injunctive relief on a FRAND-assured SEP may violate the universal duty of good faith and fair dealing when a SEP holder has made a contractual commitment to license on FRAND terms²⁵; and (4) FRAND licensing “includes an obligation to negotiate in good faith,” which obligation is “a two-way street.”²⁶

Second, identification of a market imperfection is a necessary, but not sufficient condition to justify regulation on economic grounds.²⁷ Even if one were to believe SEP-reliant markets were performing imperfectly, the burden on regulators is to demonstrate that an antitrust

²² 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).

²³ 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.

²⁴ 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).

²⁵ 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).

²⁶ *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).

²⁷ See Joshua D. Wright, Comm’r, Fed. Trade Comm’n, Regulation in High-Tech Markets: Public Choice, Regulatory Capture, and the FTC, Remarks at the Big Ideas about Information Lecture (Apr. 2, 2015), https://www.ftc.gov/system/files/documents/public_statements/634631/150402clemson.pdf. See also Harold Demsetz, *Information and Efficiency: Another Viewpoint*, 12 J. L. & ECON. 1, 1-22 (1969).

remedy or regulation would improve efficiency not merely that the market is underperforming relative to an unrealistic benchmark such as “perfect competition.”²⁸

Moreover, as discussed in the Introduction, above, there is no credible causal evidence to support the existence of a market imperfection in markets that make intensive use of SEPs. As explained there, evidence from the smartphone market certainly does not suggest that market imperfections are hampering market performance. Output has grown exponentially, while market concentration has fallen, and wireless service prices have dropped relative to the overall CPI.²⁹ 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. The evidence makes clear the burden is appropriately allocated to the proponents of additional intervention to solve SEP-related opportunism to demonstrate that the particular intervention would improve welfare.

Questions B & C – IPR Policy

b) What should be the IPR policy of Indian Standard Setting Organizations in developing Standards for Telecommunication sector and other sectors in India where Standard Essential Patents are used?

c) Whether there is a need for prescribing guidelines on working and operation of Standard Setting Organizations by Government of India? If so, what all areas of working of SSOs should they cover?

We respectfully urge the Department not issue or recommend guidelines or a one-size-fits all template for SDO policies regarding IPRs. In our experience, the issues and choices regarding specific rules are best left to individual SDOs and their members to decide. SDOs “vary widely in size, formality, organization and scope,”³⁰ and therefore individual SDOs may need to adopt different approaches to meet the specific needs of their members. In addition,

²⁸ Harold Demsetz, *Information and Efficiency: Another Viewpoint*, 12 J. L. & ECON. 12(1), 1-22. at 1 (explaining that those who adopt the nirvana viewpoint seek to discover discrepancies between the perfect competition and the real and if discrepancies are found, they deduce that the real is inefficient).

²⁹ 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), <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.

³⁰ U.S. Dep’t of Justice and Fed. Trade Comm’n, *Antitrust Enforcement and Intellectual Property Rights: Promoting Innovation and Competition* (2007) at 33 n.5, <http://www.ftc.gov/sites/default/files/documents/reports/antitrust-enforcement-and-intellectual-property-rights-promoting-innovation-and-competition-report.s.department-justice-and-federal-trade-commission/p040101promotinginnovationandcompetitionrpt0704.pdf>.

issuance of guidelines by a government agency may unduly influence private SDOs and their members to adopt policies that might not otherwise gain consensus support within a particular SDO and that may not best meet the needs of that SDO, its members, and the public. This could occur because the SDO believes failing to adopt the specified policy is not permitted or because failing to adopt the policy could subject the SDO and its members to other legal liabilities. Accordingly, the U.S. Antitrust Agencies have taken the position that they do “not advocate that SSOs [or SDOs] adopt any specific disclosure or licensing policy, and the Agencies do not suggest that any specific disclosure or licensing policy is required.”³¹

Questions D, E, & F – Royalty Rates

d) Whether there is a need for prescribing guidelines on setting or fixing the royalties in respect of Standard Essential Patents and defining FRAND terms by Government of India? If not, which would be appropriate authority to issue the guidelines and what could be the possible FRAND terms?

e) On what basis should the royalty rates in SEPs be decided? Should it be based on Smallest Saleable Patent Practicing Component (SSPPC), or on the net price of the Downstream Product, or some other criterion?

f) Whether total payment of royalty in case of various SEPs used in one product should be capped? If so, then should this limit be fixed by Government of India or some other statutory body or left to be decided among the parties?

We strongly urge the Department not to impose or recommend royalty caps or guidelines on how private parties should conduct arms-length licensing negotiations.

In the United States, firms are free unilaterally to set or privately to negotiate their prices; it follows that a firm that possesses or acquires monopoly power lawfully is free to charge profit-maximizing prices, which induce the risk-taking and entrepreneurial behavior by firms that lead to innovation and economic growth.³² Requiring by law that prices be “fair” or “reasonable,” or

³¹ *Id.* at 48.

³² See, e.g., *Verizon Commc’ns Inc. v. Law Offices of Curtis V. Trinko, LLP*, 540 U.S. 398, 407 (2004). Likewise, the U.S. antitrust agencies do not regulate price. 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.”), <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 other patents that may not be subject to a voluntary FRAND

prohibiting a firm from charging “unfairly high” 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.”³³ 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 be unlawful only if they are the result of conduct that is unlawful on other grounds.

Moreover, economics teaches that absent market information it can be especially difficult to identify a “fair” price. Indeed, it is particularly difficult to assess the “fairness” of prices associated with licensing IPRs both because the fixed costs of innovation require prices above marginal cost in order to secure an adequate return to investments in innovation, 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 competition laws.³⁴

In addition, in order to determine whether a particular price is excessive, the competition agency would need to calculate a reasonable royalty range as a baseline against which to compare the allegedly excessive price. For the reasons stated above, the antitrust laws in the U.S. generally avoid the administrative determination of prices. In our experience, competition agencies will not possess the information necessary to determine market prices generally, and royalty rates for inventions in particular. This is a task that is best left to the market or, as a last resort, to the courts in those limited cases when the parties cannot reach agreement.³⁵

Should an agency insist upon applying an excessive pricing prohibition to IPRs, it could use the hypothetical negotiation framework developed under U.S. patent law to determine the *minimum* reasonable royalty. This, however, is a complex methodology intended for use by the courts upon development of a full record, which usually includes detailed expert reports and opportunities for witnesses to testify and be subjected to cross-examination. In addition, it is essential to keep in mind that a reasonable royalty calculation using the hypothetical negotiation framework sets a *minimum* royalty; the patentee should have the opportunity to prove its lost-

commitment.”),

https://www.ftc.gov/system/files/documents/public_statements/582451/140915georgetownlaw.pdf.

³³ *Id.*

³⁴ Douglas H. Ginsburg et al., *Excessive Royalty Prohibitions and the Dangers of Pushing Vigorous Competition and Harming Incentives to Innovate*, COMPETITION POLICY INTERNATIONAL ANTITRUST BULLETIN (March 14, 2016), <https://www.competitionpolicyinternational.com/wp-content/uploads/2016/03/Excessive-Royalty-Prohibitions.pdf>.

³⁵ 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), http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2668623.

profits as part of its damages. In an excessive pricing case, these lost profits equal the profits denied by the “unfairly high” pricing provision.³⁶ As such, when used in an “unfairly high” pricing investigation, a reasonable royalty calculation should likewise be treated as a minimum starting point to avoid imposing a royalty that undercompensates the patentee—a result that would significantly reduce the patentee’s incentives to innovate.

In an action for damages resulting from patent infringement, the goal of a reasonable royalty calculation is to determine the market price the infringer would have paid if it had licensed rather than infringed the patent. Accordingly, that amount should depend upon what a willing licensee and a willing licensor would have agreed to in a hypothetical negotiation. The seminal case in the United States, *Georgia-Pacific Corp. v. United States Plywood Corp.*, describes the proper measure of damages as “[t]he amount that a licensor (such as the patentee) and the licensee (such as the infringer) would have agreed upon (at the time the infringement began) if both had been trying in good faith to reach an agreement.”³⁷ The central tenet of this framework is the willing licensor/willing licensee model, under which the amount awarded would have been acceptable to both parties.

U.S. district courts have recently adopted modified versions of the *Georgia Pacific* framework in determining prospective royalties in cases involving FRAND-assured SEPs. The U.S. Court of Appeals for the Federal Circuit in *Ericsson, Inc. v. D-Link Systems, Inc.* held that “[t]here is no *Georgia-Pacific*-like list of factors that district courts can parrot for every case involving [F]RAND-encumbered patents.”³⁸ Instead, courts must instruct the jury only on factors that are relevant to the record developed at trial, and must instruct the jury on the actual FRAND commitment at issue. Because each technology and market is different, the evidence considered and the weight placed upon each factor will vary based upon the circumstances.

In constructing the hypothetical negotiation, U.S. courts consider evidence of market factors that the negotiating parties would have considered in determining the royalty rate. Often comparable licenses are the best available evidence of the market value of the patent. Accordingly, the Federal Circuit recently held in *Ericsson v. D-Link* that evidence about comparable licenses based upon the end product should properly be considered by the jury in determining patent damages. The court reasoned that “[m]aking real world, relevant licenses inadmissible ... would often make it impossible for a patentee to resort to license-based evidence.”³⁹ Indeed, as a practical matter, 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. A number of considerations may dictate private parties’ selection of a royalty base in a

³⁶ Specifically, U.S. patent law provides that “[u]pon finding for the claimant the court shall award the claimant damages adequate to compensate for the infringement, but in no event less than a reasonable royalty for the use made of the invention by the infringer, together with interest and costs as fixed by the court.” 35 U.S.C. §284 (2014).

³⁷ *Georgia-Pacific Corp., v. U.S. Plywood Corp.*, 318 F. Supp. 1116, 1120 (S.D.N.Y. 1970), *modified and aff’d*, 446 F.2d 295 (2d Cir. 1971).

³⁸ 773 F.3d 1201, 1235 (Fed. Cir. 2014).

³⁹ *Id.* at 1228.

freely negotiated license agreement. Industry practice and the convenience of the parties is one such consideration; other commercial dealings between the parties is another.

The Federal Circuit also explained that, while prior licenses “are almost never perfectly analogous to the [licenses at issue in a later] infringement action,” that “generally goes to the weight of the evidence, not its admissibility.”⁴⁰ For example, allegedly comparable licenses may cover more patents than are at issue in the current action, or include cross-licensing terms, or cover foreign intellectual property rights, or be calculated as some percentage of the value of a multi-component product. “Testimony relying on comparable licenses must account for such distinguishing facts when invoking them to value the patented invention.”⁴¹ When considering comparable licenses, it is also important to consider factors such as the circumstances, timing, and relative bargaining position of the parties to those licenses. For example, a license entered when the commercial viability of the technology is still uncertain will, in general, provide for a lower royalty than a license entered into when the commercial viability of the technology has been established or has increased.

With respect to the appropriate royalty base, as the U.S. Court of Appeals for the Federal Circuit recently explained in *Ericsson v. D-Link*, the “smallest salable patent practicing unit” (SSPPU) approach was created as an evidentiary rule “to help our jury system reliably implement the substantive statutory requirement of apportionment of royalty damages to the invention’s value.”⁴² The SSPPU approach does not impose limitations upon private arms-length negotiations in the market place. The court went on to explain that:

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.⁴³

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, so 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

⁴⁰ *Id.* at 1227.

⁴¹ *Id.*

⁴² *Id.* at 1226.

⁴³ *Id.*

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.⁴⁴

We also note that the Antitrust Division of the U.S. Department of (DOJ) issued a Business Review Letter on February 2, 2015, in response to a request by the Institute of Electrical and Electronics Engineers (IEEE), that addressed the recommended use of the SSPPU approach.⁴⁵ 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].⁴⁶

In other words, the DOJ did not endorse the SSPPU approach as a requirement for all SDOs, 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 its preferred 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.⁴⁷

Lastly, with respect to concerns about so-called "royalty stacking," the aggregate royalty should be considered, if at all, only when there is evidence that it would have a severely adverse effect upon the product market, or at a minimum substantially restrict output. Some claim that

⁴⁴ See Layne-Farrar & Wong-Ervin, *supra* note 7.

⁴⁵ Ltr. from Renata B. Hesse, Acting Assistant Att'y Gen., U.S. Dep't of Just., to Michael A. Lindsay, Dorsey & Whitney (Feb. 2, 2015), <http://www.justice.gov/sites/default/files/atr/legacy/2015/02/02/311470.pdf>.

⁴⁶ *Id.* at 2-3.

⁴⁷ *Id.* at 12-13.

devices such as mobile phones, which implement thousands of patents, are subject to royalty stacking. The evidence, however, is not consistent with these theoretical claims. For example, a recent empirical study shows that, contrary to the predictions of the royalty stacking theory, between 1994 and 2013, the non-quality adjusted average selling price of a mobile device fell 8.1% per year on average; the number of devices sold each year rose 62 times or 20.1% per year on average; the number of device manufactures grew from one in 1994 to 43 in 2003; and since 2001, concentration fell consistently and the average gross margin of SEP holders remained constant.⁴⁸

As the U.S. Court of Appeals for the Federal Circuit explained in *Ericsson v. D-Link*, the burden is on the implementer (or, in an excessive pricing enforcement action, the agency) to provide evidence establishing the actual cumulative royalty, and that royalty must be assessed to determine whether it is excessive.⁴⁹ The court of appeals rejected the approach taken by some U.S. first instance courts of considering the aggregate royalties that would apply if one assumed that all SEP holders charged the same or similar rates. The problem with that approach is that not all patents are created equal and FRAND rates should reflect the value of the particular SEPs at issue. In addition, many licensees do not pay cash royalties for every SEP. Instead, there may be cross-licenses or other business relationships that allow for royalty-free exploitation of some SEPs.

There are several other important principles to keep in mind. First, it is important to distinguish between, on the one hand, an aggregate royalty that reflects the cumulative value of the various SEPs included in a given standard and, on the other hand, an aggregate royalty burden that includes at least some supra-FRAND rates, i.e., individual holdup rates. The former is simply the cost of making products that benefit from valuable IP, analogous to any other cost of doing business. For example, automakers face an aggregate input cost covering all of the many components needed to produce a car. There is nothing inherently anticompetitive in needing multiple inputs to produce a particular good, nor in each of those input suppliers charging the market price for its contribution.⁵⁰

Second, proper apportionment can eliminate the risks of both hold-up and royalty stacking. As long as the inputs for multi-component products are priced according to the value of each patent's contribution to the end product, no SEP holder can be faulted for either holdup or stacking. Proper apportionment is a reasonable means to accomplish this goal.⁵¹

Third, it is critical to distinguish between the number of SEPs and the number of SEP holders. Given the prevalence of portfolio licensing, it is the number of SEP holders and not the number of SEPs that is relevant. Even if licenses for 1,000 SEPs were required to implement a

⁴⁸ Alexander Galetovic & Kirti Gupta, *Royalty Stacking and Standard Essential Patents: Theory and Evidence from the World Mobile Wireless Industry* (Stanford Univ. Hoover Institution Working Grp. on Intellectual Property, Innovation, and Prosperity, Working Paper Series No. 15012, 2015), <http://hooverip2.org/wp-content/uploads/ip2-wp15012-paper.pdf>.

⁴⁹ *Ericsson*, 773 F.3d at 1234.

⁵⁰ Layne-Farrar & Wong-Ervin, *supra* note 7, at 4-5.

⁵¹ *Id.* at 5.

given standard, if all of those SEPs were held by a single entity that licensed on a portfolio basis, there would be no stack at all.⁵²

Fourth, for a variety of reasons, not all SEP holders seek license payments. As the Federal Circuit pointed out in *Ericsson v. D-Link*, “[t]he mere fact that thousands of patents are declared to be essential to a standard does not mean that a standard-compliant company will necessarily have to pay a royalty to each SEP holder.”⁵³

Fifth, one of the assumptions underlying the Cournot complements problem (the theory upon which the concern with royalty stacking is based) is that each input supplier will price its inputs without regard to the prices charged for other needed inputs.⁵⁴ But there is no reason to assume that will necessarily be the case in a standard-setting context. For example, SEP holders will be cooperating with one another (and with all other member of their standard-setting organization) in the development of the standard, and are therefore likely to know what patents are expected to be asserted and by whom. As a result, there is no reason to presume that SEP holders will set rates without regard to the full complement of known SEPs.⁵⁵

Questions G, I, & J – Non-Disclosure Agreements and Transparency

g) Whether the practice of Non-Disclosure Agreements (NDA) leads to misuse of dominant position and is against the FRAND terms?

i) What steps can be taken to make the practice of Cross-Licensing transparent so that royalty rates are fair & reasonable?

j) What steps can be taken to make the practice of Patent Pooling transparent so that royalty rates are fair & reasonable?

To our knowledge, no U.S. court has held that including an NDA in a patent license is an antitrust violation. This is not surprising given the obvious economic benefits of an NDA to the parties entering into a patent license. Because patent licenses often include the confidential business information of both the licensor and the licensee, and procompetitive licensing depends critically upon the ability of the parties to negotiate without fear that sensitive information will be revealed to non-parties, NDAs are an essential safeguard. Accordingly, in *Ericsson v. Intex*,

⁵² *Id.* at 6.

⁵³ 773 F.3d at 1234.

⁵⁴ AUGUSTIN COURNOT, RESEARCHES INTO THE MATHEMATICAL PRINCIPLES OF THE THEORY OF WEALTH 99-116 (Nathaniel T. Bacon trans., MacMillan Co. 1897) (1838); *see also* Bruce H. Kobayashi, *Does Economics Provide a Reliable Guide to Regulating Commodity Bundling by Firms? A Survey of the Economic Literature*, 1 J. COMP. L. & ECON 707, 714 (2005).

⁵⁵ Layne-Farrar & Wong-Ervin, *supra* note 7, at 5.

the Delhi High Court concluded that including an NDA is legitimate and a “sine qua non in every licensing deal, particularly in patent licensing negotiations.”⁵⁶

Given that the purpose of antitrust law is to protect the competitive process and not individual competitors, it is difficult to see how including NDAs in a license could amount to an abuse of dominance. To the extent the antitrust theory of harm relating to NDAs is that their inclusion in licenses undermines the “non-discriminatory” commitment in the FRAND license, an antitrust remedy is inappropriate and unnecessary. The FRAND commitment is a contract and failure to perform that contract warrants contract remedies. There is no reason to impose an antitrust sanction for the inclusion of one contract term in order to facilitate performance with another. That would be tantamount to imposing an antitrust duty to risk disclosing to rivals one’s confidential and sensitive business information.

For the same reasons, we respectfully disagree that cross-licensing and patent pooling require transparency for royalty rates to be fair and reasonable. For the vast majority of cases, the parties rely upon the contracting process to obtain information needed to enter into a license agreement. In the event of a dispute over royalties, the parties can use discovery to obtain under a protective order, which balances the interests of transparency and confidentiality, any additional information regarding cross-licenses or patent pooling they may need.

Moreover, the “nondiscriminatory” element of a FRAND commitment does not require licensing terms, including price, to be the same for each licensee. Instead, depending upon the specific SDO’s IPR Policy at issue, the “nondiscriminatory” prong is typically about access to essential patents, not the specific terms of a license.⁵⁷ Or, as one judge has explained, “[t]he FRAND nondiscrimination requirement prohibits ‘unfair discrimination,’ but it does not require uniform treatment across licensees, nor does it require the same terms for every manufacturer or competitor.”⁵⁸

⁵⁶ *Telefonaktiebolaget Lm Ericsson v. Intex Tech. (India) Ltd.*, I.A. No. 6735/2014 in CS(OS) No.1045/2014, at ¶ 138 (Mar. 13, 2015), <http://lobis.nic.in/ddir/dhc/MAN/judgement/16-03-2015/MAN13032015S10452014.pdf>.

⁵⁷ *See, e.g.*, Guidelines to the Intellectual Property Rights Policy of the Telecommunications Industry Association (Mar. 2005) (“The term ‘non-discriminatory’ does not mean or imply that licensing terms must be the same for all applicants. Discrimination and difference are not the same. It is understood that the process of license negotiation and the components of consideration between parties can vary substantially yet be fair. The term ‘non-discriminatory’ implies a standard of even-handedness. An example of conduct that would constitute discrimination is a willingness to license all applicants except for competitors of the licensor.”), http://www.tiaonline.org/sites/default/files/pages/IPRGuidelines_edition1_companion_to_4th_ed_engmanual_0.pdf. *See also generally* Anne Layne-Farrar, *Proactive or Reactive? An Empirical Assessment of IPR Policy Revisions in the Wake of Antitrust Actions* (Dec. 9, 2013), http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2384724.

⁵⁸ *In the Matter of Certain Wireless Devices With 3G Capabilities And Components Thereof*, Investigation No. 337-TA-800 Initial Determination, Administrative Law Judge David P. Shaw at 432 (June 28, 2013).

Whether discriminatory licensing—including FRAND licensing—is anticompetitive should be determined by an effects-based analysis that recognizes: (1) discriminatory licensing can serve legitimate, procompetitive ends and enhance consumer welfare⁵⁹; and (2) price discrimination helps a firm with fixed costs to recovery its outlays and is sometimes essential if the firm is to recovery those outlays.⁶⁰ Indeed, an important aspect to consider in evaluating licensing discrimination as compared to price discrimination for physical goods is the nature of IP development. The innovation process typically involves large upfront investments in research and development yet very low marginal costs for implementation. Economists have observed that price discrimination can be an important mechanism for recovering fixed costs under these circumstances.⁶¹

Questions H & L – Remedies for FRAND-Assured SEPs

h) What should be the appropriate mode and remedy for settlement of disputes in matters related to SEPs, especially while deciding FRAND terms? Whether Injunctions are a suitable remedy in cases pertaining to SEPs and their availability on FRAND terms?

l) Whether there is a need of setting up of an independent expert body to determine FRAND terms for SEPs and devising methodology for such purpose?

We strongly urge the Department not to create or recommend an expert body to determine FRAND terms for SEPs. Instead, particularly in cases when a patent owner has a large worldwide portfolio of SEPs, international arbitration on a portfolio basis is likely the most efficient and realistic means of resolving FRAND disputes. Otherwise, the patent owner would be required to file lawsuits around the world to adjudicate royalties on a patent-by-patent basis.

The availability of injunctive relief is an essential remedy. First, FRAND-assured SEP holders need the credible threat of an injunction if they are to recoup the value added by their patents and maintain their incentives to innovate. Second, when an injunction is unavailable, an unscrupulous or judgment-proof infringer can force the SEP holder to accept a below-FRAND

⁵⁹ See, e.g., Anne Layne-Farrar, *Nondiscriminatory Pricing: Is Standard Setting Different?*, 6 J. COMPETITION L. & ECON. 811, 811, 814-17 (2010) (the existing literature on price discrimination in traditional markets for goods and services and on licensing intellectual property establishes that “price discrimination is not necessarily harmful, and in some cases can even increase consumer welfare; most IP licensing is characterized by ‘discrimination’ in that rates and terms tend to differ across licensees; proof of market power must remain the first step in any inquiry on allegations of anticompetitive IP licensing discrimination; and as of yet, no widely applicable benchmarks or rules for distinguishing harmful from beneficial or non-harmful licensing discrimination have emerged, meaning that a careful, quantitative effects-based analysis remains the best approach.”) [hereinafter Layne-Farrar].

⁶⁰ *Id.* at 19 (citing William J. Baumol & Daniel G. Swanson, *The New Economy and Ubiquitous Competitive Price Discrimination: Identifying Defensible Criteria of Market Power*, *Symposium on Competitive Price Discrimination*, 70 ANTITRUST L.J. 661 (2003)).

⁶¹ Layne-Farrar, *supra* note 21 at 19 & n.53-54 (collecting cites).

rate.⁶² Specifically, if the worst penalty an SEP infringer faces is not an injunction but merely paying, after an adjudication, the FRAND royalty 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 to, and therefore can only discourage, both innovation and participation in standard setting. Without injunctive relief, holdouts may actually reduce the gains from innovation and standardization.

CONCLUSION

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

⁶² 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) 8 (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).