

# Memorandum

DEPARTMENT OF INDUSTRIAL POLICY AND PROMOTION  
GOVERNMENT OF INDIA  
MINISTRY OF COMMERCE & INDUSTRY

**DATE:** March 30, 2016  
**SUBJECT:** Standard-Essential Patents

Ladies and Gentlemen:

The Department of Industrial Policy and Promotion of the Indian Ministry of Commerce and Industry (hereinafter the Ministry) has invited public comments on recommended revisions of its policy toward the enforcement of standard-essential patents (SEPs). I respectfully submit my comments and suggestions.

My name is J. Gregory Sidak. I am the founder and chairman of Criterion Economics, L.L.C. in Washington, D.C. I am also a founding co-editor of the *Journal of Competition Law & Economics*, published quarterly by the Oxford University Press since 2005. For more than three decades, I have worked at the intersection of law and economics in academia, government, and private practice. As an expert economic consultant, I have served clients in the Americas, Europe, Asia, and the Pacific. I have done extensive work in the area of standard-essential patents: I have testified as an economic expert on issues regarding fair, reasonable, and nondiscriminatory (FRAND) licensing in various legal proceedings, I have published academic articles, and I have presented my research on FRAND matters and related topics at international conferences. I have also served as Judge Richard Posner's court-appointed neutral economic expert on patent damages in the U.S. District Court for the Northern District of Illinois. With respect to this submission, I do not represent any party, and I have no economic interest in the adoption of any specific policy.

I attach eight articles that I have written in recent years that amplify the ideas expressed in my comments submitted herein. The first article, *The Meaning of FRAND, Part I: Royalties*, analyzes the economic methodology to determine a FRAND royalty for SEPs.<sup>1</sup> The second article, *The Proper Royalty Base for Patent Damages*, analyzes the selection of the royalty base for the calculation of patent damages.<sup>2</sup> The third article, *Bargaining Power and Patent Damages*, outlines a methodology that enables the finder of fact to determine the bargaining range and a point royalty for a hypothetical negotiation for a license for the infringed patent.<sup>3</sup> The fourth article, *Apportionment, FRAND Royalties, and Comparable Licenses After Ericsson v. D-Link*, analyzes the principles that the

<sup>1</sup> J. Gregory Sidak, *The Meaning of FRAND, Part I: Royalties*, 9 J. COMPETITION L. & ECON. 931 (2013), <https://www.criterioneconomics.com/meaning-of-frand-royalties-for-standard-essential-patents.html>.

<sup>2</sup> J. Gregory Sidak, *The Proper Royalty Base for Patent Damages*, 10 J. COMPETITION L. & ECON. 989 (2014), <https://www.criterioneconomics.com/the-proper-royalty-base-for-patent-damages.html>.

<sup>3</sup> J. Gregory Sidak, *Bargaining Power and Patent Damages*, 19 STAN. TECH. L. REV. 1 (2015), <https://www.criterioneconomics.com/bargaining-power-and-patent-damages.html>.

Federal Circuit developed in cases concerning FRAND-committed SEPs, including the selection of the royalty base, as well as the relevance that the patent-holdup and royalty-stacking conjectures should have for the calculation of a FRAND royalty.<sup>4</sup> The fifth article, *The Meaning of FRAND, Part II: Injunctions*, analyzes the SEP holder's right to request and obtain an injunction against an infringer of an SEP.<sup>5</sup> The sixth article, *A FRAND Contract's Intended Third-Party Beneficiary*, examines the rights that a FRAND contract confers on a standard's implementer, as a third-party beneficiary of a FRAND commitment.<sup>6</sup> I also analyze the principles that a court should apply when interpreting ambiguous terms of a FRAND commitment. The seventh article, *Patent Holdup and Oligopsonistic Collusion in Standard-Setting Organizations*, evaluates the risk of horizontal collusion within standard-setting organizations (SSOs).<sup>7</sup> The eighth article, *Evading Portfolio Royalties for Standard-Essential Patents Through Validity Challenges*, refutes the assumption that a licensee's challenge to the validity of an SEP unambiguously benefits consumers.<sup>8</sup>

My comments do not include analysis of the opinion that the High Court of Delhi issued on March 30, 2016 in *Ericsson v. Competition Commission of India*.<sup>9</sup> Nonetheless, I would welcome the opportunity to supplement my comments with an economic analysis of that decision, if the Ministry finds such an addition appropriate.

## 1. Defining FRAND Terms

The Ministry has asked whether the Government of India needs to prescribe guidelines for defining FRAND terms, and, in the event that such guidelines are necessary, which agency should issue the guidelines. The Ministry has also asked whether it would be necessary to establish an independent expert body that would determine FRAND royalties.

I respectfully suggest that the Ministry refrain from imposing or endorsing any uniform definition of FRAND terms, and instead allow the SSO and the SEP holder to define the rights and obligations arising from their voluntary agreement. In case of a dispute, Indian courts (or an arbitral body)

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<sup>4</sup> J. Gregory Sidak, *Apportionment, FRAND Royalties, and Comparable Licenses After Ericsson v. D-Link*, 2016 U. ILL. L. REV. (forthcoming), <https://www.criterioneconomics.com/apportionment-frand-royalties-comparable-licenses-ericsson-dlink.html>.

<sup>5</sup> J. Gregory Sidak, *The Meaning of FRAND, Part II: Injunctions*, 11 J. COMPETITION L. & ECON. 201 (2015), <https://www.criterioneconomics.com/meaning-of-frand-injunctions-for-standard-essential-patents.html>.

<sup>6</sup> J. Gregory Sidak, *A FRAND Contract's Intended Third-Party Beneficiary*, 69 FLA. L. REV. (forthcoming 2017), <https://www.criterioneconomics.com/a-frand-contracts-intended-third-party-beneficiary.html>.

<sup>7</sup> J. Gregory Sidak, *Patent Holdup and Oligopsonistic Collusion in Standard-Setting Organizations*, 5 J. COMPETITION L. & ECON. 123 (2009), [https://www.criterioneconomics.com/docs/patent\\_holdup\\_and\\_oligopsonistic\\_collusion-21.pdf](https://www.criterioneconomics.com/docs/patent_holdup_and_oligopsonistic_collusion-21.pdf).

<sup>8</sup> J. Gregory Sidak, *Evading Portfolio Royalties for Standard-Essential Patents Through Validity Challenges*, 39 WORLD COMPETITION (forthcoming 2016), <https://www.criterioneconomics.com/docs/evading-portfolio-royalties-for-seps.pdf>.

<sup>9</sup> Judgment, Telefonaktiebolaget LM Ericsson v. Competition Commission of India, No. 1006 of 2014, High Ct. of Delhi (Mar. 30, 2016), <http://lobis.nic.in/ddir/dhc/VIB/judgement/30-03-2016/VIB30032016CW4642014.pdf>.

should determine a FRAND royalty appropriate for the parties involved and define any other obligations that might arise from a FRAND commitment. Application of the general legal principles that guide contract interpretation and the calculation of patent damages suffices to define the FRAND terms.

**a. Defining the Conditions of a FRAND Commitment**

When interpreting the meaning of a FRAND commitment, it is important to recognize that a FRAND commitment is a *voluntary* agreement between the SSO and the SEP holder. It should be, therefore, for the parties to define the exact terms of their agreement.

When entering into a voluntary agreement, each party does so to obtain a specific benefit.<sup>10</sup> By requesting that the SEP holder enter into a FRAND commitment, an SSO seeks to ensure *access* to a technology that will become essential to practice the standard that it has developed.<sup>11</sup> An SSO might propose the adoption of a standard that reads on a technology that is not available in the public domain, but is protected by a patent right. However, the SSO has no right to include a proprietary technology in its standard without the patent holder's consent. A patent right is a property right, the protection of which is typically codified both in national law and in international treaties.<sup>12</sup> Consequently, when the SSO becomes aware of the existence of a patented technology that is potentially essential to the standard, it typically asks the patent holder to clarify whether it would be willing to license its technology to the standard's users on FRAND terms, if such technology is implemented in the standard.<sup>13</sup> By requesting a FRAND commitment, the SSO seeks to obtain a right to use a proprietary technology and to ensure that the standard's users will have access to the technologies included in the standard.

Similarly, the SEP holder also seeks to obtain a benefit from entering into a FRAND commitment. The development of a patented technology typically requires significant investment in research, and no rational patent holder would agree to license its technology for less than the opportunity cost of its outside option. Contributing its technology to the standard is not the only option by which a patent holder can monetize its invention. A patent holder has the option to monetize that invention through exclusive use or exclusive licensing, rather than contributing it to the standard. SSOs recognize that, without the promise of an adequate royalty, technology owners would have insufficient incentives to contribute their technologies to SSOs. A FRAND commitment addresses

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<sup>10</sup> From an economic perspective, a party will enter into an agreement only when it expects to be better situated as a result of the agreement than in its absence. JOSEPH E. STIGLITZ, *ECONOMICS* 54–55 (W. W. Norton & Co. 1993) (explaining that, if one of the parties to an agreement expected to be worse off, that party would not enter into the agreement); ROBERT S. PINDYCK & DANIEL L. RUBINFELD, *MICROECONOMICS* 584 (Prentice Hall 6th ed. 2005).

<sup>11</sup> The IPR policy of the International Telecommunication Union (ITU), for example, explicitly states that securing access to SEPs is the “sole objective of the code of practice.” International Telecommunication Union [ITU], Common Patent Policy for ITU-T/ITU-R/ISO/IEC, <http://www.itu.int/en/ITU-T/ipr/Pages/policy.aspx>.

<sup>12</sup> See, e.g., Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) art. 28, Apr. 15, 1994, 1869 U.N.T.S. 299.

<sup>13</sup> See, e.g., European Telecommunication Standards Institute [ETSI], ETSI Intellectual Property Rights Policy, Annex 6, §§ 4.1–4.3 (Nov. 18, 2015), <http://www.etsi.org/images/files/IPR/etsi-ipr-policy.pdf>.

that problem: the SEP holder typically agrees to contribute its technology to the SSO and forgo the exclusive use or the exclusive licensing of its technology in exchange for the assurance that the SEP holder will receive fair and reasonable royalties from the standard's users.<sup>14</sup>

Therefore, a FRAND commitment aims, on the one hand, to allow the SSO to include proprietary technologies in the standard, and, on the other hand, to ensure that the SEP holder will receive fair compensation for its contribution to the standard. The negotiated terms of a FRAND agreement need to strike an appropriate balance between the SSO's interests and the SEP holder's interests. That is, they need to divide the surplus from the standard, such that the SEP holder has sufficient incentive to continue to participate in standard setting and the SSO can promote the wide adoption of the standard. For example, although an SSO might prefer that all SEPs be available free of charge (and thereby make its standard available to users at a low price, or perhaps a price of zero), it is unlikely that an SEP holder would agree to contribute its technologies to that standard for free. The more stringent the SSO's licensing requirements, the less likely it is that the SEP holder would contribute its most valuable technologies to the standard.<sup>15</sup>

Imposing any compulsory or uniform definition of FRAND terms upon which the SSO and the SEP holders have not voluntarily agreed would likely distort the balance that a FRAND commitment aims to achieve. In the long run, a lopsided division of surplus from the standard would jeopardize the standard-setting process and the quality of existing and future standards, thereby harming consumers. Therefore, the Ministry should recognize that the right to determine the terms of a voluntary agreement to license SEPs on FRAND terms should be reserved to the parties of the agreement—that is, the SSO and the SEP holder.

### ***b. Interpreting a FRAND Agreement***

By making a FRAND commitment, the SEP holder agrees to restrict, to a certain extent, the rights that it has as a patent owner. The exact restrictions that arise from a FRAND commitment are case-specific, and depend on the provisions of each specific contract. In the case of a legal dispute,

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<sup>14</sup> See, e.g., *id.* § 3.2 (“IPR holders whether members of ETSI and their AFFILIATES or third parties, should be adequately and fairly rewarded for the use of their IPRs in the implementation of STANDARDS and TECHNICAL SPECIFICATIONS.”).

<sup>15</sup> The revised licensing requirements of the Institute of Electrical and Electronics Engineers (IEEE) illustrate how stricter licensing requirements can decrease the SEP holder's willingness to contribute its technology to the industry standard. In 2015, the IEEE revised its FRAND requirement, imposing stricter obligations on the SEP holder, such as restricting the availability of injunctions and imposing the use of a specific royalty base. However, SEP holders have criticized the revised FRAND obligations and have refused to contribute their technologies to the standard under the revised terms. See, e.g., Susan Decker & Ian King, *Qualcomm Says It Won't Follow New Wi-Fi Rules on Patents*, BLOOMBERG (Feb. 11, 2015, 11:23 AM), <http://www.bloomberg.com/news/articles/2015-02-11/qualcomm-says-new-wi-fi-standard-rules-unfair-may-not-take-part>; Richard Lloyd, *Ericsson and Nokia the Latest to Confirm That They Will Not License Under the New IEEE Patent Policy*, IAM (Apr. 10, 2015), <http://www.iam-media.com/blog/detail.aspx?g=d07d0bde-ebd6-495a-aa72-4eecb9dac67d>; Letter from Lawrence F. Shay, Exec. Vice President of Intellectual Prop., InterDigital, Inc., to David Law, Patent Comm. Chair, IEEE-SA Standards Bd. (Mar. 24, 2015), <http://wpuploads.interdigital.com.s3.amazonaws.com/uploads/2015/03/Letter-to-IEEE-SA-PatCom.pdf>.

a court or an arbitral body should determine the obligations arising from a FRAND agreement through the application of well-established principles of contract interpretation.<sup>16</sup>

The principles of contract interpretation might vary across jurisdictions. In the United States, the overarching purpose of contract interpretation is to determine the parties' intent when they entered into the contract.<sup>17</sup> The best evidence of the parties' intent is the contract itself. The court should thus examine the exact terms of the FRAND agreement to determine whether there has been a violation of a specific obligation.

Consider, for example, the SEP holder's right to request an injunction against an infringer. Some commentators have suggested that a FRAND commitment constitutes a contractual waiver of the right to seek an injunction.<sup>18</sup> In the United States, the Supreme Court has said that, to "waive a statutory right[,] the duty must be established clearly and unmistakably."<sup>19</sup> Therefore, a U.S. court will examine whether the specific provisions of the FRAND commitment show that, by entering into such an agreement, an SEP holder has unmistakably waived its statutory right under patent law to seek an injunction. The IEEE's patent policy, as amended in 2015, is the most prominent example of an SSO's policy that expressly requires SEP holders to waive the right to an injunction.<sup>20</sup> The IEEE's patent policy clearly determines that an SEP holder, by entering into a FRAND contract with the IEEE after the December 2015 amendment of the IEEE's bylaws, waives its right to an injunction. In that case, an analysis of the contractual provisions will show that the SEP holder has contractually waived its right to an injunction. However, the patent policies of most other SSOs do not contain such a waiver.<sup>21</sup> In those cases, it would be incorrect legal reasoning to conclude that an SEP holder's FRAND commitment constitutes a waiver of its right to an injunction.

Courts should also apply well established principles of contract interpretation when determining the rights of a third-party beneficiary of a FRAND contract (that is, a standard implementer). In the United States, a basic legal principle of contract law is that the promisor and the promisee define the scope of a third-party beneficiary's contractual rights.<sup>22</sup> In the context of a FRAND agreement, the scope of the rights conveyed to a standard implementer as the third-party beneficiary results

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<sup>16</sup> See generally Sidak, *A FRAND Contract's Intended Third-Party Beneficiary*, *supra* note 6.

<sup>17</sup> See, e.g., *British Int'l. Ins. Co. v. Seguros La Republica, S.A.*, 342 F.3d 78, 82 (2d Cir. 2003).

<sup>18</sup> See, e.g., Joseph S. Miller, *Standard-Setting, Patents, and Access Lock-in: RAND Licensing and the Theory of the Firm*, 40 IND. L. REV. 351, 358 (2007) ("[T]he core meaning of the RAND promise [is] an irrevocable waiver of injunctive relief and other extraordinary remedies.").

<sup>19</sup> *Metropolitan Edison Co. v. NLRB*, 460 U.S. 693, 708–09 (1983).

<sup>20</sup> IEEE, IEEE-SA Standards Board Bylaws, § 6.2, at 16–19 (Dec. 2015), [http://standards.ieee.org/develop/policies/bylaws/sb\\_bylaws.pdf](http://standards.ieee.org/develop/policies/bylaws/sb_bylaws.pdf).

<sup>21</sup> For a detailed analysis of the contractual waiver of the SEP holder's right to an injunction, see J. Gregory Sidak, *Injunctive Relief and the FRAND Commitment in the United States*, in 1 CAMBRIDGE HANDBOOK OF TECHNICAL STANDARDIZATION LAW: ANTITRUST AND PATENTS (Jorge L. Contreras ed., Cambridge Univ. Press forthcoming 2017), <https://www.criterioneconomics.com/injunctive-relief-and-the-frand-commitment-in-the-united-states.html>.

<sup>22</sup> See RESTATEMENT (SECOND) OF CONTRACTS § 309 cmt. b (AM. LAW INST. 1981); see also 4 ARTHUR L. CORBIN, CORBIN ON CONTRACTS §§ 811, 819 (West 6th ed. 1951).

from a voluntary exchange between the SEP holder and the SSO. Neither the SSO nor the standard implementer can unilaterally define the scope of those rights: the SEP holder's assent is essential. In other words, the implementer cannot invoke the FRAND agreement to claim rights that the SEP holder never agreed to grant. For example, if the FRAND contract is silent on which royalty base to use to calculate a FRAND royalty, a potential licensee cannot rely on the FRAND contract to compel the SEP holder to use any specific royalty base.<sup>23</sup>

In sum, the court should apply well established principles of contract interpretation when examining a FRAND agreement. A rigorous application of those principles will enable the court to determine what rights and obligations arise from a specific FRAND agreement.

### **c. Setting a FRAND Royalty**

A court or an arbitral body might also be asked to determine what constitutes a FRAND royalty. U.S. courts have determined FRAND royalties in several cases. Their experience might thus be helpful for the Ministry to identify the principles that should guide the calculation of a FRAND royalty.

In calculating FRAND royalties, U.S. courts have applied the general legal principles that guide the calculation of damages for patent infringement. For example, U.S. courts have long recognized that observing royalties specified in comparable licenses—that is, licenses signed under economic circumstances that are sufficiently comparable to the hypothetical license between the patent holder and the infringer—is generally a reliable methodology for calculating patent damages (when such comparable licenses exist).<sup>24</sup> The Federal Circuit said that royalties specified in comparable licenses “most clearly reflect the economic value of the patented technology in the marketplace.”<sup>25</sup> In its 2014 decision in *Apple Inc. v. Motorola, Inc.*, the Federal Circuit confirmed that the same principle applies when calculating damages for the infringement of FRAND-committed SEPs.<sup>26</sup> The Federal Circuit said that calculating a FRAND royalty on the basis of comparable licenses “is generally reliable because the royalty that a similarly-situated party pays inherently accounts for market conditions . . . including a number of factors that are difficult to value, such as the cost of available, non-infringing alternatives.”<sup>27</sup> The Federal Circuit confirmed this approach in *Ericsson Inc. v. D-Link Systems, Inc.* and in *Commonwealth Scientific & Industrial Research Organization v. Cisco Systems, Inc.* (*CSIRO v. Cisco Systems, Inc.*), where the court reiterated that observing royalties specified in comparable licenses is a reliable methodology for calculating a FRAND royalty.<sup>28</sup> When

<sup>23</sup> For a detailed analysis, see Sidak, *A FRAND Contract's Intended Third-Party Beneficiary*, *supra* note 6, at 12–16.

<sup>24</sup> See, e.g., *ActiveVideo Networks, Inc. v. Verizon Commc'ns, Inc.*, 694 F.3d 1312, 1333 (Fed. Cir. 2012); *Lucent Techs., Inc. v. Gateway, Inc.*, 580 F.3d 1301, 1325 (Fed. Cir. 2009).

<sup>25</sup> *LaserDynamics, Inc. v. Quanta Comput., Inc.*, 694 F.3d 51, 79 (Fed. Cir. 2012).

<sup>26</sup> *Apple Inc. v. Motorola, Inc.*, 757 F.3d 1286, 1325 (Fed. Cir. 2014) (citing *ActiveVideo*, 694 F.3d at 1333; *Lucent*, 580 F.3d at 1325).

<sup>27</sup> *Id.* at 1326 (citing *LaserDynamics*, 694 F.3d at 79).

<sup>28</sup> *Ericsson, Inc. v. D-Link Sys, Inc.*, 773 F.3d 1201, 1225–29 (Fed. Cir. 2014); *Commonwealth Sci. & Indus. Res. Org. v. Cisco Sys., Inc.*, 809 F.3d 1295, 1303 (Fed. Cir. 2015).

available, royalties determined in comparable licenses provide the best evidence of what constitutes a FRAND royalty.

Some lower courts in the United States have adopted different approaches when determining a FRAND royalty. In *Microsoft v. Motorola*, for example, Judge James Robart said that, although “license agreements where the parties clearly understood the RAND obligation” are relevant for the determination of a RAND royalty for SEPs, he found that none of the presented licenses were sufficiently comparable.<sup>29</sup> Consequently, he used royalties for patent pools as a starting point from which to extrapolate a RAND royalty for the patents in suit.<sup>30</sup> In contrast, Judge James Holderman relied on the so-called “Top Down” methodology in *Innovatio IP Ventures*.<sup>31</sup> The court relied on the testimony of the defendants’ damages expert, who calculated a RAND royalty by first identifying the average profit that a chipmaker earns on the sale of each chip that practices the standard, and then multiplying that profit by the value that the patents in suit contribute to the standard.<sup>32</sup> I have explained in my previous writings why the methodologies that lower courts have applied in cases such as *Microsoft v. Motorola* and *Innovatio* are susceptible to error.<sup>33</sup>

It is also worth emphasizing that the Federal Circuit has rejected unsupported conjectures about patent holdup and royalty stacking. Judge Robart said in *Microsoft v. Motorola* that “a proper methodology for determining a RAND royalty should address the risk of royalty stacking.”<sup>34</sup> Judge Holderman, quoting Judge Robart, alluded to the same principle in *Innovatio*.<sup>35</sup> However, the Federal Circuit has rejected their approach. In *Ericsson v. D-Link*, the Federal Circuit emphasized that the theoretical conjectures of patent holdup and royalty stacking are relevant to the jury’s calculation of a FRAND royalty only if empirical evidence substantiates such conjectures in that specific case.<sup>36</sup> Similarly, in *CSIRO v. Cisco*, the Federal Circuit said that “abstract recitations of royalty stacking theory . . . without being anchored to a quantitative market valuation—are insufficiently reliable” to be admissible into evidence.<sup>37</sup> The Federal Circuit has thus said that concerns about royalty stacking and patent holdup should not affect the calculation of a FRAND royalty, unless there is evidence that stacking or holdup has occurred in that particular case.

The Federal Circuit’s rejection of unsupported allegations of patent holdup and royalty stacking is not surprising. Rule 702 of the Federal Rules of Evidence requires an expert witness to base its

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<sup>29</sup> *Microsoft Corp. v. Motorola Inc.*, No. C10-1823JLR, 2013 WL 2111217, at \*82 (W.D. Wash. Apr. 25, 2013) (Robart, J.).

<sup>30</sup> *Id.*

<sup>31</sup> *In re Innovatio IP Ventures, LLC Patent Litigation*, MDL No. 2303, No. 11-cv-9308, 2013 WL 5593609, at \*37–38 (N.D. Ill. Oct. 3, 2013) (Holderman, J.).

<sup>32</sup> *Id.*

<sup>33</sup> See, e.g., Sidak, *The Meaning of FRAND, Part I: Royalties*, *supra* note 1, at 968, 1012–13, 1054; Sidak, *Apportionment, FRAND Royalties, and Comparable Licenses After Ericsson v. D-Link*, *supra* note 4, at 13–14.

<sup>34</sup> *Microsoft*, 2013 WL 2111217, at \*12.

<sup>35</sup> *Innovatio*, 2013 WL 5593609, at \*9–10.

<sup>36</sup> 773 F.3d 1201, 1233–34 (Fed. Cir. 2014).

<sup>37</sup> 809 F.3d 1295, 1302 (Fed. Cir. 2015).

testimony on “reliable principles and methods” and to “reliably appl[y] the principles and methods to the facts of the case.”<sup>38</sup> If those requirements are not fulfilled, the court will conclude that the testimony is insufficiently reliable to be admissible.<sup>39</sup> For example, in 2014, the Federal Circuit rejected an economic expert’s use of the Nash bargaining solution to calculate damages because the expert failed to establish that Nobel laureate John Nash’s theoretical framework was sufficiently tied to the facts of the case.<sup>40</sup> The Federal Circuit said that an economic expert must prove that the theorem’s premises fit the particular facts of the case.<sup>41</sup> The Federal Circuit’s decisions in *Ericsson v. D-Link* and *CSIRO v. CISCO* comport with the general principle that U.S. courts apply with respect to the use of abstract theories when calculating damages.

U.S. experience shows that courts are able to solve parties’ disputes regarding FRAND terms. There is no need to set up a specialized body or prescribe any specific definition of the FRAND terms. The application of general principles that guide the calculation of patent damages is sufficient to determine what constitutes a FRAND royalty.

## 2. The Appropriate Royalty Base

The Ministry has asked which royalty base is appropriate for calculating a FRAND royalty for SEPs. Specifically, the Ministry has asked whether the price of smallest saleable patent-practicing component (SSPPC), the net price of the downstream product, or another value should serve as the royalty base. I respectfully recommend that the Ministry avoid mandating the use of any specific royalty base for the calculation of FRAND royalties, and instead allow the SEP holder and the potential licensee to select the royalty base that best serves their mutual economic interests.

### a. *The Origins of the SSPPC Concept*

It bears emphasis that the concept of the SSPPC was created in the United States to serve a purpose that is unique to jury trials: to mitigate the risk of jury bias in determining patent damages.

In the United States, the Supreme Court has long held that a “patentee . . . must in every case give evidence tending to separate or apportion the defendant’s profits and the patentee’s damages between the patented feature and the unpatented features.”<sup>42</sup> In other words, the patent holder is entitled to damages that adequately reflect the incremental value that its patented technology contributes to the overall value of the multicomponent product, but no more. In theory, various methodologies enable one to disaggregate the value of the patented technology from the value of

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<sup>38</sup> FED. R. EVID. 702(c)–(d).

<sup>39</sup> *Id.* 702.

<sup>40</sup> *VirnetX, Inc. v. Cisco Sys., Inc.*, 767 F.3d 1308, 1332–34 (Fed. Cir. 2014).

<sup>41</sup> *Id.*

<sup>42</sup> *Garretson v. Clark*, 111 U.S. 120, 121 (1884); see also *Keystone Mfg. Co. v. Adams*, 151 U.S. 139, 147–48 (1894).



the noninfringing components. First, one can estimate the patented technology's value by applying a (lower) royalty rate to a (larger) royalty base of the price of the multicomponent product. Second, one can apply a (higher) royalty rate to the (smaller) royalty base of the price of the SSPPC. Assume, for example, that the value of a licensed technology *X* is 10 Indian rupees. If the price of a final product *A* is 100 Indian rupees, one can derive the value of technology *X*—10 Indian rupees—by applying a royalty rate of 10 percent to the price of the entire product. Alternatively, if the price of the SSPPC in product *A* is 20 Indian rupees, one can derive the value of technology *X* by applying a higher royalty rate—50 percent—to the lower price of the SSPPC. Each of those methodologies would lead to an arithmetically equivalent result—that is, to the same damages award of 10 Indian rupees.<sup>43</sup>

For several years, the U.S. Court of Appeals for the Federal Circuit had expressed skepticism about apportioning a patented technology's value by applying a lesser royalty rate to the entire value, or the net price, of the downstream product.<sup>44</sup> The Federal Circuit said that, although one could derive an appropriate royalty by using the entire market value of the downstream product as the royalty base, presenting a jury with the large profits and revenue derived from sales of the downstream product might bias the jury's damages award upward.<sup>45</sup> The Federal Circuit said that the jury "may be less equipped to understand the extent to which the royalty rate" requires adjustment to reflect the true incremental value of the patented technology.<sup>46</sup> The Federal Circuit consequently developed an evidentiary principle for jury trials—the so-called entire market value rule (EMVR). The EMVR supports the use of the downstream product as the royalty base only when "the patented feature drives the demand for an entire multi-component product."<sup>47</sup> Conversely, in a jury trial, when there is no evidence that the patented feature drives the demand for the entire product, the Federal Circuit has favored apportionment using the SSPPC as the royalty base.<sup>48</sup> Apportionment using the SSPPC would, in the Federal Circuit's view, prevent skewing the jury's damages award.

Economists have criticized the application in of the EMVR in jury trials,<sup>49</sup> emphasizing, among other things, that the Federal Circuit has not substantiated in an intellectually rigorous manner its claim

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<sup>43</sup> See Sidak, *Apportionment, FRAND Royalties, and Comparable Licenses After Ericsson v. D-Link*, *supra* note 4, at 16–17; Elizabeth M. Bailey, Gregory K. Leonard & Mario A. Lopez, *Making Sense of "Apportionment" in Patent Damages*, 12 COLUM. SCI. & TECH. L. REV. 255, 259 (2011) ("It should not matter what royalty rate or royalty base are used, as long as the product of the two yields a result (in dollars) that is in line with the patented technology's incremental value.").

<sup>44</sup> See, e.g., *LaserDynamics, Inc. v. Quanta Comput., Inc.*, 694 F.3d 51, 67–68 (Fed. Cir. 2012); *Uniloc USA, Inc. v. Microsoft Corp.*, 632 F.3d 1292, 1320–21 (Fed. Cir. 2011).

<sup>45</sup> See, e.g., *Uniloc*, 632 F.3d at 1320; *VirnetX*, 767 F.3d at 1329 (Fed. Cir. 2014); see also *Ericsson, Inc. v. D-Link Sys., Inc.*, 773 F.3d 1201, 1226 (Fed. Cir. 2014).

<sup>46</sup> *Ericsson*, 773 F.3d at 1227.

<sup>47</sup> *LaserDynamics*, 694 F.3d at 67.

<sup>48</sup> *Id.* at 67–68; see also *Cornell Univ. v. Hewlett-Packard Co.*, 609 F. Supp. 2d 279, 283, 287–88 (N.D.N.Y. 2009); *VirnetX*, 767 F.3d at 1329.

<sup>49</sup> See, e.g., Sidak, *The Proper Royalty Base for Patent Damages*, *supra* note 2, at 991; see also David J. Teece & Edward F. Sherry, *On the "Smallest Salable Patent Practicing Unit" Doctrine: An Economic and Public Policy*

that the EMVR might bias a jury.<sup>50</sup> However, irrespective of this criticism, it is clear that concerns about jury bias, and the consequent motive for using the SSPPC to apportion patent damages, is unique to American patent litigation, in which the patent holder has the right under the Seventh Amendment to the U.S. Constitution to demand that a jury determine patent damages.<sup>51</sup> The concern about jury bias is not relevant when a judge, rather than a jury, determines the damages award. A methodology that involves large numbers is unlikely to mislead experienced judges and arbitrators. Consequently, the use of the SSPPC is less relevant in jurisdictions, such as India, where a judge, rather than a jury, determines patent damages.

### ***b. The Use of the SSPPC in Real-World Negotiations***

More importantly, the Federal Circuit, in developing the EMVR, never intended to mandate the use of the SSPPC in real-world negotiations between licensors and licensees. The EMVR is a legal construct for jury trials, not a decision-making heuristic that rational firms and individuals use in real-world transactions. It would be nonsensical to assert that a license executed through private negotiation must use the SSPPC when calculating a royalty for SEPs. The Federal Circuit observed that, to the contrary, real-world licenses typically do not comport with the EMVR and with the SSPPC concept.<sup>52</sup> Parties to a license often use the value of the downstream product as the royalty base, even if there is no evidence that the licensed technology drives consumer demand for the entire device.

Economic theory explains that there might be valid justifications for selecting a royalty base other than the SSPPC. The combinatorial interaction among patented technologies creates value that exceeds a simple sum of component values, especially in the context of SEPs. In other words, each of the individual components has value, but the interaction of all of the multiple components provides additional value to the final product.<sup>53</sup>

Former Chief Judge Leonard Davis, who personally presided over 1,700 patent matters in the most active district court for patent litigation in the United States,<sup>54</sup> offered a simple analogy to explain

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*Analysis 2–3* (Tusher Center for the Management of Intellectual Capital, Working Paper Series No. 11, 2016), <http://innovation-archives.berkeley.edu/businessinnovation/documents/Tusher-Center-Working-Paper-11.pdf>; Anne Layne-Farrar, *The Practicalities and Pitfalls of the Smallest Saleable Patent Practicing Unit Doctrine: A Review of Teece and Sherry* (Feb. 18, 2016) (unpublished manuscript), <http://ssrn.com/abstract=2736365>.

<sup>50</sup> Sidak, *The Proper Royalty Base for Patent Damages*, *supra* note 2, at 991.

<sup>51</sup> U.S. CONST., amend. VII; see also Sidak, *The Proper Royalty Base for Patent Damages*, *supra* note 2, at 991.

<sup>52</sup> *Ericsson, Inc. v. D-Link Sys., Inc.*, 773 F.3d 1201, 1228 (Fed. Cir. 2014).

<sup>53</sup> See, e.g., Sidak, *The Proper Royalty Base for Patent Damages*, *supra* note 2, at 993–95; see also J. GREGORY SIDAK & DANIEL F. SPULBER, *DEREGULATORY TAKINGS AND THE REGULATORY CONTRACT: THE COMPETITIVE TRANSFORMATION OF NETWORK INDUSTRIES IN THE UNITED STATES* 547 (Cambridge Univ. Press 1998).

<sup>54</sup> See *Judge Leonard Davis*, U.S. DISTRICT COURT FOR THE EASTERN DISTRICT OF TEXAS, [http://www.txed.uscourts.gov/cgi-bin/view\\_document.cgi?document=2388](http://www.txed.uscourts.gov/cgi-bin/view_document.cgi?document=2388).

how the SSPPC fails to capture the complementary effects that individual components create in a final product. He said that “[b]asing a royalty solely on chip price is like valuing a copyrighted book based only on the costs of the binding, paper and ink needed to actually produce the physical product. While such a calculation captures the cost of the physical product, it provides no indication of its actual value.”<sup>55</sup> In other words, the SSPPC may provide an accurate measure of the value of the physical components that embody the SEPs, but it cannot reflect the complementary value that the SEPs provide to the user of the downstream product.

Mandating the use of the SSPPC as a royalty base in all licenses for an SEP could prevent the SEP holder from obtaining a royalty that reflects the SEP’s incremental value to the standard. That rule could ultimately result in the SEP holder’s undercompensation, which would, in turn, reduce the SEP holder’s incentives to contribute its technologies to industry standards. In the long run, imposing the use of the SSPPC as the royalty base would reduce the benefits that consumers accrue from industry standards. Not surprisingly, U.S. courts have rejected the suggestion that the SSPPC should always be the royalty base for the calculation of FRAND-committed SEPs.<sup>56</sup>

In sum, the EMVR and the SSPPC concept do not aim to guide real-world licensing negotiations. Therefore, I respectfully recommend that policymakers in India abstain from imposing any rule requiring the use of a specific royalty base in all licenses for SEPs.

### 3. Injunctions and SEPs

The Ministry has also asked whether an injunction is an appropriate remedy for a court to issue against an infringer of FRAND-committed SEPs. Over the last decade, commentators have raised concerns that allowing the SEP holder to obtain an injunction could facilitate patent holdup—that is, the SEP holder could use the threat of an injunction as a tool to force the potential licensee to accept a royalty that exceeds the FRAND range.<sup>57</sup> Proponents of the patent-holdup conjecture have suggested that, to mitigate the risks of patent holdup and opportunism by the SEP holder during license negotiations, courts should limit the SEP holder’s right to an injunction.<sup>58</sup> However, those

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<sup>55</sup> Commonwealth Sci. & Indus. Res. Org. v. Cisco Sys., Inc., No. 6-11-cv-00343, 2014 WL 3805817, at \*11 (E.D. Tex. July 23, 2014).

<sup>56</sup> See, e.g., Commonwealth Sci. & Indus. Research Org. v. Cisco Sys., Inc., 809 F.3d 1295, 1303 (Fed. Cir. 2015).

<sup>57</sup> See, e.g., U.S. Department of Justice & Federal Trade Commission, Policy Statement on Remedies for Standard-Essential Patents Subject to Voluntary F/RAND Commitments 6 (Jan. 8, 2013) [hereinafter DOJ & USPTO Policy Statement], [http://www.uspto.gov/about/offices/ogc/Final\\_DOJ-PTO\\_Policy\\_Statement\\_on\\_FRAND\\_SEPs\\_1-8-13.pdf](http://www.uspto.gov/about/offices/ogc/Final_DOJ-PTO_Policy_Statement_on_FRAND_SEPs_1-8-13.pdf) (explaining that an exclusion order could allow the SEP holder to pressure a potential licensee to accept “more onerous licensing terms than the patent holder would be entitled to receive consistent with the F/RAND commitment”); *Microsoft Corp. v. Motorola, Inc.*, 795 F.3d 1024, 1046 (9th Cir. 2015) (“In the absence of a fear of irreparable harm as a motive for seeking an injunction, the jury could have inferred that the real motivation was to induce Microsoft to agree to license at a higher-than-RAND rate.”).

<sup>58</sup> See, e.g., Mark A. Lemley & Carl Shapiro, *Patent Holdup and Royalty Stacking*, 85 TEX. L. REV. 1991, 1991–92 (2007).

suggestions are misguided; if implemented, they risk harming the standardization process and consumers.

Courts should adopt a balanced approach that discourages opportunism during licensing negotiations, on both the part of the SEP holder and the part of the implementer.<sup>59</sup> On the one hand, always allowing the SEP holder to obtain an injunction could, according to some commentators, enable patent holdup. On the other hand, a categorical ban on injunctions for SEPs—that is, never allowing the SEP holder to obtain an injunction—would expose the SEP holder to the opportunistic behavior of the potential licensees (typically defined as the risk of *patent holdout*, or *reverse patent holdup*).<sup>60</sup> Without the risk of an injunction, a potential licensee has a strong incentive to infringe the patent and attempt to pressure the SEP holder into accepting royalties for its SEPs that are below what the SEP holder would normally accept.<sup>61</sup> Therefore, adopting an approach at either end of the extreme—that is, adopting either an approach that automatically *grants* the SEP holder’s request for an injunction or an approach that automatically *denies* the SEP holder’s request for an injunction—risks enabling opportunism on one side or the other.

Courts and policymakers in the United States and in the European Union have recognized those concerns and have rejected adopting a categorical ban on injunctions for SEPs, recognizing that injunctive relief should remain available to SEP holders.<sup>62</sup> For example, the U.S. Department of Justice and the U.S. Patent and Trademark Office have explained that an injunction might be appropriate when “the putative licensee is unable or refuses to take a F/RAND license and is acting outside the scope of the patent holder’s commitment to license on F/RAND terms.”<sup>63</sup> As I explain in Part 4 below, the Court of Justice of the European Union (CJEU) has similarly emphasized that a patent holder—including a holder of a FRAND-committed SEP—“may not be deprived of the right to have recourse to legal proceedings.”<sup>64</sup> In sum, courts and policymakers in the United States and in the European Union have largely upheld the important principle that an SEP holder should be able to obtain an injunction even after committing to offer to license its SEPs on FRAND terms.

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<sup>59</sup> See Sidak, *The Meaning of FRAND, Part II: Injunctions*, *supra* note 5, at 230–31.

<sup>60</sup> See DOJ & USPTO POLICY STATEMENT, *supra* note 57, at 7 n.15.

<sup>61</sup> Joshua D. Wright, Comm’r, Fed. Trade Comm’n, Remarks at the Center for the Protection of Intellectual Property Inaugural Academic Conference: The Commercial Function of Patents in Today’s Innovation Economy 30 (Sept. 12, 2013), [https://www.ftc.gov/sites/default/files/documents/public\\_statements/ssos-frand-and-antitrust-lessons-economics-incomplete-contracts/130912cpip.pdf](https://www.ftc.gov/sites/default/files/documents/public_statements/ssos-frand-and-antitrust-lessons-economics-incomplete-contracts/130912cpip.pdf).

<sup>62</sup> See, e.g., DOJ & FTC POLICY STATEMENT, *supra* note 57, at 7; *Apple Inc. v. Motorola, Inc.*, 757 F.3d 1286, 1331–32 (Fed. Cir. 2014) (“To the extent that the district court applied a *per se* rule that injunctions are unavailable for SEPs, it erred.”); *Case C-170/13, Huawei Tech. Co. v. ZTE Corp.* (July 17, 2015), § 58, <http://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1437080250973&uri=CELEX:62013CJ0170> (emphasizing that an SEP holder’s right to injunctive relief “ensure[s] effective enforcement of [the SEP holder’s] exclusive rights, and that, in principle, the user of those rights, if he is not the proprietor, is required to obtain a licence prior to any use.”).

<sup>63</sup> DOJ & FTC Policy Statement, *supra* note 57, at 7.

<sup>64</sup> *Huawei Tech Co.*, *Case C-170/13*, § 58.

To encourage good-faith negotiations and discourage opportunism by both the SEP holder and the implementer, I respectfully suggest that Indian courts continue to apply a balanced approach and eschew categorical rules on the availability of injunctions for SEPs. Adopting a flexible approach will enable courts to establish “a fair balance between the IP protection and public interest.”<sup>65</sup>

#### 4. Royalty Stacking

The Ministry has asked whether there should be a cap on the total royalty payment for all of the SEPs that an individual product implements. Imposing such a cap would set the maximum amount that SEP holders could collectively obtain from a single standard-compliant product. The Ministry has also asked which authority should be entrusted with determining a cap, if such a cap were to be imposed.

I respectfully recommend that the Ministry refrain from imposing a royalty cap on SEPs. The Ministry’s suggestion presumably relies on concerns of “royalty stacking”—that is, a concern that cumulative royalty payments for SEPs would be prohibitively high.<sup>66</sup> Proponents of the royalty-stacking conjecture maintain that, when a product incorporates multiple patents, the sum of all royalties that the manufacturer must pay could impose an excessive royalty burden on the manufacturer. In their view, royalty stacking would harm consumers by increasing the prices of standard-compliant goods and reducing innovation.<sup>67</sup> Economists have criticized the royalty-stacking conjecture, emphasizing that economic evidence contradicts the predictions of the royalty-stacking conjecture. I thus find no economic justification for introducing a royalty cap.

If the royalty-stacking conjecture were correct, one would expect one or more of the following outcomes. First, a high royalty burden would hinder the adoption of a standard if manufacturers switched to a different standard in response to high aggregate royalties. (Almost by definition, a standard that succeeds cannot have a royalty stack). Second, if a manufacturer cannot switch to the use of an alternative standard, one would expect the royalty stack to decrease the success of the standardized products. A manufacturer could pass the excessive royalties on to consumers through increased prices, but attempts to commercialize the product would fail because customers do not value the product enough to bear the cost of high royalties. In that scenario, the royalty stack would result in low sales of standardized products. Third, if the manufacturer bears the high royalty burden, the royalty stacking should result in reduced innovation. However, evidence from industries that rely on SEPs contradicts those predictions.<sup>68</sup>

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<sup>65</sup> Gov’t of India, Dep’t of Indus. Pol’y and Promotion, Ministry of Comm. & Indus., *Discussion Paper on Standard Essential Patents and Their Availability on FRAND Terms* 3 (2016).

<sup>66</sup> See, e.g., Lemley & Shapiro, *Patent Holdup and Royalty Stacking*, *supra* note 58.

<sup>67</sup> *Id.* at 1993 (“Such royalty over-charges act as a tax on new products incorporating the patented technology, thereby impeding rather than promoting innovation.”).

<sup>68</sup> See, e.g., Alexander Galetovic, Stephen Haber & Ross Levine, *An Empirical Examination of Patent Holdup*, 11 J. COMPETITION L. & ECON. 549 (2015); J. Gregory Sidak, *Holdup, Royalty Stacking, and the Presumption of*

For example, there is no evidence that manufacturers of standard-compliant goods are struggling to commercialize their products. Total shipments of mobile devices that use the mobile communication standards have grown rapidly since 2009. Global smartphone sales to end users increased from 172.4 million units in 2009 to 1.4 billion units in 2015.<sup>69</sup> Industry analysts have described the general growth in the global mobile device industry as “extraordinary,”<sup>70</sup> “impressive,”<sup>71</sup> and “record-setting.”<sup>72</sup> India exemplifies the rapid growth of smartphone users worldwide. During 2015, shipments of smartphones (that implement the 2G, 3G, or 4G mobile communication standards) in India grew at an annual rate of 23 percent<sup>73</sup> (whereas the corresponding global growth rate was only 12 percent<sup>74</sup>), and there were more than 220 million Indian smartphone users.<sup>75</sup> Such an increase in sales would be unlikely if the cumulative royalty payment truly led to higher prices of standard-compliant goods.

There is also no evidence that royalty payments for SEPs have obstructed the success of industry telecommunications standards. The International Telecommunication Union (ITU) reported that, in 2009, the number of global mobile subscriptions (that rely on one of the telecommunications standards) was approximately 4.6 billion.<sup>76</sup> In 2015, the ITU reported that there were more than 7 billion mobile subscriptions worldwide, an increase of over 52 percent.<sup>77</sup> In addition, Ericsson has

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*Injunctive Relief for Patent Infringement: A Reply to Lemley and Shapiro*, 92 MINN. L. REV. 714 (2008), <https://www.criterioneconomics.com/lemley-shapiro-holdup-royalty-stacking-injunctive-relief.html>.

<sup>69</sup> Press Release, Gartner, Gartner Says Worldwide Mobile Phone Sales to End Users Grew 8 Per Cent in Fourth Quarter 2009 (Feb. 23, 2010), <http://www.gartner.com/newsroom/id/1306513>; Press Release, Gartner, Gartner Says Worldwide Smartphone Sales Grew 9.7 Percent in Fourth Quarter of 2015 (Feb. 18, 2016), <http://www.gartner.com/newsroom/id/3215217>.

<sup>70</sup> CCS INSIGHT, GLOBAL SMARTPHONE MARKET ANALYSIS AND OUTLOOK: DISRUPTION IN A CHANGING MARKET 3 (2014), <http://www.lenovo.com/transactions/pdf/CCS-Insight-Smartphone-Market-Analysis-Full-Report-07-2014.pdf>.

<sup>71</sup> A.T. KEARNEY, THE MOBILE ECOSYSTEM IN ASIA PACIFIC 1 (2011), [http://www.atkearney.com/documents/4773063/4833502/the\\_mobile\\_ecosystem\\_in\\_asia\\_pacific.pdf/d1335d2c-b629-4941-a54b-2bc0c948fa62](http://www.atkearney.com/documents/4773063/4833502/the_mobile_ecosystem_in_asia_pacific.pdf/d1335d2c-b629-4941-a54b-2bc0c948fa62).

<sup>72</sup> Press Release, IDC, Worldwide Smartphone Shipments Increase 25.2% in the Third Quarter with Heightened Competition and Growth Beyond Samsung and Apple, Says IDC (Oct. 29, 2014), <http://www.idc.com/getdoc.jsp?containerId=prUS25224914>.

<sup>73</sup> Tarun Pathak, *India Surpasses USA to Become the Second Largest Smartphone Market in the World*, COUNTERPOINT TECH. MKT. RES. (Feb. 2, 2016), <http://www.counterpointresearch.com/indiahandsetmarket2015>.

<sup>74</sup> Linda Sui, *Global Smartphone Shipments Hit a Record 1.4 Billion Units in 2015*, STRATEGY ANALYTICS (Jan. 27, 2016), <https://www.strategyanalytics.com/strategy-analytics/blogs/devices/smartphones/smartphones/2016/01/27/global-smartphone-shipments-hit-record-1.4-billion-units-in-2015#>; see also Scott Bicheno, *Global Smartphone Market Q4 2014 – Peak Smartphone Approaches*, TELECOMS.COM (Jan. 28, 2016), <http://telecoms.com/463552/global-smartphone-market-q4-2015-peak-smartphone-approaches>.

<sup>75</sup> Pathak, *India Surpasses USA*, *supra* note 73.

<sup>76</sup> Press Release, International Telecommunication Union, ITU Sees 5 Billion Mobile Subscription Globally in 2010 (Feb. 15, 2010), [http://www.itu.int/newsroom/press\\_releases/2010/06.html](http://www.itu.int/newsroom/press_releases/2010/06.html).

<sup>77</sup> Press Release, International Telecommunication Union, ITU Releases 2015 ICT Figures (May 26, 2015), [https://www.itu.int/net/pressoffice/press\\_releases/2015/17.aspx](https://www.itu.int/net/pressoffice/press_releases/2015/17.aspx).

reported that the growth rate of global smartphone subscriptions (which rely on telecommunications standards) is accelerating. In 2015, Ericsson found that “[i]t took over five years to reach the first billion smartphone subscriptions, a milestone that was hit in 2012, and less than two years to reach the second billion.”<sup>78</sup> Furthermore the telecommunications industry has consistently developed and deployed successful new standards. In 2016, for example, GSMA reported that the LTE standard—a variation of the 4G standard introduced in 2010—had experienced “unprecedented growth.”<sup>79</sup> GSMA observed that “[w]hile it took 10 years for 3G networks to reach half of the global population, it will take 4G networks eight years after launch to reach the same milestone.”<sup>80</sup> In 2015, Ericsson predicted that the subscription uptake of the developing 5G standard “is expected to be *faster* than for 4G.”<sup>81</sup> Evidently, telecommunications standards have experienced increasingly rapid success in the last decade, despite the assertions that cumulative royalties for SEPs are prohibitively high.

In addition, there is no evidence that the alleged royalty-stacking problem has retarded innovation. In the last decade, SEP holders and manufacturers have adopted and commercialized a series of increasingly valuable mobile communication standards.<sup>82</sup> Furthermore, in addition to the significant growth of the mobile-phone industry, manufacturers have released new devices such as tablets, cameras, and routers that provide mobile connectivity through the 2G, 3G, and 4G mobile communication standards. The number of tablet users in India grew from 23 million in 2013 to 32 million in 2014, and it is expected to reach 60 million by 2018.<sup>83</sup> That manufacturers have diversified their standard-compliant products and that the sales and shipments of those standard-compliant products have increased rapidly in India and worldwide contradict the claim that the aggregate royalty burden for SEPs is exorbitant.

In 2014, in an unpublished paper, Keith Mallinson examined the total monetary burden that royalties for SEPs actually impose on manufacturers of standard-compliant goods.<sup>84</sup> He compared

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<sup>78</sup> ERICSSON, ERICSSON MOBILITY REPORT 2015 9 (June 2015) [hereinafter ERICSSON MOBILITY REPORT 2015], <http://www.ericsson.com/res/docs/2015/ericsson-mobility-report-june-2015.pdf>.

<sup>79</sup> Press Release, GSMA, 4G Connections Hit One Billion as Mobile Broadband Momentum Extends to the Developing World (Feb. 22, 2016), <http://www.businesswire.com/news/financialpost/20160221005299/en/4G-Connections-Hit-Billion-Mobile-Broadband-Momentum>; see also Press Release, 4G Americas, 4G Reports 300 LTE Networks Worldwide (June 16, 2014), <http://www.4gamericas.org/en/newsroom/press-releases/4g-americas-reports-300-lte-networks-worldwide/>.

<sup>80</sup> GSMA, THE MOBILE ECONOMY 2015 11 (2015), [http://www.gsmamobileeconomy.com/GSMA\\_Global\\_Mobile\\_Economy\\_Report\\_2015.pdf](http://www.gsmamobileeconomy.com/GSMA_Global_Mobile_Economy_Report_2015.pdf).

<sup>81</sup> ERICSSON MOBILITY REPORT 2015, *supra* note 78, at 9.

<sup>82</sup> See, e.g., Zach Epstein, *The Evolution of the G*, BGR (Aug. 31, 2013), <http://bgr.com/2013/08/31/wireless-technology-evolution-infographic>.

<sup>83</sup> *Tablet Usage in India Is on the Rise*, EMARKETER (Jan. 15, 2015), <http://www.emarketer.com/Article/Tablet-Usage-India-on-Rise/1011848>; see also IDC: *India's Tablet Market Grew by 8.2 Per Cent in 2015*, DataWind on Top, INDIAN EXPRESS (Mar. 11, 2016), <http://indianexpress.com/article/technology/mobile-tabs/indias-tablet-market-grew-by-8-2-per-cent-in-2015-datawind-on-top-idc>.

<sup>84</sup> Keith Mallinson, *Cumulative Mobile-SEP Royalty Payments No More Than Around 5% of Mobile Handset Revenues*, WISEHARBOR (2015),

the licensing revenue of major SEP holders and licensing fees for patent pools to total global handset revenues. On the basis of those data, Mallinson found that the aggregate royalties for 2G, 3G, and 4G SEPs accounted for only approximately five percent of global handset revenues. If correct, Mallinson's finding would seem to refute the speculation of some standards implementers (and some academic economists) that cumulative royalty payments approach 30 percent of the net price of a smartphone.

In sum, empirical evidence concerning industries that implement SEPs contradicts the predictions of the royalty-stacking conjecture. Because there is no evidence that cumulative royalty payments for SEPs are prohibitively high, I respectfully urge the Ministry to reject the suggestion to introduce a cap on the cumulative royalty payments.

## 5. SEPs and Antitrust Intervention

The Ministry has also requested comments on whether current Indian antitrust legislation is adequately equipped to address competition issues related to SEPs, or whether it requires amending. I see no justification for revising the Competition Act of 2002 to address competition concerns related to the SEP holder's licensing practices. The Competition Act of 2002 contains provisions that prohibit agreements restricting competition, as well as provisions prohibiting the abuse of a dominant position. Those provisions are comparable to the provisions embedded in the antitrust law of other jurisdictions and provide the Competition Commission of India (CCI) with sufficient tools to address anticompetitive practices that harm competition and are thus detrimental to consumer welfare.

### *a. Is Competition Law Necessary to Address an SEP Holder's Exploitative Licensing Practices?*

In several countries, courts and competition authorities have examined whether an SEP holder's licensing practice violated competition law.<sup>85</sup> However, in only a few cases did that scrutiny lead to condemnation of the SEP holder's conduct.

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<http://www.wisefharbor.com/pdfs/Mallinson%20on%20cumulative%20mobile%20SEP%20royalties%20for%20IP%20Finance%202015Aug19.pdf>.

<sup>85</sup> See, e.g., Press Release, U.S. Dep't of Justice, Statement of the Department of Justice Antitrust Division on Its Decision to Close Its Investigation of Samsung's Use of Its Standards-Essential Patents (Feb. 7, 2014), <https://www.justice.gov/opa/pr/statement-department-justice-antitrust-division-its-decision-close-its-investigation-samsung>; Decision and Order, Motorola Mobility, L.L.C., No. C-4410 (F.T.C. July 24, 2013); Decision and Order, Robert Bosch GmbH, No. C-4377 (F.T.C. Apr. 23, 2013); European Commission, Commission Decision, Case 39985 ¶¶ 123-45 (Apr. 29, 2014) [hereinafter *Motorola Mobility* Infringement Decision]; Press Release, European Commission, Antitrust: Commission Opens Proceedings Against Samsung (Jan. 31, 2012), [http://europa.eu/rapid/press-release\\_IP-12-89\\_en.htm](http://europa.eu/rapid/press-release_IP-12-89_en.htm); Guangdong Gaoyuan Shenjie Huawei Gongsi yu Meiguo IDC Gongsi Lanyong Shichang Diwei Longduan Jiufen An [广东高院审结华为公司与美国 IDC 公司滥用市场地位垄断纠纷案] (Guangdong High Court's Decision on Abuse of Market Power in Huawei v. IDC



From an economic perspective, competition law should focus on cases in which the SEP holder's behavior is shown to harm competition—that is, conduct that raises aggregate prices or reduces aggregate output in a relevant market, thereby reducing consumer welfare.<sup>86</sup> For example, U.S. courts have found that an SEP holder's deceptive practice during the standardization process could harm competition among technologies that compete for implementation in the standard. The U.S. Court of Appeals for the Third Circuit said that an SEP holder's deceptive behavior during the standardization process may allow the SEP holder to acquire monopoly power and is thus actionable under section 2 of the Sherman Act—a provision of U.S. antitrust law that prohibits monopolization and attempted monopolization.<sup>87</sup> However, U.S. courts have emphasized that, to establish an antitrust violation, the plaintiff must present more than mere proof of the SEP holder's deceptive behavior.<sup>88</sup> The plaintiff needs to present evidence that the deception harmed the competitive process<sup>89</sup>—that is, that the SEP holder would not have acquired or maintained its monopoly power but for its deception.<sup>90</sup>

Most publicly known competition law investigations concerning an SEP holder's licensing practice have not presented allegations about harm to competition. Instead, they have presented allegations about the SEP holder's failure to comply with the FRAND commitment (typically allegations about the SEP holder's attempt to extract an unfair royalty). In other words, those allegations do not maintain that the SEP holder's conduct harms the competitive process; instead those allegations concern a contract dispute between the SEP holder and the potential licensee. Not surprisingly, courts and competition authorities in multiple jurisdictions have concluded that it was inappropriate to use competition law to address contractual disputes between the SEP holder and a potential licensee, particularly when the potential licensee has the ability to enforce in court the SEP holder's duty arising from a FRAND commitment.

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Case) (Nov. 1, 2013) (China), [http://www.gdcourts.gov.cn/ecdomain/framework/gdcourt/monehpcnabjcbboekklboafjdjkbjamc/cohhkcfaabjdbboekklboafjdjkbjamc.do?isfloat=1&disp\\_template=pchlilmiaebdbboeljahjhkjkkgjbje&fileid=20131101104516982014&moduleIDPage=cohhkcfaabjdbboekklboafjdjkbjamc&siteIDPage=gdcourt&infoChecked=0&keyword=&dateFrom=&dateTo=](http://www.gdcourts.gov.cn/ecdomain/framework/gdcourt/monehpcnabjcbboekklboafjdjkbjamc/cohhkcfaabjdbboekklboafjdjkbjamc.do?isfloat=1&disp_template=pchlilmiaebdbboeljahjhkjkkgjbje&fileid=20131101104516982014&moduleIDPage=cohhkcfaabjdbboekklboafjdjkbjamc&siteIDPage=gdcourt&infoChecked=0&keyword=&dateFrom=&dateTo=).

<sup>86</sup> See, e.g., RICHARD A. POSNER, *ECONOMIC ANALYSIS OF LAW* § 9.3, at 336–38 (Wolters Kluwer 9th ed. 2014).

<sup>87</sup> *Broadcom Corp. v. Qualcomm Inc.*, 501 F.3d 297, 303 (3d Cir. 2007).

<sup>88</sup> *Rambus Inc. v. Fed. Trade Comm'n*, 522 F.3d 456, 463–68 (D.C. Cir. 2008).

<sup>89</sup> *Id.* at 464 (“Deceptive conduct—like any other kind—must have an anticompetitive effect in order to form the basis of a monopolization claim.”).

<sup>90</sup> *Id.* at 463 (“The critical question is whether Rambus engaged in exclusionary conduct, and thereby acquired its monopoly power in the relevant markets unlawfully.”).

The use of antitrust law to prosecute the SEP holder's alleged failure to comply with its FRAND obligation is highly controversial from an economist's standpoint.<sup>91</sup> Indeed, the SEP holder's failure to comply with its FRAND obligation would typically fall outside the domain of U.S. antitrust law. U.S. antitrust law does not generally prohibit a company—even a company with significant market power—from imposing high (or even excessive) prices.<sup>92</sup> As William Baer, Assistant Attorney General for the Antitrust Division of the U.S. Department of Justice, reiterated in September 2015, the Antitrust Division does not “use antitrust enforcement to regulate royalties.”<sup>93</sup> Nevertheless, even in jurisdictions that prohibit exploitative conduct, such as India, using competition law to regulate the SEP holder's licensing practices might be an undesirable policy solution.

Economists have, for a long time, argued against competition law intervention in cases of contractual disputes, including cases of alleged excessive prices.<sup>94</sup> The practice of excessive pricing by itself does not restrict or eliminate competition, because high prices typically impel other firms to enter the market to exploit the monopoly profits, thus *increasing* competition. Innovation often leads to the introduction of new products and features and the realization of cost-saving efficiencies, which benefit consumers. In addition, even assuming that competition law intervention is desirable to address the SEP holder's behavior, antitrust authorities often lack sufficient information to determine the appropriate competitive price that an SEP holder *should* charge. There is consequently a risk of the competition authority setting an erroneous rate.<sup>95</sup>

Moreover, antitrust intervention is especially superfluous when, as in the FRAND context, market participants have access to other legal mechanisms through which they may challenge exploitative behavior. For example, if the SEP holder's FRAND commitment constitutes a binding contract with the SSO, implementers of industry standards—as third-party beneficiaries of that contract—may enforce the SEP holder's FRAND obligations in court. Antitrust intervention would be superfluous in such a case.

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<sup>91</sup> See 1 PHILLIP E. AREEDA & HERBERT HOVENKAMP, *ANTITRUST LAW: AN ANALYSIS OF ANTITRUST PRINCIPLES AND THEIR APPLICATION* ch. 1, ¶ 111.d, at 102–03 (Aspen 2d ed. 2002); RICHARD A. POSNER, *ANTITRUST LAW* 28–29 (Univ. of Chicago Press 2d ed. 2001).

<sup>92</sup> *Verizon Commc'ns Inc. v. Law Offices of Curtis V. Trinko, LLP*, 540 U.S. 398, 407 (2004) (“The mere possession of monopoly power, and the concomitant charging of monopoly prices, is not only *not* unlawful; it is an important element of the free-market system.”).

<sup>93</sup> Bill Baer, Assistant Attorney Gen., Antitrust Div., U.S. Dep't of Justice, Remarks as Prepared for Delivery at the 19th Annual International Bar Association Competition Conference, Reflections on the Role of Competition Agencies When Patents Become Essential 10 (Sept. 11, 2015), <http://www.justice.gov/opa/file/782356/download> [hereinafter Baer 2015 Speech].

<sup>94</sup> See, e.g., MASSIMO MOTTA, *COMPETITION POLICY: THEORY AND PRACTICE* 89 (Cambridge Univ. Press 2004) (“Indeed, the prospect of having some market power (i.e., some profit) represents a most powerful incentive for firms to innovate and invest. Competition laws and their enforcement should therefore ensure that firms will be able to enjoy the rewards for their investments.”); see also DENNIS W. CARLTON & JEFFREY M. PERLOFF, *MODERN INDUSTRIAL ORGANIZATION* 679 (Pearson-Addison Wesley 4th ed. 2005).

<sup>95</sup> See MOTTA, *supra* note 94, at 69 (“[D]eciding if a price is too high or not involves a high degree of arbitrariness.”).

Not surprisingly, the European Commission has abstained from using antitrust law to determine whether an SEP holder's offer is FRAND. In particular, the European Commission refused to determine what constitutes the appropriate royalty rate or the appropriate royalty base for SEPs, reasoning that "[n]ational courts and arbitrators are generally well equipped" to address such issues.<sup>96</sup> The Advocate General of the European Court of Justice, Melchior Wathelet, made a similar observation when analyzing whether an SEP holder's request for an injunction constituted an abuse of a dominant position. He emphasized that questions regarding the SEP holder's right to an injunction could be "adequately—if not better—resolved in the context of other branches of law or by mechanisms other than the rules of competition law."<sup>97</sup>

In sum, antitrust law has played a limited role in addressing an SEP holder's behavior. I respectfully suggest that the CCI adopt a similar approach and limit its intervention to cases in which the facts show that the SEP holder's behavior harms competition and consumer welfare. In the absence of such harm, other bodies of law are better suited to addressing the SEP holder's behavior.

***b. Should the SEP Holder's Request for an Injunction Trigger Antitrust Liability?***

A particularly controversial question is whether the SEP holder's mere request for an injunction can constitute a violation of competition law.

As of March 2016, no U.S. court has found an SEP holder's request for an injunction or an exclusion order to be anticompetitive. To the contrary, at least one court has found that the *Noerr-Pennington* doctrine—which immunizes from antitrust liability someone who exercises his First Amendment right to petition the government for a redress of grievances—would bar an antitrust claim against an SEP holder's request for an injunction or an exclusion order.<sup>98</sup> The Federal Trade Commission (FTC) twice challenged an SEP holder's use of an injunction under section 5 of the Federal Trade Commission Act—which empowers the FTC to prohibit "unfair methods of competition" and "unfair or deceptive acts or practices."<sup>99</sup> However, in both cases, the FTC adopted a consent order, and thus concluded both investigations without a finding of a section 5 violation.<sup>100</sup> Since 2014, the FTC has not initiated any investigation challenging an SEP holder's request for an injunction. In September 2015, Assistant Attorney General Baer said that "the ability of F/RAND-encumbered patent holders to get an injunction in U.S. federal courts has been appropriately limited."<sup>101</sup> His

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<sup>96</sup> Press Release, European Commission, Antitrust: Commission Seeks Feedback on Commitments Offered by Samsung Electronics to Address Competition Concerns on Use of Standard Essential Patents—Questions and Answers (Oct. 17, 2013), [http://europa.eu/rapid/press-release\\_MEMO-13-910\\_en.htm](http://europa.eu/rapid/press-release_MEMO-13-910_en.htm).

<sup>97</sup> Opinion of Advocate General Wathelet ¶ 9, Case C-170/13 Huawei Tech. Co. v. ZTE Corp. (Nov. 20, 2014) (European Union).

<sup>98</sup> See, e.g., *Apple, Inc. v. Motorola Mobility, Inc.*, 886 F. Supp. 2d 1061, 1076 (W.D. Wis. 2012).

<sup>99</sup> 15 U.S.C. § 45.

<sup>100</sup> See Decision and Order, Robert Bosch GmbH, No. C-4377, § IV.D (F.T.C. Apr. 23, 2013); Decision and Order, Motorola Mobility, L.L.C., No. 121-0120, § II.E (F.T.C. July 24, 2013).

<sup>101</sup> Baer 2015 Speech, *supra* note 93, at 10.

statement suggests that the Antitrust Division has no intention to prosecute under antitrust law an SEP holder that requests an injunction.

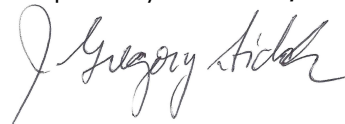
In the European Union, an SEP holder's request for an injunction has been scrutinized under the provisions of competition law. In 2012, the European Commission initiated two investigations to determine whether the SEP holder's request for an injunction amounted to an abuse of a dominant position. However, the Commission adopted an infringement decision condemning the SEP holder's request for an injunction in only one of the two investigations.<sup>102</sup> (Even in that case, the Commission did not impose any fine on the SEP holder.) In 2015, the Court of Justice of the European Union (CJEU) adopted a decision that restricted the circumstances in which the SEP holder's request for an injunction could constitute an abuse of a dominant position.<sup>103</sup> The CJEU clarified that, if the SEP holder has committed to license its SEPs on FRAND terms and has met specific prerequisites (such as notifying the defendant about the infringement and clearly presenting a license offer to the infringer), then that SEP holder's request for an injunction will not be considered an abuse of its dominant position.<sup>104</sup>

In determining whether to impose on the SEP holder antitrust liability for requesting an injunction, it is first necessary to consider the likelihood that the SEP holder could actually obtain an injunction. When the likelihood of obtaining an injunction is low, the threat created by the SEP holder's request for an injunction is unlikely to distort the negotiation process in any material way. The likelihood of obtaining an injunction will typically be lower in jurisdictions where, as in India, there is no automatic right to an injunction. Because Indian courts have discretion to decide whether to enjoin an infringer of a FRAND-committed SEPs, the Ministry consequently might conclude that there is no need to subject an SEP holder's request for an injunction to liability under competition law.

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I am grateful for this opportunity to submit my views on the Ministry's recommended revisions, and I would be pleased to elaborate upon my comments if the Ministry has any questions.

Respectfully submitted,



J. Gregory Sidak  
Chairman

#### Attachments

<sup>102</sup> *Motorola Mobility Infringement Decision*, *supra* note 85, ¶ 311.

<sup>103</sup> Case C-170/13, *Huawei Tech. Co. v. ZTE Corp.* (July 17, 2015).

<sup>104</sup> *Id.*