

ANTITRUST AND THE IEEE'S BYLAW AMENDMENTS

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I.

In February 2015, the IEEE began regulating the calculation of FRAND royalties for standard-essential patents. It made that change with the encouragement and subsequent blessing of the Antitrust Division of the U.S. Department of Justice, which, several years earlier, had begun urging standard-setting organizations to amend their bylaws. In a speech in October 2012 to the International Telecommunication Union, Deputy Assistant Attorney General Renata Hesse said that the holder of standard-essential patents might “engag[e] in . . . patent hold-up, . . . obtaining an unjustifiably higher price for its invention than would have been possible before the standard was set.”¹ She then itemized policies that she urged standard-setting organizations to adopt.² The Patent Committee of the IEEE’s Standards Board embraced this advice. It appointed an *ad hoc* committee that drafted proposed amendments to the IEEE’s bylaws that mirrored Ms. Hesse’s recommendations.³ In the words of the IEEE’s outside counsel, the IEEE’s amendments would “provide greater clarity on issues that have divided SEP owners and standards implementers in recent years.”⁴

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1. Renata Hesse, Deputy Assistant Attorney Gen., U.S. Dep’t of Justice, Six “Small” Proposals for SSOs Before Lunch: Remarks as Prepared for the ITU-T Patent Roundtable 5 (Oct. 10, 2012), <http://www.justice.gov/atr/public/speeches/287855.pdf>.
2. *Id.* at 9–10.
3. Letter from Michael A. Lindsay, Esq., Dorsey & Whitney, L.L.P., to Hon. William J. Baer, Assistant Attorney Gen., U.S. Dep’t of Justice 13 (Sept. 30, 2014) [hereinafter IEEE Business Review Letter Request], <http://www.justice.gov/sites/default/files/atr/legacy/2015/02/17/311483.pdf>.
4. *Id.* at 15; *see id.* at 16–17 (“When a SEP owner can seek a Prohibitive Order [either an injunction from a court or an exclusion order from the U.S. International Trade Commission] without any limitation, the negotiation can become a negotiation over the cost to the implementer of being excluded from implementing the standard, rather than the value that the particular SEP contributes to the implementation.”).

II.



The amendments drafted by the *ad hoc* committee and ratified by the IEEE diminish the ability of the holder of a standard-essential patent to enforce its patent rights, and they redefine FRAND in a way that suppresses the royalty that the holder of standard-essential patent may charge a licensee.⁵ The amendments mandate, among other things, that a FRAND royalty exclude any value attributable to the standard, and they restrict the right of the holder of a standard-essential patent to seek an injunction against an unlicensed implementer.

Before ratifying these bylaw amendments, the IEEE sought, in September 2014, a business review letter from the Antitrust Division confirming that the amendments would “compl[y] with all applicable antitrust and competition laws.”⁶ The IEEE further sought assurance that the Division “would not bring action against IEEE under any antitrust theory.”⁷ Likewise, the IEEE’s Standards Board recommended that the IEEE’s Board of Governors approve the amendments contingent on obtaining a “favorable Business Review Letter.”⁸ In its request to the Antitrust Division, outside counsel for the IEEE said that the IEEE was seeking a business review letter because some of its stakeholders had expressed antitrust concerns over the proposed amendments and other stakeholders had asked the IEEE to seek such a letter.⁹ In a letter dated January 30, executives from Apple, Cisco, Intel, Microsoft, and other companies urged the IEEE’s leadership to adopt the proposed amendments.¹⁰

On February 2, 2015, the Antitrust Division released its business review letter, signed by Ms. Hesse, declining to challenge the IEEE’s proposed amendments to its bylaws.¹¹ Ms. Hesse said that the amendments had “the potential to

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5. See, e.g., IEEE-SA Standards Bd. Patent Comm., IEEE-SA Patent Policy: Draft Comments, Comment ID No. 37 (Mar. 4, 2014), http://grouper.ieee.org/groups/pp-dialog/drafts_comments/PatCom_sort_by_commentID_040314.pdf (comments of Dina Kallay, Dir. for IP and Competition, Ericsson); Don Clark, *Patent Holders Fear Weaker Tech Role*, Wall St. J. (Feb. 9, 2015, 1:26 PM), <http://www.wsj.com/articles/patent-holders-fear-weaker-tech-role-1423442219>; Ryan Davis, *Patent Owners Take Hit with Standard-Setting Body’s Rules*, Law360 (Feb. 9, 2015, 8:49 PM), <http://www.law360.com/competition/articles/619687>.
 6. IEEE Business Review Letter Request, *supra* note 3, at 17.
 7. *Id.* at 19.
 8. *Id.* at 14–15.
 9. *Id.* at 17. Strictly speaking, “the issuance of such a letter is not to be represented to mean that the Division believes that there are no anticompetitive consequences warranting agency consideration.” 28 C.F.R. § 50.6(7)(a).
 10. Letter from Ira Blumberg, Vice President of Intellectual Prop., Lenovo Grp. Ltd., et al. to Howard E. Michel, President & CEO, IEEE, and Bruce Kraemer, President, IEEE-SA & Dir., IEEE (Jan. 30, 2015), <http://comparativepatentremedies.blogspot.com/2015/02/letter-in-support-of-proposed-ieee-sa.html>. The companies signing the letter were Apple, Cisco Systems, Dell, Hewlett-Packard Española, Intel, Juniper Networks, Kingston Technology, Lenovo, Microsoft, Samsung, Sceptre, and Verizon.
 11. Business Review Letter from Hon. Renata B. Hesse, Acting Assistant Attorney Gen., U.S. Dep’t of Justice, to Michael A. Lindsay, Esq., Dorsey & Whitney, L.L.P. (Feb. 2, 2015) [hereinafter 2015 IEEE Business Review Letter], http://www.justice.gov/sites/default/files/opa/press-releases/attachments/2015/02/02/ieee_business_review_letter.pdf; see also J. Gregory Sidak, *The Antitrust Division’s Devaluation of SEPs*, 104 GEO. L.J. ONLINE 48, 52 n.19 (2015),

benefit competition and consumers[,]” and were likely to “facilitat[e] licensing negotiations, mitigat[e] [patent] hold up and royalty stacking, and promot[e] competition among technologies for inclusion in standards.”¹² Further, the Antitrust Division did not find the amendments likely to result in anticompetitive harm because, in Ms. Hesse’s assessment, “licensing rates . . . are [still] determined through bilateral negotiations, the [amendments] are not out of step with the direction of current U.S. law interpreting [F]RAND commitments[,] . . . and patent holders can avoid” the amendments by refusing to submit a Letter of Assurance or “can depart to other SSOs.”¹³ The Antitrust Division said that, even if the amendments did generate anticompetitive repercussions, the “potential procompetitive benefits” of the bylaw amendments would “likely outweigh those harms.”¹⁴ Six days later, the IEEE’s Board of Governors ratified the bylaw amendments.¹⁵

III.



In the tradition of Sir Karl Popper, the British philosopher, I refer to the “patent-holdup conjecture” or the “royalty-stacking conjecture” as an example of an *a priori* hypothesis that must survive rigorous attempts at falsification (both theoretical and empirical) before it can be accepted as plausibly true.¹⁶ Strictly speaking, Popper believed that we never really confirm a conjecture; we only fail to refute it. But in the course of repeatedly failing to refute a conjecture, we become more confident that it is true. Popper called the information in which we have such confidence “objective knowledge.”

The Supreme Court had this epistemological framework of conjecture and refutation in mind when, in *Daubert*, it quoted Popper to describe the essence of admissible scientific evidence under the Federal Rules of Evidence: “The criterion of the scientific status of a theory is its falsifiability, or refutability, or testability.”¹⁷ I am not aware of any binding legal principle that requires an Executive Branch official who has sworn to faithfully execute a highly technical body of law—such as antitrust law—to act solely on the basis of objective knowledge. Yet, as a prudential matter, it is hardly asking too much that an

<https://www.criterioneconomics.com/docs/antitrust-divisions-devaluation-of-standard-essential-patents.pdf>.

12. 2015 IEEE Business Review Letter, *supra* note 11, at 16.

13. *Id.* at 8.

14. *Id.* at 16.

15. Press Release, IEEE, IEEE Statement Regarding Updating of Its Standards-Related Patent Policy (Feb. 8, 2015), http://www.ieee.org/about/news/2015/8_february_2015.html?WT.mc_id=std_8feb.

16. See KARL R. POPPER, CONJECTURES AND REFUTATIONS: THE GROWTH OF SCIENTIFIC KNOWLEDGE (5th ed. 1989); KARL R. POPPER, OBJECTIVE KNOWLEDGE: AN EVOLUTIONARY APPROACH (Oxford Univ. Press rev. ed. 1979).

17. See *Daubert v. Merrill Dow Pharm., Inc.*, 509 U.S. 579, 593 (1993) (quoting POPPER, CONJECTURES AND REFUTATIONS, *supra* note 16, at 37) (emphasis omitted)); see also J. Gregory Sidak, *Court-Appointed Neutral Economic Experts*, 9 J. COMPETITION L. & ECON. 359, 384–86 (2013) (analyzing the epistemological foundation of *Daubert* and its progeny), <https://www.criterioneconomics.com/docs/sidak-court-appointed-neutral-economic-experts-9-jcle-359-2013.pdf>.

official like Ms. Hesse inform her exercise of prosecutorial discretion with no less intellectual rigor than what, on any day of the week, a federal court demands of an expert witness testifying in the same technical area of law.

Yet Ms. Hesse told a public conference in Washington in March that patent holders “should stop saying” that patent holdup “is not a problem.”¹⁸ In effect, the Antitrust Division has decreed that the patent-holdup conjecture is true. It is not interested in the falsifiability of the conjecture. The Antitrust Division requires no proof that there exists a problem for which the IEEE bylaw amendments are the promised solution. Merely to posit a market failure suffices.

Mark Lemley and Carl Shapiro proposed the patent-holdup conjecture in 2007 in an article funded by six companies that included Apple, Cisco, Intel, and Microsoft.¹⁹ By the time of the Antitrust Division’s business review letter in early 2015, articles by more than two dozen economists and lawyers had disputed the patent-holdup and royalty-stacking conjectures.²⁰ The critics—and I will not call them “holdup deniers,” out of respect for George Orwell’s essay, *Politics and the English Language*²¹—argued that the patent-holdup conjecture exaggerates the incentive of a holder of standard-essential patents to engage in patent holdup.²² Furthermore, empirical research indicates that patent holdup does not routinely occur in practice.²³ Those studies show, among other things, that the quality-adjusted prices for products in industries that rely on standard-essential patents decline faster than prices for products in industries that do not rely on standard-essential patents, which is the opposite of what one would predict for industries that supposedly face patent holdup.²⁴ The Antitrust Division did not cite any of this research in its IEEE business review letter, let alone respond to the fact that it casts doubt that patent holdup and royalty stacking occur in the real world.

For the patent-holdup and royalty-stacking conjectures to have any plausibility, the holder of a standard-essential patent must be able to make a credible threat to enjoin an implementer’s unlicensed use of the standard-essential patent. The Supreme Court’s decision in *eBay*—decided in May 2006, *before* the Lemley-Shapiro article was even published in 2007—by itself eviscerates the plausibility of these conjectures. U.S. courts have never enjoined an

18. Michael Macagnone, *SEP License Fees Are Getting Out of Hand, Officials Say*, LAW360 (Mar. 16, 2015, 8:26 PM), <http://www.law360.com/articles/631607> (quoting Deputy Assistant Attorney General Renata Hesse).

19. Mark A. Lemley & Carl Shapiro, *Patent Holdup and Royalty Stacking*, 85 TEX. L. REV. 1991 (2007).

20. See, e.g., Sidak, *The Antitrust Division’s Devaluation of SEPs*, *supra* note 11, at 61–62 n.49.

21. George Orwell, *Politics and the English Language* (1946), http://www.orwell.ru/library/essays/politics/english/e_polit/.

22. See, e.g., J. Gregory Sidak, *Apportionment, FRAND Royalties, and Comparable Licenses After Ericsson v. D-Link*, 2016 U. ILL. L. REV. (forthcoming) (manuscript at 24), <https://www.criterioneconomics.com/docs/apportionment-frand-royalties-comparable-licenses-ericsson-dlink.pdf>.

23. See, e.g., Alexander Galetovic, Stephen Haber & Ross Levine, *An Empirical Examination of Patent Hold-Up*, 11 J. COMPETITION L. & ECON. 1 (2015).

24. See, e.g., *id.*, *supra* note 23, at 6.

implementer of standard-essential patents.²⁵ In 2014, Carl Shapiro himself wrote, with Fiona Scott-Morton, that “the risk of injunctions appears to be quite low” and that “[m]any holders of SEPs *do license at FRAND rates*, perhaps due to concerns about reputation or retaliatory conduct by others.”²⁶

Yet, the Antitrust Division in 2015 ignored these developments and did not cite any empirical evidence to indicate that patent holdup and royalty stacking have impaired implementation of any IEEE standard. In a word, the benefits that the Antitrust Division credited to the IEEE's bylaw amendments were fictitious.

IV.



So much for the Antitrust Division's assessments of the benefits of the IEEE's bylaw amendments. What about the costs? The potential costs of the proposed amendments should have been clear enough. Implementers could suppress royalties for standard-essential patents by collectively lobbying the IEEE to adopt rules that would make the enforcement of standard-essential patents particularly onerous or that would prescribe particular rate-setting methodologies guaranteed to produce lower royalties than would eventuate from bilateral negotiations undertaken in the absence of such coordinated modifications of the IEEE's bylaws.

Ms. Hesse's business review letter ran sixteen single-spaced pages, but the extent of her analysis of the danger of collusion among buyers of standard-essential technology consisted of this sentence: “The Department has analyzed whether the [proposed bylaw amendments] . . . will harm competition by anticompetitively reducing royalties and thereby diminishing incentives to innovate.”²⁷ Ms. Hesse did not say what methods or principles the Antitrust Division applied to the specific facts of the IEEE's bylaw amendments to reach the conclusion that its coordinated suppression of FRAND royalties was “unlikely.”²⁸ Her statement that no competitive problem is present because the parties still would set FRAND royalties in bilateral negotiations is specious, because the bylaw amendments have succeeded in lopping off the upper end of the bargaining range.

But if the IEEE's proposed bylaw amendments had no potential to violate antitrust law, then why did the IEEE want the Antitrust Division to say that it “would not bring action against IEEE under any antitrust theory”?²⁹ Why did the IEEE's Standards Board urge the IEEE's Board of Governors to make its

25. For an example of the reluctance to enjoin, see *Apple Inc. v. Motorola, Inc.*, 757 F.3d 1286, 1332 (Fed. Cir. 2014).

26. Fiona M. Scott Morton & Carl Shapiro, *Strategic Patent Acquisitions*, 79 ANTITRUST L.J. 463, 473, 475 (2014) (emphasis added).

27. 2015 IEEE Business Review Letter, *supra* note 11, at 8.

28. *Id.*

29. IEEE Business Review Letter Request, *supra* note 3, at 19.

approval of the bylaw amendments conditional on receipt of an accommodating business review letter?

V.



A favorable business review letter means only that the Antitrust Division has no current intention to prosecute the conduct in question. I will leave it to others to speculate why the Antitrust Division's 2015 IEEE business review letter ignores the elephant in the corner. But ask yourself this question: If a holder of standard-essential patents brought a private antitrust suit against either the IEEE or some subset of its members, would the court take the reasoning of the Antitrust Division's business review letter seriously?

In a private lawsuit of this nature, the plaintiff would need to prove the existence of an agreement in restraint of trade. It is established law that bylaw amendments of an industry association themselves can constitute the requisite agreement under section 1 of the Sherman Act.³⁰ Beyond that, the joint letter of the member companies urging the IEEE's leadership to ratify the bylaw amendments is also evidence of collective action manifesting an agreement, the purpose of which was to secure adoption of the royalty-suppressing bylaws that the *ad hoc* committee had crafted. If the court were to apply the *per se* test, the case would be over, and the defendants would owe treble damages.

If, in contrast, the court were to apply the rule of reason to the case, it would consider the competitive effects of the restraint of trade. Then, and only then, would the court consider whether the restraint of trade was justified by a legitimate business purpose and was no more restrictive than necessary to achieve that purpose. At that point, the prevention of patent holdup and royalty stacking could be raised as an affirmative defense, but the IEEE or its member companies (as the case may be) would bear the burden of proof. The decision maker would no longer be the credulous Antitrust Division, but a skeptical jury or district court judge.

The best evidence of how this affirmative defense would fare is the Federal Circuit's December 2014 decision in *Ericsson v. D-Link*.³¹ There, the Federal Circuit upheld Chief Judge Leonard Davis' reasoning in a patent infringement

30. See, e.g., *Robertson v. Sea Pines Real Estate Cos., Inc.*, 679 F.3d 278, 289 (4th Cir. 2012) ("The content of the rules," which were bylaws passed by board members of a multiple listing service (MLS) and were "described in detail in the complaints, constitutes the factual matter establishing a plausible claim of conspiracy between the MLS board members."); see also *Northwest Wholesale Stationers v. Pac. Stationery & Printing Co.*, 472 U.S. 284, 293 (1985) ("If the challenged concerted activity of Northwest's members would amount to a *per se* violation of § 1 of the Sherman Act, no amount of procedural protection would save it."); *American Soc'y Mech. Eng'rs, Inc. v. Hydrolevel Corp.*, 456 U.S. 556, 577-78 (1982) ("By holding ASME liable under the antitrust laws for the antitrust violations of its agents committed with apparent authority, we recognize the important role of ASME and its agents in the economy, and we help to ensure that standard-setting organizations will act with care when they permit their agents to speak for them.")

31. 773 F.3d 1201 (Fed. Cir. 2014).

case not to instruct the jury about the theoretical risk of patent holdup and royalty stacking because, he concluded, the accused infringers had presented no empirical evidence that patent holdup or royalty stacking had ever occurred.³² Here is what Chief Judge Davis said:

[G]iven the opportunity to present evidence of an *actual* stack[,] . . . [the] Defendants came up empty. All of [the] Defendants' concerns about royalty stacking were just that—concerns.³³

The Federal Circuit agreed. It said:

In deciding whether to instruct the jury on patent hold-up and royalty stacking, . . . 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.³⁴

Unlike securing a business review letter from the Antitrust Division, getting a jury instruction on patent holdup and royalty stacking requires one to make what the Federal Circuit calls "something more than a general argument that these phenomena are possibilities."³⁵

VI.



Where does that leave us? The IEEE and the member companies responsible for the bylaw amendments have succeeded in fundamentally transforming this standard-setting organization into a regulator of FRAND royalties. But they have done so at the cost of exposing themselves to antitrust liability against which the 2015 business review letter is no shield. As Shakespeare wrote in *Hamlet*:

For 'tis the sport to have the engineer
Hoist with his own petard.³⁶

32. *Id.* at 1233–34; *Ericsson Inc. v. D-Link Sys., Inc.*, No. 6:10-cv-00473, 2013 WL 4046225, at *18 (E.D. Tex. Aug. 6, 2013).

33. *Ericsson*, 2013 WL 4046225, at *18, *26 (emphasis in original); see Sidak, *Apportionment, FRAND Royalties, and Comparable Licenses After Ericsson v. D-Link*, *supra* note 22, at 4, 4 n.18.

34. *Ericsson*, 773 F.3d at 1234.

35. *Id.*

36. WILLIAM SHAKESPEARE, *THE TRAGEDY OF HAMLET, PRINCE OF DENMARK* act 3, sc. 4.