Antitrust Deterrence of Patent Holdup: Refocusing on Competition as a Driver of Technological Innovation

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Traditionally, antitrust law has served as both deterrent against and remedy for the monopolistic behavior known as patent holdup. Yet those who profit from patent holdup not only deny its existence but also until very recently wielded an enticing critique of the role of antitrust law in its deterrence—namely, that antitrust law (1) disincentivizes technological innovation and (2) incentivizes infringement.

After exploring patent holdup and why the modern and historical goals of antitrust law are well suited to combatting it, this Note provides direct and circumstantial evidence of the existence of patent holdup as a real-world problem. It also looks at how a sociopolitical power imbalance at work from 2017 until 2021 bolstered attempts to immunize standard-essential patents from antitrust scrutiny. Next, it covers why contract law alone is insufficient to remedy or deter patent holdup. Additionally, this Note debunks the misguided admonition that innovation will be deterred by antitrust scrutiny. Such admonition is premised on the notions that unqualified patent rights, such as the right to maximize prices and the right to exclude others from practicing one's patent, are necessary incentives for innovation and that antitrust enforcement suppresses these incentives. This Note ends with a realistic view of the role of injunctions in the context of standard-essential patents and the conclusion that a recent governmental policy shift towards continuing to allow firms to seek injunctions while preserving the role of antitrust law is the only sensible approach to take.

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INTRODUCTION

Patent law and antitrust law are complementary in that they both aim to promote innovation and competition.[1] This Note is about maintaining the

1. *See* Atari Games Corp. v. Nintendo of Am., Inc., 897 F.2d 1572, 1576 (Fed. Cir. 1990) ("[T]he aims and objectives of patent and antitrust laws may seem, at first glance, wholly at odds. However, the two bodies of law are actually complementary, as both are aimed at encouraging innovation, industry and competition." (citing Loctite Corp. v. Ultraseal LTD., 781 F.2d 861, 876–77 (Fed. Cir. 1985), *overruled by* Nobelpharma AB v. Implant Innovations, Inc., 141 F.3d 1059 (Fed. Cir. 1998))); Statement of Interest of the United States at 4, Cont'l Auto. Sys., Inc. v. Avanci, LLC, 485 F. Supp. 3d 712 (N.D. Tex. 2020) (No. 19-CV-02933) [hereinafter Statement of Interest], https://www.justice.gov/atr/case-document/file/1253361/download [https://perma.cc/Q7JN-

complementary alignment between these two bodies of law, particularly in the context of technological standards. More specifically, it explores the perfect fit between antitrust law and standard-essential patents. It focuses on the goal of keeping antitrust law at play in order to deter what is known as patent holdup and to promote technological innovation. This focus remains especially important in light of several years of attacks on the applicability of antitrust law in connection with technological standards.[2]

Given recent political developments, the time is now to distinguish which arguments about patent holdup have merit and which do not.[3] First, legislators from both sides of the aisle are "increasingly focus[ed] on tech companies and [anticompetitive] practices."[4] Second, in a July 2021 Executive Order, President Biden called for initiatives that will promote competition, such as revising a Joint Policy Statement on remedies for standard-essential patents (SEPs) subject to fair, reasonable, and nondiscriminatory (FRAND) commitments.[5] Third, the U.S. Department of Justice (DOJ) released a draft revised policy statement in December of 2021 and requested public comments for the statement until February 4, 2022.[6] This draft revised policy statement has already been touted as "reestablish[ing]

LS8F] ("[T]he policies of the patent laws and antitrust laws are aligned in their mutual aim to foster innovation that creates dynamic competition."); *cf.* Oskar Liivak, *Rethinking the Concept of Exclusion in Patent Law*, 98 GEO. L.J. 1643, 1656 (2010) ("Patent law is an artificial deviation from competition." (internal quotations omitted) (citing Brett M. Frischmann & Mark A. Lemley, *Spillovers*, 107 COLUM. L. REV. 257, 267 n.33 (2007))); Letter from Thom Tillis, U.S. Sen., to Merrick Garland, Att'y Gen. & Jonathan Kanter, Assistant Att'y Gen. (Jan. 19, 2022) [hereinafter Letter from Thom Tillis], https://www.ipwatchdog.com/wp-content/uploads/2022/01/1.19.2022-LTR-Senator-Tillis-to-AG-Garland-and-AAG-Kanter.-Final.docx.pdf [https://perma.cc/9B7M-YBR8] ("Antitrust and intellectual property policies need to work together to create a balanced, strong, innovation ecosystem.").

2. *See* Rosa Morales, *Can Antitrust Enforcement Be a Tool for Racial Equity?*, LAW360 (Mar. 30, 2021, 6:03 PM), https://www.law360.com/articles/1370258 [https://perma.cc/548J-3H2D] ("Sen. Amy Klobuchar, D-Minn.—who chairs the U.S. Senate's Subcommittee on Competition Policy, Antitrust and Consumer Rights—recently commented that increasing market power and concentration, and decades of court rulings and lax regulation by agency enforcers, have been key contributors to the monopoly problem, particularly in Big Tech.").

3. *See id.* ("[R]ecent legislative and executive developments may portend a policy shift in antitrust enforcement in a political environment with rare bipartisan support for reining in market power in and beyond Big Tech.").

4. *See* James Arkin, *Bipartisan Senators to Target Big Tech in Competition Bill*, LAW360 (Oct. 14, 2021, 5:19 PM), https://law360.com/articles/1431044 [https://perma.cc/6RQD-XVT6].

5. Promoting Competition in the American Economy, 86 Fed. Reg. 36,987, 36,991–92 (July 14, 2021), https://www.govinfo.gov/content/pkg/FR-2021-07-14/pdf/2021-15069.pdf [https://perma.cc/6LGT-CE5G].

6. U.S. PAT. & TRADEMARK OFF., NAT'L INST. OF STANDARDS & TECH. & ANTITRUST DIV., U.S. DEP'T OF JUST., DRAFT POLICY STATEMENT ON LICENSING NEGOTIATIONS AND REMEDIES FOR STANDARDS-ESSENTIAL PATENTS SUBJECT TO VOLUNTARY F/RAND COMMITMENTS (2021) [hereinafter "DRAFT POLICY STATEMENT"], https://www.justice.gov/atr/page/file/1453471/download [https://perma.cc/4JVT-TUKJ]. As of this writing, political developments surrounding the revised Joint Policy Statement are evolving. Developments occurring after April 11, 2022 will not be captured before this Note goes to print.

balance in negotiations between SEP holders and implementers by removing the threat of illegitimate exclusionary relief."[7]

Part I of this Note provides an overview of patent holdup and explains why it is anticompetitive. Part II explores real-world evidence that patent holdup actually happens and takes a deeper look at why it implicates antitrust scrutiny under both modern and historical goals of antitrust law. It includes a concrete example of a sociopolitical power imbalance at work—the kind that can both arise from and seek to perpetuate patent holdup. Part III discusses why antitrust enforcement is not only implicated but also necessary. It explains why contract law alone cannot maintain the integrity of the standard-setting and implementation processes and then debunks the myth that innovation will suffer if antitrust law remains involved. It next discusses the reality that patent owners are not victims in a world where patent holdup is deterred because if they do not want to agree to fair and reasonable patent-licensing terms, they can stay out of collective standard setting by developing and implementing fully proprietary products instead. Lastly, in Part IV, this Note rebuts the allegation that antitrust scrutiny incentivizes patent infringement by limiting the availability of injunctions. Granted, those taking a pro-injunction approach are partially right in that the fear of an antitrust lawsuit could deter a patent owner from seeking an injunction. But any claims that the availability of injunctions has been or will be foreclosed in the standards context are blatantly wrong and distract from the important goal of maintaining antitrust liability.

I. BACKGROUND

A. Standardization

Standards-setting organizations (SSOs) are groups responsible for setting quality and interoperability standards for the devices and products consumers know and love. Two paradigmatic examples are cell phones and Wi-Fi.[8] These products could not function the way they do without conforming to certain uniform technological standards. Indeed, it has been said that "without standardization there wouldn't be a modern economy."[9]

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7. Timothy Muris, *Biden FRAND Policy Will Help Protect Competition*, LAW360 (Jan. 27, 2022, 6:41 PM), https://www.law360.com/articles/1459379 [https://perma.cc/WV42-LBHZ].

8. *See* Kristen Jakobsen Osenga, *Ignorance over Innovation: Why Misunderstanding Standard Setting Organizations Will Hinder Technological Progress*, 56 U. LOUISVILLE L. REV. 159, 169 (2018) ("Whether you have a phone made by Apple or Google or Samsung, you will be able to talk and text other people, regardless of what brand of smart phone they use. You will be able to access Wi-Fi via the router in your house, not [sic] matter what company manufactures that router—and you will be able to hop onto Wi-Fi hotspots at the local library, coffee shop, and many other places. When not on Wi-Fi, you will be able to access the LTE network, whether you use Verizon, T-Mobile, or another cell phone service provider. Technology standards make all these things, and so many other aspects of modern life, possible.").

9. James Surowiecki, *Turn of the Century*, WIRED (Jan. 1, 2002, 12:00 PM), http://www.wired.com/wired/archive/10.01/standards.html [https://perma.cc/FQT6-WXX5].

SSOs endeavor to select the technologies that will be most beneficial for the industry.[10] The process includes meetings with industry experts as well as pre-standard (ex ante or upstream) competition among the innovators who are each advocating for the selection of their own technology.[11] During this period of upstream competition, monopoly pricing is not yet a problem.[12] But once a standard is set, the selected technology is essential to compliance with the standard, so, assuming it was patented, it becomes what is known as an SEP. In other words, "if it is impossible to design a product that complies with a particular technical standard without infringing the claims of a particular patent, that patent is 'essential' to the practice of that standard."[13] Once a patent is anointed as an SEP, there arises a risk of patent holdup.

B. Patent Holdup

Patent holdup is when an SEP holder either refuses to license its technology or charges excessive royalties for its technology after others have already made "substantial investments" in developing and adopting the relevant standard.[14] To help prevent patent holdup, SSOs employ a two-step process that requires (1) disclosure of all patents and (2) agreement by the patent owner to license its patent on FRAND terms.[15] These requirements evolved as a means to balance the interests of SEP holders against those of end-product proprietors.[16] That is, they protect competition and curb monopolistic behavior.

It is worth noting that *lawful* monopolies do not implicate antitrust law, but illegal monopolies do.[17] A legal monopoly does not result in patent holdup because

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10. .*See, e.g.*, *Developing Standards*, IEEE STANDARDS ASS'N, https://standards.ieee.org/develop/index.html [https://perma.cc/6GEC-94H5] (last visited Mar. 25, 2022) ("The IEEE standards development process is rooted in consensus, due process, openness, right to appeal and balance . . . . In particular, the IEEE operates in active agreement with the WTO principle that standards should not create unnecessary obstacles to trade, and whenever appropriate, should specify requirements in terms of performance rather than design or descriptive characteristics.").

11. *See, e.g.*, *id.*

12. *See* Deborah Platt Majoras, Chairman, Fed. Trade Comm'n, Recognizing the Procompetitive Potential of Royalty Discussions in Standard Setting, Remarks Prepared for Standardization and the Law: Developing the Golden Mean for Global Trade at Stanford University 3 (Sept. 23, 2005), http://www.ftc.gov/speeches/majoras/050923stanford.pdf [https://perma.cc/7WCN-TYLP] ("[B]efore lock in—or '*ex ante*'—technologies compete to be the standard, and no patent-holder can demand more than a competitive royalty rate. After lock in—or '*ex post*'—the owner of the chosen technology may have the power to charge users supra-competitive royalty rates—rates that may ultimately be passed on to consumers in the form of higher prices.").

13. Interview by Patrick H.J. Hughes with John D. Carlin, Pat. Att'y, Venable LLP (Sept. 23, 2020), 2020 IPDBRF 0115.

14. *Id.*

15. *Id.*

16. *Id.*

17. 58 C.J.S. *Monopolies* § 16 (2021) ("Under Section 2 of the Sherman Act prohibiting monopolization and conspiracy to monopolize, acts or practices that result in the acquisition or maintenance of monopoly power are not in violation unless they represent something more than the

it will have been achieved and maintained through competition on the merits.[18] Competition for inclusion in a standard includes not only superior product but also a bona fide intent to honor one's FRAND commitment, which prevents the unlawful acquisition of monopoly power.[19]

An illegal monopoly, on the other hand, results when a patent holder deceptively influences an SSO to set a technological standard that requires use of its patent by agreeing to license the patent on FRAND terms but then violates that FRAND agreement by charging high or discriminatory licensing fees.[20] The ones being charged these above-FRAND licensing fees are the implementers and cannot at this point simply opt to use a different piece of technology.[21] Once a piece of patented technology is included in a standard and the industry moves in that direction, the standard becomes entrenched, making it too costly for the industry to go back and pick a new standard. Those costs are called switching costs.[22] Switching costs, coupled with the exclusionary power of the patent, are what create a monopoly for the SEP holder and eliminate other options for the implementers.[23] Obtaining and using this type of monopoly power through deception on an SSO has been known as patent holdup, and antitrust law has historically been involved to prevent such anticompetitive conduct.[24] Even in high-tech industry cases not

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conduct of business that is part of the normal competitive process, and must be actions that are taken for no legitimate business reasons. A defendant must be guilty of illegal conduct to foreclose competition, to gain a competitive advantage, or to destroy a competitor, such that liability turns on whether valid business reasons can explain a defendant's actions. Monopoly power is not condemned by the Act only when it was unlawfully obtained. Even a lawful monopolist may be in violation when seeking to extend or exploit its monopoly in a manner not contemplated by its authorization. The use of monopoly power, however lawfully acquired, to foreclose competition, to gain a competitive advantage, or to destroy a competitor is unlawful." (footnotes omitted)).

18. *See* Broadcom Corp. v. Qualcomm Inc., 501 F.3d 297, 308 (3d Cir. 2007) ("Anticompetitive conduct may take a variety of forms, but it is generally defined as conduct to obtain or maintain monopoly power as a result of competition on some basis other than the merits." (citing LePage's Inc. v. 3M, 324 F.3d 141, 147 (3d Cir. 2003) (en banc))).

19. *See id.* at 305.

20. *See id.* at 312 n.5 ("[E]ven if the SSO . . . itself is not corrupt, the subversion of an SSO by a single industry player or by a limited subset of SSO members can result in anticompetitive outcomes . . . . [B]y hijacking or capturing an SSO, a single industry player can magnify its power and effectuate anticompetitive effects on the market in question.").

21. Implementers are technology developers and manufacturers of products conforming with a standard—the companies whose products incorporate the SEPs.

22. *See* Eastman Kodak Co. v. Image Tech. Servs., Inc., 504 U.S. 451, 476 (1992) ("[A] seller profitably could maintain supracompetitive prices in the aftermarket if the switching costs were high relative to the increase in service prices, and the number of locked-in customers were high relative to the number of new purchasers.").

23. *See* Microsoft Corp. v. Motorola, Inc., No. C10-1823, 2013 WL 2111217, at *10 (W.D. Wash. Apr. 25, 2013) ("[T]he 'essence of hold-up' is that while *ex ante* competition constrains what a patent holder can obtain for access to its patent, *ex post*, the technology in the standard does not face that competition." (citing trial testimony of Richard Schmalensee).

24. *See Broadcom*, 501 F.3d at 314 ("Deception in a consensus-driven private standard-setting environment harms the competitive process by obscuring the costs of including proprietary technology in a standard and increasing the likelihood that patent rights will confer monopoly power on the patent

specifically dealing with patent holdup, courts have held that deception is monopoly conduct.[25] Those who reject patent holdup's receptiveness to antitrust scrutiny do not deny that deception can be monopoly conduct[26] but attempt to evade such scrutiny by suggesting that the "particular type of purported deception in the standard-setting context" is different—that it is a foreseeable and therefore immaterial kind of deception.[27]

But undermining antitrust law—a successful deterrent to wrongdoing—will invite more wrongdoing. Without antitrust laws enforcing the integrity of the standard-setting processes, consumers will lose some of the benefits provided by those processes. For one, SSOs may opt for non-patented technology in order to avoid patent holdup,[28] potentially giving consumers less-than-ideal products. Patent owners, in turn, could be driven to take their chances in a standards war[29] rather than participate in a standard-selection process that might prefer non-patented technologies. Another possibility is that even if SSOs continued their current competitive selection processes, the FRAND commitment would have no teeth. Then, high and discriminatory royalty rates would become even more common, resulting in market delays, fewer implementers, more concentrated wealth, concentrated power, higher prices, and fewer choices for consumers.[30] Maintaining

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holder." (citing Rambus, Inc., No. 9302, at 4 (Fed. Trade Comm'n, Aug. 2, 2006), 2006 WL 2330117 at *19)); Wi-LAN Inc. v. LG Elecs., Inc., 382 F. Supp. 3d 1012, 1023 (S.D. Cal. 2019) ("Courts have recognized that fraudulent FRAND declarations that are used to induce SSOs to adopt standards essential patents can be monopoly conduct for the purposes of establishing a Section 2 claim." (citing Apple Inc. v. Samsung Elecs. Co., No. 11-CV-01846, 2011 WL 4948567, at *4 (N.D. Cal. Oct. 18, 2011))); Rsch. In Motion Ltd. v. Motorola, Inc., 644 F. Supp. 2d 788, 796 (N.D. Tex. 2008) (denying a motion to dismiss a Section 2 claim because the plaintiff alleged that the defendant "obtained its position of power in the market not as a consequence of a superior product, business acumen or historic accident, but by misrepresenting its intentions"); *Apple Inc.*, 2011 WL 4948567, at *4 ("Thus, intentionally false promises to SSOs regarding licenses with FRAND terms can give rise to actionable claims under Section 2 of the Sherman Act.").

25. *See* United States v. Microsoft Corp., 253 F.3d 34, 76–77 (D.C. Cir. 2001) (en banc) (per curium) (holding that Section 2 liability was based on Microsoft's intentionally deceiving developers into thinking applications they developed to run on Microsoft systems would be cross-platform).

26. Statement of Interest, *supra* note 1, at 1 n.2 (citing *Microsoft Corp.*, 253 F.3d at 76–77) ("Deception, of course, can ground a valid Section 2 claim in certain circumstances.").

27. *Id.*; *see also id.* at 15 ("Even if the patent holder plans to maximize its licensing rates until a court or other tribunal determines those rates are above FRAND . . . [its] failure to be forthcoming about that intent . . . does not constitute a material deception.").

28. *See Broadcom*, 501 F.3d at 305 (noting that, in order to deter unlawful monopolies, SSOs might choose "nonproprietary technologies for inclusion in the standard"); Christopher R. Leslie, *The DOJ's Defense of Deception: Antitrust Law's Role in Protecting the Standard-Setting Process*, 98 OR. L. REV. 379, 389 (2020) ("The [FRAND] obligation, however, must be binding, because if FRAND commitments are neither credible nor enforceable, SSOs may adopt suboptimal standards in an effort to minimize the risk of patent holdup.").

29. "Standards wars" are competitions for market-selected standards as opposed to collectively set standards. *See* Osenga, *supra* note 8, at 169. They are discussed in detail in Section III.D of this Note.

30. *See* DRAFT POLICY STATEMENT, *supra* note 6, at 4 ("Opportunistic conduct by SEP holders to obtain, through the threat of exclusion, higher compensation for SEPs than they would have been

antitrust enforcement, on the other hand, promotes lawful competition and innovation, as this Note will explore.

C. Obtaining a Monopoly Through Deception on an SSO Is Not Competition on the Merits

SSOs are comprised of implementers, patent holders, technical experts, and other stakeholders, many of whom compete with each other.[31] Thus, SSOs utilize competition at the upstream, standard-selection level to choose the most efficient and beneficial technology for their members.[32] Critics argue that the existence of this upstream competition means all SEP monopolies are achieved through competition on the merits and therefore antitrust laws should not be at play.[33] This could make sense if there were no FRAND commitments or deception on the SSOs, but it ignores the fact that the patented products would never have been selected if there were not FRAND commitments attached.[34] When competing for selection, misrepresenting one's intent to honor a FRAND commitment is akin to misrepresenting the capability of the product. Both intent to honor a FRAND commitment and the product's capabilities are important factors in determining which products get chosen and which do not. Thus, such deception in standards selection is anticompetitive. It permits an "inefficient acquisition of market power" that "subverts the competitive process" by keeping implementers unaware of the terms on which a technology will be licensed.[35]

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able to negotiate prior to standardization, can deter investment in and delay introduction of standardized products, raise prices, and ultimately harm consumers and small businesses.").

31. *See* Osenga, *supra* note 8, at 165 ("SSOs are 'voluntary collectives in which representatives from multiple private companies, who are often competitors of each other, work together to establish technology standards.'" (quoting Jay P. Kesan & Carol M. Hayes, *FRANDs Forever: Standards, Patent Transfers, and Licensing Commitments*, 89 Ind. L. Rev 1, 4 (2009))).

32. *See, e.g.*, *Developing Standards*, *supra* note 10.

33. Makan Delrahim, Assistant Att'y Gen., U.S. Dep't of Just., Antitrust Div., Broke . . . but Not No More: Opening Remarks—Innovation Policy and the Role of Standards, IP, and Antitrust, Prepared Remarks for LeadershIP Virtual Series (Sept. 10, 2020) [hereinafter Delrahim, Broke], https://www.justice.gov/opa/speech/assistant-attorney-general-makan-delrahim-delivers-remarks-leadership-virtual-series#_ftnref1 [https://perma.cc/3BK5-TUJ6] ("The competitive process in this context takes place in the negotiations between implementers and patent holders. Negotiating in the shadow of dubious antitrust liability is not only unnecessary, it dramatically shifts bargaining power between patent holders and implementers in a way that distorts the incentives for real competition on the merits through innovation. Giving implementers the threat of treble damages in antitrust increases the perverse likelihood of 'hold-out,' which is the other side of the 'hold-up' coin. Of course, none of this undermines the importance of the negotiations that took place at the time that an [SSO] selected competing technologies for inclusion in the standard.").

34. *See* Broadcom Corp. v. Qualcomm Inc., 501 F.3d 297, 313 (3d Cir. 2007) ("A firm's FRAND commitment, therefore, is a factor—and an important factor—that the [SSO] will consider in evaluating the suitability of a given proprietary technology vis-a-vis competing technologies." (citing Brief of Amici Curiae The Institute of Electrical and Electronics Engineers, Inc. et al. in Support of Neither Party at 9, *Broadcom*, 501 F.3d 297 (No. 06-4292), 2006 WL 6900963)).

35. Joseph Farrell, John Hayes, Carl Shapiro & Theresa Sullivan, *Standard Setting, Patents, and Hold-Up*, 74 ANTITRUST L.J. 603, 609 (2007).

The market power at issue here does not apply to all patents or to lawful SEPs for that matter. For one, not all patents confer a monopoly. When people (or even courts)[36] use the word "monopoly" to refer to patent rights in a *non-SEP* invention, that is typically a misnomer.[37] The distinction between a true monopoly and general patent rights is important because, in patent holdup, antitrust law is not concerned with the lawful exclusion from competition that would be granted by a patent or with the lawful exclusion that results from a standard.[38] Antitrust law *is*, however, concerned with deterring and remedying the unlawful exclusion that results from anticompetitive violations of FRAND agreements.[39]

II. RELEVANCE

A. Undeterred Patent Holdup Breaks Down the Integrity of the Standard-Selection Process

Although patent holdup does occur, it is at least partially deterred by the risk of an antitrust lawsuit, which maintains integrity in the standard-selection process. SSOs require this integrity in order to continue providing significant and reliable services—namely, developing and adopting the standards on which industries and consumers rely. Deterrence of patent holdup is incredibly important because, without a reliable selection process in which patent holders can be trusted to maintain FRAND royalty rates, holdup slows the whole system, harming innovation

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36. *E.g.*, Cont'l Auto. Sys., Inc. v. Avanci, LLC, 485 F. Supp. 3d 712, 733 (N.D. Tex. 2020) ("A patent holder, of course, has a lawful monopoly to license its patent."), *vacated and remanded*, 27 F.4th 326 (5th Cir. 2022).

37. *See* Ill. Tool Works Inc. v. Indep. Ink, Inc., 547 U.S. 28, 44 (2006) ("[T]he vast majority of academic literature recognizes that a patent does not necessarily confer market power."); *see also* HERBERT HOVENKAMP, MARK D. JANIS, MARK A. LEMLEY, CHRISTOPHER R. LESLIE & MICHAEL A. CARRIER, IP AND ANTITRUST: AN ANALYSIS OF ANTITRUST PRINCIPLES APPLIED TO INTELLECTUAL PROPERTY LAW § 4.02 (3d ed. 2017) ("In sum, coverage of one's product with an intellectual property right does not confer a monopoly . . . . ").

38. On the inherent exclusivity of patent law, see Liivak, *supra* note 1, at 1643 ("Patent law's broad exclusionary rule is one of its defining features."). On the inherent exclusivity of standards, see *Research in Motion Ltd. v. Motorola, Inc.*, 644 F. Supp. 2d 788, 796 (N.D. Tex. 2008) (noting that the opinion in Allied Tube & Conduit Corp. v. Indian Head, Inc., 486 U.S. 492, 501 (1988), "implies that, without safeguards against bias, the very existence of standards is inherently anti-competitive"). *See also* Makan Delrahim, Assistant Att'y Gen., Antitrust Div., U.S. Dep't of Just., *Antitrust Law and Patent Licensing in the New Wild West*, Prepared Remarks for IAM'S Patent Licensing Conference 6 (Sept. 18, 2018), https://www.justice.gov/opa/speech/file/1095011/download [https://perma.cc/F5UK-UCVA] ("In the context of legitimate standard setting, the collective decision to incorporate a patented technology into a standard necessarily involves the 'exclusion' of rival technologies.").

39. *See* Apple Inc. v. Samsung Elecs. Co., No. 11-CV-01846, 2012 WL 1672493, at *6 (N.D. Cal. May 14, 2012) ("Moreover, a number of courts have recognized a legal distinction between a normal patent—to which antitrust market power is generally not conferred on the patent owner, and a patent incorporated into a standard—to which antitrust market power may be conferred on the patent owner.").

and consumers alike.[40] A former Joint Policy Statement issued in 2013 by the DOJ and the U.S. Patent and Trademark Office (USPTO) had noted that implementers might "postpone or avoid making commitments to standardized technology or . . . make inefficient investments in developing and implementing a standard" as a means of protecting themselves against patent holdup.[41] Moreover, it stated that "[c]onsumers of products implementing the standard could also be harmed to the extent that the holdup generates unwarranted higher royalties and those royalties are passed on to consumers in the form of higher prices."[42]

The 2013 Joint Policy Statement was withdrawn as part of a push toward undermining antitrust law in the context of technological standard setting.[43] In December of 2019, it was replaced with the current Joint Policy Statement by the DOJ, USPTO, and National Institute of Standards and Technology (NIST), which advised against antitrust scrutiny in the FRAND-licensing context so that it would be easier for SEP holders to seek injunctions.[44] Just two years later, the current Joint Policy Statement began undergoing draft revisions in an effort to return to previous policy guidance.[45]

During the course of these policy shifts, some discourse called patent holdup a "radical theory" that needed to be reconsidered.[46] Other arguments went so far as to suggest that integrity is not necessary in the standard-setting process—that, on the contrary, deception should be considered par for the course.[47] Specifically, in the Statement of Interest submitted by the 2020 DOJ in *Continental Automotive Systems, Inc. v. Avanci, LLC*, it was argued that

> [e]ven if the patent holder plans to maximize its licensing rates until a court or other tribunal determines those rates are above FRAND, that contingency is foreseeable [to] the SSO with a term as flexible as

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40. *See* Microsoft Corp. v. Motorola, Inc., No. C10-1823, 2013 WL 2111217, at *10 (W.D. Wash. Apr. 25, 2013) ("In addition to harming firms that are forced to pay higher royalties, hold-up also harms consumers to the extent that those excess costs are passed onto them.").

41. U.S. DEP'T OF JUST. & U.S. PAT. & TRADEMARK OFF., POLICY STATEMENT ON REMEDIES FOR STANDARDS-ESSENTIAL PATENTS SUBJECT TO VOLUNTARY F/RAND COMMITMENTS 4 (2013), https://www.justice.gov/atr/page/file/1118381/download [https://perma.cc/87JL-KGSW] (withdrawn).

42. *Id.*

43. *See* James Arkin, *Tillis Slams DOJ's Plan to Revise Policy on Essential Patents*, LAW360 (Jan. 21, 2022, 7:22 PM), https://www.law360.com/articles/1457597/tillis-slams-doj-s-plan-to-revise-policy-on-essential-patents [https://perma.cc/D3WU-G3G4] ("The Trump policy replaced the previous stance of U.S. competition enforcers, which was that patent holders could face antitrust claims from the government if they sought court injunctions against use of their patents without engaging in what enforcers believed were sufficient efforts to negotiate a licensing deal on fair, reasonable and nondiscriminatory terms.").

44. *See id.*

45. *Id.*

46. *E.g.*, Bryan Koenig, *DOJ Antitrust Head Touts Pushback on 'Radical' IP Theory*, LAW360 (Sept. 10, 2020, 8:03 PM), https://www.law360.com/articles/1307302/doj-antitrust-head-touts-pushback-on-radical-ip-theory [https://perma.cc/BL73-RDPD].

47. *See, e.g.*, Statement of Interest, *supra* note 1, at 15.

"FRAND." A patent holder's failure to be forthcoming about that intent, therefore, does not constitute a material deception.[48]

Such a scenario is exactly the type of behavior that federal courts have recognized as anticompetitive.[49] And logic would dictate that if it were foreseeable for patent holders to lie about their intent to charge above-FRAND royalties, then SSOs would not bother with FRAND commitments in the first place.

1. Evidence of Patent Holdup

Another common attack on the use of antitrust law to combat patent holdup is that patent holdup is but a theory lacking empirical evidence.[50] But the evidence is not lacking—patent holdup empirically occurs, and the following is a sampling of real-world examples.

First is an extensive study of court dockets from all U.S. cases filed from 2010 to 2019 that assert or challenge SEPs.[51] In the study, researchers from Santa Clara University and Toulouse School of Economics found "evidence of opportunistic behavior" by SEP licensors in approximately seventy-five percent of the assertions made in court.[52] The study measured behaviors that have all been associated with patent holdup, including claiming discriminatory licensing terms, waiting until after a standard was adopted before disclosing relevant patents, and seeking to enjoin implementers from creating products that follow the standard.[53] As stated by the researchers, "[w]hile it is true that many of our measures of opportunistic behavior are based on allegations by accused infringers, we strictly limit our data to allegations of strategic behavior that are supported by specific factual statements."[54] Thus, this research helps illustrate the frequency of patent holdup.

Second, evidence of patent holdup can be seen in findings from the University of Tokyo, where researchers analyzed data gathered from after a 2011 auction of

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48. *Id.*

49. *See* Amphastar Pharms., Inc. v. Momenta Pharms., Inc., 297 F. Supp. 3d 222, 230 (D. Mass. 2018) ("Intentional misrepresentations designed to deceive a standard-setting organization can constitute an antitrust violation.").

50. *See, e.g.*, Jonathan M. Barnett, *Has the Academy Led Patent Law Astray?*, 32 BERKELEY TECH. L.J. 1313, 1338–39 (2017) ("Remarkably, *all* available empirical evidence fails to confirm these widely endorsed theories. This mismatch between theory and evidence demands that we revisit the explicit and implicit assumptions behind those theories; upon closer review, it is clear that those assumptions are unlikely to be typically realized in real-world technology markets."); Osenga, *supra* note 8, at 172 ("The existence and extent of patent hold-up and royalty stacking have been questioned by numerous commentators due to a lack of evidence and even evidence to the contrary.").

51. Brian J. Love, Yassine Lefouili & Christian Helmers, *Do Standard-Essential Patent Owners Behave Opportunistically? Evidence from U.S. District Court Dockets* 41 (Toulouse Sch. of Econ., Working Paper No. 20-1160, 2020), https://ssrn.com/abstract=3727085 [https://perma.cc/HZ8V-PTYN].

52. *Id.*

53. *Id.* at 11 tbl.1.

54. *Id.* at 41.

the patent portfolio of bankrupt-telecommunications-company Nortel Networks.[55] Companies like Apple, Microsoft, and Sony purchased valuable patents from the auction, and companies like Google and Intel were losing bidders.[56] Empirical evidence from the relevant players' post-auction patenting activity supported the researchers' hypothesis that "a firm's patent purchase deters its rival firm's development of relevant technologies to that patent if the patent covers crucial technological input for its rival's market operation."[57] This, they point out, can "aggravate ex-post patent holdup and increase the cost of innovation."[58] Of course, the ones who develop these "relevant technologies" are the implementers.[59] The evidence of Google and Intel's reluctance to invest in implementing technologies shows that they fear the sunk costs of patent holdup. A rational company like Google or Intel would not calculate its behavior to minimize the risk of something that never happens.

Interestingly, the study also found that though the auction-losing firms were "deterred from developing technologies relevant to the Nortel patents immediately after the auction, these firms' development of such technologies recovered a few years later."[60] The study offers an explanation for this recovery: the auction bidders were all large firms, capable of developing long-term strategies to deter patent holdup.[61] One primary strategy is purchasing other, third-party-owned SEPs for themselves, which they can then cross-license to the auction-winning firms so that neither side would have more leverage than the other.[62] Indeed, the study points out that both Google and Intel adopted a defensive patent-acquisition strategy—Google by acquiring Motorola Mobility with its patent portfolio, and Intel by purchasing 1,400 telecommunications patents from Prowave, Inc.[63] But the existence of this type of strategy does not solve the holdup problem because it is not available to small or midsized companies who cannot acquire as many SEPs for cross-licensing. The next example touches on this very point—that the cross-licensing strategy is not a solution for many companies.

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55. Seokbeom Kwon, *How Does Patent Transfer Affect Innovation of Firms?*, TECH. FORECASTING & SOC. CHANGE, May 2020, at 1, 1, https://www.researchgate.net/publication/339230418_How_does_patent_transfer_affect_innovation_of_firms [https://perma.cc/68YU-9PBB].

56. *Id.* at 6.

57. *Id.* at 1.

58. *Id.*

59. *Id.* On the role of implementer vis-à-vis SEP holder, it is worth noting that these are not mutually exclusive; firms capable of cross-licensing will be both licensor and licensee, depending on the respective technologies involved.

60. *Id.* at 16.

61. *Id.*

62. *Id.*

63. *Id.*

Third, a personal account was given by Mr. Allen Lo, Director of Intellectual Property at Juniper Networks, a midsized company[64] that develops and markets networking products.[65] Mr. Lo discussed his experience with patent holdup as one in which the company being offered the license "really has no leverage to negotiate anything that's fair and reasonable . . . because it doesn't have a mature patent portfolio and because it has to implement these standards."[66] The effect is that the patent holder essentially gets "to dictate what those [F]RAND terms are going to be."[67] In his words, because of the leverage disparity, if an implementer asks what exactly FRAND means, the patent holder responds with, "you can wait a year or two until I come knocking on your door and I'll tell you what that means."[68] When the patent owner later approaches the company for royalties, the company is no longer in a position to negotiate.[69] If the company rejects the dictated terms, then the parties are in a holdup situation where the implementer could then face "potential willful infringement damages, as well as the risk of an injunction."[70]

Fourth, in *Microsoft Corp. v. Motorola, Inc.*, Motorola demanded royalties from Microsoft in the amount of $6 to $8 per Xbox unit that used Motorola's SEPs and sought to exclude those consoles from entering the United States if these royalties were not paid.[71] When the court determined the actual FRAND rates for the various SEPs, they were only $0.0055 to $0.195 per unit (less than $0.01 per unit to an upper limit of $0.19 per unit).[72] That means that, through patent holdup, Motorola was seeking to charge royalties that were up to 1090 times higher than the appropriate FRAND royalty.[73]

Fifth, in *Realtek Semiconductor Corp. v. LSI Corp.*, LSI sought to exclude Realtek products from entering the United States where those products included technology

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64. JUNIPER NETWORKS, CORPORATE CITIZENSHIP AND SUSTAINABILITY REPORT 5 (2019), https://www.juniper.net/content/dam/www/assets/factsheet/us/en/juniper-corporate-citizenship-and-sustainability-report.pdf [https://perma.cc/SC5N-YT5S] ("Forbes' list of America's Best *Midsize* Employers 2019" (emphasis added)).

65. Matt Stump, *Juniper Acquisitions Yield Small-System CMTS Gear*, MULTICHANNEL NEWS (Oct. 6, 2002), https://www.nexttv.com/news/juniper-acquisitions-yield-small-system-cmts-gear-148732 [https://perma.cc/W3UR-2VZK].

66. Allen M. Lo, Dir. of Intell. Prop., Juniper Networks, Remarks at the United States Department of Justice Antitrust Division and Federal Trade Commission Hearings on Competition and Intellectual Property Law and Policy in the Knowledge Based Economy: Standard Setting 243 (Apr. 18, 2002), https://www.ftc.gov/sites/default/files/documents/public_events/competition-ip-law-policy-knowledge-based-economy-hearings/020418trans.pdf [https://perma.cc/39JF-AAWJ].

67. *Id.*

68. *Id.* at 292.

69. *Id.* at 293.

70. *Id.*

71. Microsoft Corp. v. Motorola, Inc. No. C10-1823, 2013 WL 2111217, at *99 (W.D. Wash. Apr. 25, 2013).

72. *Id.* at *101.

73. *See id.*

covered by two of LSI's SEPs.[74] It then offered to license those SEPs to Realtek on "terms that would have required Realtek to pay LSI a royalty *in excess of the selling price* of Realtek's products."[75] Royalties above 100% are obviously inherently unreasonable.[76] The court determined that to be in compliance with its FRAND commitment, LSI could charge a royalty of no more than 0.07% or 0.12% of Realtek's U.S. sales (depending on which of the two patents at issue was being utilized).[77] Because it had demanded over 100%, that was at least 834 times higher than the appropriate royalty rate.[78]

Sixth, in *TCL Communication Technology Holdings, Ltd. v. Telefonaktiebolaget LM Ericsson*, the parties had been engaged in renegotiating license fees for Ericsson's 2G, 3G, and 4G cellular technology SEP portfolios because previous licenses were about to expire.[79] In a bench trial, the district court noted that the rates Ericsson offered "evolved over the course of the parties' negotiations."[80] For example, its first 4G offer was a royalty rate of 3% for 4G handsets and tablets.[81] After TCL filed the lawsuit, Ericsson reduced the 4G rate to 2% and then again to 1.5%.[82] The court then calculated that a proper FRAND rate was 0.45% for the 4G technology.[83] Thus, the amount that Ericsson demanded prior to initiation of the lawsuit was nearly seven times higher than the court-calculated rate.[84] On appeal it was ultimately determined that Ericsson had not waived its right to a jury trial and was entitled to have the FRAND rate re-decided by a jury, but the court of appeals did not suggest that the district court had erred in its calculations.[85] Thus, although the issue was remanded for recalculation by a jury,[86] the court's FRAND determination shows that the patent owner was demanding inordinately higher-than-FRAND royalties.

Seventh and infamously, Rambus, Inc., a licensor of computer memory-chip technology and member of the Joint Electron Device Engineering Council (an SSO), became aware of an interchangeability standard to be implemented by the

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74. Realtek Semiconductor, Corp. v. LSI Corp., No. C-12-3451, 2014 WL 2738216, at *2 (N.D. Cal. June 16, 2014).

75. Plaintiff Realtek Semiconductor Corp.'s Opposition to Defendants LSI Corp. & Agere Systems LLC's Motion to Dismiss, *Realtek Semiconductor Corp.*, 2014 WL 2738216 (No. C-12-3451), 2012 WL 5187083 at *5 (emphasis added).

76. *See id.*

77. *Realtek*, 2014 WL 2738216, at *2.

78. *See id.*

79. TCL Commc'n Tech. Holdings, Ltd. v. Telefonaktiebolaget LM Ericsson, No. CV 15-2370, 2018 WL 4488286 (C.D. Cal. Sept. 14, 2018), *rev'd in part, vacated in part*, 943 F.3d 1360 (Fed. Cir. 2019).

80. *Id.* at *3.

81. *Id.*

82. *Id.*

83. *Id.* at *51.

84. *Id.*

85. TCL Commc'n Tech. Holdings Ltd. v. Telefonaktiebolaget LM Ericsson, 943 F.3d 1360, 1375 (Fed. Cir. 2019).

86. *Id.* at 1376.

SSO, then amended its patent applications to cover the standard.[87] However, Rambus concealed the existence of these applications from the SSO, thus influencing the content of the standard.[88] After the SSO unwittingly selected some of Rambus's patented technologies as part of the standard, Rambus was able to charge a royalty of 3.5% for the incorporated patents, as opposed to a 0.75% rate for its patents that were not incorporated in a standard.[89] The Federal Trade Commission (FTC) ruled that Rambus had committed antitrust violations, but, in *Rambus Inc. v. FTC*, the court of appeals overturned the FTC's ruling and held in favor of Rambus.[90] That holding begged a number of questions. First, the court reasoned that the SSO would have adopted the same standard anyway.[91] But if that were true, why would Rambus have felt the need to conceal the existence of its patents? Second, the court held that failing to be bound by a FRAND agreement is not an antitrust violation, as charging higher prices is not in itself monopoly conduct because it does not keep competitors out of the market.[92] But even if charging higher prices is not monopoly conduct, what about using deception to attain monopoly power and avoid a FRAND commitment?[93] Third, the court held that the resulting higher prices were actually procompetitive because "high prices and constrained output tend to attract competitors, not to repel them."[94] But did this ignore the fact that the particular technology at issue was already locked in by a standard, meaning any further competition was foreclosed by switching costs?[95]

Eighth, after a "highly visible" lawsuit, BlackBerry developer Research in Motion paid $612.5 million to the patent owner of one component of its

87. Herbert Hovenkamp, Patent Deception in Standard Setting: The Case for Antitrust Policy 6 (July 20, 2010) (unpublished manuscript), https://ssrn.com/abstract=1138002 [https://perma.cc/A2VC-NMWU] ("According to the FTC Rambus also took advantage of its membership in JEDEC to formulate additional divisional applications written on the very technology that JEDEC was in the process of developing, all of which would obtain the original 1990 priority date under PTO continuance rules."); Rambus Inc. v. Infineon Techs. AG, 318 F.3d 1081, 1107 (Fed. Cir. 2003) (Prost, J., dissenting) ("Rambus continued to attend JEDEC meetings for three more years, watching the SDRAM standard evolve and then amending its patent applications to try to cover features of the standard.").

88. *See* Hovenkamp, *supra* note 87, at 8–9 (discussing how a defendant's failure to disclose its patent applications to an SSO can "result[] in the adoption of the defendant's technology even though another technology would have been preferred *had it been known that the defendant's technology was not in the public domain*" (emphasis added)).

89. Mark R. Patterson, Commentary, *Antitrust and the Costs of Standard-Setting: A Commentary on Teece and Sherry*, 87 MINN. L. REV. 1995, 2001 n.33 (2003).

90. *See* Rambus Inc. v. FTC, 522 F.3d 456 (D.C. Cir. 2008).

91. *See id.* at 466–67.

92. *Id.* at 466.

93. *See* United States v. Microsoft Corp., 253 F.3d 34, 76–77 (D.C. Cir. 2001) (per curiam) (holding that deception is monopoly conduct).

94. *Rambus*, 522 F.3d at 466.

95. In other words, although the prospect of charging high prices may lure competing technologies into a typical market, there is no room for such competition once a standard has been set; the exclusionary nature of a standard is too high of a barrier to entry.

then-ubiquitous BlackBerry device to settle further litigation and avoid any further risk of injunction, despite the fact that the jury had awarded royalty damages of only $33.5 million.[96] That is an *eighteen-to-one* difference between the settlement amount and the jury award, which begs the question of why Research in Motion would have been willing to pay so much to continue using the component. Although the large settlement amount may have included additional forward-looking royalties, those alone would not have justified the gap.[97] Scholars have explained cases like this by pointing out that in patent holdup "it is not the underlying value of the patented technology, but the cost to the defendant of switching technologies midstream, that is driving the high royalties being paid." [98] It is therefore "common for patent defendants to settle cases for more money than the patentee could have won in damages and license fees, simply to avoid the threat of an injunction shutting down the core product."[99]

Ninth, according to a study entitled *"3G Cellular Standards and Patents*," hundreds of standard-essential 3G inventions (equating to thousands of standard-essential *patents* once patenting the same invention in multiple countries was taken into account) belonged to forty-one different companies.[100] These patents related only to internet functionality and therefore would not account for the many other technology costs that go into developing and manufacturing a cell phone.[101] Yet, royalties on a cell phone implementing these patents have been estimated to be as high as thirty percent prior to any cross-licensing offsets.[102] This is patent holdup in action because it cannot be FRAND to pay thirty percent of the sales price of an independently invented product for mere internet connectivity royalties alone.

Tenth, testimony from the Associate General Counsel of Broadcom Inc., Mr. David Djavaherian, in *In re Innovatio IP Ventures, LLC Patent Litigation*, stated that holdup "was not merely theoretical for Broadcom."[103] It had seen a number of entities "driving up costs in the industry" by attempting to assert patents essential to a wireless computer networking standard (namely, the 802.11 standard established by the Institute of Electrical and Electronics Engineers (IEEE)).[104]

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96. Mark A. Lemley & Carl Shapiro, *Patent Holdup and Royalty Stacking*, 85 TEX. L. REV. 1991, 2009 & n.36 (2007) (citing NTP, Inc. v. Rsch. in Motion, Ltd., No. 01 CV 767, 2003 WL 23100881, at *1 (E.D. Va. Aug. 5, 2003), *aff'd in part, vacated in part, remanded*, 392 F.3d 1336 (Fed. Cir. 2004), *and aff'd in part, vacated in part, rev'd in part*, 418 F.3d 1282 (Fed. Cir. 2005)).

97. *Id.*

98. *Id.* at 2008–09.

99. *Id.*

100. David J. Goodman & Robert A. Myers, *3G Cellular Standards and Patents*, IEEE WIRELESSCOM 2005, June 13, 2005, https://patentlyo.com/media/docs/2009/03/wirelesscom2005.pdf [https://perma.cc/2N3R-XR5A].

101. Lemley & Shapiro, *supra* note 96, at 2026–27.

102. *Id.*

103. *In re* Innovatio IP Ventures, LLC Patent Litig., No. 11 C 9308, 2013 WL 5593609, at *9 (N.D. Ill. Oct. 3, 2013).

104. *Id.*

Moreover, in an August 5, 2011, letter to the FTC, Broadcom wrote, "'From Broadcom's perspective, far from being a 'rare disease,' patent ambush is widespread.'"[105]

The foregoing compilation is not exhaustive, nor does it necessarily reflect the most egregious examples of patent holdup. But to the extent these real-world examples are less than voluminous, the following points explain why. First, "if companies understand the risk of holdup, they will avoid or mitigate it."[106] Second, "quantifying the frequency and magnitude of actual patent holdups is very difficult as a practical matter" and is not the best way to assess the problem.[107] This is partly because researchers rarely have access to confidential patent-licensing terms, and even when they do view such ex post pricing, they do not typically have access to what the ex ante price would have been, so they cannot draw a comparison.[108] Third, antitrust enforcement of FRAND commitments involving deception on the SSO serves as a deterrent to wrongdoing.[109] To argue that industries simply do not have a problem with patent holdup is not only to ignore the cases, anecdotes, and research cited above but also to ignore the fact that antitrust law is doing its job—the reason there is not *more* evidence of holdup is because SEP holders do not wish to risk treble damages.[110]

Additionally, some of the commentators who argue that patent holdup is not a real-world problem may be funded or otherwise connected to companies with a vested interest in patent holdup.[111] For example, one scholar comically pointed out how absurd the backlash can sometimes be by highlighting a study that

> purport[ed] to find no innovation loss from patent holdup in software by declaring bananas and sugar to be "textbook holdup industries" and finding that prices fall faster for technologies subject to holdup than they do in bananas or sugar, despite the rather different characteristics of

105. *Id.* (quoting Letter from Broadcom Corp. to Fed. Trade Comm'n (Aug. 5, 2011) https://www.ftc.gov/sites/default/files/documents/public_comments/request-comments-and-announcement-workshop-standard-setting-issues-project-no.p111204-00053%C2%A0/00053-80206.pdf [https://perma.cc/ZD3B-VF9V]).

106. Love, Lefouili & Helmers, *supra* note 51, at 6–7.

107. Carl Shapiro & Mark A. Lemley, *The Role of Antitrust in Preventing Patent Holdup*, 168 U. PA. L. REV. 2019, 2039 (2020).

108. *Id.*

109. Leslie, *supra* note 28, at 413.

110. Successful antitrust plaintiffs are awarded treble damages. E. THOMAS SULLIVAN, HERBERT HOVENKAMP, HOWARD A. SHELANSKI & CHRISTOPHER R. LESLIE, ANTITRUST LAW, POLICY, AND PROCEDURE 177–79 (8th ed. 2019) (citing Section 4 of the Clayton Act, 15 U.S.C. § 15).

111. *See, e.g.*, Shapiro & Lemley, *supra* note 106, at 2041 ("So far as we can tell, the vast majority of these papers have been funded by Qualcomm and other patent holders seeking to weaken the institutions designed to control patent holdup, increase their leverage in licensing negotiations, and thus increase their ability to monetize their patents.").

> bananas and smartphones and the absence of any systematic holdup in bananas or sugar.[112]

Having established that patent holdup is a real-world problem, the next Section takes a deeper look at why it implicates antitrust law.

B. Deterrence of Patent Holdup Is In-Line with the Goals of Antitrust Law

Antitrust laws have advanced two main goals throughout history: one is enhancing economic efficiency and consumer welfare,[113] and the other is promoting a balance of sociopolitical power amongst businesses.[114] Additionally, a third, more modern goal of antitrust law is gaining traction—antitrust enforcement as a tool to achieve racial equity.[115] Preserving the beneficial institution of standard selection is important because it furthers both of the historic goals that antitrust law cares about, and perhaps the more modern one as well. Moreover, the solution to the problem of patent holdup is simple and administrable and is something antitrust law is good at—deterring the acquisition of unlawful monopoly power.

1. Enhancing Economic Efficiency and Consumer Welfare

Regarding the goal of enhancing economic efficiency and consumer welfare, businesses are considered efficient when they are able to generate goods and services at lower costs or increased value to consumers, and "this is true whether the business unit is a competitor or a monopolist."[116] Incorporation in a standard indeed risks conferring monopoly power on the owner of the selected patent, but the exercise of such power is meant to be constrained by a FRAND agreement.[117] As long as incorporation is achieved through truthful competition during the selection process, this is considered a legal monopoly—albeit one that is constrained by a FRAND commitment.[118]

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112. Mark A. Lemley, *Faith-Based Intellectual Property*, 62 UCLA L. REV. 1328, 1336 n.24 (2015) (citing Alexander Galetovic, Stephen Haber & Ross Levine, *Patent Holdup: Do Patent Holders Holdup Innovation?* 2–3 (Hoover IP2, Working Paper Series No. 14011, 2014), http://www.hoover.org/sites/default/files/ip2-wp14011-paper.pdf [https://perma.cc/NAD7-9W2Q]).

113. As used here, consumer welfare is defined as the value to the consumer that an economy produces.

114. SULLIVAN ET AL., *supra* note 109, at 4, 15.

115. Morales, *supra* note 2("[Recent political] alignment may signal a significant shift in antitrust enforcement away from a pure efficiencies model.").

116. ROBERT H. BORK, THE ANTITRUST PARADOX: A POLICY AT WAR WITH ITSELF 7–8 (1978).

117. *See* Broadcom Corp. v. Qualcomm Inc., 501 F.3d 297, 312, 314 (3d Cir. 2007) ("Private standard setting occurs in a consensus-oriented environment, where participants rely on structural protections, such as rules requiring the disclosure of [patent rights], to facilitate competition and constrain the exercise of monopoly power . . . . Deception in a consensus-driven private standard-setting environment harms the competitive process by . . . increasing the likelihood that patent rights will confer monopoly power on the patent holder.").

118. *See id.* at 305 ("[T]he FRAND commitments that [SSOs] require[] of vendors [are] intended as a bulwark against unlawful monopoly . . . . ").

In any event, standards contribute to economic efficiency and consumer welfare by both lowering costs[119] and making products more valuable to consumers.[120] Specifically, interoperability standards lower transaction costs, lower design and installation costs, allow industries to avoid switching costs, and increase information sharing and predictability, among other financial benefits.[121] And performance standards make products more valuable because consumers can rely on them to "set minimum requirements for all products in a general product category."[122] SSOs help maintain efficiency by requiring FRAND commitments before selecting a standard that could confer monopoly power on the SEP holder. This works by preventing the monopolist from doing what traditional monopolists do—namely, raising price and reducing output.[123] Raising price and reducing output (or, in this context, raising royalties and reducing the number of licenses granted) result in overcharging those who can and will pay more while denying access to

119. Indeed, technology costs have decreased over the last thirty years at an incredible pace. *See* Roberto Saracco, *A Never Ending Decrease of Technology Cost*, IEEE FUTURE DIRECTIONS (Oct. 18, 2017), https://cmte.ieee.org/futuredirections/2017/10/18/a-never-ending-decrease-of-technology-cost/ [https://perma.cc/X9QV-MXKT] ("Take storage. In 1971 storing 1 GB of data would have cost 250 Million $ [sic] . . . now storing a GB on a hard drive costs less than 0.03$. In less than 50 years the price went down 8 billion times!"). This decrease is at least in part due to the coordination and avoidance of duplicative investments that SSOs are able to provide.

120. *See* Osenga, *supra* note 8, at 160.

121. *See id.* at 163 ("Interoperability and interconnectivity standards guarantee that standard-compliant products made by different companies are compatible with other products that also incorporate the standard, regardless of the manufacturer."); GRIDWISE ARCHITECTURE COUNCIL, FINANCIAL BENEFITS OF INTEROPERABILITY: HOW INTEROPERABILITY IN THE ELECTRIC POWER INDUSTRY WILL BENEFIT STAKEHOLDERS FINANCIALLY 5 (2009) [hereinafter GRIDWISE, FINANCIAL BENEFITS OF INTEROPERABILITY], https://www.gridwiseac.org/pdfs/financial_interoperability.pdf [https://perma.cc/VPH2-9MQE].

122. U.S. DEP'T OF JUST. & FED. TRADE COMM'N, ANTITRUST ENFORCEMENT AND INTELLECTUAL PROPERTY RIGHTS: PROMOTING INNOVATION AND COMPETITION 33 n.1 (2007) [hereinafter U.S. DEP'T OF JUST. & FED. TRADE COMM'N], https://www.usdoj.gov/atr/public/hearings/ip/222655.pdf [https://perma.cc/WKZ4-CGZ3] (citing Gregory Tassey, *Standardization in Technology-Based Markets*, 29 RSCH. POL'Y 587, 589–90 (2000)).

123. *See* Broadcom Corp. v. Qualcomm Inc., 501 F.3d 297, 307 (3d Cir. 2007) ("Monopoly power is the ability to control prices and exclude competition in a given market. If a firm can profitably raise prices without causing competing firms to expand output and drive down prices, that firm has monopoly power.") (internal citations omitted); Sam D. Johnson & A. Michael Ferrill, *Defining Competition: Economic Analysis and Antitrust Decisionmaking*, 36 BAYLOR L. REV. 583, 592 (1984) ("Whereas the purely competitive firm must take price as a parameter, and therefore will expand output to the point where marginal cost is equal to the market price, a firm with monopoly power . . . can expand sales only by lowering its price. Assuming that the firm with monopoly power cannot discriminate in price between purchasers, the marginal revenue obtained from an additional sale will be less than the price paid by the marginal purchaser because in order to make that additional sale, the monopoly firm also must reduce its price to all customers, including those that would have purchased even without the reduction in price. Thus, unlike the competitive firm, for whom price equals marginal cost, price exceeds marginal cost for the firm with monopoly power.") (emphasis omitted).

those who cannot or will not. This is the opposite of efficiency and is what happens when SEP holders are allowed to play patent holdup.[124]

Patent holdup is, therefore, something that implicates the first goal of the antitrust laws: enhancing economic value to the consumer by deterring and punishing wrongdoing.

2. Promoting a Balance of Sociopolitical Power Amongst Businesses

Sociopolitical power imbalances, created by concentrated wealth, can undermine democracy because giant monopolists carry too much political influence.[125] This may be seen with the former Associate Attorney General of the Antitrust Division of the DOJ, Makan Delrahim, and his ties to chipmaker Qualcomm. Prior to his confirmation on September 28, 2017, Delrahim was Qualcomm's outside counsel.[126] During his approximately three-year tenure with the DOJ, he vigorously promoted a pro-SEP-licensor (pro-Qualcomm) view that a refusal to license SEPs should be per se legal, and that any FRAND violation should not be subject to antitrust liability.[127] This was seen in his department's interference with the FTC's lawsuit against Qualcomm, which the FTC won at the district court level, but Qualcomm won on appeal. That case centered around the issue of Qualcomm's refusal to grant SEP licenses to rival chip manufacturers.[128] Though the district court found that this refusal was "a violation of the antitrust duty to deal under Section 2 of the Sherman Act," the court of appeal vacated such judgment and held that the remedy for Qualcomm's FRAND violations lies not in antitrust law but in contract or tort law.[129]

It was at the appeal level that the DOJ interjected by filing its Statement of Interest. While Delrahim himself was recused from participating in the Statement of Interest due to his ties to Qualcomm, the Statement was nevertheless submitted by his subordinates, and it articulated the same views he personally expressed in his

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124. One counterargument to this proposition is that patent holdup (i.e., raising royalty rates and limiting licenses) could almost never be the goal of an SEP holder because "the interests of the patentee are almost always to license the patent; the patent is worthless to them otherwise." Dirk Auer, Geoffrey A. Manne, Julian Morris & Kristian Stout, *The Deterioration of Appropriate Remedies in Patent Disputes*, FEDERALIST SOC'Y REV., Aug. 11, 2020, at 158, 163. But given that the profit-maximizing price set by an SEP holder (i.e., one with monopoly power who cannot engage in price discrimination) need not contemplate the broadest possible licensing scheme, it is able to embrace higher royalties for those implementers who can and will pay them, to the exclusion of others. *See* Johnson & Ferrill, *supra* note 122, at 592.

125. SULLIVAN ET AL., *supra* note 109, at 7.

126. Lee Gesmer, *FTC and DOJ Face Off over Antitrust and FRAND Licensing in* FTC v. Qualcomm, MASS LAW BLOG (Aug. 26, 2019), https://www.masslawblog.com/antitrust/ftc-and-doj-face-off-over-antitrust-and-frand-licensing-in-ftc-v-qualcomm-2/ [https://perma.cc/9TR4-BS6K].

127. *Id.*

128. Hughes, *supra* note 13.

129. *Id.*

many speeches.[130] Editorialists called the DOJ's interference in the FTC's case "absolutely unheard-of"[131] and pointed out that the Delrahim DOJ was "disproportionately more active filing amicus briefs than actually enforcing the antitrust laws."[132] Others have added that, "[h]istorically, the division has participated in outside cases on a very limited basis," but under Delrahim—who signed the filings personally—"the division [] promised to wade in more frequently 'to help shape the development and application of antitrust law in the earliest stages of private litigation.'"[133]

With the placement of Delrahim as the DOJ's chief antitrust enforcer from September 2017 through January 2021, Big-Tech companies had an ally on the inside, even against bipartisan support for antitrust enforcement in the technology industry.[134] The most obvious effects of this can be seen in the dramatic decrease in antitrust enforcement actions brought by the DOJ during Delrahim's tenure, as compared with the equally dramatic *increase* in DOJ involvement in third-party court cases during this time.

The following data, taken directly from the DOJ's website, confirm the above statements. Antitrust enforcement case filings by the DOJ averaged 65.7 cases per year from the year 2000 until Delrahim took office in late 2017, as compared with only 43.5 enforcement cases per year from the time he took office until the end of 2020.[135] Conversely, antitrust amicus briefs, statements of interest, and letter briefs filed by the DOJ in outside cases[136] averaged only 4.6 filings per year from 2000 until Delrahim took office in late 2017, as compared with 15.5 outside

130. Gesmer, *supra* note 125.

131. Chris Sagers, *The Utter Failure of the Trump Administration's Antitrust Chief*, SLATE: MONEYBOX (Aug. 10, 2020, 5:50 AM), https://slate.com/business/2020/08/antitrust-doj-delrahim-trump.html [https://perma.cc/EZ2B-HNP4].

132. Florian Mueller, *On DOJ's Behalf, Former Qualcomm Lawyers File Amicus Brief in Support of Qualcomm and Point to Paper Co-Authored by Qualcomm Lobbyist: Ninth Circuit Appeal of Consumer Class Certification*, FOSS PATENTS (June 12, 2019, 3:09 PM), http://www.fosspatents.com/2019/06/on-dojs-behalf-former-qualcomm-lawyers.html [https://perma.cc/V4QE-UDLE].

133. Bryan Koenig & Matthew Perlman, *DOJ Antitrust Division Gets Off the Sidelines*, LAW360 (Feb. 8, 2019, 8:04 PM), https://www.law360.com/articles/1126818/doj-antitrust-division-gets-off-the-sidelines [https://perma.cc/XRT7-NCAC].

134. *See* Lauren Feiner, *Trump's Outgoing Antitrust Enforcer Delrahim Explains the Government's Push Against Big Tech*, CNBC (Jan. 21, 2021, 10:30 AM), https://www.cnbc.com/2021/01/21/trumps-outgoing-antitrust-enforcer-delrahim-explains-the-governments-push-against-b.html [https://perma.cc/9S7V-EJTJ] ("Delrahim rejects notions even from his own party that certain issues with the tech platforms can be dealt with through antitrust enforcement.").

135. *Antitrust Case Filings*, U.S. DEP'T JUST., https://www.justice.gov/atr/antitrust-case-filings [https://perma.cc/8MRJ-ZNCC] (last visited Mar. 31, 2022). If the partial year of 2017 is simply omitted, these numbers change to 67.6 and 44.7, respectively. *Id.*

136. Excluded from the calculation of outside case filings are those cases in which the U.S. was a party or in which the DOJ was filing briefs on behalf of another U.S. department, because those are not truly "outside" cases.

filings per year from the time he took office until the end of 2020.[137] Also notable is that quite a few of the *pre-Delrahim* filings were not unilaterally initiated by the DOJ but were submitted in response to court requests for the DOJ's opinion.[138] This is further evidence of the dramatic shift in priorities that occurred during Delrahim's tenure.[139]

Moreover, the DOJ historically only issued business review letters (BRLs) upon request from a business or group of businesses.[140] However, in September of 2020, the DOJ took the liberty of updating a 2015 BRL in order to change its position from one that approved of the IEEE's SEP policy and contemplation of patent holdup as a competitive problem to one that promoted broader injunctive rights for SEP holders and condemned the use of antitrust laws to remedy patent holdup.[141] Updating the IEEE's BRL was a self-described "extraordinary step" and was the only time since at least 1991 that the DOJ has done this.[142] Tellingly, once Delrahim's tenure was over, the DOJ promptly removed the updated letter from the section of its website where other BRLs can be accessed.[143] Although the DOJ

137. *Appellate Briefs*, U.S. DEP'T JUST., https://www.justice.gov/atr/appellate-briefs [https://perma.cc/23DJ-737R] (last visited Mar. 31, 2022). If the partial year of 2017 is simply omitted, these numbers change to 4.9 and 18, respectively. *Id.*

138. *See, e.g.*, U.S. Dep't of Just., Antitrust Div., Opinion Letter regarding Pandora Media, Inc. v. American Societ'y of Composers, Authors and Publishers (Mar. 6, 2015), https://www.justice.gov/atr/case-document/file/628831/download [https://perma.cc/N525-UXFS]; Brief for the United States in Response to the Court's Invitation, Ark. Carpenters Health & Welfare Fund v. Bayer AG, 604 F.3d 98 (2d Cir. 2010) (No. 05-2851-cv(L), 05-2852-cv(CON)), https://www.justice.gov/atr/case-document/file/491886/download [https://perma.cc/RU76-BQVY]; U.S. Dep't of Just., Antitrust Div., Response of the United States to the Court's Request for Views on the Issue of Implied Antitrust Immunity, Billing v. Credit Suisse First Boston (May 5, 2005), https://www.justice.gov/atr/case-document/file/489336/download [https://perma.cc/M657-J78V].

139. Even counting the pre-Delrahim filings that were merely responses to court requests, the ratio between DOJ viewpoints filed in outside cases and DOJ enforcement actions increased five times over during Delrahim's term. That is, the pre-Delrahim DOJ averaged 4.6 outside filings as compared to 65.7 enforcement actions, which equals approximately a seven percent ratio. Conversely, the Delrahim DOJ averaged 15.5 outside filings as compared to 43.5 enforcement actions, which equals approximately a thirty-six percent ratio.

140. *Business Review Letters and Request Letters*, U.S. DEP'T JUST., https://www.justice.gov/atr/business-review-letters-and-request-letters [https://perma.cc/L3CG-BMKC] (last visited Mar. 31, 2022).

141. Letter from Makan Delrahim, Assistant Att'y Gen., U.S. Dep't of Just., to Sophia A. Muirhead, Gen. Couns. & Chief Compliance Officer, Inst. of Elec. Eng'rs, Inc." (Sept. 10, 2020) [hereinafter *Updated IEEE Business Review Letter*], https://www.justice.gov/atr/page/file/1315291/download [https://perma.cc/S945-X92K].

142. *Id.*; *Business Review Letters and Request Letters*, *supra* note 139.

143. *See* Allen Grunes, *Of Antitrust and Patents: The Quiet Return of the Status Quo at the DOJ's Antitrust Division*, PROMARKET (Apr. 26, 2021), https://promarket.org/2021/04/26/antitrust-patents-status-quo-doj-makan-delrahim/ [https://perma.cc/S264-P7XC] ("[T]he DOJ demoted—some might say 'buried'—a Business Review Letter containing Delrahim's views on 'standard-essential patents.'").

characterized the move as merely procedural, others viewed it as restoring the 2015 BRL and backing away from the Delrahim-era agenda.[144]

Oddly, Delrahim once stated that his objective was to "remove our thumbs from the scale."[145] But the amicus briefs, statements of interest, and strong support for Qualcomm showed that taking thumbs off the scale was not the intent; these instead demonstrated a firm resolve to sway the law in the monopolists' favor. This is exactly the type of political influence antitrust laws seek to avoid, and thus the antitrust goal of promoting a balance of sociopolitical power amongst businesses is implicated.

3. Antitrust Enforcement as a Tool for Racial Equity

Whereas there is some debate as to whether the traditional roles of antitrust law have ever been truly value neutral, the more modern approach is clearly not.[146] The modern approach says antitrust enforcement can combat racial inequity by "dusting off" some existing tools.[147] FTC Commissioner Rebecca Kelly Slaughter expressed the idea as follows:

> Antitrust enforcement necessarily addresses fundamental economic and market structures. In the United States, these economic and market structures are historically and presently inequitable. So, when we make decisions about whether and where to enforce the law or how to deploy our enforcement resources, we are making decisions that will have an effect on structural equity or inequity. Our decisions can either reinforce existing structural inequities or work to break them down. I would prefer we choose the latter, and either way, that we make our choice on an informed basis and with open eyes.[148]

This approach does have its critics, who argue that antitrust laws are not well suited for the task.[149] However, proponents argue that antitrust law can be

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144. *See id.* ("Moving a document from one place to another on a government website hardly seems like a significant change in direction. But in this case, it has been understood as a return to Obama-era policy.").

145. *See* Gene Quinn, *Antitrust and Patents: A Conversation with Makan Delrahim*, IPWATCHDOG (Mar. 26, 2020), https://www.ipwatchdog.com/2020/03/26/antitrust-patents-conversation-makan-delrahim/id=120166/ [https://perma.cc/9BHY-7F3Z] (quoting a statement made by Delrahim and discussing the purpose of the 2019 Joint Policy Statement).

146. *See* Rebecca Kelly Slaughter, Comm'r, Fed. Trade Comm'n, Antitrust at a Precipice, Prepared Remarks at GCR Interactive: Women in Antitrust 4 (Nov. 17, 2020), https://www.ftc.gov/system/files/documents/public_statements/1583714/slaughter_remarks_at_gcr_interactive_women_in_antitrust.pdf [https://perma.cc/5VJN-ZW3X] ("The second problem I have with the premise that antitrust should be uniquely value-neutral is that I do not believe antitrust *can* be value-neutral.").

147. Dani Kritter, Blog, *Antitrust as Antiracist*, CALIF. L. REV. ONLINE (Mar. 2021), https://www.californialawreview.org/antitrust-as-antiracist [https://perma.cc/BQL8-6LUJ].

148. Slaughter, *supra* note 145, at 4.

149. Morales, *supra* note 2 ("Some critics argued that the FTC's jurisdiction cannot be invoked unless 'the challenged conduct harms competition and the competitive process' and that it would not

anti-racist and that such an agenda is completely in line with the historical underpinnings of antitrust jurisprudence.[150] Specifically, there is a nexus between rising corporate power, which deepens socioeconomic divisions, and its tendency to "affect communities of color disproportionately and exacerbate systemic racism."[151]

Moreover, the impact of racial inequity is clear in the technology context: per a recent Silicon Valley Bank study, "Black entrepreneurs received only 1% of the $130 billion spent in 2019 by venture capitalists in the U.S. — effectively stunting the ability of communities of color to build wealth and exacerbating racial inequality."[152] Although the Silicon Valley Bank study does not address FRAND commitments or patent holdup specifically, it does relate to discrimination in tech dealmaking generally.[153] This is certainly relevant to the "nondiscriminatory" element of "fair, reasonable, and nondiscriminatory." Thus, in addition to directly implicating the two historical goals of antitrust law stated above, inequalities in the technology sphere may implicate antitrust scrutiny under the racial-equality approach as well.

4. Patent Holdup Harms Competition, Not Just Competitors

Notwithstanding these clear implications, some critics counter that patent holdup is not actually anticompetitive (i.e., not subject to antitrust scrutiny at all) because for conduct to be deemed anticompetitive, it must harm competition, not just competitors.[154] While this is a correct statement of the rule, it is incorrect to suggest that patent holdup merely harms competitors.[155] This would ignore the fact that an SEP holder's "role as a gatekeeper gives it the power to eliminate, and thus to harm, competition."[156] Moreover, when implementers must pay significantly higher royalties for an SEP than they would pay for a comparable piece of technology (i.e., before the comparable technology was left out of the standard), downstream markets are affected. Firstly, consumers will have fewer products to choose from if some implementers are pushed out of the market by way of injunction or high licensing fees, or if those implementers choose to postpone entry

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suffice for the FTC to articulate a 'goal of making markets fairer or less discriminatory.' Others claim that antitrust enforcers are not equipped to achieve anti-racist objectives, and that other programs and statutes are specifically designed to address discrimination.").

150. *Id.*

151. *Id.*

152. *Id.*

153. *See* Reed Albergotti, *Black Start-Up Founders Say Venture Capitalists Are Racist, but the Law Protects Them*, WASH. POST (July 22, 2020), https://www.washingtonpost.com/technology/2020/07/22/black-entrepreneurs-venture-capital/ [https://perma.cc/2VRW-NMVS].

154. Statement of Interest, *supra* note 1, at 9–10.

155. Rsch. in Motion Ltd. v. Motorola Inc., 644 F. Supp. 2d 788, 795–96 (N.D. Tex. 2008) (reasoning that because "FRAND commitments are intended as a 'bulwark' against the unlawful accumulation of monopoly power that antitrust laws are designed to prevent," the defendant's "efforts to side-step this bulwark" were harmful not only to its competitor "but to competition in general").

156. *Id.* at 796.

into the market for fear of the same.[157] Secondly, consumers will face higher prices for standard-compliant products because those high licensing fees will be passed onto them.[158] Thirdly, SSOs may adopt a less-than-ideal standard in order to avoid or mitigate holdup.[159] Fourthly, holdup even harms other SEP holders when they cannot recover royalties on their own patents because other parties have already "extracted hold-up value from the market."[160] Bars to entry, fewer choices, higher prices, inferior products, and uneven distribution of royalties are all indicative of harm to competition, not just to competitors.

For the foregoing reasons, patent holdup implicates antitrust scrutiny. The next Section explores why antitrust enforcement is not only implicated but also necessary.

III. IMPORTANCE

A. Antitrust Law Should Continue to Be the Deterrent Against Patent Holdup

Antitrust laws are needed to remedy the anticompetitive harm caused by patent holdup because they provide successful plaintiffs with treble damages as well as costs and reasonable attorney's fees.[161] In particular, Section 2 of the Sherman Act combats illegal monopolies.[162] Supreme Court cases have suggested that antitrust remedies are meant not only to compensate victims but also to deter violators.[163] Without the threat of Section 2 claims against SEP holders, there would

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157. *See* U.S. DEP'T OF JUST. & FED. TRADE COMM'N, *supra* note 121, at 36 n.17" ("For consumer harm to occur, it is not necessary that hold up result in higher marginal costs for producers. For example, higher lump sum or fixed royalties might discourage entry among firms that would produce the standardized product. The reduction in competition at the downstream level, and possible reduction in product adoption, might harm consumers.").

158. *See* Microsoft Corp. v. Motorola, Inc., No. C10–1823, 2013 WL 2111217, at *10 (W.D. Wash. Apr. 25, 2013) ("In addition to harming firms that are forced to pay higher royalties, hold-up also harms consumers to the extent that those excess costs are passed onto them."); Leslie, *supra* note 28, at 388 ("Patent holdup inflicts multiple harms across the economy. Patent holdup injures consumers who ultimately pay higher prices when exorbitant royalties are passed on to them. Economic efficiency suffers as output is reduced.").

159. Leslie, *supra* note 28, at 389 ("[I]f FRAND commitments are neither credible nor enforceable, SSOs may adopt suboptimal standards in an effort to minimize the risk of patent holdup.").

160. *In re* Innovatio IP Ventures, LLC Patent Litig., No. 11 C 9308, 2013 WL 5593609, at *8 (N.D. Ill. Oct. 3, 2013); *see also Microsoft Corp*., 2013 WL 2111217, at *10–11 (No. 11 C 9308) ("Hold-up by one SEP holder also harms other firms that hold SEPs relating to the same standard because it jeopardizes further adoption of the standard and limits the ability of those other holders to obtain appropriate royalties on their technology.").

161. SULLIVAN ET AL., *supra* note 109, at 177–79.

162. 15 U.S.C. § 2 ("Every person who shall monopolize, or attempt to monopolize, or combine or conspire with any other person or persons, to monopolize any part of the trade or commerce among the several States, or with foreign nations, shall be deemed guilty of a felony . . . . ").

163. *See* Ill. Brick Co. v. Illinois, 431 U.S. 720, 746 (1977) ("But § 4 has another purpose in addition to deterring violators and depriving them of 'the fruits of their illegality'; it is also designed to compensate victims of antitrust violations for their injuries." (first quoting Hanover Shoe,

be more incentives for patent holders to conceal their intention to breach FRAND commitments. Incentives include reaping unrestrained royalties and engaging in discriminatory licensing until and unless an appropriate FRAND rate is adjudicated by a court. But many implementers, especially new entrants, may lack the resources to go to court and obtain such an adjudication.[164]

Without an effective deterrent in place, there will be more deception, and once there is more deception, the SSOs will be leery of adopting patented technology for their standards. Once the SSOs are leery of adopting patented technology for their standards, they may opt instead for standards that call for non-patented technology—perhaps something similar but not as ideal as its patented counterpart.[165] For example, the patent policy of one SSO, the European Telecommunications Standards Institute (ETSI), is that "[i]f a patent owner refuses to commit to license on FRAND terms and conditions, ETSI will attempt to design around the patent, and if that is impossible, then work will cease."[166] Logically, the same would be true if an SSO knows it cannot trust the patent owner's FRAND commitment. That is, from the SSO's point of view, knowing patent holders can and will lie about FRAND commitments would be equally as bad as allowing them to refuse the commitments in the first place.

Opting for less-than-ideal technology, designing around a patent, or ceasing work on a standard could ultimately result in less participation in SSOs and more "standards wars." Standards wars happen when differing technologies compete for consumer choice in the downstream market rather than at the ex ante standard-selection level.[167] Standards wars, discussed more fully in Part III, are always an option for patent holders but are not ideal for the consuming public.[168]

Inc. v. United Shoe Mach. Corp., 392 U.S. 481, 494 (1968); and then citing Brunswick Corp. v. Pueblo Bowl-O-Mat, Inc., 492 U.S. 477, 485–86 (1977))).

164. *See* Microsoft Corp. v. Motorola, Inc., 795 F.3d 1024, 1030 (9th Cir. 2015) ("[Standard setting] increases competition by lowering barriers to entry . . . . ").

165. Leslie, *supra* note 28, at 389.

166. TCL Commc'n Tech. Holdings, Ltd. v. Telefonaktiebolaget LM Ericsson, No. CV 15-2370, 2018 WL 4488286, at *6 (C.D. Cal. Sept. 14, 2018), *rev'd in part, vacated in part*, 943 F.3d 1360 (Fed. Cir. 2019).

167. Standards wars are discussed in more detail in Section III.D *infra*.

168. *See* Intel Corp. v. VIA Techs., Inc., 174 F. Supp. 2d 1038, 1040 (N.D. Cal. 2001), *aff'd*, 319 F.3d 1357 (Fed. Cir. 2003) ("Without [industry standards], the industry would balkanize, improvements would slow, and consumers would suffer."); Osenga, *supra* note 8, at 169–70 ("[W]hen there are competing standards in the marketplace, some consumers delay purchasing until after the de facto standard is selected to avoid the costs of choosing the losing standard, either having to use a suboptimal product or needing to buy a second product to enjoy the benefits that come with standardization."); Golden Bridge Tech., Inc. v. Motorola, Inc., 547 F.3d 266, 273 (5th Cir. 2008) ("Potential procompetitive benefits of standards promoting technological compatibility include facilitating economies of scale in the market for complementary goods, reducing consumer search costs, and increasing economic efficiency.").

B. Contract Law Alone Is Insufficient to Deter or Remedy Patent Holdup

It has been argued that FRAND agreements are matters of contract, not matters of antitrust.[169] But contract law is insufficient to cover the wrongdoing of patent holdup because penalties for breach of contract are not expensive enough to deter anticompetitive wrongdoing, nor are they enough to make the plaintiff whole in the SEP-licensing context, and because contract law jurisprudence does not contemplate long-term, unchanging standards.[170] Of these reasons, the deterrent effect of antitrust law is perhaps the most important. Without the deterrent of antitrust law, FRAND commitments would be essentially meaningless.

Contract law is insufficient as a deterrent to FRAND violations because contract damages are limited to single damages.[171] This means that if an SEP holder is held to have breached its contractual FRAND agreement, it will have to pay back any above-FRAND royalties it has already collected and will only be able to collect FRAND royalties going forward.[172] This puts the SEP holder in no worse a position than it would have been in if it had complied with its FRAND commitment in the first place.[173] In other words, with antitrust out of the picture there would be no treble damages, so there would be less of an incentive to avoid wrongdoing in the SEP-selection process. In fact, negotiating in the shadow of contract law provides practically no deterrence at all.[174] That leaves only reputation, which one might think would be enough, particularly when SSOs are often comprised of repeat players.[175] But if reputation were enough, patent holdup would not happen: "Reputation works only if you can avoid dealing with companies that behave unreasonably; that may not be possible if they own SEPs."[176]

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169. *See generally* Delrahim, Broke, *supra* note 33("To the extent that implementers bargained for some benefit, contract law already provides a solution to the problem of patent holders failing to live up to that bargain. The parties are on equal terms when they bargain in the shadow of contract law, because there is no threat of treble damages skewing the negotiations in favor of the implementer."); Makan Delrahim, Assistant Att'y Gen., U.S. Dep't of Just., Antitrust Div., The "New Madison" Approach to Antitrust and Intellectual Property Law, Prepared Remarks at the University of Pennsylvania Law School 5 (Mar. 16, 2018) [hereinafter Delrahim, New Madison], https://www.justice.gov/opa/speech/file/1044316/download [https://perma.cc/PH6R-Y5YG].

170. *See* Leslie, *supra* note 28, at 400.

171. *Id.* at 422 ("Although called compensatory damages, the single damages associated with contract law do not actually fully compensate victims of breach for their injuries.").

172. *Id.* ("With respect to remedies, under contract law, if the patentee charges a royalty that is not FRAND, the contract plaintiff can recover the difference between the FRAND amount and the royalty actually paid. In contrast, successful antitrust plaintiffs are entitled to treble damages on the overcharge as well as reasonable attorneys' fees and costs.").

173. *See id*. The SEP holder would still have to pay legal fees, but these can be built into the cost of doing business, especially since those same legal fees make FRAND litigation cost-prohibitive for the plaintiff-implementers on the other side.

174. *See id*.

175. *See* Osenga, *supra* note 8, at 173 ("[S]tandardization is often a repeat-player game; if a patent holder acts in an unfair manner, it is unlikely that other firms will be willing to urge adoption of that patent holder's technology in future standard setting proceedings.").

176. Shapiro & Lemley, *supra* note 106, at 2039.

In addition to failing to deter patent holdup, contract damages fail to make a plaintiff whole. Contract law, as discussed in the preceding paragraph, only provides successful plaintiffs with the difference between the higher royalties they actually paid and the lower, FRAND royalties they should have paid. This does not compensate the plaintiff (i.e., the implementer) for attorney's fees or costs of investigating the suit because contract law generally follows what is known as the American Rule, which is that "win or lose" each side pays its own attorney's fees.[177] Courts generally do not deviate from this rule absent "explicit statutory authority" or "specific and explicit" contractual provisions.[178] This explains why implementers need costs and attorney's fees in order to make a lawsuit worth their while.

A final reason contract law is insufficient is because standards are long-term, whereas contracts are typically for defined periods.[179] Once an industry has selected a standard, the standard becomes entrenched, and switching costs prohibit any "new competitive process" that would change the technology involved.[180] "This is very different from the situation in which, for example, a year-long contract is granted every year and a particular firm gets the contract through misrepresentations; that situation can be remedied moving forward at the next opportunity for contract renewal."[181]

C. Patent Rewards Do Not Have to Be Unrestricted in Order to Encourage Innovation

One of the primary and most seductive arguments against antitrust enforcement of FRAND commitments is that innovation will be stifled in the absence of unqualified patent rights.[182] Patent rights generally include the right to exclude any and all others from practicing one's patent and the ability to maximize license fees when others *are* permitted to practice the patent.[183] When a patent is an SEP, these rights are qualified and constrained by FRAND commitments, such that SEP holders must make their technologies available to all applicants who wish to comply with the standard and must not charge more than what is fair and

177. Baker Botts L.L.P. v. ASARCO LLC, 576 U.S. 121, 126 (2015).

178. *Id.* (first quoting Buckhannon Bd. & Care Home, Inc. v. W. Va. Dep't of Health & Hum. Res., 532 U.S. 598, 602 (2001); and then quoting Alyeska Pipeline Serv. Co. v. Wilderness Soc'y, 421 U.S. 240, 260 (1975)).

179. Leslie, *supra* note 28, at 400.

180. *Id.*

181. *Id.*

182. *See, e.g.*, Statement of Interest, *supra* note 1, at 9 ("[In lawsuits involving] deception regarding contractual commitments and breaches of those commitments . . . [antitrust] liability—and treble damages in particular— . . . would tend to chill dynamic competition and innovation, the exact goals that the antitrust laws are intended to promote. These claims, therefore, should be dismissed with prejudice.").

183. *See* 35 U.S.C. § 271 ("Except as otherwise provided in this title, whoever without authority makes, uses, offers to sell, or sells any patented invention, within the United States or imports into the United States any patented invention during the term of the patent therefor, infringes the patent.").

reasonable.[184] Allowing SEP holders to enter into insincere FRAND agreements with the intent to maintain unqualified patent rights implicates antitrust scrutiny.[185] Antitrust law deters the maximizing of license fees in violation of FRAND commitments and the seeking of injunctions against implementers who are unwilling to pay above-FRAND royalties.[186] Some fear this deterrent effect will extend to innovation—that is, innovators will stop innovating.[187]

Fortunately, this fear is unwarranted. Scholars have indicated that no such huge reward is needed from the patent system in order to encourage innovation.[188] Not only that, but competition aids in incentivizing innovation.[189] It is complimentary to exclusion (i.e., to patent rights) in terms of encouraging innovation.

The following statements are typical of the innovation-will-suffer argument. First, "[t]he guarantee of market-driven financial rewards for invention serves as a powerful incentive for the development of new inventions that can render old technologies obsolete."[190] Second, "[r]ecognizing a Section 2 cause of action premised on alleged violations of commitments to offer patent licenses at rates that are FRAND would [] run contrary to the policies underlying the antitrust laws that encourage market-based pricing . . . ."[191] The first of these statements makes sense, but the second is problematic.

First of all, a FRAND price *is* the market-based price. A FRAND commitment is not a set price negotiated by the SSO but rather the flexible standard that must

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184. *See, e.g.*, Fed. Trade Comm'n v. Qualcomm Inc., 969 F.3d 974, 986 (9th Cir. 2020) (declining to conclude whether Qualcomm breached its FRAND commitments, but noting that in those commitments Qualcomm agreed to make its SEPs available on fair and reasonable terms to all applicants wishing to implement the relevant standards).

185. *See* United States v. U.S. Gypsum Co., 333 U.S. 364, 390–91 (1948) (indicating that courts must "balance the privileges of [the patent holder] and its licensees under the patent grants with the prohibitions of the Sherman Act against combinations and attempts to monopolize").

186. *See* New York *ex rel.* Schneiderman v. Actavis PLC, 787 F.3d 638, 660 (2d Cir. 2015) ("[A] patent does not confer upon the patent holder an 'absolute and unfettered right to use its intellectual property as it wishes,' and '[i]ntellectual property rights do not confer a privilege to violate the antitrust laws.'" (first quoting United States v. Microsoft Corp., 253 F.3d 34 (D.C. Cir. 2001) (per curiam); then quoting *In re* Indep. Serv. Orgs. Antitrust Litig., 203 F.3d 1322 (Fed. Cir. 2000))).

187. *See* Makan Delrahim, Assistant Att'y Gen., U.S. Dep't of Just., Antitrust Div., The Long Run: Maximizing Innovation Incentives Through Advocacy and Enforcement, Prepared Remarks for LeadershIP Conference 3 (Apr. 10, 2018) [hereinafter Delrahim, The Long Run], https://www.justice.gov/opa/speech/file/1050956/download [https://perma.cc/KF3J-P5GJ] ("[D]enying injunctive relief to standard essential patent holders except in the rarest circumstances . . . could have an unintended and harmful effect on dynamic competition by undermining important incentives to innovate . . . ."); *see also* Letter from Thom Tillis, *supra* note 1(expressing that the DOJ's draft policy statement "seeks to undermine the patent system," which must work together with antitrust policies to "create a balanced, strong, innovation ecosystem").

188. *See* JAMES BESSEN & MICHAEL J. MEURER, PATENT FAILURE: HOW JUDGES, BUREAUCRATS, AND LAWYERS PUT INNOVATORS AT RISK 73 (2008).

189. *See id.* at 90.

190. Statement of Interest, *supra* note 1, at 2.

191. *Id.*

be followed by all bilateral negotiations between the patent holder and each implementer.[192] When the implementers and patent holder negotiate the FRAND price, they are looking at market factors to determine what is fair and reasonable,[193] and therefore the FRAND price cannot be contrary to the principles underlying antitrust law. On the contrary, the FRAND price is *exactly* in line with the principles of market-based pricing, and it is patent holdup that runs contrary to those principles. Absent antitrust enforcement of FRAND commitments, with monopoly power having been conferred on a patent holder, the patent holder can extract financial rewards far higher than the market would have dictated had the implementer not been locked into the standard. In other words, royalties that are unhinged from FRAND commitments are above-market, monopolistic royalties, *not* "market-based pricing" as suggested.[194]

What's more is that *even if* the FRAND price were disconnected from the market, the availability of above-FRAND rewards could not be the only incentive to innovate because patent holders regularly agree to license their innovations on FRAND terms.[195] This is the huge-reward vs. reasonable-reward argument again. An unqualified reward is obviously not necessary to encourage involvement in the standard-setting process.[196] Nor is an unqualified reward necessary to spur innovation.[197] As one scholar explained, "as long as there are profits and not losses," then a rational business that innovates under a patent system with broad exclusionary rights will also do so under a qualified patent system with narrower exclusionary rights.[198]

The ideal balance is to have rights of ownership and exclusion on the one hand and lawful competition on the other, with both working together to drive innovation.[199] A patent provides rights of ownership and exclusion—namely, the

192. *See* Richard J. Gilbert, *Deal or No Deal? Licensing Negotiations in Standard-Setting Organizations*, 77 ANTITRUST L.J. 855, 859 (2011) ("[N]o SSO, court, or enforcement agency has offered a workable and generally accepted definition of fair and reasonable licensing terms.").

193. *See id.* at 860 ("The competitive royalty is the outcome of bilateral negotiations, and is related to the value created by the technology relative to its next-best alternative.").

194. *See* Statement of Interest, *supra* note 1, at 2.

195. *See, e.g.*, *IEEE at a Glance*, IEEE STANDARDS ASS'N, https://www.ieee.org/about/at-a-glance.html [https://perma.cc/LZH8-XCW6] (Dec. 2021) ("IEEE has . . . [o]ver 400,000 members in more than 160 countries [and] an active portfolio of nearly 1,200 standards and more than 900 projects under development . . . . ").

196. *See* Osenga, *supra* note 8, at 186 ("Since FRAND contracts are willing agreements between highly competent parties, 'it logically follows that such agreements, correctly interpreted, must generate valuable benefits to innovators and implementers alike.'" (quoting Richard A. Epstein & Kayvan B. Noroozi, *Why Incentives for "Patent Holdout" Threaten to Dismantle FRAND, and Why It Matters*, 32 BERKELEY TECH. L.J. 1381, 1386 (2017))).

197. Liivak, *supra* note 1, at 1663.

198. *Id.* (comparing the current patent system to one more akin to the copyright system, in which free entry by independent inventors would be allowed as long as there is no actual copying).

199. *See* BESSEN & MEURER, *supra* note 186("Perhaps one of the clearest lessons of the Cold War was that private-property and market economies can be powerful engines of economic growth and innovation.").

right, for a limited time, to exclude others from practicing one's invention.[200] Patent owners can enforce this right by seeking reasonable injunctions.[201] Hence, a patent is certainly one of the rewards that incentivizes companies to innovate and to invest in research and development.[202] However, stronger patent rights do not automatically equate to stronger innovation.[203] A patent is considered a big reward because it grants exclusive rights to use an invention. The orthodox belief is that granting a patent is an incentive for people to invest in innovation.[204] But some scholars say this is more like a leap of faith than an economic understanding because there is very little evidence supporting the belief.[205] Many technological fields that are likely to have standards and FRAND issues, such as the telecommunications industry[206] and the software industry,[207] do not require such a big reward (i.e., unqualified exclusionary rights) in order to incentivize innovation.[208] In fact,

200. U.S. CONST. art. I, § 8, cl. 8 ("Congress shall have Power . . . [t]o promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries.").

201. 35 U.S.C. § 283 ("The several courts having jurisdiction of cases under this title may grant injunctions in accordance with the principles of equity to prevent the violation of any right secured by patent, on such terms as the court deems reasonable.").

202. *See id.*

203. BESSEN & MEURER, *supra* note 186, at 84 ("Intellectual property rights are *not* just like other property rights, and simple casual observations about the correlation between United States or Western technology and patent systems can be misleading. On the other hand, this does not mean that patents have no measurable effects, but rather that it appears that their effects might be more tentative, being contingent upon the details of the patent system or the particular technology, industry, or state of economic development.").

204. Liivak, *supra* note 1, at 1659 ("The general notion is that a system that allowed for competition from independent inventors would result in a smaller reward to the initial inventor and risks 'undermin[ing] incentives to develop the invention at all.'" (quoting Mark A Lemley, *Should Patent Infringement Require Proof of Copying?*, 105 MICH. L. REV. 1525, 1529 (2007))).

205. Lemley, *supra* note 111, at 1332, 1335 ("In the past three decades there has been an unprecedented—indeed, astonishing—outpouring of sophisticated empirical work on virtually every aspect of IP law and innovative and creative markets . . . . [This empirical] evidence casts substantial doubt on the efficacy of [recent IP] laws.").

206. Mark A. Lemley & Lawrence Lessig, *The End of End-to-End: Preserving the Architecture of the Internet in the Broadband Era*, 48 UCLA L. REV. 925, 960 (2001) ("Some commentators have even suggested that competition, not monopoly, is actually the best spur to investment by incumbents in telecommunications and related fields.").

207. BESSEN & MEURER, *supra* note 186, at 85 ("[A 2004 empirical study] looked at the effect of changes in the United States treatment of inventions that involve software. They found that the number of software patents grew dramatically. Firms in the software industry acquired relatively few patents, however; instead, most were obtained by firms in electronics and computer industries known for stockpiling large arsenals of patents to use as bargaining chips. Moreover, the firms that acquired relatively more software patents tended to actually *reduce* their level of R&D spending relative to sales.").

208. One notable exception is the pharmaceutical industry, where evidence shows that the high cost of R&D does in fact need to be incentivized by a big reward at the end. *See id.* at 13 ("Case studies present a convincing argument that patents are critical for investment in R&D in the pharmaceutical industry. On the other hand, survey evidence suggests that in most other industries, patents do not pose much of a barrier to imitation, and firms rely mainly on other means, such as lead-time advantages and trade secrecy, to obtain returns on their R&D investments.").

they may be motivated by the opposite—competition.[209] Thus, antitrust scrutiny of requests for injunctions against willing licensees will not discourage innovation in these fields.

Lawful competition promoted by the antitrust laws is a better driver of innovation than unfettered exclusionary rights over an SEP.[210] It has been argued that "possession of unchallenged economic power deadens initiative, discourages thrift and depresses energy."[211] In contrast, when the standard-selection process is supported by meaningful FRAND commitments—that is, when patent holders engage in fair competition on the merits of their technology and implementers compete for development and sales of interoperable products in the marketplace—technological progress is stimulated.[212]

Researchers have found that "innovation is greatest when firms earn modest rents [profits]; too much or too little competition reduces innovation rates."[213] This is because new entrants can "spur incumbents not to rest on their laurels" and "bring diverse knowledge that increases the odds of future innovation success."[214] Competition's positive effect on innovation has been confirmed by other researchers following the patterns seen in several new technologies, who found that "[l]ess innovation occurs when firms face less threat of competition," even though patenting rates are highest when there is less competition.[215] This "suggests that much innovation is not dependent on patenting."[216]

Additionally, natural economic experiments have shown that while a strengthening of patent laws in certain countries can increase innovation, a strengthening of patent laws in countries that already have "high levels of patent 'strength' . . . actually decrease[s] innovation."[217] Moreover, a steady stream of licensing royalties is arguably already a big reward, even if those royalties must remain fair, reasonable, and nondiscriminatory.

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209. *Id.* ("Moreover, several studies suggest that a moderate degree of competition might actually spur innovation.").

210. *See* C. Scott Hemphill, *Disruptive Incumbents: Platform Competition in an Age of Machine Learning*, 119 COLUM. L. REV. 1973, 1982 (2019) (citing Kenneth Arrow, *Economic Welfare and the Allocation of Resources for Invention*, *in* THE RATE AND DIRECTION OF INVENTIVE ACTIVITY: ECONOMIC AND SOCIAL FACTORS 609, 619–22 (Richard R. Nelson ed., 1962) ("The preinvention monopoly power acts as a strong disincentive to further innovation.")).

211. United States v. Aluminum Co. of Am., 148 F.2d 416, 427 (2d Cir. 1945).

212. *See* GRIDWISE, FINANCIAL BENEFITS OF INTEROPERABILITY, *supra* note 120, at 7 ("Interoperability promotes competition, and competition encourages innovation and quality.").

213. BESSEN & MEURER, *supra* note 186, at 90.

214. *Id.* at 89.

215. *Id.* at 90.

216. *Id.*

217. *Id.* at 88. Here, the natural economic experiments involved empirical evidence gathered from before and after a specific strengthening of a country's patent laws.

D. Proprietary Products and Standards Wars

In any event, working through an SSO is a choice.[218] It is an attractive choice because it allows patent owners to "licens[e] their patent rights to implementers who can more efficiently deliver those technologies to end users."[219] As groups of competitors working together to select the technology that works best for them collectively, SSOs provide a host of benefits for most of those involved and for consumers as well.[220] However, collectively set standards are not the only way to go.

Rather than compete for inclusion in a selected standard, patent owners can opt to go it alone by creating (or licensing others to create) proprietary end products that incorporate their patented technology and take their chances on whether those products will be chosen by consumers in the marketplace. No SSOs and no implementers need be involved. Patent rights without a FRAND commitment generally give patent holders the right to enter into exclusive licenses or to refuse to license their technology to anyone.[221] If a patent holder wants to do this without risking antitrust liability, or to be free to charge unrestricted royalties, it should stay out of standard setting and gain its monopoly through a superior end product, which is one of the legal ways to obtain a monopoly.[222]

This is referred to as a "standards war" because it presents consumers with choices between incompatible products.[223] Standards wars typically result in the more popular product becoming the de facto standard or in multiple standards remaining available in the market.[224] Famously, the "'War of the Currents' between Thomas Edison, George Westinghouse, and Nikola Tesla . . . paved the way for the modern world."[225] And although alternating current initially won the day, "direct

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218. *See* U.S. DEP'T OF JUST. & FED. TRADE COMM'N, *supra* note 121, at 34 n.6 ("In a 'standards war,' substitute products with incompatible designs are introduced into a market, and users' purchase decisions ultimately establish one design as the dominant design or de facto standard, in what can effectively be a winner-take-all competition.").

219. Statement of Interest, *supra* note 1, at 2.

220. *See supra* Parts I and II.

221. *See* 35 U.S.C. § 271.

222. *See* United States v. Grinnell Corp., 384 U.S. 563, 570–71 (1966) ("The offense of monopoly under § 2 of the Sherman Act has two elements: (1) the possession of monopoly power in the relevant market and (2) the willful acquisition or maintenance of that power as distinguished from growth or development as a consequence of a superior product, business acumen, or historic accident.").

223. *See* Osenga, *supra* note 8, at 169 ("The 'standards war,' or competition between firms seeking to become the standardized technology by winning market selection, further requires firms to expend significant resources in trying to attract the larger market share.").

224. *Id.*

225. Jeffrey Wilder, Econ. Dir. of Enforcement, Antitrust Div, U.S. Dep't of Just., Leveling the Playing Field in the Standards Ecosystem: Principles for A Balanced Antitrust Enforcement Approach to Standards-Essential Patents, Prepared Remarks at IAM & Global Competition Review Summit on Standards Essential Patents (Sept. 29, 2021), https://www.justice.gov/opa/speech/antitrust-division-economics-director-enforcement-jeffrey-wilder-iam-and-gcr-connect-sep [https://perma.cc/E6B5-PDYP].

current has seen a bit of a renaissance" with direct current being used in electric vehicles, in computers, and as a means to "transport electricity long distances with less electricity loss."[226] Other well-known examples were the rivalries between VHS and Betamax, setting VHS as the de facto standard, and between Blu-ray Disc and HD DVD, setting Blu-ray as the de facto standard.[227] On the other hand, Nintendo, Xbox, and PlayStation consoles have all remained available to consumers despite that they are competing, incompatible standards.[228]

Although a standards war can incur significant expense and risk to the patent holder, once the war is won, the winning patent holder will have achieved a legal, unqualified monopoly.[229] The victor in a standards war has no FRAND commitment and can refuse to license its patent to anyone, thus preventing others from making compatible, competing products.[230] Or, this legal monopolist can grant licenses at high, monopoly prices if it so chooses. The only ways to dethrone the holder of a de facto standard are to wait until the patent expires (or, in the case of some software copyrights, to wait until the copyright expires, which is a much longer time period) or to develop such a superior technology that users are willing to make the switch and incur the associated switching costs.[231]

Some commentators contend that becoming part of a collectively set standard does not add value to a patent because that patent was already valuable, which is why it was selected for the standard.[232] But this argument ignores the fact that the SEP holder made a business decision to be part of that standard. They believed that their patent would be more valuable as an SEP than as a proprietary component, or

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226. Allison Lantero, *The War of the Currents: AC vs. DC Power*, U.S. DEP'T ENERGY (Nov. 18, 2014), https://www.energy.gov/articles/war-currents-ac-vs-dc-power [https://perma.cc/8AGV-MPDK] ("So it appears the War of the Currents may not be over yet. But instead of continuing in a heated AC vs. DC battle, it looks like the two currents will end up working parallel to each other in a sort of hybrid armistice.").

227. *See* U.S. DEP'T OF JUST. & FED. TRADE COMM'N, *supra* note 121, at 34 n.6. Some scholars contend the Blu-ray vs. HD battle was not a classic standards war because it "was not fought with technological superiority but instead with exclusivity contracts," but for purposes of this Note, it is included as a recognizable example. *See* Kevin L. Spark, Note, *Format War, Antitrust Casualties: The Sherman Act and the Blu-Ray–HD DVD Format War*, 83 S. CAL. L. REV. 173, 173 (2009).

228. *See* U.S. DEP'T OF JUST. & FED. TRADE COMM'N, *supra* note 121, at 34 n.6.

229. *See id.* at 34 n.8 ("To win a standards war, a firm may have to incur significant costs or limit its assertion of market power in order to establish an installed base of users. The winner of a standards war, however, may have significant market power, often because it can enforce its patent rights to prevent others from making products that conform to the standard.").

230. *See id.*

231. *See* Daniel J. Gifford, *The Antitrust/Intellectual Property Interface: An Emerging Solution to an Intractable Problem*, 31 HOFSTRA L. REV. 363, 392 (2002) ("Microsoft Windows is now the de facto industry standard: it is the platform to which most software is written. But a sufficiently superior technology could displace Windows. The challenge is that the newer technology would have to be enough of an improvement over Windows to overcome the switching costs that users would incur in adopting it.").

232. Gene Quinn, *Standard Essential Patents: The Myths and Realities of Standard Implementation*, IPWATCHDOG (Feb. 4, 2019), https://www.ipwatchdog.com/2019/02/04/standard-essential-patents-myth-realities-standard-implementation/id=105940/ [https://perma.cc/6ZJ7-V5DJ].

at least that participating in a collectively set standard would be better than gambling on the market-selection process of a standards war.

Patent holders are not victims in a world in which deception on an SSO is considered anticompetitive behavior—patent holders have other options, and any decision to participate in the standard-setting process would necessarily be based on a risk-benefit analysis. This is not to suggest that it would be desirable to see more standards wars in lieu of standard-setting processes. Although competition to win a standards war can certainly drive innovation,[233] standard selection by an SSO is more efficient and less risky than standard selection by the market.[234] As stated previously, decreased participation in standards would cause technological improvements to slow,[235] prices and consumer search costs to increase,[236] and some consumers to hold off on making new purchases until the market settled on one de facto standard or another.[237] The current Joint Policy Statement by the DOJ, USPTO, and NIST acknowledges the benefits of standards set by SSOs:

> Standards, particularly voluntary consensus standards set by [SSOs], play a vital role in the economy. [SSOs] develop standards using open, transparent, and consensus-based processes to address issues of interest to their stakeholders. By allowing products designed and manufactured by many different firms to function together, interoperability standards can create enormous value for consumers and fuel the creation and utilization of new and innovative technologies to benefit consumers.[238]

Despite the high potential reward for obtaining a legal monopoly through a de facto standard, many patent holders of innovative technology understandably try to obtain a monopoly through selection by an SSO.[239]

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233. Wilder, *supra* note 223.

234. *See id.* ("When [the SSO] ecosystem works well, competition in standardized products thrives and consumers benefit. When it does not, we can miss out on standards that might make us safer, healthier, or more connected.").

235. Intel Corp. v. VIA Techs., Inc., 174 F. Supp. 2d 1038, 1040 (N.D. Cal. 2001) *aff'd*, 319 F.3d 1357 (Fed. Cir. 2003).

236. Golden Bridge Tech. v. Motorola, Inc., 547 F.3d 266, 273 (5th Cir. 2008).

237. Jeffrey R. Church & Roger Ware, *Network Industries, Intellectual Property Rights and Competition Policy*, *in* COMPETITION POLICY AND INTELLECTUAL PROPERTY RIGHTS IN THE KNOWLEDGE-BASED ECONOMY 230–39 (Robert D. Anderson & Nancy T. Gallini eds., 1998) ("During a standards war, however, some consumers may delay purchasing until the de facto standard is chosen because they do not want to be stuck with the costs of moving from a losing standard to the winning standard.").

238. U.S. DEP'T OF JUST., U.S. PAT. & TRADEMARK OFF. & NAT'L INST. OF STANDARDS AND TECH., POLICY STATEMENT ON REMEDIES FOR STANDARDS-ESSENTIAL PATENTS SUBJECT TO VOLUNTARY F/RAND COMMITMENTS 2 (2019) [hereinafter JOINT POLICY STATEMENT], https://www.justice.gov/atr/page/file/1228016/download [https://perma.cc/TLV3-LE35].

239. As discussed, whether or not this is a legal monopoly depends on whether there was deception regarding the patent holder's intent to honor its FRAND commitments.

IV. DISTRACTION

This Part IV submits that, although an SEP holder's ability to seek a permanent injunction against an implementer is highly relevant to the issue of patent holdup, the debate over the availability of such an injunction is distracting and misleading.

Before explaining the tension surrounding injunctions, this Note seeks to emphasize two main points. First, there is no categorical rule that injunctions are unavailable when the patent at issue is an SEP.[240] Second, courts are perfectly capable of analyzing SEP injunctions under the general equitable framework.[241] The focus should instead remain on keeping antitrust lawsuits available to implementers, even if the threat of such lawsuits might deter SEP holders from seeking injunctions.

A. The Controversy over Injunctions

Typical remedies available to patent holders when someone uses their patented inventions without a license are injunctions and damages, which can include treble damages, costs, and attorneys' fees.[242] The most controversial of these—when the patent at issue is an SEP—is the injunction.[243] Although treble damages, costs, and attorneys' fees have also been criticized as inappropriate in the SEP context,[244] they have not garnered nearly as much attention.

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240. Apple Inc. v. Motorola, Inc., 757 F.3d 1286, 1331 (Fed. Cir. 2014), *overruled on other grounds by* Williamson v. Citrix Online, LLC, 792 F.3d 1339 (Fed. Cir. 2015) ("To the extent that the district court applied a per se rule that injunctions are unavailable for SEPs, it erred."); *see also* INST. OF ELEC. & ELECS. ENG'RS, IEEE-SA BOARD BYLAWS 17–21 (2022) [hereinafter IEEE PATENT POLICY], https://standards.ieee.org/content/dam/ieee-standards/standards/web/documents/other/sb_bylaws.pdf [https://perma.cc/79EE-KE35].

241. *Apple*, 757 F.3d at 1332 ("[T]he district courts are more than capable of considering these factual issues when deciding whether to issue an injunction under the principles in *eBay*."). It has been suggested that the DOJ's revised policy stance leaves too much discretion to the courts alone, but it is unclear why giving nonbinding policy guidance and leaving courts to follow court precedent would be considered improper. *See* Letter from Thom Tillis, *supra* note 1("I am very concerned with what appears to be the DOJ's attempt to diminish patent holders' statutory rights and undermine the judicial process by substituting the courts' judgment for its own.").

242. *See* 35 U.S.C. §§ 283–284 ("[C]ourts having jurisdiction of cases under this title may grant injunctions in accordance with the principles of equity to prevent the violation of any right secured by patent, on such terms as the court deems reasonable . . . . Upon finding for the claimant the court shall award the claimant damages adequate to compensate for the infringement, but in no event less than a reasonable royalty for the use made of the invention by the infringer, together with interest and costs as fixed by the court . . . . [T]he court may increase the damages up to three times the amount found or assessed.").

243. Osenga, *supra* note 8, at 174–75 ("Because injunctive relief is often unavailable to SEP owners as part of court and commentator efforts to 'fix' patent hold-up, the patent owner has little recourse other than to sue the refusing implementer for payment of a reasonable royalty . . . the same thing it was seeking in the first instance.").

244. *See, e.g.*, Mark A. Lemley, *Intellectual Property Rights and Standard-Setting Organizations*, 90 CAL. L. REV. 1889, 1925 (2002) (contending that FRAND obligations should bar patent infringement actions, whether seeking injunctions or damages, because patent infringement claims "might result in an injunction, treble damages, and attorneys' fees"); Doug Lichtman, *Understanding the Rand*

For context, the following concepts explain why injunctions are such an issue for SEP holders and implementers alike. For SEP holders, injunctions are arguably more effective than money damages at deterring patent infringement.[245] Relevant to both sides is that the threat of an injunction provides SEP holders with negotiating leverage over the implementers.[246] And the implementers cannot market standard-compliant products without access to the SEP. Therefore, if a permanent injunction is allowed against an implementer, that is an absolute barrier to entry into the market.[247]

Commentaries on these opposing positions often use extreme language to describe when injunctions should be granted, though both sides are fundamentally saying the same thing—injunctions should be granted when an implementer refuses to pay a reasonable royalty or unreasonably delays in negotiating the same, but not otherwise.[248] For example, one scholarly article argued that when courts favor damages remedies over injunctions, they incentivize implementers to avoid paying royalties, and that courts should "automatically issue an injunction" if an implementer is found to have used a patented invention that it "did not attempt to license in good faith."[249] In other words, despite the pro-injunction tone of the argument, it is saying that granting an injunction should be conditional on a finding of bad faith. Another example is that Judge Sharon Prost's concurring opinion in *Apple v. Motorola* has been portrayed as taking the view that "an implementer's negotiation conduct—no matter how intransigent—should *never* justify granting an injunction to the holder of the SEP."[250] But her actual words explicitly agreed with the majority "that there is no need to create a categorical rule that a patentee can never obtain an injunction on a FRAND-committed patent."[251] Her only deviation

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Commitment, 47 HOUS. L. REV. 1023, 1043 (2010) ("Courts could interpret RAND as a public commitment that creates a defense of equitable estoppel. Under that estoppel, the patent holder would be deemed to have permanently waived his right to seek triple damages or to ask for injunctive relief, but would otherwise be allowed to invoke patent law's damages regime."). *But cf.* Suzanne Michel, *Bargaining for RAND Royalties in the Shadow of Patent Remedies Law*, 77 ANTITRUST L.J. 889, 893 (2011) ("If negotiations break down, the implementer can bring a contract claim asking the court to enforce the patentee's promise to license at RAND rates. The patentee can claim patent infringement, seeking remedies, including compensatory damages and a permanent injunction prohibiting future infringement.").

245. *See* Osenga, *supra* note 8, at 174–75 (arguing that without injunctive relief, the "rational strategy of all implementers" would be to refuse to pay royalties until a court orders them to do so).

246. *See* J. Gregory Sidak, *Holdup, Royalty Stacking, and the Presumption of Injunctive Relief for Patent Infringement: A Reply to Lemley & Shapiro*, 82 MINN. L. REV. 714, 714 (2008).

247. Saransh Chaturvedi & Ditipriya Dutta Chowdhary, *The Effect of Injunctive Relief on Antitrust: The United States Position*, IPLEADERS (June 10, 2020), https://blog.ipleaders.in/the-effect-of-injunctive-relief-on-antitrust-the-united-states-position/ [https://perma.cc/8EU9-XMD4].

248. Apple Inc. v. Motorola Inc., 757 F.3d 1286, 1332 (Fed. Cir. 2014), *overruled on other grounds by* Williamson v. Citrix Online, LLC, 792 F.3d 1339 (Fed. Cir. 2015).

249. *See, e.g.*, Richard A. Epstein & Kayvan B. Noroozi, *Why Incentives for "Patent Holdout" Threaten to Dismantle FRAND, and Why It Matters*, 32 BERKELEY TECH. L.J. 1381, 1382 (2017).

250. *Id.* at 1415 (emphasis added).

251. *Apple*, 757 F.3d at 1342 (Prost, C.J., concurring in part and dissenting in part).

from the majority opinion was to add that an injunction is truly only necessary if the "alleged infringer were judgment-proof" or where sanctions were in order for failure to pay court-ordered damages.[252] She also added that an implementer is "fully entitled to challenge the validity of a FRAND-committed patent before agreeing to pay a license on that patent, and so should not necessarily be punished for less than eager negotiations."[253]

There is also plenty of misleading commentary implying that injunctions are barred by antitrust enforcement of FRAND commitments.[254] For example, it has been commented that

> If a patent holder effectively loses its right to an injunction whenever a licensing dispute arises, or is deterred from seeking an injunction due to the prospect of treble damages, an implementer can freely infringe, knowing that the most he or she will eventually have to pay is a reasonable royalty rate.[255]

Similar comments posit that "*[r]emoving* the injunction option . . . not only changes the bargaining range (and makes infringement a valid business option), but, by extension, it lowers the expected returns of investing in the creation and commercialization of patents, in the first place."[256] It has even been implied that policies of SSOs, like those of the IEEE, currently preclude SEP holders with FRAND commitments from seeking injunctions.[257] When framed in this way, it is tempting to find cause for concern.

As for SSO policies like those of the IEEE, one's first reaction might be that, of course, they should not prohibit patent owners from being able to exclude non-royalty-paying implementers from practicing their patents. But, interestingly, the IEEE's Patent Policy does not prohibit injunctions.[258] It merely prohibits injunctions against implementers who are willing to comply with FRAND rates once those rates have been determined by a court.[259] The purpose of this policy is

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252. *Id.* at 1343.

253. *Id.* at 1342.

254. *See, e.g.*, Delrahim, The Long Run, *supra* note 185, at 2–3 ("[B]y denying injunctive relief to standard essential patent holders except in the rarest circumstances, courts in the U.S. run the risk of turning a FRAND commitment into a compulsory license. As a defender of competitive markets, I am concerned that these patent law developments could have an unintended and harmful effect on dynamic competition by undermining important incentives to innovate, and ultimately, have a detrimental effect on U.S. consumers.").

255. Delrahim, New Madison, *supra* note 167, at 14.

256. Auer et al., *supra* note 123, at 163 (emphasis added).

257. *See Updated IEEE Business Review Letter*, *supra* note 140.

258. *See* Microsoft Corp. v. Motorola, Inc., 963 F. Supp. 2d 1176, 1190 (W.D. Wash. 2013) ("There is no provision in Motorola's contracts with the IEEE and ITU expressly stating that Motorola is prohibited from seeking injunctive relief against SEP implementers. Neither party argues that such a provision exists.").

259. IEEE PATENT POLICY, *supra* note 236, 20 ("The Submitter of an Accepted [Letter of Assurance] who has committed to make available a license for one or more Essential Patent Claims agrees that it shall neither seek nor seek to enforce a Prohibitive Order based on such Essential Patent

likely to keep the threat of an injunction away from the negotiating table, where it could otherwise be wielded by the SEP holder to "dramatically influence" royalty rates above what is fair and reasonable.[260] It seems that what the critics of these policies really want is for injunctive relief to be available to patent holders *even when* they ask for supra-FRAND royalties.[261] Indeed, they may have made some headway as different courts have "reached differing results" regarding the circumstances under which a FRAND-committed SEP holder can obtain an injunction against an implementer.[262] But SSO policies, like those of the IEEE, should be supported by courts and enforcement agencies because it is the SSOs who are uniquely situated to understand and protect against the anticompetitive issues that arise in FRAND licensing.[263]

As for antitrust enforcement, it is not clear why critics claim it would remove the injunction option. It does make sense, however, that an SEP holder would be *deterred* from seeking an injunction, for fear of either a retaliatory antitrust lawsuit initiated by an implementer or an antitrust enforcement action initiated by the

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Claim(s) in a jurisdiction *unless the implementer fails to participate in, or to comply with the outcome of, an adjudication*, including an affirming first-level appellate review, if sought by any party within applicable deadlines, in that jurisdiction by one or more courts that have the authority to: determine Reasonable Rates and other reasonable terms and conditions; adjudicate patent validity, enforceability, essentiality, and infringement; award monetary damages; and resolve any defenses and counterclaims." (emphasis added)).

260. Lemley & Shapiro, *supra* note 96, at 1993.

261. *See* Makan Delrahim, Assistant Att'y Gen., U.S. Dep't of Just., Antitrust Div., "Telegraph Road": Incentivizing Innovation at the Intersection of Patent and Antitrust Law, Prepared Remarks at the Nineteenth Annual Berkeley-Stanford Advanced Patent Law Institute 4 (Dec. 7, 2018), https://www.justice.gov/opa/speech/file/1117686/download [https://perma.cc/9XHH-S8XW].

262. *Microsoft*, 963 F. Supp. 2d at 1190 ("*Compare* Realtek Semiconductor (holding that it was a breach of the RAND commitment to seek injunctive relief before even offering a license) *and* Apple, Inc. v. Motorola, Inc. (finding injunctive relief unavailable unless the implementer has refused to pay a RAND royalty) *with* Apple, Inc. v. Motorola Mobility, Inc. (holding that the RAND commitment did not deprive defendant of its right to seek injunctive relief)." (first citing Realtek Semiconductor Corp. v. LSI Corp., 946 F. Supp. 3d 998, 1006–07 (N.D. Cal. 2013); then citing Apple, Inc. v. Motorola, Inc., 869 F. Supp. 2d 901, 912–13 (N.D. Ill. 2012); and then citing Apple, Inc. v. Motorola Mobility, Inc., No. 11-cv-178, 2012 WL 5416941 (W.D. Wis. Oct. 29, 2012))). There also appears to be a recent trend toward courts holding against antitrust plaintiffs in patent holdup cases. This is why policies like the IEEE's are wise to require an adjudication of the FRAND rate before allowing an SEP holder to seek an injunction. Because courts have had mixed holdings on antitrust enforcement of patent holdup, and because SSO policies can aid in the prevention of patent holdup, they provide a layer of protection beyond reliance on the courts. Regarding such recent trend in the courts, see *Federal Trade Commission v. Qualcomm Inc.*, 969 F.3d 974, 997 (9th Cir. 2020) (giving nod to the antitrust rationale that "intentional deception" of an SSO gives rise to antitrust liability, but nevertheless "declin[ing] to hold that Qualcomm's alleged breach of its SSO commitments to license its SEPs on FRAND terms . . . amounted to anticompetitive conduct in violation of § 2" where there was no finding of intentional deception), and *Continental Automotive Systems, Inc. v. Avanci, LLC*, 485 F. Supp. 3d 712, 734 (N.D. Tex. 2020) ("An SEP holder may choose to contractually limit its right to license the SEP through a FRAND obligation, but a violation of this contractual obligation is not an antitrust violation.").

263. Wilder, *supra* note 223.

government.[264] Understandably, it has been argued that the ambiguity in the market about what constitutes a fair and reasonable royalty rate leaves patent owners to "guess" about when they can safely seek an injunction.[265] But that is exactly the point of antitrust scrutiny. Antitrust law *should* be at play to deter firms from engaging in patent holdup and to force them to question their own actions before seeking injunctions against implementers who are willing to pay reasonable royalties.

B. The General Legal Framework Regarding Injunctions Is Sufficient

Not every area of tension requires a special law. The pro-injunction side is correct that an injunction analysis in the SEP context should be consistent with traditional patent dispute principles. However, the pro-injunction side goes too far when it suggests that antitrust law should not be involved.

The current Joint Policy Statement by the DOJ, USPTO, and NIST, for example, is undergoing revision for that very reason.[266] Its purported aim was to dismiss any misinterpretation of the 2013 Statement as having encouraged a per se rule limiting injunctive rights for SEPs.[267] This in itself was an innocuous stance—clarifying that there is no per se rule for exclusionary relief for SEPs is in keeping with the American tradition of avoiding rule-based formalism in this area.[268] But, as is often the case, the real crux of the policy change was buried in a footnote rejecting the applicability of antitrust law in FRAND disputes.[269]

In other words, the current Joint Policy Statement got it partially right in stressing that injunctions and other exclusionary remedies should be available to

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264. Part I of this Note discusses that deception constitutes monopoly conduct, which is one of the required elements of a prima facie Section 2 claim under *United States v. Grinnell Corporation*, 384 U.S. 563 (1966).

265. Auer et al., *supra* note 123, at 164.

266. *See* JOINT POLICY STATEMENT, *supra* note 236, at 4, 4 n.9.

267. *Id.* at 4 ("[T]he USPTO, NIST, and the DOJ . . . have developed additional experience with disputes concerning standards-essential patents . . . . [T]he agencies have heard concerns that the 2013 policy statement has been misinterpreted to suggest that a unique set of legal rules should be applied in disputes concerning patents subject to a F/RAND commitment that are essential to standards (as distinct from patents that are not essential), and that injunctions and other exclusionary remedies should not be available in actions for infringement of standards-essential patents.").

268. *See* Muris, *supra* note 7("[E]ffort[s] to try and specify the contours of good-faith negotiations among SEP holders and implementers should not foreshadow a tacit acceptance of a more European and rules-based formalism to the highly technical and diverse commercial circumstances in which the licensing of SEPs takes place, and thus presents ground for caution about de facto and ex ante rulemaking in this area.").

269. *See* JOINT POLICY STATEMENT, *supra* note 236, at 4 n.9 ("Although the U.S. International Trade Commission may consider 'competitive conditions in the United States economy' as part of its public interest analysis, *see, e.g.*, 19 U.S.C. § 1337(d)(1), that does not signify that F/RAND licensing disputes raise antitrust concerns."); *see also* Muris, *supra* note 7("[I]n 2019 the Trump administration issued a new and carefully crafted policy statement that, under guise of rejecting the adoption of 'a special set of legal rules' for SEPs, did precisely that by signaling that the use of otherwise valid antitrust limitations on breaches of FRAND promises were unjustified—both with respect to exclusion orders issued by the ITC, as well as through the application of *eBay v. MercExchange*.").

SEPs in the same way that they are available to other patents.[270] That is, a claim for injunctive relief must meet the requirements set forth in *eBay Inc. v. MercExchange, L.L.C.* and 19 U.S.C. § 1337, as applicable.[271] The *eBay* framework analyzes whether a permanent injunction should be granted in U.S. federal courts, and § 1337 is specific to the International Trade Commission's ability to exclude imports.[272] The *eBay* framework includes a four-factor test in which a plaintiff must demonstrate that (1) "it has suffered an irreparable injury"; (2) legal remedies "such as monetary damages[] are inadequate to compensate for that injury"; (3) "considering the balance of hardships between the plaintiff and defendant," a permanent injunction is warranted; and (4) "the public interest would not be disserved" by excluding the defendant from practicing the patent.[273]

This *eBay* framework makes sense in the U.S. SEP context, especially in light of the case's two concurring opinions.[274] The concurrence by Chief Justice Roberts (joined by Justices Scalia and Ginsburg) stresses that the "historical practice" of granting injunctions "does not *entitle* a patentee to a permanent injunction or justify a *general rule* that such injunctions should issue."[275] Even more applicable to the SEP context is the concurrence by Justice Kennedy (joined by Justices Stevens, Souter, and Breyer), which cautions against issuing injunctions in situations that sound a lot like patent holdup:

> An industry has developed in which firms use patents not as a basis for producing and selling goods but, instead, primarily for obtaining licensing fees. For these firms, an injunction, and the potentially serious sanctions arising from its violation, can be employed as a bargaining tool to charge exorbitant fees to companies that seek to buy licenses to practice the patent. *When the patented invention is but a small component of the product the companies seek to produce and the threat of an injunction is employed simply for undue leverage in negotiations, legal damages may well be sufficient to compensate for the infringement and an injunction may not serve the public interest.*[276]

As made clear by these concurring opinions, and by the DOJ's draft revised policy statement, the *eBay* framework acknowledges that circumstances specific to

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270. JOINT POLICY STATEMENT, *supra* note 236, at 6.

271. *Id.*

272. *See* 19 U.S.C. § 1337; eBay Inc. v. MercExchange, L.L.C., 547 U.S. 388 (2006).

273. *eBay Inc.*, 547 U.S. at 391.

274. *Id.* at 388–90. Notably, the *eBay* concurring opinions were joined by a total of seven of the Justices.

275. *Id.* at 395 (Roberts, C.J., concurring).

276. *Id.* at 396–97 (Kennedy, J., concurring) (emphasis added) (citing FED. TRADE COMM'N, TO PROMOTE INNOVATION: THE PROPER BALANCE OF COMPETITION AND PATENT LAW AND POLICY ch. 3 at 38–39 (2003), https://www.ftc.gov/sites/default/files/documents/reports/promote-innovation-proper-balance-competition-and-patent-law-and-policy/innovationrpt.pdf [https://perma.cc/6YL6-W2EC]).

standard setting must be considered.[277] Those circumstances will often weigh against the granting of an injunction, not because of SSO policies or antitrust law but per the ordinary application of patent law.[278] In fact, even the current Joint Policy Statement conceded that "the particular F/RAND commitment made by a patent owner, the S[S]O's intellectual property policies, and the individual circumstances of licensing negotiations between patent owners and implementers all may be relevant in determining remedies for infringing a standards-essential patent, depending on the circumstances of each case."[279] Once again, this makes perfect sense; SEP holders should absolutely be entitled to seek injunctions consistent with SSO policies and individual negotiations, including considerations of an implementer's willingness to pay a FRAND royalty.

Thus, the real issue is not when injunctions should be available to patentees but when antitrust remedies should be available to implementers. The 2020 DOJ had opined that breaching a FRAND obligation is never an antitrust violation,[280] and, as stated above, the relevant footnote to the current Joint Policy Statement said antitrust law was inapplicable in FRAND licensing disputes.[281] This complete denial of the applicability of antitrust law was problematic. Although antitrust law may not be applicable to every FRAND licensing dispute, it must remain available when the disputed conduct involves deception and harms competition.[282]

Fortunately, the July 9, 2021, Executive Order issued by President Biden called for revision of the current Joint Policy Statement's "position on the intersection of the intellectual property and antitrust laws."[283] The explicit purpose of the revision is "[t]o avoid the potential for anticompetitive extension of market power beyond the scope of granted patents, and to protect standard-setting processes from

277. *See* DRAFT POLICY STATEMENT, *supra* note 6, at 9 ("Where a SEP holder has made a voluntary F/RAND commitment, the *eBay* factors, including the irreparable harm analysis, balance of harms, and the public interest generally militate against an injunction."); *see also* Muris, *supra* note 7("[T]he legal framework and private incentives already exist to facilitate SEP licensing in a dynamic commercial environment at which participants are in a much better position to understand than any governmental bodies.").

278. Recall that injunctive relief is an equitable remedy and that the Patent Act requires that they only be issued on "reasonable" terms. *See* 35 U.S.C. § 283.

279. JOINT POLICY STATEMENT, *supra* note 236, at 7.

280. *See, e.g.*, Statement of Interest, *supra* note 1, at 1–2 ("Recognizing a Section 2 cause of action premised on alleged violations of commitments to offer patent licenses at rates that are FRAND would (1) run contrary to the policies underlying the antitrust laws that encourage market-based pricing; (2) risk distorting licensing negotiations for standard-essential patents ('SEPs'); and (3) threaten to deter procompetitive or competitively neutral conduct.").

281. JOINT POLICY STATEMENT, *supra* note 236, at 4 n.9 (seeking to dismiss any ways in which the 2013 Joint Policy Statement may have been "misinterpreted to suggest that antitrust law is applicable to F/RAND disputes").

282. Wilder, *supra* note 223("[A]ntitrust law is not a mechanism for powerful, incumbent firms to reduce the royalties they pay to implement standards where competition has not been harmed . . . . Antitrust enforcement policy should discourage deception and protect competition in the standards-setting process.").

283. Promoting Competition in the American Economy, *supra* note 5, at 36,991.

abuse."[284] Moreover, the relevant Supreme Court precedent remains that manipulating the standard-setting process can give rise to antitrust liability,[285] and federal courts have followed this precedent.[286]

In any event, there is nothing mutually exclusive about injunctions and antitrust law; it makes sense to have them both involved to protect licensing negotiations from becoming too one-sided. If balance is as necessary to keep patent holders involved in the standard-setting process as both sides say it is,[287] then allowing injunctions while still preserving antitrust liability will be a better answer than gutting antitrust law.

CONCLUSION

Standards adopted through SSOs after careful selection of the various technological components are necessary to ensure compatibility, technological improvements, and consumer welfare.[288] FRAND commitments are intended to prevent the anticompetitive behavior that can result from patented technology being selected as part of a standard. However, without antitrust law to deter SEP holders from charging exorbitant royalties or refusing to license their technology, a FRAND commitment has no teeth. Given that the FRAND commitment is one of the most important competitive reasons any patent gets anointed as an SEP in the first place, if it cannot be meaningfully enforced, the consequences could be extensive. The wrong products may get chosen, output will be reduced, prices will increase,[289] SSOs may attempt to design around a patent or cease work on the standard altogether,[290] and consumers could face more standards wars in lieu of the beneficial standard-selection process that has come to drive modern technological advancements. Though tech giants have developed defensive cross-licensing strategies to combat the real challenge of patent holdup, these strategies do not solve the problem for everyone. By first excluding upstream rival technologies from selection in the standard and then excluding downstream companies from

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284. *Id.*

285. *See* Allied Tube & Conduit Corp. v. Indian Head, Inc., 486 U.S. 492, 500 (1988) ("[SSOs] have traditionally been objects of antitrust scrutiny.").

286. *See* Amphastar Pharms., Inc. v. Momenta Pharms., Inc., 297 F. Supp. 3d 222, 230 (D. Mass. 2018) ("Intentional misrepresentations designed to deceive a standard-setting organization can constitute an antitrust violation.").

287. *See Updated IEEE Business Review Letter*, *supra* note 140("As experience has shown, a group of implementers working collectively may have both the motive and the means to impose anticompetitive policies or rules that favor their interests to the detriment of others'. Any such collusion can also be a serious threat to innovation if the conduct leads to under-investment by patent holders in the standard-setting process. Balance is therefore important not only to encourage participation and competition among patent holders in the standard-setting process, but also to ensure more significant antitrust concerns do not arise.").

288. Leslie, *supra* note 28, at 385.

289. Note, *Deception as an Antitrust Violation*, 125 HARV. L. REV. 1235, 1239 (2012).

290. TCL Commc'n Tech. Holdings, Ltd. v. Telefonaktiebolaget LM Ericsson, No. CV 15-2370, 2018 WL 4488286, at *6 (C.D. Cal. Sept. 14, 2018).

implementing that standard, patent holdup prevents true competition on the merits and slows innovation at all levels.

Research discredits one of the most notable counterarguments to antitrust deterrence of patent holdup—the one that claims innovation is disincentivized when patent holders are afraid to maximize royalties or discriminate amongst developers. Greater exclusionary rights are far from necessary to drive innovation.[291] On the contrary, the real incentive to innovate comes from patent holders competing for inclusion in a standard that will provide a steady stream of reasonable royalties from the implementers who are themselves engaged in further competition to innovate the best end products.

291. *See* Lemley, *supra* note 111, at 1332, 1335; *see also* BESSEN & MEURER, *supra* note 186, at 84, 90.