Take It to the Limit:
Respecting Innovation Incentives
in the Application of Antitrust Law

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I. Introduction

Good afternoon. Thank you for the opportunity to be with you today, and I especially want to thank Dean Scotten for the invitation, as well as the leaders of the USC Gould School of Law. Los Angeles has a special meaning to me. After my family moved to the United States from Iran, we settled in LA, and I’ve always considered California my home. It is good to be back.

Though we’re thousands of miles from the center of federal government, we should take a moment to remember that today we observe a federal holiday, Veteran’s Day, and pause on why we do so. The active armed forces, particularly those serving in areas of great danger overseas, do not get the day off. They struggle every day to protect our safety, liberty, and way of life, too often paying the ultimate price for their service. Indeed, my friend and Deputy Assistant Attorney General for litigation, Don Kempf, is a retired active duty marine. We thank him and all of our service members for their service. This conference is a venue for us to reflect on innovation and engage in lively debate about policy. But let’s not forget what drives the hopes and dreams of so many innovators: the hope of making a technology that will improve the way people live. For wounded warriors returning home, innovations in medical technology have greatly assisted their adjustment. Many of these innovations would not be possible without the robust intellectual property system and free market liberties we enjoy today.

The field of innovation policy is an area about which I care deeply; and it drove me to public service. I am a registered patent lawyer—the first head of the Antitrust Division to be so, I am told. Given the growing importance of IP rights in the modern economy, I believe the stakes in this area are enormous. It has long been the view of the Antitrust
Division that the intellectual property laws provide important incentives for innovation and commercialization, which ultimately benefit consumers. Relatedly, the Division has long viewed patent licensing as generally pro-competitive.¹

I’d like to focus my comments today on an important debate on antitrust enforcement and intellectual property—that is, the role of antitrust law in the context of standard setting organizations, or SSOs. Standard setting organizations arose with noble intentions, and play an important pro-competitive role. Once upon a time, and in their best mode, they were dominated by engineers aimed at the common goal of finding the most efficient technological solution to an industrywide problem. Over the years, the SSO process has worked best when participants endeavored to determine which technology, or combination of complementary technologies, would become the “winner” for a standard with limited concern over who the winner was, or how the winner would choose to license its IP rights.

Times have changed. Industry standards have exploded over the past several decades, and today they play a vital role in many sectors of the economy. By allowing products designed and manufactured by many different firms to function together, interoperability standards create enormous value for consumers and fuel the creation and utilization of new and innovative technologies to the benefit of consumers. As the global economy is increasingly characterized by information technology and accompanying intellectual property assets, the setting of industry standards has become more critical and more complicated. Because the stakes are so high, interest in the outcomes of SSOs is no

longer merely that of engineers; they are now the subject of intense focus in the board room.

Competition policy and antitrust treatment of SSOs have also evolved. The goal of antitrust law is to protect free market competition and thereby consumers, but if misapplied, it can cause great harm to innovation, the competitive process, and the consumer.2 As I have explained in the past, “Antitrust enforcers should . . . strive to eliminate as much as possible the unnecessary uncertainties for innovators and creators in their ability to exploit their intellectual property rights, as those uncertainties can also reduce the incentives for innovation.”3 I submit that this is a good time to take a step back and think about the implications of SSOs and the proper role for antitrust law enforcement, to ensure our efforts maximize innovation incentives while protecting the competitive process.

II. The Hold-Out Problem Poses a More Serious Threat to Innovation than the Hold-Up Problem

In particular, I worry that we as enforcers have strayed too far in the direction of accommodating the concerns of technology implementers who participate in standard setting bodies, and perhaps risk undermining incentives for IP creators, who are entitled to an appropriate reward for developing break-through technologies.4 The dueling interests of innovators and implementers always are in tension, and the tension is resolved through

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2 As Judge Easterbrook has explained, “[t]he conditions for useful legal intervention may be met when we know a lot about the practice and can condemn or approve it out of hand. But when we know but little the risk of error goes up, and the risk of false positives may be substantial. . . . If the prohibition was mistaken, we shall suffer the consequences indefinitely.” Frank H. Easterbrook, Does Antitrust Have a Comparative Advantage?, 23 HARV. J.L. & PUB. POL’Y 5, 8 (1999); see also Verizon Commc’ns Inc. v. Law Offices of Curtis V. Trinko, LLP, 540 U.S. 398, 414 (2004) (“Mistaken inferences and the resulting false condemnations ‘are especially costly, because they chill the very conduct the antitrust laws are designed to protect.’” (quoting Matsushita Elec. Indus. Co. v. Zenith Radio Corp., 475 U.S. 574, 594 (1986))).
3 ANTITRUST MODERNIZATION COMMISSION: REPORT AND RECOMMENDATIONS 404-05 (2007) (Separate Statement of Commissioner Delrahim) [hereinafter ANTITRUST MODERNIZATION COMMISSION REPORT].
4 Of course, many innovators are implementers and vice versa, but quite often the innovator is not vertically integrated. My remarks are focused on the interaction between a buyer and seller of IP.
the free market, typically in the form of freely negotiated licensing agreements for royalties or reciprocal licenses. Despite the benefits SSOs confer, the regulation of the interactions and licensing practices within an SSO through the misapplication of the antitrust laws threatens to disrupt the free-market bargain, which could undermine the process of dynamic innovation itself.

I credit my friend, Professor Carl Shapiro, the highly respected economist and former Deputy Assistant Attorney General in the Antitrust Division, for helping provide a framework in which to consider the interplay between technology innovation and implementation. Carl and other economics scholars highlighted a risk that can arise in the standard setting context, where a new standard implements a technology, after which the patent owner for that technology threatens to delay licensing until its royalty demands are met. This is the so-called “hold-up” problem. Much ink has been spilled on how standard setting organizations can remedy this risk, and in recent years the discussion has shifted to how antitrust law should assist in policing such private commitments to SSOs.3

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4 I refer to it as the “so-called” hold-up problem not in a pejorative sense, but rather to emphasize the shaky empirical foundations for the possibility that unilateral hold-up in the standard-setting context will result in above-competitive royalty rates. See J. Gregory Sidak, The Antitrust Division’s Devaluation of Standard-Essential Patents, 104 GEO. L.J. ONLINE 48, 61 (2015) (“By early 2015, more than two dozen economists and lawyers had disproved or disputed the numerous assumptions and predictions of the patent-holdup and royalty-stacking conjectures.”).


Too often lost in the debate over the hold-up problem is recognition of a more serious risk: the hold-out problem.9 Standard setting typically occurs against the backdrop of negotiations between innovators, who develop technologies through private investment and own IP rights, and implementers, who hope to market and use the technology through a license and pay the IP holder a royalty. The hold-out problem arises when implementers threaten to under-invest in the implementation of a standard, or threaten not to take a license at all, until their royalty demands are met.

I view the collective hold-out problem as a more serious impediment to innovation.10 Here is why: most importantly, the hold-up and hold-out problems are not symmetric.11 What do I mean by that? It is important to recognize that innovators make an investment before they know whether that investment will ever pay off. If the implementers hold out, the innovator has no recourse, even if the innovation is successful. In contrast, the implementer has some buffer against the risk of hold-up because at least some of its investments occur after royalty rates for new technology could have been determined. Because this asymmetry exists, under-investment by the innovator should be of greater concern than under-investment by the implementer.12

More to the point, many of the proposed “solutions” to the hold-up problem are often anathema to the policies underlying the intellectual property system envisioned by

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10 I should note that a concerted agreement among innovators to hold up would raise a similar anticompetitive concern. See generally U.S. DEPARTMENT OF JUSTICE & FEDERAL TRADE COMMISSION, ANTITRUST ENFORCEMENT AND INTELLECTUAL PROPERTY RIGHTS: PROMOTING INNOVATION AND COMPETITION 51-52 (2007) (identifying two types of sham license negotiations: agreements on prices of downstream products and agreements by IP owners on licensing terms to be proposed to SSOs (bid rigging)). However, the so-called hold-up concern often litigated relates to unilateral action by an innovator.

11 Froeb & Shor, supra note 9, at 2-3; Ganglmair et al., supra note 9, at 260-61.

12 Froeb & Shor, supra note 9, at 2-3.
our forefathers. These patent policies are constitutionally enshrined in Article 1, Section 8, which gives Congress the power “To 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.” These “exclusive rights” importantly and necessarily include the power to exclude. The misapplication of the antitrust laws to punish the legitimate exercise of these rights seems to undermine these policies when they require a patent holder to sacrifice these rights.

My priority as Assistant Attorney General is to help foster debate toward a more symmetric balance between the seemingly dueling policy concerns between intellectual property and antitrust law. Unfortunately, in recent years, competition policy has focused too heavily on the so-called unilateral hold-up problem, often ignoring what fuels dynamic innovation and efficiency. New inventions do not appear out of the ether, and excessive use of the antitrust laws rather than other remedies can overlook and undermine the magnitude of investment and risk inventors undertake for the chance at being included in a standard. 

Every incremental shift in bargaining leverage toward implementers of new technologies acting in concert can undermine incentives to innovate. I therefore view

13 U.S. CONST. art. 1, § 8.
14 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.”); eBay Inc. v. MercExchange, L.L.C., 547 U.S. 388, 391-93 (2006).
16 I have written more extensively regarding dynamic efficiency in the past. See ANTI TRUST MODERNIZATION COMMISSION REPORT, supra note 3, at 405-06 (Separate Statement of Commissioner Delrahim). As I have explained, “dynamic efficiency . . . results when an entirely new technology is developed and made available to consumers. Dynamic efficiency has much more dramatic effects on consumer well-being, and therefore is an appropriate focus of attention for policymakers. Standard setting should be viewed as a potential means for bringing about dynamic efficiency.” Id. at 406.
policy proposals with a one-sided focus on the hold-up issue with great skepticism because they can pose a serious threat to the innovative process.

III. Antitrust Law Should Not Police FRAND Commitments to SSOs

Against this backdrop, I respectfully submit that enforcers and courts should be mindful of the proper application of antitrust law to standard setting.\textsuperscript{17} There is a growing trend supporting what I would view as a misuse of antitrust or competition law, purportedly motivated by the fear of so-called patent hold-up, to police private commitments that IP holders make in order to be considered for inclusion in a standard.\textsuperscript{18} This trend is troublesome. If a patent holder violates its commitments to an SSO, the first and best line of defense, I submit, is the SSO itself and its participants.

These commitments are typically contractual in nature. More specifically, SSOs often impose obligations on IP holders seeking to have their technology evaluated and, if selected, incorporated into a standard to engage in fair, reasonable, and nondiscriminatory licensing of their technology—what we call “FRAND” or “RAND” commitments.\textsuperscript{19} Disputes inevitably arise regarding what licensing fees or practices are “reasonable,” and “nondiscriminatory,” as you would expect with free-market negotiations. We should be

\textsuperscript{17} I note that FTC Commissioner and Acting Chairman Maureen Ohlhausen has written extensively and thoughtfully on this topic. See, e.g., Hon. Maureen K. Ohlhausen, The Elusive Role of Competition in the Standard-Setting Antitrust Debate, 20 STAN. TECH. L. REV. 93, 97 (2017) (“[A]gency intervention, though well intentioned, has undermined the integrity of the antitrust enterprise by silently expanding the sphere of liability. It has done so by employing antitrust laws against actions that do not eliminate a market constraint on price or other forms of competition. This development is troublesome not merely because it departs from fundamental theory, but also because it blurs the lines between antitrust enforcement and industry regulation. Competition law should not be a mechanism to rework industry dynamics to align outcomes with enforcers’ preferred market vision.”).


most concerned, however, when this dispute involves concerted action, on either side—the implementers or the innovators.

If a patent holder is alleged to have violated a commitment to a standard setting organization, that action may have some impact on competition. But, I respectfully submit, that does not mean the heavy hand of antitrust necessarily is the appropriate remedy for the would-be licensee—or the enforcement agency. There are perfectly adequate and more appropriate common law and statutory remedies available to the SSO or its members.20

Patent rights are conferred by statute and guaranteed by the U.S. Constitution. The enforcement of valid patent rights should not be a violation of antitrust law.  A patent holder cannot violate the antitrust laws by properly exercising the rights patents confer, such as seeking an injunction or refusing to license such a patent. Set aside whether taking these actions might violate the common law. Under the antitrust laws, I humbly submit that a unilateral refusal to license a valid patent should be per se legal.21 Indeed, just this Monday, Chief Judge Diane Wood, a former Deputy Assistant Attorney General at the Antitrust Division, stated that “[e]ven monopolists are almost never required to assist their competitors.”22

20 See Microsoft Corp. v. Motorola, Inc., 864 F. Supp. 2d 1023, 1030-33 (W.D. Wash. 2012) (holding that contract was formed through commitments to license patents on reasonable and nondiscriminatory terms); Research in Motion Ltd. v. Motorola, Inc., 644 F. Supp. 2d 788, 797 (N.D. Tex. 2008) (finding that plaintiff stated breach of contract claim based on defendant’s alleged failure to offer FRAND terms it had agreed to two standard setting organizations); Interdigital Tech. Corp. v. Pegatron Corp., 2016 WL 234433, at *8-9 (N.D. Cal. Jan. 20, 2016) (raising state law contract and fraud claims based on allegedly false promises to SSOs to license patents on FRAND terms and subsequent charging of a supposed non-FRAND rate). See generally Bruce H. Kobayashi & Joshua D. Wright, Federalism, Substantive Preemption, and Limits on Antitrust: An Application to Patent Holdup, 5 J. COMPETITION L. & ECON. 469, 505-16 (2009).
21 Cf. Verizon Commc’ns Inc. v. Law Offices of Curtis V. Trinko, LLP, 540 U.S. 398, 407 (2004) (“To safeguard the incentive to innovate, the possession of monopoly power will not be found unlawful unless it is accompanied by an element of anticompetitive conduct.”).
Under the existing statutory scheme, it is not the duty or the proper role of antitrust law to referee what unilateral behavior is reasonable for patent holders in this context. Patent holders make decisions every day about how to exploit their property rights, knowing that the consequence of those actions may be to subject themselves to contractual or other common law liability. The blunt application of antitrust law to such unilateral conduct throws those decisions into disarray, threatening to punish IP holders with onerous penalties that can deter other innovators from taking the necessary R&D investment risk to develop the next great technological leap forward.

More importantly, refraining from imposing antitrust penalties gives teeth to more appropriate common law remedies and allows SSOs to live up to their promise. In a breach of contract action, a party can litigate the facts regarding what constitutes a “reasonable” or “nondiscriminatory” rate or commitment. If there is a violation of a reasonableness standard, the factfinder can decide it, like they do in other instances of contract violations. Antitrust enforcers should exercise greater humility and enforce the antitrust laws in a manner that best promotes dynamic competition for the benefit of consumers.

IV. Antitrust Enforcers Should Scrutinize Concerted Action Within SSOs that Causes Competitive Harm to the Dynamic Innovation Process

In case anyone is inclined to misunderstand my comments, let me clearly state that there is an important role for antitrust scrutiny in the standard setting context. With respect to innovators, I agree with the D.C. Circuit’s en banc statement in United States v. Microsoft that “[i]ntellectual property rights do not confer a privilege to violate the antitrust

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laws.”24 Nor does membership in a standard setting organization confer immunity from serious antitrust scrutiny. Given the incentives participants in SSOs face to bend licensing negotiations to their benefit, there is a risk that members of standard setting bodies could engage in collusive, anticompetitive behavior.

Courts and antitrust law enforcers have long understood that SSOs “can be rife with opportunities for anticompetitive activity.”25 When competitors come together, there is always a risk that they will engage in naked cartel-like behavior, such as fixing downstream prices or boycotting a new entrant. In cases like Radiant Burners, Allied Tube, and Hydrolevel, the Supreme Court has condemned efforts to use SSOs as a means of excluding particular competitors or products, emphasizing that such conduct can cause harm to competition.26 For that reason, enforcers should carefully examine and recognize the risk that SSO participants might engage in a form of buyer’s cartel, what economists call a monopsony effect.

When implementers act together within a standard-setting organization as the gatekeeper to sales of products including a new technology, they have both the motive and means to impose anticompetitive licensing terms.27 At the extreme, they can shut down a potential new technology in favor of the status quo, all to the detriment of consumers. The

26 Allied Tube & Conduit Corp. v. Indian Head, Inc., 486 U.S. 492, 500 (1988) (“There is no doubt that the members of such [standard setting] associations often have economic incentives to restrain competition and that the product standards set by such associations have a serious potential for anticompetitive harm. . . . Accordingly, private standard-setting associations have traditionally been objects of antitrust scrutiny.”); Hydrolevel, 456 U.S. at 571; Radiant Burners, Inc. v. Peoples Gas Light & Coke Co., 364 U.S. 656 (1961).
27 See J. Gregory Sidak, Patent Holdup and Oligopsonistic Collusion in Standard-Setting Organizations, 5 J. COMPETITION L. & ECON. 123, 126 (2009) (“Simply put, ex ante collective action that is privately undertaken in an SSO to counteract potential patent holdup may facilitate, if not serve as an outright façade for, horizontal price fixing by oligopsonists of the patented input.”).
risk of failing to implement a new technology does not fall equally on innovators and implementers. The prospect of hold-out offers implementers a crucial bargaining chip. Unlike the unilateral hold-up problem, implementers can impose this leverage before they make significant investments in new technology.

The Antitrust Division will therefore be skeptical of rules that SSOs impose that appear designed specifically to shift bargaining leverage from IP creators to implementers, or vice versa. SSO rules purporting to clarify the meaning of “reasonable and non-discriminatory” that skew the bargain in the direction of implementers warrant a close look to determine whether they are the product of collusive behavior within the SSO.

If an SSO pegs its definition of “reasonable” royalties to a single Georgia-Pacific factor that heavily favors either implementers or innovators, then the process that led to such a rule deserves close antitrust scrutiny. While the so-called “smallest salable component” rule may be a useful tool among many in determining patent infringement damages for multi-component products, its use as a requirement by a concerted agreement of implementers as the exclusive determinant of patent royalties may very well warrant antitrust scrutiny.

It is just as important to recognize that a violation by a patent holder of an SSO rule that restricts a patent-holder’s right to seek injunctive relief should be appropriately the

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28 Georgia-Pacific Corp. v. U.S. Plywood Corp., 318 F. Supp. 1116, 1120 (S.D.N.Y. 1970); see Dow Chemical Co. v. Mee Indus., Inc., 341 F.3d 1370, 1382 (Fed. Cir. 2003) (instructing court “to consider the so-called Georgia-Pacific factors in detail, and to award such reasonable royalties as the record evidence will support”) (citation omitted).

29 See, e.g., Commonwealth Scientific & Indus. Res. Org. v. Cisco Sys., Inc., 809 F.3d 1295, 1302 (Fed. Cir. 2015) (“The smallest salable patent-practicing unit principle provides that, where a damages model apportions from a royalty base, the model should use the smallest salable patent-practicing unit as the base.”).

30 As Froeb and Shor explain, “[i]f the adjudicated RAND royalty is expected to rely on only the smallest component, then the implementer is less likely to accept royalty payments based on the entire market value as it can always (after a judicial proceeding) receive the smaller adjudicated royalty.” Froeb & Shor, supra note 9, at 4.
subject of a contract or fraud action, and rarely if ever should be an antitrust violation. Patents are a form of property, and the right to exclude is one of the most fundamental bargaining rights a property owner possesses. Rules that deprive a patent holder from exercising this right—whether imposed by an SSO or by a court—undermine the incentive to innovate and worsen the problem of hold-out. After all, without the threat of an injunction, the implementer can proceed to infringe without a license, knowing that it is only on the hook only for reasonable royalties.

In this regard, I believe Judge Posner was badly mistaken in the Apple v. Motorola case, in which he held that IP owners who make FRAND commitments somehow sacrifice their right even to seek an injunction. Though the Federal Circuit corrected that ill-conceived decision, its ruling did not improve matters much. The court of appeals held that making a FRAND commitment and entering into other licenses “strongly suggest” that damages for infringement should be adequate relief, meaning that injunctive relief should be denied except in rare cases. In my view, that is a distinction without much of a difference. We should not transform commitments to license on FRAND terms into a compulsory licensing scheme. Indeed, we have had strong policies against compulsory licensing, which effectively devalues intellectual property rights, including in most of our trade agreements, such as the TRIPS agreement of the WTO. If an SSO requires innovators to submit to such a scheme as a condition for inclusion in a standard, we should view the SSO’s rule and the process leading to it with suspicion, and certainly not condemn

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mpatterson Highlight

As responses to the speech have pointed out, a FRAND policy agreed to by a patentee would not typically be described as compulsory licensing, even if the FRAND requirement were anticompetitive. That term is usually used for court-mandated licensing, not for licensing restrictions to which a patentee agrees.

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33 Id. at 1332.
the use of such injunctive relief as an antitrust violation where a contract remedy is perfectly adequate.

The Antitrust Division will carefully scrutinize what appears to be cartel-like anticompetitive behavior among SSO participants, either on the innovator or implementer side. The old notion that “openness” alone is sufficient to guard against cartel-like behavior in SSOs may be outdated, given the evolution of SSOs beyond strictly objective technical endeavors. I therefore urge antitrust enforcers to take a more humble approach to the application of antitrust to unilateral violations of SSO commitments and to take a fresh look at concerted actions within SSOs that cause competitive harm to the dynamic innovation process. I likewise urge SSOs to be proactive in evaluating their own rules, both at the inception of the organization, and routinely thereafter. In fact, SSOs would be well advised to implement and maintain internal antitrust compliance programs and regularly assess whether their rules, or the application of those rules, are or may become anticompetitive.

V. Conclusion

My remarks here should not surprise anyone here who has followed my statements in the past. The views expressed here are consistent with the views I have held since my service in the mid-1990s at the U.S. Trade Representative’s Office, during my time working for the Senate Judiciary Committee with exclusive jurisdiction over the federal intellectual property and antitrust laws, and in my last tour of duty in the Antitrust Division in the early 2000s.35

Fresh thinking about the implications of SSOs and the proper role of antitrust law is long overdue. Bargaining over new and innovative technologies is a high stakes game, and each side has an incentive to use every means necessary to improve its end of the bargain. In this game, the competitive market process should win. SSOs should not be a tool for IP licensors or licensees to obtain more favorable terms than they would otherwise achieve in an unconstrained market.

We don’t have the tools to know what the competitive royalty rate is—we’re not price regulators, after all—and if we inject antitrust law where it does not belong, it can actually subvert the competitive process and do serious harm to American consumers and to innovation itself. But we should guard against traditional forms of anticompetitive behavior to ensure that competitive rates prevail. That is why concerns over possible innovator hold-up should not override the dangerous prospect of implementer hold-out. It’s time to correct this asymmetry to ensure that there are maximum incentives to innovate, and equally proper incentives to implement.

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