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Antitrust Oversight of Standard-Essential Patents:
The Role of Injunctions

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I. Introduction

Good morning and many thanks to Professor Haung Yong, the University of International Business and Economics, the China Intellectual Property Law Association, the Electric Intellectual Property Centre, MIIT, and the Intellectual Property School, Renmin University of China. It is an honor to be here.

Innovation policy is profoundly important, and today more so than ever. We live in turbulent times, characterized by fluctuating macroeconomic conditions, rapid technological change, and disruption. This environment demands our renewed commitment to fostering invention. The challenge is real, but the rewards are immense. Indeed, technological advance may be the single largest determinant of long-term economic growth.

Today, we discuss intellectual-property rights and competition policy—two foundational pillars of any effective innovation platform. To unlock the vast potential of human ingenuity,

[1] The views expressed in these remarks are my own and do not necessarily reflect the views of the Federal Trade Commission or any other Commissioner. I would like to thank my attorney advisor Alan Devlin for his important contributions to this speech.

governments must encourage the private sector to invest in R&D. Achieving the optimal blend of IP rights and antitrust rules is key to success, but many difficult questions remain unanswered. No doubt, we will address many of them during this conference. I am convinced that by collaborating and learning from one another's experiences—as we do today—we can advance our understanding and, in time, overcome economic challenges of the day.

It is useful to revisit fundamental principles as we think about how to tailor innovation policy. Above all, property rights are the key to spurring R&D. Firms will devote capital to the costly process of invention, but only if they can reap the rewards of success. If its rivals can simply appropriate its technologies without payment, no rational company will invest in new products and methods that are vulnerable to copying. This point might seem obvious, but it is often overlooked. It can be tempting to assume that today's technologies were inevitable, such that diluting IP rights will simply lead to more competition and to lower prices. That view is too limited. Scientific progress is costly; it is not a given. Far from suppressing competition, property rights spur competition where it matters most: in technology. Firms that cannot simply take others' technologies must invent their own. The result will be rich and varied innovation from a variety of sources that will ultimately bring fierce competition to product markets.

II. Limits on the Rights of Owners of Patents for Standard-Setting Technologies

I begin with those remarks because they provide context for a much-debated topic that I wish to address in this morning's speech: antitrust limits on the use of standard-essential patents (SEPs). Standards play a critical role in the new economy. They foster interoperability, avoid costly wars between rival systems, and facilitate competition in product markets. It is thus incumbent upon us—as guardians of the public interest—to ensure that the standard-setting process benefits from, and promotes, competition. Yet, old questions governing property are emerging once again. In particular, when—if ever—should the law limit property rights to

facilitate price competition? To get to the right outcome for competition and consumers, we must consider these questions very carefully. If policymakers go too far in limiting the rights of patentees who own standard-essential technologies, I fear that reduced innovation will result.

Hold-up is the issue that has attracted most attention. The conventional narrative is that, when firms commit to a standard, they can no longer look to alternative technologies that were previously available. Patentees' bargaining power may therefore "surge" after industry adopts an infringing standard, potentially allowing SEP holders to demand outsize royalties.[2] Armed with an injunction—the thinking goes—a SEP owner can threaten all revenue flowing from the standard. The patentee could then extract more than the competitive price, which would reflect the marginal value of the patentee's technology to the standard as compared to the alternative technologies that were available at the time the standard was set.

It is no surprise, then, that some policymakers take a dim view of SEP holders' efforts to enjoin firms from practicing mandatory industry standards. Indeed, competition authorities around the world have considered whether to prohibit a SEP owner, which has promised a standard-setting organization (SSO) that it will license its essential technologies on reasonable and nondiscrimintatory (RAND) terms, from seeking to enjoin a willing licensee.

In America, the FTC has used its Section 5 authority to challenge owners of RAND-encumbered SEPs that try to enjoin willing licensees.[3] Last year, the European Commission adopted a decision that Motorola had abused its dominant position by trying to enjoin certain

[2] Apple, Inc. v. Motorola, Inc., 869 F. Supp. 2d. 901, 913 (N.D. Ill. 2012), *rev'd in part,* 757 F.3d 1286 (Fed. Cir. 2014).

[3] *In re* Motorola Mobility LLC and Google Inc., File No. 121-0120, Complaint (Jan. 3, 2013); *In re* Robert Bosch GmbH, File No. 121-0081, Complaint (Nov. 26, 2012). I do not agree that simply seeking an injunction by itself is a Section 5 violation. *In re* Motorola Mobility LLC and Google Inc., File No. 121-0120, Dissenting Statement of Commissioner Maureen K. Ohlhausen (Jan. 8, 2013); *In re* Robert Bosch GmbH, File No. 121-0081, Dissenting Statement of Commissioner Maureen K. Ohlhausen (Apr. 24, 2013).

Apple products using alleged SEPs subject to RAND terms.[4] Just two months ago in *Huawei*, the Court of Justice of the European Union held that a SEP holder's refusal to license on RAND terms may, in principle, be an abuse of dominance in violation of Article 102 TFEU.[5] In December 2014, the Korea Fair Trade Commission took the view that "unfairly rejecting the licensing of a standard essential patent" is likely to impede fair trade, even if an SSO did not set the relevant standard.[6] In July 2015, the Japanese Fair Trade Commission published proposed amendments to its IP-licensing guidelines, which would provide that a FRAND-encumbered SEP holder who claims an injunction against a willing licensee "may fall under the exclusion of business activities of other entrepreneurs."[7]

Here in China, the Shenzhen Intermediate Court in *Huawei v. InterDigital* found in 2013 that InterDigital had violated the Anti-Monopoly Law by seeking an exclusion order from the U.S. International Trade Commission against Huawei while discussions for a license were still underway.[8] Last April, the State Intellectual Property Office made available for public comment a proposed fourth amendment to the Patent Law of China. Article 82, as proposed, states that a

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[4] Case AT.39985 – Motorola – Enforcement of GPRS Standard Essential Patents, Commission Decision of 04.29.2014. On the same day, the Commission accepted commitments by Samsung not to request injunctions against technology users that agree to enter into a specified licensing-negotiation framework. AT.39939 – Samsung – Enforcement of UMTS Standard Essential Patents, Commission Decision of 29.4.2014; *see also* Case No. COMP/M.6381, Google/Motorola Mobility Comm'n Decision pursuant to Article 6(1)(b) of Council Reg. No. 139/2004.

[5] Case C-170/13, Huawei Technologies Co. Ltd v ZTE Corp., 2015 E.C.R. __ [not yet published], para. 53. The CJEU explained that a SEP owner that has agreed to license on FRAND terms may not seek an injunction without first alerting an alleged infringer with specific details of infringement and responding to an expressed willingness to license with a specific FRAND offer and accompanying explanation. Nor may the SEP owner request an injunction if the accused infringer does not continue to use the patented technology or responds diligently to the patentee's offer in accordance with recognized commercial practices in the field. *Id.* ¶ 71.

[6] Korea Fair Trade Commission, Review Guidelines on Unfair Exercises of Intellectual Property Rights, Art. III, 5.A. (4) (2014).

[7] Japan Fair Trade Commission, (Proposed) Guidelines for the Use of Intellectual Property under the Antimonopoly Act (July 8, 2015); *see also* Japan Fair Trade Commission, Guidelines on Standardization and Patent Pool Arrangements (2005).

[8] *Huawei v. InterDigital*, (Apr. 2014), *available at* http://www.mlex.com/China/Attachments/2014-04-18_AXRC879FW8P38IO7/guangdonghpc_IDChuawei_SEP_18042014.pdf (in Chinese).

"[p]atent holder who does not disclose its standard essential patents during its participation in the national standard-setting process is deemed to permit the user who implements the standard to use the patented technology."[9] And last month, competition rules promulgated by the State Administration of Industry and Commerce potentially require dominant IP owners to license their patents under an essential-facilities doctrine.[10]

These global developments point to increasingly onerous limits on SEP owners' ability to assert their rights and suggest a categorical rule: if you agree to license on RAND terms, you may not try to enjoin a willing licensee using a SEP. But absolutes are seldom correct, and it is no different here. The "no-injunction rule" overlooks complications that ought to give us pause. The prohibition is overbroad, both snaring conduct that does not harm competition and potentially suppressing innovation. Given the complexity of these issues, a quasi-*per se* rule misses the mark.

The U.S. Supreme Court has explained that "[r]esort to *per se* rules is confined to restraints . . . 'that would always or almost always tend to restrict competition and decrease output.'"[11] Only restraints that "'lack . . . any redeeming virtue'" warrant *per se* prohibition.[12] In America, we have jettisoned misplaced per se rules against vertical price and market restraints,[13] and abandoned the erroneous assumption that a patent always confers market power.[14] So, too, EU law does not condemn agreements as by-object restrictions of competition under Article 101

[9] State Intellectual Property Office of the PRC, Draft Fourth Amendments to the Patent Law of People's Republic of China, Art. 82.

[10] State Administration of Industry and Commerce, Provisions on the Prohibition of the Abuse of Intellectual Property Rights to Eliminate or Restrain Competition Art. 7 (2015); *see also* Art. 13.

[11] Leegin Creative Leather Prods, Inc. v. PSKS, Inc., 551 U.S. 877, 886 (2007) (quoting Bus. Elecs. Corp. v. Sharp Elecs. Corp., 485 U.S. 717, 723 (1988)).

[12] *Id.* (quoting Nw. Wholesale Stationers, Inc. v. Pac. Stationery & Printing Co., 472 U.S. 284, 289 (1985)).

[13] *Id.* at 899; State Oil Co. v. Kahn, 522 U.S. 3 (1997); Cont'l TV, Inc. v. GTE Sylvania, Inc., 433 U.S. 36 (1977); *see also* Texaco Inc. v. Dagher, 547 U.S. 1 (2006); Broadcast Music, Inc. v. CBS, Inc., 441 U.S. 1 (1979).

[14] Ill. Tool Works, Inc. v. Indep. Ink, Inc., 547 U.S. 28, 31 (2006).

TFEU unless, "by their very nature," they are "harmful to the proper functioning of normal competition" and "lead[] to falls in production and price increases, resulting in poor allocation of resources to the detriment, in particular, of consumers."[15]

I submit that requested injunctive relief by RAND-limited SEP owners, even directed at so-called "willing licensees," does not justify summary condemnation. This is not to deny the potential for anticompetitive hold-up—though there is little real-life evidence of it[16]—but rather to observe that procompetitive justifications can exist. My own agency's experience counsels against dogmatic rules and in favor of flexibility. In investigating the acquisition of SPX Service Solutions (SPX) by Robert Bosch GmbH, for example, the FTC learned that SPX had previously used patents to try to enjoin willing licensees.[17] In settling the case in 2013, the FTC required that Bosch license certain of its patents, which may (or may not) have been standard essential, on a *royalty-free* basis and that Bosch agree not to seek injunctive relief against standard implementers.[18] Yet, just three months later, the FTC backed off this approach in *Google/MMI*.[19] It did not require Google to license Motorola Mobility's previously asserted SEPs royalty-free. Nor did the FTC deny Google the possibility of injunctive relief. To the contrary, Google could move to enjoin a standard implementer that did not commit to license on RAND terms as determined through arbitration or an action in district court.[20]

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[15] C-67/13 P, Groupement de cartes bancaires v. Comm'n, E.C.R. __ [not yet published], [2014] 5 C.M.L.R. 22, ¶¶ 50-51.

[16] *See In re* Certain 3G Mobile Handsets and Components Thereof, Inv. No. 337-TA-613, Reply Submission on the Public Interest of Federal Trade Commissioners Maureen K. Ohlhausen and Joshua D. Wright (July 20, 2015).

[17] *In re* Bosch GmbH, File No. 121-0081. I strongly disagreed with that aspect of the consent decree. *Id.*, Dissenting Statement of Commissioner Maureen K. Ohlhausen (Apr. 24, 2013).

[18] *Id.*, Dkt. No. C-4377, Decision & Order (Apr. 24, 2013).

[19] *In re* Motorola Mobility LLC and Google, Inc., File No. 121-0120.

[20] *Id.*, Dkt. No. C-4410, Decision & Order (July 24, 2013).

Lessons drawn from the U.S. experience and from case law governing *per se* or by-object prohibition counsel a flexible standard rather than a firm rule. It is not easy to craft a rule that will appropriately resolve future cases, least of all in a setting as complex and dynamic as the standard-setting space. With those principles in mind, I worry that antitrust analysis governing SEP owners is being reduced to a simplistic principle. I say this with full respect for antitrust authorities' efforts to address perceived hold-up. And while I recognize that much intervention to date has challenged efforts to enjoin those deemed to be "willing licensees," that label has at times been applied too broadly to include parties that did not seem to be willing to pay a RAND rate.[21] In any event, policymakers should not presume that seeking an injunction is always problematic, even against firms that agree to respect a third party's determined royalty. Competition agencies should examine the facts of each case before reaching a conclusion.

I will discuss complications that receive too little attention and show how requests for injunctive relief—even directed at arguably "willing licensees"—could be procompetitive or competitively neutral in some situations. That possibility warrants full scrutiny of alleged hold-up, divorced from preconceived notions of harm.

III. Injunctions and willing licensees: there is more to the issue than meets the eye

To be clear, I support antitrust oversight of the standard-setting process. Patentees involved in standard-setting can harm competition. For example, eliminating a price constraint imposed by a substitute technology would injure competition in an upstream technology market. Thus, if multiple technologies vie for inclusion in a standard and a firm conceals its patent or falsely promises to license on RAND terms, then an antitrust claim *may* lie if the standard-setting

[21] For instance, in *Google/MMI*, the FTC characterized Apple as a willing licensee of Samsung's technology. *In re* Motorola Mobility LLC and Google Inc., File No. 121-0120, Complaint, ¶¶ 25-27 (Jan. 3, 2013). Yet, in infringement litigation with Samsung, Apple represented to the district court that "that it did not intend to be bound by any rate that the court determined." Apple, Inc. v. Motorola Mobility, Inc., No. 11-cv-178-bbc, slip op. at 5 (W.D. Wis. Nov. 8, 2012).

organization chooses the patentee's technology as a result of the deception and if the SEP owner subsequently holds up firms that implement the standard.[22] Harm could also lie in the product market if the SEP owner competes there and uses economic power derived from its monopolization of the upstream market to raise rivals' costs downstream.

So, there is indeed a role for competition law. My concern is that policymakers may, in some cases, be using competition policy in a manner that exceeds its mandate. Antitrust protects competition; it does not regulate prices. The modern trend toward categorical condemnation is in tension with that fundamental principle. Increasingly, it appears that owner of a RAND-encumbered SEP may not lawfully try to enjoin a standard implementer that refuses to pay the patentee's demanded price and that instead chooses to litigate. But not every such case harms competition, and a ban on injunctions may sometimes harm consumers. Hence, it would be better to scrutinize each case of alleged hold-up on its own facts.[23]

1. Core inventions and lawful monopoly

First, consider a groundbreaking, pioneer technology that every firm in an industry wants to use in its next-generation products. Such a patent may be essential even before the standard is set—i.e., the patentee has a lawful monopoly. The relevant SSO could not create the industry's desired standard without including the patentee's new technology. In that situation, we would expect technology users to pay the monopoly price, compensating the patentee appropriately for its revolutionary invention and fostering incentives to invent. In other words, for such a standout technology, a reasonable royalty is the monopoly price.

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[22] Broadcom v. Qualcomm, 501 F.3d 297, 314 (3d Cir. 2007); *cf.* Rambus v. Fed. Trade Comm'n, 522 F.3d 456, 466-67 (D.C. Cir. 2008), *cert. denied*, 129 S. Ct. 1318 (2009).

[23] *See, e.g., In re* Certain 3G Mobile Handsets and Components Thereof, Inv. No. 337-TA-613, Reply Submission on the Public Interest of Federal Trade Commissioners Maureen K. Ohlhausen and Joshua D. Wright (July 20, 2015).

As to such technologies, there can be no harm to upstream competition because there are no substitutes to foreclose. Hold-up may not be possible because the SEP holder's market power before the standard is set could equal its market power with the standard. Since the inventor of the revolutionary technology has a lawful patent monopoly, it can prevent others from using its technology in the downstream market.

The owner of such a critical technology—i.e., one for which no substitute exists—could agree to license on RAND terms, but later seek to enjoin users of its technology that refuse to pay the monopoly price. Whether or not it would be a breach of contract, in my view that conduct would not create antitrust issues.[24] If the SSO wanted to negotiate a specific royalty up front or demand the disclosure of most restrictive licensing terms, then it could do so. But if industry chooses to delay negotiating the monopoly price until after adopting the standard, it is not clear how that choice implicates competition. Yet, the way the policy winds are blowing suggests that such a SEP owner could not enjoin an arguably willing licensee without violating competition law. Antitrust liability here would be unprincipled—antitrust enforcement should focus on actions that injure competition—but it could also be counterproductive. It would undercompensate owners of the most valuable technologies: those that standard-setting organizations had to include in the relevant standard because of the importance of the invention.

One might suppose that damages are enough, thus undermining the need for an injunction. Having agreed to license on RAND terms, surely the inventor of an essential technology could sue for a reasonable royalty and avoid irreparable injury? Perhaps, but not necessarily. Beyond idiosyncratic situations—for instance, an accused infringer may be judgment proof—the problem lies in technology users' resulting incentives. Prospective

[24] *See also In re* Robert Bosch GmbH, File No. 121-0081, Dissenting Statement of Commissioner Maureen K. Ohlhausen (Apr. 24, 2013).

licensees of key technologies gain nothing by paying the monopoly price up front, if they can use a "willing licensee" framework recognized by antitrust enforcers without fear of injunction. Faced with a monopoly price, they would rationally play the regulator's game. They would go through the motions of a back and forth negotiation, before swiveling to a protracted dispute-resolution process by which a court or arbitrator identifies a reasonable price. Unable to threaten an injunction, the law would force the SEP owner to pay litigation costs and forego immediate licensing revenue.

As a result, the law may deny owners of the most valuable technologies their full compensation, diluting incentives to invent. That outcome would be especially perverse because core innovations are the most important ones to encourage. Facing that prospect, inventors of cutting-edge technologies may simply choose not to participate in the standard-setting process to avoid encumbering their critical technologies with a RAND commitment. Their abandoning the standard-setting process would hardly be an ideal outcome for anyone, most of all consumers.

I do not present this example as a general case, but use it to illustrate the danger of absolutes. We should also be very clear what the no-injunction rule here ultimately entails: compulsory licensing of proprietary technologies, qualified only by a patentee's willingness to offer a RAND-licensing promise. The U.S. Supreme Court has never recognized an essential-facilities doctrine, and its recent jurisprudence wisely pours cold water on the virtues of forced sharing.[25] In the patent setting, the Federal Circuit has held that, "[i]n the absence of any indication of illegal tying, fraud in the Patent and Trademark Office, or sham litigation, the patent holder may . . . exclude others . . . free from liability under the antitrust laws."[26] That

[25] Verizon Comm'cns v. Law Offices of Curtis V. Trinko, 540 U.S. 398, 410-11 (2004); *see also* Pacific Bell Tel. Co. v. Linkline Comm'cns, 555 U.S. 438, 440 (2009).

[26] *In re* Independent Serv. Org. Antitrust Litig., 203 F.3d 1322, 1327 (Fed. Cir. 2000), *cert. denied*, 531 U.S. 1143 (2001).

jurisprudence exists for a good reason, which applies equally here. As the U.S. Supreme Court has explained: "Compelling such firms to share the source of their advantage is in some tension with the underlying purpose of antitrust law, since it may lessen the incentive for the monopolist, the rival, or both to invest in those economically beneficial facilities. Enforced sharing also requires antitrust courts to act as central planners, identifying the proper price, quantity, and other terms of dealing–a role for which they are ill-suited."[27]

2. Merely asking for an injunction rarely in itself harms competition

There are other problems with condemning a SEP owner just for seeking an injunction. If the only alleged wrongdoing is requesting such relief—i.e., there is no allegation of impropriety before the SSO—there will often be no injury to competition. That is so even if there were substitutes to the SEP *ex ante*. Seeking an injunction cannot in itself harm competition in the upstream market for the licensed technology. Absent deception or other misconduct that caused the SSO to adopt a firm's patented technology over an alternative, a SEP holder's enhanced power in licensing its technology comes from third parties' lock in—not from its conduct.

If a SEP owner harms competition by requesting an injunction, then the injury must lie in the downstream product market. Some policymakers have argued that the mere threat of injunction can distort competition by giving the patent holder greater leverage in negotiations over a fair royalty.[28] Maybe, but that is not always so. Seeking to enjoin a technology user could harm downstream competition only if three conditions are satisfied: (a) the court actually grants the requested injunction or there is a material probability that it will do so; (b) the patentee or its

[27] *Trinko*, 540 U.S. at 407-08.

[28] *Compare In re* Certain 3G Mobile Handsets & Components Thereof, Written Submission on the Public Interest of Federal Trade Commission Chairwoman Edith Ramirez, Inv. No. 337-TA-613 (Int'l Trade Comm'n, July 10, 2015) *with In re* Certain 3G Mobile Handsets & Components Thereof, Reply Submission on the Public Interest of Federal Trade Commissioners Maureen K. Ohlhausen & Joshua D. Wright, Inv. No. 337-TA-613 (Int'l Trade Comm'n, July 20, 2015).

proxy competes in the product market[29]; and (c) the patentee has sufficient power in that market. Those conditions will not always hold.

In the first place, the court may find that the asserted patent is invalid or not infringed: a fairly frequent occurrence in America.[30] Even if the patentee shows that its patent is indeed standard-essential, the court may still deny injunctive relief and award a reasonable royalty. Indeed, today's "anti-injunction rule" presupposes that merely *requesting* an injunction tends to exclude competition. But one's threat is only as powerful as it is credible. In the United States, the law does not automatically award prevailing patentees injunctive relief.[31] The Federal Circuit has held that giving a RAND-licensing guarantee does not foreclose an injunction, but is rather a factor to be considered in applying the traditional four-factor test.[32] Still, unless an accused infringer unilaterally refuses a RAND royalty or unreasonably delays negotiations, it seems unlikely that courts will grant injunctions to SEP owners who have given RAND-licensing assurances. Generally, then, competition in the product market will continue undisturbed even if a SEP owner asks for an injunction. In most cases, the infringer will simply have higher costs

[29] Note that a competitor in a product market could use a nominally independent NPE to raise rivals' costs, such that harm to competition in a product market is possible even if the patent-holding entity that sues does not itself compete in that market. Antitrust looks at actual relationships to determine competitive impact. *See generally* Am. Needle, Inc. v. Am. Football, League, 560 U.S. 183, 191 (2010) ("[W]e have eschewed . . . formalistic distinctions in favor of a functional consideration of how the parties involved in the alleged anticompetitive conduct actually operate.").

[30] U.S. courts invalidate patents at a high rate. *See, e.g.*, John Allison *et al.*, *Patent Quality and Settlement Among Repeat Patent Litigants*, 99 GEO. L.J. 677, 687 (2011); Kimberly A. Moore, *Judges, Juries, and Patent Cases - An Empirical Peek inside the Black Box*, 99 MICH. L. REV. 365, 385 (2000); John R. Allison & Mark A. Lemley, *Empirical Evidence on the Validity of Litigated Patents*, 26 AIPLA Q.J. 185, 205 (1998). Invalidity findings have been especially prevalent since the Supreme Court's recent decision on patentable subject matter, *Alice Corp. v. CLS Bank Int'l*, 134 S. Ct. 2347 (2014). High rates of patent invalidity and non-infringement are not unique to the United States. *See, e.g.*, Competition Directorate-General of the European Comm'n, *Standard-essential patents*, 8 COMPETITION POLICY BRIEF p. 4 (June 2014) ("On average more than 30% of European invalidity actions result in the explicit invalidation of the challenged patents, and approximately 50% of the patents challenged are found not to be infringed").

[31] eBay Inc. v. MercExchange, L.L.C., 547 U.S. 388 (2006).

[32] Apple, Inc. v. Motorola, Inc., 757 F.3d 1286, 1331-32 (Fed. Cir. 2014).

from having to pay damages. Such liability, of course, reflects the lawful patent grant and is not a cognizable injury to competition.

Second, if the SEP owner or an entity that controls the SEP owner does not compete in the product market, it cannot monopolize that market under the Sherman Act.[33] In other situations, the SEP holder may compete in the product market, but lack the market power needed to violate antitrust law. Perhaps the patent is valid, but it infringes only an optional feature of a standard and on the facts the SEP owner lacks sufficient market power. Separately, the patentee may have a fringe position in the product market and the scope of its requested injunction may be too narrow to harm competition. Further, even if a patent is essential to practicing a particular standard, there may be competing standards within an industry that deprive the patentee of monopoly power. Even if a standard is mandatory, a SEP owner may be one of many seeking to monetize its proprietary technology. Competing claims to revenue generated by a standard could limit a SEP owner's ability to raise price, and should thus feature in a proper antitrust analysis. Of course, these details will not exist in every case, but the point is that any or all of them could arise and the "no-injunction rule" that currently finds favor would not seem to accommodate them.

Finally, U.S. law requires more than a request for an injunction for liability to attach. Suing for injunctive relief is government petitioning that enjoys *Noerr-Pennington* immunity.[34] For an antitrust claim to lie, there must be conduct beyond simply suing that is anticompetitive. For instance, deceptive conduct before a private standard-setting organization can suffice.[35] But

[33] Discon, Inc. v. Nynex Corp., 93 F.3d 1055, 1062 (2d Cir. 1996) ("[I]t is axiomatic that a firm cannot monopolize a market in which it does not compete."), *vacated on other grounds,* 525 U.S. 128 (1998).

[34] *See* Apple, Inc. v. Motorola Mobility, Inc., 886 F. Supp. 2d 1061, 1075-77 (W.D. Wis. 2012).

[35] *See generally* Allied Tube & Conduit Corp. v. Indian Head, Inc., 486 U.S. 492, 500-01 (1988).

if there is no allegation that a SEP owner engaged in deception or other misconduct before the standard-setting body, *Noerr* presumably applies.[36]

3. Agencies can identify hold-up when it occurs

There are therefore many circumstances in which a SEP owner cannot harm competition, and hence cannot violate antitrust law, in seeking to enjoin a willing licensee. More importantly, there are cases in which denying a SEP holder injunctive relief will harm dynamic efficiency and dissuade participation in the standard-setting process. To date, agency action has not sufficiently addressed these complications.

Ultimately, the antitrust case against efforts to enjoin a willing licensee using a RAND-encumbered SEP may be strong or weak, depending on the specific facts of the situation at hand. Why deny ourselves the flexibility to scrutinize each case on its own merits? That a standard implementer adopts the mantle of a "willing licensee" should not be a trump card that excludes the possibility of hold-out or other circumstances justifying injunctive relief.[37]

All told, even if a requested injunction violates a RAND-licensing guarantee, it is not always an antitrust problem. Rather, these issues sound in contract law, as litigants and courts

[36] One might argue that making a RAND-licensing promise is a non-petitioning act before a private standard-setting body and thus beyond *Noerr*. Absent behavior that leads a standard-setting organization to reject substitute technologies in favor of the patentee's technology, however, there is no harm to competition in a technology market. It would thus seem that a RAND-licensing promise would have to be false when made to be an anticompetitive act independent of filing suit. *See Broadcom*, 501 F.3d at 314 (recognizing a cause of action based, in part, on "a patent holder's intentionally false promise to license essential proprietary technology on FRAND terms"). *But cf.* Microsoft Corp. v. Motorola, Inc., 2015 WL 4568613, at *19 (9th Cir. July 30, 2015) (*Noerr* does not immunize a breach of contract for breach of a RAND-licensing promise).

[37] The Federal Trade Commission has not had to face the full panoply of issues because it has challenged alleged SEP hold-up using its broader authority under Section 5 and settled cases prior to their resolution on the merits. *In re* Robert Bosch GmbH, File No. 121-0081, Complaint (Nov. 26, 2012); *In re* N-Data Solutions LLC, No. 51-0094, Complaint (Jan. 23, 2008). In a case where the Commission equated Section 5's scope with that of Section 2, the D.C. Circuit granted a petition for review because the Commission did not show that the deceptive conduct had caused the SSO to adopt the defendant's patented technology. *Rambus*, 522 F.3d at 456.

have recognized.[38] I submit that antitrust agencies should focus on conduct that actually harms the competitive process, as when a patentee's deception before an SSO causes the adoption of proprietary technology over a substitute technology, followed by hold-up. Injunctions in violation of contractual promises, however, are generally matters to be resolved using conventional breach-of-contract principles.

IV. Conclusion

In conclusion, I hope you will agree that the issues surrounding injunctions in the standard-setting arena are more complex than is often supposed. Today's common wisdom is that a SEP owner who has promised to license on RAND terms should never try to enjoin a potentially willing licensee. That position is understandable and intuitive. After all, a patentee can potentially use an injunction to extract royalties exceeding its technical contribution to a standard. Yet, despite good intentions, a strict no-injunction rule omits critical nuances. Above all, depriving SEP holders of injunctive relief against arguably willing licensees may undercompensate those who invent the most valuable technologies. That is a serious problem. The no-injunction rule would still be defensible if the administrative costs of distinguishing pro- and anti-competitive conduct were high, but competition agencies are eminently capable of investigating each case on its facts to weigh allegations of hold-up and the potential for hold-out. Overbroad rules inevitably result in false positives, which we should not countenance here.

This all leads me to my most important point: diluting property rights harms innovation. Technological progress is a critical driver of long-term economic growth. If domestic innovation is to flourish, then the law must instill appropriate incentives. Domestic firms will not invest large capital sums in R&D if they cannot protect their technological insights from appropriation.

[38] *See, e.g.*, Microsoft Corp. v. Motorola, Inc., 2015 WL 4568613 (9th Cir. July 30, 2015); *In re* Innovatio IP Ventures, LLC Patent Litig., No. 11 C 9308, 2013 WL 5593609 (N.D. Ill. Oct. 3, 2013); Realtek Semiconductor Corp. v. LSI Corp., 946 F. Supp. 2d 998 (N.D. Cal. 2013).

That principle is straightforward, but it is the foundation of patent systems around the world that have overseen unprecedented technological advance. As economies become increasingly knowledge-based, optimal innovation policy must evolve in turn. Speaking briefly about our host country, China enjoys near-limitless potential, in my estimation. The land that brought the four great inventions of paper, gunpowder, the compass, and printing can surely be a cradle of future innovation—not least given its vast economic power, rich history, and unyielding desire to improve. I submit that strong patent rights would play a key role in realizing that potential.

In that regard, I return to industry standards. As they become ubiquitous and account for a larger share of technology, standards require tailored patent and antitrust policies. Hold-up is a potential concern, for which competition enforcers should be on guard. But hold-up is not the only danger, and recent enforcement actions and narratives obscure an equally serious concern: hold-out. SEP holders that acquire market power via anticompetitive conduct before a SSO and that use injunctions to hold-up technology users should face antitrust scrutiny. But, equally, the law should not undercompensate owners of critical technologies by allowing any infringer that adopts the mantle of a "willing licensee" to delay compensation via hold-out.

Thank you again for your kind invitation. I look forward to speaking further about this and other challenging topics at the antitrust and IP intersection.