

**Response of the International Center for
Law & Economics, ITA-NIST-USPTO
Request for Comments on Issues at the
Intersection of Standards and Intellectual
Property**

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We thank the International Trade Administration (ITA), the National Institute of Standards and Technology (NIST) and the U.S. Patent and Trademark Office (USPTO) for this opportunity to comment on its call for evidence concerning a new framework for standard-essential patents.¹ The International Center for Law and Economics (ICLE) is a nonprofit, nonpartisan research center whose work promotes the use of law & economics methodologies to inform public-policy debates. We believe that intellectually rigorous, data-driven analysis will lead to efficient policy solutions that promote consumer welfare and global economic growth. ICLE's scholars have written extensively on competition, intellectual property, and consumer-protection policy.

In this comment, we express concerns about global regulatory developments in the standard-essential patent (SEP) industry. The European Union is in the process of considering legislation that would fundamentally alter the landscape of global standards setting, making it more difficult for inventors to enforce their intellectual-property rights.² Not only will this legislation have profound ramifications for companies located all over the globe but—as the USPTO's call for comments recognizes—the EU risks kicking off a global race to the bottom in regulating SEPs that will ultimately harm innovation and slow the diffusion of groundbreaking technologies.

We are concerned that a tit-for-tat response intended to counteract bad policies in the EU (and among other allied nations) is doomed to do more harm than good. Erecting what amount to protectionist barriers—even if in response to similar regulations abroad—would diminish U.S. interests, as well as those of our partners. Instead, the agencies should be seeking opportunities to influence the policy decisions made in foreign jurisdictions, in the hope that those entities will pursue better policies.

For obvious reasons, the way intellectual-property disputes are resolved has tremendous ramifications for firms that operate in standard-reliant industries. Not only do

¹ U.S. Patent and Trademark Office, *Joint ITA-NIST-USPTO Collaboration Initiative Regarding Standards*, FEDERAL REGISTER (Sep. 27, 2023), <https://www.federalregister.gov/documents/2023/09/27/2023-20919/joint-ita-nist-uspto-collaboration-initiative-regarding-standards>; U.S. Patent and Trademark Office, *Joint ITA-NIST-USPTO Collaboration Initiative Regarding Standards; Notice of Public Listening Session and Request for Comments*, FEDERAL REGISTER (Sep. 11, 2023), available at <https://www.govinfo.gov/content/pkg/FR-2023-09-11/pdf/2023-19667.pdf> (“Call for Comments”).

² European Commission, *Explanatory Memorandum for Proposal for a Regulation of the European Parliament and of the Council on Standard Essential Patents and Amending Regulation (EU) 2017/1001*, COM (2023) 232 Final (“Explanatory Memorandum”).

many of the firms in this space derive a large share of their revenue from patents but, perhaps more importantly, the prospect of litigation dictates how firms structure the transfer of intellectual-property assets. In simple terms, ineffectual judicial remedies for IP infringements and uncertainty concerning the resolution of IP disputes discourage firms from concluding license agreements in the first place.

The key role that IP plays in these industries should impel policymakers to proceed with caution. By virtually all available metrics, the current system works. The development of innovative technologies through standards development organizations (SDOs) has led to the emergence of some of the most groundbreaking technologies that consumers use today;³ and recent empirical evidence suggests that many of the alleged ills that have been associated with the overenforcement of intellectual-property rights simply fail to materialize in industries that rely on standard-essential patents.⁴

At the same time, “there is no empirical evidence of structural and systematic problems of holdup and royalty stacking affecting standard-essential patent (“SEP”) licensing.”⁵ Indeed, “[t]he notion that implementers in such innovation-driven industries are being suffocated by an insurmountable patent royalty stack has turned out to be nothing more than horror fiction.”⁶ Yet, without a sound basis, the anti-injunctions approach increasingly espoused by policymakers unnecessarily “adds a layer of additional legal complexity and alters bargaining processes, unduly favoring implementers.”⁷

Licensing negotiations involving complex technologies are legally intricate. It is simply not helpful for a regulatory body to impose a particular vision of licensing

³ See, e.g., Dirk Auer & Julian Morris, *Governing the Patent Commons*, 38 CARDOZO ARTS & ENT. L.J. 294 (2020).

⁴ See, e.g., Alexander Galetovic, Stephen Haber & Ross Levine, *An Empirical Examination of Patent Holdup*, 11 J. COMPETITION L. & ECON. 549 (2015). This is in keeping with general observations about the dynamic nature of intellectual property protections. See, e.g., RONALD A. CASS & KEITH N. HYLTON, *LAWS OF CREATION: PROPERTY RIGHTS IN THE WORLD OF IDEAS* 42-44 (2013).

⁵ Oscar Borgogno & Giuseppe Colangelo, *Disentangling the FRAND Conundrum*, DEEP-IN Research Paper (Dec. 5, 2019) at 5, available at <https://ssrn.com/abstract=3498995>.

⁶ 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, 1411 (2017).

⁷ Borgogno & Colangelo, *supra* note 5, at 5.

negotiations if the goal is more innovation and greater ultimate returns to consumers. Instead, where possible, policy should prefer allowing parties to negotiate at arm's length and to resolve disputes through courts. In addition to maintaining the sometimes-necessary remedy of injunctive relief against bad-faith implementers, this approach allows courts to explore when injunctive relief is appropriate on a case-by-case basis. Thus, over the course of examining actual cases, courts can refine the standards that determine when an injunctive remedy is inappropriate. Indeed, the very exercise of designing *ex ante* rules and guidelines to inform F/RAND licensing is antagonistic to optimal policymaking, as judges are far better situated and equipped to make the necessary marginal adjustments to the system.

Against this backdrop, our comments highlight several factors that should counsel preserving the rules that currently govern SEP-licensing agreements:

To start, the SEP space is far more complex than many recognize. Critics often assume that collaborative standards development creates significant scope for opportunistic behavior—notably, patent holdup. The tremendous growth of SEP-reliant industries and market participants' strong preference for this form of technological development, however, suggest these problems are nowhere near as widespread as many believe.

Second, it is important not to overlook the important benefits conferred by existing IP protections. This includes the advantages inherent in pursuing injunctions rather than damages awards.

Third, weakening the protections afforded to SEP holders would also erode the West's technological leadership over economies that are heavily reliant on manufacturing, and whose policymakers routinely undermine foreign firms' intellectual-property rights. In short, while IP promotes innovation, weakened patent protection has second-order effects that are often overlooked, such as ceding advantages to China's manufacturing sector and thereby exacerbating U.S.-China tensions.

Fourth, while mandated transparency in SEP negotiations may appear beneficial, the reality is more complex, as disclosure requirements can have mixed effects. Further, transparency mandates would likely require government interventions, such as essentiality checks, which can be very costly.

Finally, collective SEP rate-setting raises antitrust issues that stem from firms' need to share sensitive data in order to determine a standard's value. Vertically integrated SEP holders setting collective royalties on the inputs they manufacture could enable price-fixing and collusion. Safeguards like third-party mediation in patent pools may be needed so that joint SEP rate negotiation does not violate antitrust rules barring competitors from fixing prices.

I. Regulatory Developments in Foreign Jurisdictions

In their call for comments, the agencies essentially ask whether regulatory developments in foreign jurisdictions threaten U.S. technological leadership in industries that rely on standard-essential patents and, if so, how the United States should respond:

Do the intellectual property rights policies of foreign jurisdictions threaten any of U.S. leadership in international standard setting, U.S. participation in international standard setting, and/or the growth of U.S. SMEs that rely on the ability to readily license standard essential patents?

If responding affirmatively to question 1, what can the Department of Commerce do to mitigate the effects of any adverse foreign policies relating to intellectual property rights and standards? Please clearly identify any such adverse foreign policies with specificity.⁸

Recent regulatory developments in the European Union loom large over the agencies' two questions. On April 27, the European Commission published its Proposal for a Regulation on Standard Essential Patents ("SEP Regulation"). The SEP Regulation's proclaimed aims are to ensure that end users—including small businesses and EU consumers—benefit from products based on the latest standardized technologies; make the EU attractive for standards innovation; and encourage both SEP holders and implementers to innovate in the EU, make and sell products in the EU, and be competitive in non-EU markets.⁹

⁸ Call for Comments, *supra* note 1, Questions 1 and 2.

⁹ Proposal for a Regulation of the European Parliament and of the Council on Standard Essential Patents and Amending Regulation (EU) 2017/1001, COM (2023) 232 Final ("Draft SEP Regulation").

While we share the agencies' concern, responding to this foreign legislation (and other international responses that are likely to arise) by enacting similar policies would only exacerbate the situation and further erode U.S. technological leadership. In fact, several of the EU legislation's shortcomings that would be rendered more destructive if the United States responded in kind.

As ICLE-affiliated scholars have explained in comments on the draft European legislation,¹⁰ the available evidence does not support a finding of market failure in SEP-licensing markets that would justify intrusive regulatory oversight. Instead, the Commission's own evidence points to the low incidence of SEP litigation and no systemic negative effects on SEP owners and implementers. The mobile-telecommunication market, which is claimed to have the most SEP litigation and licensing inefficiencies, has over the years seen rapid growth, expansion, declining consumer prices, and new market entry.

Some market imperfections are necessary-but-not-sufficient conditions for regulatory intervention. Regulation might not be necessary or proportionate if its aims could be achieved with less costly instruments.

The EU's proposed SEP Regulation appears to pursue the value-redistributive function of imposing costs on only one group (SEP owners), while accruing all benefits to non-EU (or US)-based standard implementers. It is difficult to find justification for such value redistribution from the evidence presented on the functioning of SEP licensing markets.

The proposed EU SEP Regulation applies to all standards licensed on FRAND terms. It is unclear how many standards would be caught and why all standards licensed on FRAND terms are presumed to be inefficient, requiring regulatory intervention. One early study identified 148 standards licensed on FRAND terms in a 2010 laptop. No evidence was presented that licensing inefficiencies of these standards caused harms in laptop markets.

¹⁰ Robin Jacob & Igor Nikolic, *ICLE Comments Regarding the Draft Regulation on Standard Essential Patents* (Jul. 28, 2023), available at <https://laweconcenter.org/wp-content/uploads/2023/07/ICLE-Comments-to-the-SEP-Regulation.pdf>.

The EU legislation would require evaluators and conciliators that need to be qualified and experienced experts in relevant fields. There are unlikely to be enough evaluators to conduct essentiality checks reliably on such a massive scale.

To make matters worse, the proposed SEP Regulation raises competition concerns, as it requires SEP owners to agree on global aggregate royalty rates. No safeguards are provided against the exchange of sensitive commercial information and possible cartelization.

There is also a risk that legislation seeking to make the standardization space more transparent, by mandating aggregate royalty-rate notifications and nonbinding expert opinions on global aggregate royalty rates, may lead to even more confusion for implementers.

Finally, the EU's proposed SEP Regulation would have extraterritorial effects. Indeed, while the SEP Register and system of “essentiality checks” created by the regulation would apply only for patents in force in EU Member States, its system of nonbinding opinions on aggregate royalties and FRAND determination would apply worldwide, covering portfolios in other countries. Other countries—including the United States—may follow suit and introduce their own regulations on SEPs. Such regulations may be used as a strategic and protectionist tool to devalue the royalties of innovative SEP owners. The proliferation of regulatory regimes would make SEP licensing even more costly, with unknown effects on the viability of the current system of collaborative and open standardization.

Considering the above, it would appear unwise for the United States to mimic the EU's draft SEP regulation. In its current form, the regulation is likely to harm both U.S. and European innovators. In turn, this threatens the west's technological leadership on a global stage and will serve the interests of jurisdictions whose economies rely heavily on implementing standard-essential technologies and that generally have weaker IP protection than either the United States or the EU.

Instead, the agencies should look for opportunities to work with their foreign counterparts to improve the proposed EU legislation (and other similar measures in other jurisdictions). Neither EU nor U.S. interests will be well-served by these sorts of regulatory endeavors, least of all if both areas enact ill-advised SEP policies. Sound policy should be focused on ensuring that the successful SEP ecosystem continues to perform as impressively as it has to date. Enacting defensive measures against

the EU legislation will create a tit-for-tat dynamic that will double the obstacles faced by innovators in both the EU and the United States, allowing foreign rivals to take advantage of the situation.

II. Regulatory Restraint

In their call for comments, the agencies ask what private entities can do to boost America's participation in international standard-setting efforts:

What more can other entities do, such as standards development organizations, industry or consumer associations, academia, or U.S. businesses to help improve American leadership, participation in international standard setting, and/or increased participation of small to medium-sized enterprises that rely on the ability to readily license standard essential patents?¹¹

While this is a good way to look at the issue (today's standardization practices were born of spontaneous market interactions, rather than government fiat, which leaves private entities with a clearly significant role to play in this space), one should not overestimate the extent to which governments can identify inefficiencies that may afflict standard-reliant industries and nudge private parties to resolve them—e.g., by asking SDOs to curb the use of injunctions or encourage collective royalty-setting agreements.

It's tempting for lawmakers to look at the complex SEP licensing process as a Gordian Knot to be solved through regulatory fiat. But pursuing Alexander's solution, though expedient, would similarly leave the SEP licensing ecosystem in tatters.

Consider smartphones: Tens of thousands of patents are essential to making smartphone technology work.¹² Some critics posit that this makes it extremely difficult to market smartphones effectively, but no evidence supports this claim, and the

¹¹ Call for Comments, *supra* note 1, Question 3.

¹² See, e.g., JORGE PADILLA, JOHN DAVIES, & ALEKSANDRA BOUTIN, ECONOMIC IMPACT OF TECHNOLOGY STANDARDS: THE PAST AND THE ROAD AHEAD (2017), available at https://www.compasslexecon.com/wp-content/uploads/2018/04/CL_Economic_Impact_of_Technology_Standards_Report_FINAL.pdf (Section 3 has an in-depth discussion of the adoption of standards and the benefits to the growth of mobile technology); IRUNWAY, PATENT & LANDSCAPE ANALYSIS OF 4G-LTE TECHNOLOGY 9-12 (2012), <https://www.i-runway.com/images/pdf/iRunway%20-%20Patent%20&%20Landscape%20Analysis%20of%204G-LTE.pdf>.

proliferation of smartphones suggests otherwise.¹³ It is worth considering that cell-phone technology marks the culmination of research efforts spanning the entire globe. The coordinated efforts of these numerous firms are not the result of government coercion, but the free play of competitive forces.

Coordination on such a vast scale is no simple task. And yet, of the vast array of options available to them, an increasing number of firms have settled on one particular paradigm to solve these coordination problems: the development of new technologies and open standards within SDOs. These organizations and their members are responsible not only for wireless cellular technologies (e.g., 3G, 4G, 5G) but also for such high-profile technologies as Wi-Fi, USB, and Blu-ray, among many others.¹⁴

Throughout history, economic actors have sought to reap the benefits of specialization and interoperability. This has led to the emergence of various standardization practices, ranging from *de facto* standards and competition for the market, to complex standard-setting procedures within SDOs.

Ultimately, because interoperability standards rely on firms being able to coordinate their behavior, standardization necessarily implies a degree of incentive compatibility. That is, parties will coordinate their behavior only if they expect that doing so will be mutually beneficial. “This mutuality of considerations has been at the heart of the voluntary FRAND bargain from the outset, given that any risks of holdup or misappropriation of information are bilateral—that is, such risks work in both directions.”¹⁵ This implies that SDOs must design balanced internal rules that bring both patent holders *and implementers* to the table through mutually agreeable interoperability standards, and guarantee that they will continue to work together into the future as new technologies emerge.¹⁶

¹³ See, e.g., Galetovic, *et al.*, *supra* note 4; Keith Mallinson, *Don't Fix What Isn't Broken: The Extraordinary Record of Innovation and Success in the Cellular Industry under Existing Licensing Practices*, 23 GEO. MASON L. REV. 967 (2016); Damien Geradin, Anne Layne-Farrar, & Jorge Padilla, *The Complements Problem within Standard Setting: Assessing the Evidence on Royalty Stacking*, 14 B.U. J. SCI. & TECH. L.144 (2008).

¹⁴ Auer & Morris, *supra* note 3, at 5.

¹⁵ Epstein & Noroozi, *supra* note 6, at 1394.

¹⁶ See, e.g., Daniel F. Spulber, *Standard Setting Organisations and Standard Essential Patents: Voting and Markets*, 129 ECON. J. 1477, 1502-03 (2018) (“The interaction between inventors and adopters helps explain the variation of decision rules among SSOs, ranging from majority rule to consensus

Establishment of SDO interoperability standards typically follows a process by which interested parties come together and identify technological problems that they might be able to solve cooperatively.¹⁷ SDO members include a wide range of stakeholders, including (among others): companies that manufacture products implementing the technology, companies that market services that use the standards, companies that operate networks that practice the standards, technology firms that create technologies that are included in the standards, academic institutions, and government agencies.¹⁸

The SDO provides information to interested parties about the standard-setting project and a forum for collaboration.¹⁹ Members attend standard-setting meetings, vote on standardization decisions, and make technological contributions. Participation in standard setting can be subject to a substantial fee and always entails considerable time. There are policies and procedures (“bylaws”) that govern the process of adoption and standard development. Participation in SDOs is voluntary and is subject to acceptance of the terms and conditions set out in the bylaws. These aim to allow the most appropriate technology to become standardized, based on several factors. This is a democratic and consensus-based process designed to ensure that no single participant can manipulate it. Many SDOs also allow for post-adoption appeals by dissenting members. This ultimately leads to a series of technical specifications upon which implementers can build products.

Throughout this process, a critical challenge for SDOs is to ensure that their internal regulations remain “*incentive compatible*.” To optimize their technological output and ensure the success of their standards, SDOs must attract the right mix of both implementers and innovators. “Most succinctly, the ‘right membership’ comprises a significant portion of *each class of stakeholder* whose active support is needed to achieve

requirements.... Technology standards will be efficient when SSO decision making reflects the countervailing effects of voting power and market power.”).

¹⁷ See Kirti Gupta, *How SSOs Work: Unpacking the Mobile Industry’s 3GPP Standards*, in THE CAMBRIDGE HANDBOOK OF TECHNICAL STANDARDIZATION LAW: COMPETITION, ANTITRUST, AND PATENTS (Jorge L. Contreras ed., 2017).

¹⁸ See Kristen Jakobsen Osenga, *Ignorance Over Innovation: Why Misunderstanding Standard Setting Organizations Will Hinder Technological Progress*, 56 U. LOUISVILLE L. REV. 159, 178 (2018); Andrew Updegrove, *Value Propositions, Roles and Strategies: Participating in a SSO*, in THE ESSENTIAL GUIDE TO STANDARDS, <https://www.consortiuminfo.org/guide> (last visited Jan. 23, 2022).

¹⁹ Adapted from Auer & Morris, *supra* note 3, at 18-19.

broad adoption.”²⁰ They thus need to design internal procedures that strike a balance between the sometimes-diverging interests of these stakeholders.

This is no simple task. Although there are numerous ways in which these rules may favor a particular group of participants, allocating the profits of standardization is perhaps the most salient. To a first approximation, SEP holders will tend to favor internal rules that allow them to charge prices that are close to the monopoly benchmark (though not the double-marginalization one). Conversely, implementers will generally prefer policies that limit SEP holders’ returns (so long as this does not dry up the supply of inventions). However, these first-order incentives may not always hold true in the real world. Practical considerations may, for instance, urge SEP holders to accept a pricing structure that is not “profit maximizing” in the short run, but which may incentivize further cooperation or the adoption of an underlying technology.²¹

The above has important consequences for patent and antitrust policy in SEP-reliant industries. As we have explained, collaborative standard development gives rise to complex incentives, as well as a web of heterogeneous and deliberately incomplete contracts (i.e., where the parties choose not to specify some aspects of their agreement).²² Given this diversity, uniform and centralized policies that needlessly constrain the range of negotiation—such as a federal-enforcement presumption against injunctions—would likely lead to fewer agreements and inefficient outcomes in

²⁰ Andrew Updegrave, *Business Considerations: Forming and Managing a SSO*, in THE ESSENTIAL GUIDE TO STANDARDS, <https://www.consortiuminfo.org/guide/forming-managing-a-sso/business-considerations> (last visited Nov. 6, 2023).

²¹ See, e.g., Jonathan M. Barnett, *The Host’s Dilemma: Strategic Forfeiture in Platform Markets for Informational Goods*, 124 HARV. L. REV. 1861, 1883 (2010) (showing that firms routinely forfeit their intellectual assets in order to boost the growth of the platform they operate).

²² See Joanna Tsai & Joshua D. Wright, *Standard Setting, Intellectual Property Rights, and the Role of Antitrust in Regulating Incomplete Contracts*, 80 ANTITRUST L.J. 157, 159 (2015) (“SSOs [standard-setting organizations] and their IPR policies appear to be responsive to changes in perceived patent holdup risks and other factors. We find the SSOs’ responses to these changes are varied, and that contractual incompleteness and ambiguity persist across SSOs and over time, despite many revisions and improvements to IPR policies. **We interpret the evidence as consistent with a competitive contracting process and with the view that contractual incompleteness is an intended and efficient feature of SSO contracts.**”) (emphasis added).

numerous cases, especially compared to case-by-case adjudication of F/RAND commitments under the common law of contract.²³

In short, “standards organizations and market participants are better than regulators at balancing the interests of patent holders and implementers.”²⁴ Interfering with the emergent norms of the standard-development industry thus risks undermining innovators’ expectations of a reasonable return on their investments:

Each of the innovative companies that agrees to be an SSO participant does so with the understanding of the investments they have made in research, development, and participation, as well as the risks that their innovations may not be selected for incorporation in the standard. They bear these investments and risk with the further understanding that they will receive adequate and fair remuneration as part of the FRAND commitment they have made to the SSO.

Unfortunately, the actions of the courts and the proposals by commentators are greatly undermining the value and benefits of SSO participation that are expected....²⁵

III. The Importance of Injunctions

The agencies’ call for comments appears concerned that current standardization practices may be hindering U.S. innovation and the creation of startups in the SEP space:

Are current fair, reasonable, and non-discriminatory (FRAND) licensing practices adequate to sustain U.S. innovation and global competitiveness? Are there other international models which would better serve U.S. innovation in the future?

²³ See, e.g., Daniel F. Spulber, *Licensing Standard Essential Patents with FRAND Commitments: Preparing for 5G Mobile Telecommunications*, 18 CO. TECH. L.J. 79, 147 (2020) (“Adjudication of SEP disputes guided by common law principles and comparable licenses complements SSO FRAND commitments and market negotiation of SEP licenses. Adjudication based on common law and comparable licenses provides general rules for the resolution of SEP disputes that does not restrict SSO IP policies and or interfere with consensus decision making by SSOs. Such adjudication also does not interfere with efficient market negotiation of SEP licenses.”).

²⁴ *Id.* at 148.

²⁵ Osenga, *supra* note 18, at 213-14.

Are there specific U.S. intellectual property laws or policies that inhibit participation in standards development?

Are there specific U.S. intellectual property laws or policies that inhibit growth of SMEs that rely on licensing and implementing standards?²⁶

While they are not mentioned explicitly in the agencies' call for comments, the role of injunctions sought against implementers by SEP holders looms large over the above questions. The use of injunctions is arguably one of the most contentious—and widely misunderstood—topics in SEP policy debates. While often portrayed as a means for inventors to extract unreasonable royalties from helpless implementors, injunctions are, in fact, a critical legal tool that encourages all parties in the standardization space to come to the negotiation table. In fact, even the EU's draft regulation on SEPs—which in many other respects reduces the protections afforded to inventors—implicitly recognizes the crucial role that injunctions play, by ensuring that the various proposed SEP transparency and arbitration procedures do not undermine parties' ability to obtain an injunction:

The obligation to initiate FRAND determination should not be detrimental to the effective protection of the parties' rights. In that respect, the party that commits to comply with the outcome of the FRAND determination while the other party fails to do so should be entitled to initiate proceedings before the competent national court pending the FRAND determination. In addition, either party should be able to request a provisional injunction of a financial nature before the competent court.²⁷

A. The Fundamental Value of Injunctions

Historically, one of the most important features of property rights in general, and patents in particular, is that they provide owners with the power to exclude unauthorized use by third parties and thus enable them to negotiate over the terms on which instances of use or sale will be authorized.²⁸ While the ability to exclude is

²⁶ Call for Comments, *supra* note 1, Questions 4, 5, 6.

²⁷ Draft SEP Regulation, preamble at (35).

²⁸ Richard A. Epstein, *The Clear View of The Cathedral: The Dominance of Property Rules*, 106 YALE L.J. 2091, 2091 (1996) (“Property rights are, in this sense, made absolute because the ownership of some asset confers sole and exclusive power on a given individual to determine whether to retain or part with an asset on whatever terms he sees fit.”)

important in creating the incentive to innovate, it is equally—and perhaps more—important in facilitating the *licensing* of inventions.²⁹

There are many reasons that someone may invent a new product or process. But if they are to be optimally encouraged to distribute that product and thus generate the associated social welfare, it is crucial that they retain the ability to engage supply chains to commercialize the invention fully.³⁰ “[T]he patent system encourages and enables not just *invention* but also *innovation* by providing the basic, enforceable property rights that facilitate (theoretically) efficient organizations of economic resources and the negotiations necessary to coordinate production among them.”³¹ If a patent holder believes that the path to commercialization and remuneration is hindered by infringers, she will have less incentive to invest fully in the commercialization process (or in the innovation in the first place).

Removing 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.... With a no-injunction presumption..., as long as the expected cost of litigation is less than the expected gain from infringing without paying any royalties, potential licensees will always have an incentive to pursue this strategy. The net result is a shift in bargaining power so that, even when license agreements are struck, royalty rates are lower than they would otherwise be, as well as an increased likelihood of infringement.³²

Because infringement affects both the initial incentive to innovate as well as the complex process of commercialization, courts have historically granted injunctions against those who have used a patent without proper authorization.

²⁹ See generally Edmund W. Kitch, *The Nature and Function of the Patent System*, 20 J.L. & ECON. 265 (1977); F. Scott Kieff, *Property Rights and Property Rules for Commercializing Inventions*, 85 MINN. L. REV. 697 (2001).

³⁰ See, e.g., Barnett, *supra* note 21, at 856 (“Strong patents provide firms with opportunities to disaggregate supply chains through contract-based relationships, which in turn give rise to trading markets in intellectual resources, whereas weak patents foreclose those options.”).

³¹ Dirk Auer, Geoffrey A. Manne, Julian Morris, & Kristian Stout, *The Deterioration of Appropriate Remedies in Patent Disputes*, 21 FEDERALIST SOC’Y REV. 158, 160 (2020).

³² *Id.* at 163.

B. Damages Alone Are Often Insufficient

Injunctions are almost certainly the most powerful means to enforce property rights and remedy breaches. Nonetheless, courts may sometimes award damages, either in addition to or as an alternative to awarding an injunction.³³ It is often difficult to establish the appropriate size of an award of damages, however, when intangible property—such as invention and innovation, in the case of patents—is the core property being protected.

In this respect, a key feature of patents is that they possess uncertain value *ex ante*. The value of a particular invention or discovery cannot be known until it is either integrated into the end-product that will be distributed to consumers, or actually used by consumers.³⁴ This massive upfront uncertainty creates the need for technology designers to carefully structure their investments such that the risk/reward ratio remains sufficiently low. This, in turn, means ensuring that their inventions' commercialization can reasonably be expected to generate sufficient profits.

Commercializing highly complex innovations, such as pharmaceuticals and advanced technologies, requires a large degree of risk taking and capital investment, as well as massive foregone opportunities. As such, it will often be difficult, or even impossible, to adequately calculate appropriate monetary damages for the unauthorized use of a patent, even if the patent's *ex post* value is knowable. Put differently, the inability to

³³ See, e.g., Doris Johnson Hines & J. Preston Long, *The Continuing (R)evolution of Injunctive Relief in the District Courts and the International Trade Commission*, IP LITIGATOR (Jan./Feb. 2013) (citing Tracy Lee Sloan, *The 1988 Trade Act and Intellectual Property Cases Before the International Trade Commission*, 30 SANTA CLARA L. REV. 293, 302 (1990) (“Out of 221 intellectual property cases between 1974 and 1987, the ITC found that only five failed to establish sufficient injury... for injunctive-type relief.”)), available at <https://www.finnegan.com/en/insights/articles/the-continuing-r-evolution-of-injunctive-relief-in-the-district.html>.

³⁴ And even then, the specific contribution of a particular patent to ultimate consumer value will remain uncertain. See Robert P. Merges, *Of Property Rules, Coase, and Intellectual Property*, 94 COLUM. L. REV. 2655, 2659 (1994) (“The problems with [clearly defining harms/benefits] in the IPR field result from the abstract quality of the benefits conferred by prior works and the cumulative, interdependent nature of works covered by IPRs. Valuation, then, is at least as great a problem as detection.”)

bargain effectively for royalties post-standardization may “deter investment... and ultimately harm consumers.”³⁵

While it is necessary to establish damages for violations after the fact, it will nearly always be appropriate to award injunctions to deter ongoing violations. This would further allow the property owner to do their own value calculations, based on their investments, sunk costs, and—critically—lost opportunities that were foregone in order to realize the particular invention. “[A] property rule is superior to a liability rule when ‘the court lacks information about both damages and benefits.’ Without accurate information, the damages may be set below the actual level of harm, encouraging the ‘injurer’ (or infringer) to engage in an excessive level of activity—in our case, increased infringement.”³⁶

C. Injunctions Encourage Efficient Licensing Negotiations

In addition to the concerns outlined in the previous section, it is worth noting that curbs on injunctions pertaining to SEPs would make inventors bear the risk of opportunistic behavior, thus enabling firms to opt out of commercial negotiations and wait for potential litigation. In turn, this would tilt the bargaining scale in their favor in subsequent royalty negotiations undertaken in the shadow of prior court proceedings.³⁷

³⁵ See Richard Epstein, F. Scott Kieff, & Daniel Spulber, *The FTC, IP, and SSOs: Government Hold-Up Replacing Private Coordination*, 8 J. COMPETITION L. & ECON. 1 (2012) at 21, available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1907450 (“The simple reality is that before a standard is set, it just is not clear whether a patent might become more or less valuable. Some upward pressure on value may be created later to the extent that the patent is important to a standard that is important to the market. In addition, some downward pressure may be caused by a later RAND commitment or some other factor, such as repeat play. The FTC seems to want to give manufacturers all of the benefits of both of these dynamic effects by in effect giving the manufacturer the free option of picking different focal points for elements of the damages calculations. The patentee is forced to surrender all of the benefit of the upward pressure while the manufacturer is allowed to get all of the benefit of the downward pressure.”).

³⁶ *Merges*, *supra* note 34, at 2666-67 (quoting A. Mitchell Polinsky, *Resolving Nuisance Disputes: The Simple Economics of Injunctive and Damage Remedies*, 32 STAN. L. REV. 1075, 1092 (1980)).

³⁷ See Auer, *et al.*, *supra* note 31, at 163 (“It also establishes this lower royalty rate as the ‘customary’ rate, which ensures that subsequent royalty negotiations, particularly in the standard-setting context, are artificially constrained.”).

The U.S. Supreme Court's 2006 decision in *eBay v. MercExchange* offers a case in point. The court rejected the "general rule" that a prevailing patentee is entitled to an injunction.³⁸ In the aftermath of the decision, courts refused to grant injunctions in considerably more cases.³⁹

Nearly two decades later, however, questions remain regarding *eBay*'s effect on patent licensing, negotiation, and litigation.⁴⁰ In particular, it is likely that *eBay* systematically distorted the relative bargaining positions in SEP licensing in favor of implementers, at the expense of patent holders. One post-*eBay* assessment argues that limiting injunctions to prevent holdup results in more "false positives"—where patent holders with no designs of patent holdup are nonetheless denied injunctive relief—than it does deterrence of actual holdups.⁴¹ The result is a reduction in the cost of willful infringement and "under-compensation" for innovation.⁴²

One of the important features of injunctions that critics miss is that they are not solely a tool for simple exclusion from property, but a tool that *promotes efficient bargaining*.⁴³ If a property holder ultimately has the right to exclude infringers, there is relatively more weight placed on the importance of initial bargaining for licenses. "It

³⁸ *eBay Inc. v. MercExchange, LLC*, 547 U.S. 388 (2006).

³⁹ See Benjamin Petersen, *Injunctive Relief in the Post-eBay World*, 23 BERKELEY TECH. L.J. 193, 196 (2008), ("In the two years after the Supreme Court's ruling in *eBay*, there were thirty-three district court decisions that interpreted *eBay* when determining whether to grant injunctive relief to a patent holder. Of these decisions, twenty-four have granted permanent injunctions and ten have denied injunctions."). See also Bernard H. Chao, *After eBay, Inc. v. MercExchange: The Changing Landscape for Patent Remedies*, 9 MINN. J.L. SCI. & TECH. 543, 572 (2008) ("For the first time, courts are not granting permanent injunctions to many successful patent plaintiffs."); Robin M. Davis, *Failed Attempts to Dwarf the Patent Trolls: Permanent Injunctions in Patent Infringement Cases Under the Proposed Patent Reform Act of 2005 and eBay v. MercExchange*, 17 CORNELL J.L. & PUB. POL'Y 431, 444 (2008) ("However, the first few district courts deciding patent cases following that decision granted injunctions to patent owners in the majority of cases, at a rate of approximately two-to-one.").

⁴⁰ See generally Epstein & Noroozi, *supra* note 6, at 1406-08.

⁴¹ Vincenzo Denicolò, Damien Geradin, Anne Layne-Farrar & A. Jorge Padilla, *Revisiting Injunctive Relief: Interpreting eBay in High-Tech Industries with Non-Practicing Patent Holders*, 4 J. COMP. L. & ECON. 571 (2008).

⁴² *Id.* at 608. See also Vincenzo Denicolò, *Do Patents Over-Compensate Innovators?*, 22 ECON. POL'Y 681 (2007) (noting that, with respect to patents in general, "a preponderance of what evidence is currently available points against the over-reward hypothesis").

⁴³ See, e.g., Mark Schankerman & Suzanne Scotchmer, *Damages and Injunctions in Protecting Intellectual Property*, 32 RAND J. ECON. 201 (2001).

is the very threat of the injunction right—and its associated high transaction costs—that brings the parties to the negotiating table and motivates them to draw upon the full scope of their knowledge and creativity in forming contractual and institutional solutions to the perceived holdup problem.”⁴⁴

Post-*eBay*, “efficient infringement” becomes a viable choice for firms seeking to maximize profits. Thus, implementing firms seeking to pay as little as possible for use of an invention have incentive to disregard the bargaining process with a patent holder altogether. The relative decline in the importance of injunctions narrows the bargaining range. The narrower range of prices that an implementing firm will offer means that, even where it does bargain, agreement will be less likely. Where rightsholders can be reasonably expected to enforce their patent rights, by contrast, the bargaining range is expanded and agreement is more likely, because the initial cost of negotiating for a license is relatively less than always (or usually) opting for “efficient infringement”; that is, infringement becomes less efficient.

The ultimate tension is not between seeking damages or an injunction, but between whether a firm opts to negotiate or to litigate, while facing the risk of some combination of damages and injunction on the back end.

This reality is *particularly* important in the context of SDOs, where implementers and innovators are in a constant dance both to maximize their own profits as well as to facilitate the product of an incomplete, joint agreement that binds each party. “The seminal example of intentional contractual incompleteness is the F/RAND commitment common in many [SDO’s] IPR policies.”⁴⁵ Permitting one party, through weakened legal doctrine, to circumvent or artificially constrain the bargaining process inappropriately imbalances the careful commercial relationships that should otherwise exist.

In the SEP context, furthermore, it is rarely mentioned that “an implementer’s decision to reject a certifiably F/RAND license and continue to infringe is contrary to the spirit of the F/RAND framework as well.”⁴⁶

⁴⁴ Epstein & Noroozi, *supra* note 6, at 1408.

⁴⁵ Tsai & Wright, *supra* note 22, at 163.

⁴⁶ James Ratliff & Daniel L. Rubinfeld, *The Use and Threat of Injunctions in the RAND Context*, 9 J. COMPETITION L. & ECON. 14 (2013).

Moreover, it is not typically the case that a negotiation process would end with an injunction and a refusal to license, as critics sometimes allege. Rather, the threat of an injunction is important in hastening an infringing implementer to the table and ensuring that protracted litigation to determine the appropriate royalty (which is how such disputes *do* actually end) is costly not only to the patentee, *but also to the infringer*. As James Ratliff and Daniel Rubinfeld explain:

[T]he existence of that threat does not lead to holdup as feared by those who propose that a RAND pledge implies (or should embody) a waiver of seeking injunctive relief. If RAND terms are reached by negotiation, the negotiation is not conducted in the shadow of an injunctive threat but rather in the shadow of knowledge that the court will impose a set of terms if the parties do not reach agreement themselves. The crucial element of this model that substantially diminishes the likelihood that the injunctive threat will have real bite against an implementer willing to license on RAND terms is the assumption that an SEP owner maintains its obligation to offer a RAND license even if its initial offer is challenged by the implementer and, further, even if the court agrees with the SEP owner that its initial offer was indeed RAND. **Thus any implementer that is willing to license on court-certified RAND terms can avoid an injunction by accepting those RAND terms without eschewing any of its challenges to the RAND-ness of the SEP owner's earlier offers.**⁴⁷

Ultimately, this means that an implementer that accepts nominally F/RAND terms need not be an actual “willing licensee,” but instead can gain that designation as a matter of law without ever accepting a royalty rate within the *true* bargaining range that includes the licensor’s valid injunction threat. “[B]y stripping the SEP holder’s right to injunctive relief, [a no-injunction rule] may enable a potential licensee to delay good faith negotiation of a F/RAND license and the patent holder could be forced to accept less than fair market value for the use of the patent.... Undermining this bargaining outcome using antitrust rules runs a significant risk of doing more harm than good.”⁴⁸

For the purposes of this proceeding, the lesson is clear: U.S. policy needs to return to a neutral position in which both parties in a F/RAND negotiation are encouraged

⁴⁷ Ratliff & Rubinfeld, *supra* note 46, at 7 (emphasis added).

⁴⁸ Tsai & Wright, *supra* note 22, at 182.

to reach mutually agreeable terms in arm's length licensing transactions. The effects of *eBay* and its progeny have distorted that bargaining process. Here, the agencies have an important role to play in pressing the need for this change.

IV. Increased Transparency Is No Free Lunch

The agencies' call for comments asks whether increased transparency requirements in the SEP space could make SEP licensing more efficient:

What can the Department of Commerce do to mitigate emergence or facilitate the resolution of FRAND licensing disputes? Can requiring further transparency concerning patent ownership make standard essential patent (SEP) licensing more efficient? What are other impediments to reaching a FRAND license that the Department of Commerce could address through policy or regulation?⁴⁹

But while fostering transparency may appear to be a win-win proposition for all parties in the standardization space, the reality is far more complex. In many instances, inventors are already required to disclose their standard essential patents—and these requirements have ambiguous effects.⁵⁰ Given this, demands for further transparency would almost certainly entail some form of government intervention, such as the creation of SEP registers and government-run essentiality checks, which seek to verify whether the patents that firms declare as standard-essential are truly so.

Unfortunately, these attempts to make SEP-reliant industries more transparent are anything but costless. The EU's draft SEP regulation offers a case in point. The regulation would create a system of government-run essentiality checks and nonbinding royalty arbitrations that seek to make the process easier for implementers. But as ICLE scholars have written, this scheme will prove extremely difficult and costly to

⁴⁹ Call for Comments, *supra* note 1, Question 9.

⁵⁰ See, e.g., Rudi Bekkers, Christian Catalini, Arianna Martinelli, Cesare Righi, and Timothy Simcoe. *Disclosure Rules and Declared Essential Patents*, 52 RESEARCH POLICY, 104618, 3 (2023) ("Thus, allowing blanket disclosure can be efficient if the main purpose of a disclosure policy is to reassure prospective implementers that a license will be available. On the other hand, blanket disclosure shifts search costs from the patent holder (who presumably has a comparative advantage at finding its own essential patents) onto other interested parties, such as prospective licensees who wish to evaluate the scope and value of a firm's dSEPs; other SSO participants seeking to make explicit cost-benefit comparisons of alternative technologies before committing to a standard; and regulators or courts that might use information about relevant dSEPs to determine reasonable royalties.").

operate in practice.⁵¹ Much the same would be true of attempts to introduce similar measures in the United States.

The proposed EU regulation would rely on qualified experts to work as evaluators and conciliators. Evaluators will need specialized knowledge of the particular technological area in which they will conduct essentiality checks. The European Commission estimates that there are about 1,500 experts (650 patent attorneys and 800 patent examiners) qualified to do essentiality checks in the EU.⁵²

The sheer magnitude of the task, however, will require many more evaluators and it is very doubtful that the optimal number of potential qualified experts are even available to join this process. For certain, special arrangements would need to be made with patent offices to grant patent examiners leave to conduct essentiality checks. Each year, evaluators would need to test a random sample of up to 100 SEPs if requested by each SEP owner or an implementer per standard. Thus, the amount of work may exponentially increase depending on how many standards are caught by the regulation.

If 148 FRAND-licensed standards per laptop are to serve as a rough proxy, then we might expect more than 100-200 standards to be checked for essentiality every year. In addition, if SEP owners and implementers regularly use the possibility of testing up to 100 SEPs per standard and per SEP owner, the sheer magnitude of work may exceed the capacity of patent attorneys. Patent attorneys may find it challenging to regularly engage in such high volumes of essentiality checks while also serving other clients. And why should they do it at all unless the rate of pay is at least what they could earn in a patent law firm? To be blunt, the work would not be as much fun as acting for real clients, so the pay would probably have to be even higher to attract applicants.

Consequently, it is very unlikely that the capability even exists to annually perform a large number of essentiality checks of registered SEPs. If the requirements to become an evaluator were relaxed to address this workload, this would cast doubt on the

⁵¹ See Jacob & Nikolic, *supra* note 10.

⁵² See European Commission, Impact Assessment Report Accompanying the Document Proposal for a Regulation of the European Parliament and of the Council on Standard Essential Patents and Amending Regulation (EU) 2017/1001, SWD(2023) 124 final (“Impact Assessment”), at 101.

reliability of the whole system. There is no point in building a battleship unless you are sure you can get a competent crew.

Additionally, the patent attorneys most likely to be familiar with these technologies may well also find themselves with conflicts of interest. They will probably have worked for some SEP owners or implementers. Elaborate rules to avoid such conflicts would need to be implemented to prevent patent attorneys who were, or still are, engaged with certain clients from becoming evaluators of those clients' registered SEPs. The conflicts problem would, of course, apply not just to individual attorneys but to their entire firms.

Conciliators would also need to be experts in the field. They might come from the ranks of retired judges, seasoned former company officials, or experienced lawyers. Conflict-of-interest provisions would also be needed to ensure their independence and impartiality in mandatory FRAND determinations. But the job would, again, have to be sufficiently attractive, both in remuneration and in work content and culture. The Commission has made no investigation as to whether a sufficiently large pool of credible individuals could be found to make the system work.

Of course, there are well-established voluntary systems of conciliators and mediators, some of which are used now to help resolve FRAND disputes. But the proposal adds the idea of compulsory mediation or conciliation. There is scant evidence that either system works in other commercial disputes around the world, and it is unclear why it should be assumed to work here.

In short, it is doubtful that a government-operated scheme of essentiality checks and SEP-royalty arbitrations could reach satisfactory outcomes, as the expertise to do so is lacking and attracting potentially thousands of professionals from the private sector would be too costly. The result is that any government scheme along these lines is unlikely to have the necessary staffing to conduct its mission to the requisite standard. It would thus risk doing more harm than good.

V. SEP Rights and China's 'Cyber Great Power' Ambitions

In their call for comments, the agencies express a desire to protect the United States' leading position in the field of standard development and implementation:

Are there steps that the Department of Commerce can take regarding intellectual property rights policy that will help advance U.S. leadership in standards development and implementation for critical and emerging technologies?⁵³

The agencies essentially ask what active steps they could take to preserve the United States' leading position. This, however, ignores the arguably more important question: What steps should the United States avoid taking? As we explain below, U.S. agencies should be particularly careful not to weaken intellectual-property protection in ways that may, ultimately, favor firms in other jurisdictions, such as China.

Observers often regard intellectual property as merely protecting original creations and inventions, thus boosting investments. But while IP certainly does this, it is important to look beyond this narrow framing. Indeed, by protecting these creations, intellectual-property protection—particularly that of patents—produces beneficial *second-order* effects in several important policy areas.

Consequently, weakening patent protection could have detrimental ramifications that are routinely overlooked by policymakers. This includes giving a leg up to jurisdictions that are heavily geared toward manufacturing, rather than R&D, and specifically to China (with knock-on effects for ongoing political tensions between these two superpowers).

As the USPTO has observed:

Innovation and creative endeavors are indispensable elements that drive economic growth and sustain the competitive edge of the U.S. economy. The last century recorded unprecedented improvements in the health, economic well-being, and overall quality of life for the entire U.S. population. As the world leader in innovation, U.S. companies have relied on intellectual property (IP) as one of the leading tools with which such advances were promoted and realized.⁵⁴

⁵³ Call for Comments, *supra* note 1, Question 10.

⁵⁴ See, e.g., U.S. PATENT OFFICE, INTELLECTUAL PROPERTY AND THE U.S. ECONOMY: 2016 UPDATE (2016), available at <https://www.uspto.gov/sites/default/files/documents/IPandtheUSEconomySept2016.pdf>.

The United States is a world leader in the production and commercialization of IP, and naturally seeks to retain that comparative advantage.⁵⁵ IP and its legal protections will become increasingly important if the United States is to maintain its prominence, especially when dealing with international jurisdictions, like China, that don't offer similar levels of legal protection.⁵⁶ By making it harder for patent holders to obtain injunctions, licensees and implementers gain the advantage in the short term, because they are able to use patented technology without having to engage in negotiations to pay the full market price. In the case of many SEPs—particularly those in the telecommunications sector—a great many patent holders are U.S.-based, while the lion's share of implementers are Chinese. Potential anti-injunction policies may thus amount to a subsidy to Chinese infringers of western technology.

At the same time, China routinely undermines western intellectual-property protections through its industrial policy. The government's stated goal is to promote "fair and reasonable" international rules, but it is clear that China stretches its power over intellectual property around the world by granting "anti-suit injunctions" on behalf of Chinese smartphone makers, designed to curtail enforcement of foreign companies' patent rights.⁵⁷

⁵⁵ Shayerah Ilias Akhtar, Liana Wong & Ian F. Fergusson, *Intellectual Property Rights and International Trade*, at 6 (Congressional Research Service, May 12, 2020), available at <https://crsreports.congress.gov/product/pdf/RI/RL34292> ("Intellectual property generally is viewed as a long-standing strategic driver of U.S. productivity, economic growth, employment, higher wages, and exports. It also is considered a key source of U.S. comparative advantage, such as in innovation and high-technology products. Nearly every industry depends on it for its businesses. Industries that rely on patent protection include the aerospace, automotive, computer, consumer electronics, pharmaceutical, and semiconductor industries.").

⁵⁶ See, e.g., Martina F. Ferracane & Hosuk Lee-Makiyama, *China's Technology Protectionism and Its Non-negotiable Rationales*, ECIPE (Jun. 2017), available at <https://ecipe.org/publications/chinas-technology-protectionism>. Consider that, even for actual citizens of the People's Republic of China, individual rights are legally subordinate to "the interests of the state." Const. of the People's Rep. of China, Art. 51, available at <http://www.npc.gov.cn/englishnpc/constitution2019/201911/1f65146fb6104dd3a2793875d19b5b29.shtml>. One has to imagine that the level of legal protections afforded foreign firms is no better, and surely must be subordinate to the objectives of China's industrial policy, including the goal of leapfrogging the United States in IP production. See, e.g., Karen M. Sutter, "Made in China 2025" *Industrial Policies: Issues for Congress* (Congressional Research Service, Aug. 11, 2020), available at <https://sgp.fas.org/crs/row/IF10964.pdf>.

⁵⁷ See *China Is Becoming More Assertive in International Legal Disputes*, THE ECONOMIST (Sep. 18, 2021), <https://www.economist.com/china/2021/09/18/china-is-becoming-more-assertive-in-international-legal>

In several recent cases, Chinese courts have claimed jurisdiction over F/RAND issues.⁵⁸ In *Oppo v. Sharp*, the Supreme People’s Court of China determined that Chinese courts can set the global terms of what is a fair and reasonable price for a license,⁵⁹ even if that award would be considerably lower than in other jurisdictions. This decision follows *Huawei v. Conversant*, in which a Chinese court for the first time claimed the ability to issue an anti-suit injunction against the Chinese company.⁶⁰

All of this is part of the Chinese government’s larger approach to industrial policy, which seeks to expand Chinese power in international trade negotiations and in global standards bodies.⁶¹ As one Chinese Communist Party official put it: “Standards are the commanding heights, the right to speak, and the right to control. Therefore, the one who obtains the standards gains the world.”⁶² Chinese President Xi Jinping frequently (but only domestically) references China’s “cyber great power” ambitions: “We must accelerate the promotion of China’s international discourse power and rule-making power in cyberspace and make unremitting efforts towards

disputes (“In the past year Chinese courts have issued sweeping orders on behalf of Chinese smartphone-makers that seek to prevent lawsuits against them in other countries over the use of foreign companies’ intellectual property... so that they (rather than foreign courts) can decide how much Chinese firms should pay in royalties to the holders of patents that their products use.”).

⁵⁸ See Matthew Laight, *Shifting landscape in SEP FRAND litigation – 2021 will see hard fought disputes in China and India*, DIGITAL BUSINESS (Dec. 9, 2020), <https://digitalbusiness.law/2020/12/shifting-landscape-in-sep-frand-litigation-2021-will-see-hard-fought-disputes-in-china-and-india>.

⁵⁹ See RPX Corporation, *China: Chinese Courts Can Set Global SEP License Terms, Rules Supreme People’s Court*, MONDAQ (Oct. 21, 2021), <https://www.mondaq.com/china/patent/1120114/chinese-courts-can-set-global-sep-license-terms-rules-supreme-people39s-court>.

⁶⁰ *Id.*

⁶¹ See Rush Doshi, Emily De La Bruyère, Nathan Picarsic, & John Ferguson, *China as a “Cyber Great Power”: Beijing’s Two Voices in Telecommunications*, Brookings Institute Foreign Policy Paper (Apr. 2021) at 16, available at https://www.brookings.edu/wp-content/uploads/2021/04/FP_20210405_china_cyber_power.pdf. (“In March 2018, Beijing launched the China Standards 2035 project, led by the Chinese Academy of Engineering. After a two-year research phase, that project evolved into the National Standardization Development Strategy Research in January 2020. The ‘Main Points of Standardization Work in 2020’ issued by China’s National Standardization Committee in March 2020 outlined intentions to ‘strengthen the interaction between the standardization strategy and major national strategies.’”).

⁶² Quoted in *id.*

the goal of building a cyber great power.”⁶³ Chinese leaders are intentionally pursuing a two-track strategy of taking over standards bodies and focusing on building platforms to create path dependencies that cause others to rely on Chinese technology.⁶⁴ As a Hinrich Foundation Report notes:

Trade and technical standards are inherently interrelated. They are mutually reinforcing. But Beijing treats standard setting, and standards organizations, as competitive domains. This approach risks distorting global trade. **Beijing does not support a neutral architecture where iterative negotiating strives for technical interoperability. Instead, Beijing promotes an architecture that bolsters and cements Chinese competitiveness.** Due to China’s size and centralization, the consequences of this approach will reverberate across the international system. Given the nature of emerging technology and standards, the consequences will endure.⁶⁵

Insufficient protections for intellectual property will hasten China’s objective of dominating collaborative standard development in the medium- to long-term.⁶⁶ U.S. entrepreneurs are able to engage in the types of research and development that drive innovation because they can monetize those innovations. Reducing the returns for patents that eventually become standards will lead to less investment in those technologies. It will also harm the competitive position of American companies that

⁶³ *Id.* “The phrase ‘cyber great power’ is a key concept guiding Chinese strategy in telecommunications as well as IT more broadly. It appears in the title of almost every major speech by President Xi Jinping on China’s telecommunications and network strategy aimed at a domestic audience since 2014. But the phrase is rarely found in messaging aimed at external foreign audiences, appearing only once in six years of remarks by Foreign Ministry spokespersons. **This suggests that Beijing intentionally dilutes discussions of its ambitions in order not to alarm foreign audiences.**” *Id.* at 3 (emphasis added).

⁶⁴ See Danny Russel & Blake Berger, *Is China Stacking the Technology Deck by Setting International Standards?*, THE DIPLOMAT (Dec. 2, 2021), <https://thediplomat.com/2021/12/is-china-stacking-the-technology-deck-by-setting-international-standards>.

⁶⁵ Emily de la Bruyere, *China’s Quest to Shape the World Through Standards Setting*, HINRICH FOUNDATION (Jul. 2021), at 11 (emphasis added), available at <https://www.hinrichfoundation.com/research/article/tech/china-quest-to-shape-the-world-through-standards-setting>.

⁶⁶ Although China is currently under-represented in most SDOs, that is already rapidly changing. See Justus Baron & Olya Kanevskaia, *Global Competition for Leadership Positions in Standards Development Organizations*, Working Paper (Mar. 31, 2021), available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3818143. As Baron and Kanevskaia note, “[t]he surge in the number of leadership positions held by Huawei... [have] raised concerns that... Huawei [may] gain an undue competitive advantage over Western commercial and strategic interests.” *Id.* at 2.

refrain from collaborating because the benefits don't outweigh the costs, including "missing the opportunity to steer a standard in the manner most compatible with a company's product offerings, falling behind competitors, or failing to head off broad adoption of a second standard...."⁶⁷

Simultaneously, this will engender a switch to greater reliance on proprietary, closed standards rather than collaborative, open standards. Proprietary standards (and competition among those standards) are sometimes the most efficient outcome: for instance, when the costs of interoperability outweigh the benefits. The same cannot be said, however, for government policies that effectively *coerce* firms into adopting proprietary standards by raising the relative costs of the collaborative standard-development process. In other words, there are social costs when firms are artificially prevented from taking part in collaborative standard setting and forced instead to opt for proprietary standards.

Yet this is precisely what will happen to U.S. firms if IP rights are not sufficiently enforceable. Indeed, as explained above, collaborative standardization is an important driver of growth.⁶⁸ It is crucial that governments do not needlessly undermine these benefits by preventing American firms from competing effectively in these international markets.

These harmful consequences are magnified in the context of the global technology landscape, and in light of China's strategic effort to shape international technology standards.⁶⁹ With U.S. firms systematically deterred from participating in the development of open technology standards, Chinese companies, directed by their

⁶⁷ Updegrove, *supra* note 18.

⁶⁸ See *id.* at 30-36 (surveying the economic benefits from standardization). See also Soon-Yong Choi & Andrew B. Whinston, *Benefits and Requirements for Interoperability in the Electronic Marketplace*, 2 TECH. IN SOC'Y 33, 33 (2000) ("Economic benefits of interoperability result in lowered production or transaction costs typically utilizing standardized parts or automated processes. In the networked economy, the need for interoperability extends into an entire commercial processes, market organizations and products.").

⁶⁹ Anna Gross, Madhumita Murgia & Yuan Yang, *Chinese Tech Groups Shaping UN Facial Recognition Standards*, FINANCIAL TIMES (Dec. 1, 2019), <https://www.ft.com/content/c3555a3c-0d3e-11ea-b2d6-9bf4d1957a67> ("The drive to shape international standards... reflects longstanding concerns that Chinese representatives were not at the table to help set the rules of the game for the global Internet,' the authors of the New America report wrote. 'The Chinese government wants to make sure that this does not happen in other ICT spheres, now that China has become a technology power with a sizeable market and leading technology companies, including in AI.'").

government authorities, will gain significant control of the technologies that will underpin tomorrow's digital goods and services. The consequences are potentially catastrophic:

The effect of [China's] approach goes far beyond competitive commercial advantage. The export of Chinese surveillance and censorship technology provides authoritarian governments with new tools of repression. Governments that seek to control their citizens' access to the internet are supportive of Beijing's "cyber sovereignty" paradigm, which can lead to a balkanized internet riddled with incompatibilities that impede international commerce and slow technological innovation. And when cyber sovereignty is paired with Beijing's push to redefine human rights as the "collective" rights of society as defined by the state, authoritarian governments gain a shield of impunity for violations of universal norms.⁷⁰

With Chinese authorities joining standardization bodies and increasingly claiming jurisdiction over F/RAND disputes, there should be careful reevaluation of the ways weakened IP protection would further hamper the U.S. position as a leader in intellectual property and innovation.

To return to the framing question, yes, there are steps the agencies could take to secure and promote U.S. leadership in intellectual-property-intensive industries. The first step, as noted throughout this comment, is to refrain from promoting policies that unnecessarily imbalance the negotiation process between innovators and implementers. The second step is twofold. First, work with trustworthy partners, like the EU, to make sure that U.S. Allies' IP policies are in alignment with and are geared toward promoting neutral standards that allow tech industries to thrive. The second part is to advocate for trade policies that dissuade countries like China from using their domestic courts and regulatory agencies as protectionist entities designed simply to advance China's national interests.

VI. Competition Concerns with Aggregate Royalties

In the call for comments, the agencies ask:

⁷⁰ Russel & Berger, *supra* note 64.

Do policy solutions that would require SEP holders to agree collectively on rates or have parties rely on joint negotiation to reach FRAND license agreements with SEP holders create legal risks? Are there other concerns with these solutions?⁷¹

A host of competition concerns are implicated in this question, in that it requires SEP owners to negotiate and ultimately agree on aggregate royalty rates for standards. This may require SEP owners to exchange sensitive commercial information relevant to establishing the value that devices derive from using the standardized technology. Competition-sensitive data could include projected revenues on a per-unit basis following the incorporation of connectivity in the end products, the number of end products sold on the market, actual and forecast sales, and price projections.⁷² The competitive dangers inherent in this process are more serious for those vertically integrated SEP owners, who simultaneously hold SEPs and manufacture standard-implementing products. They would effectively agree to set the costs (royalties) for their inputs and exchange data about their downstream sales.

Jointly negotiated rates could therefore potentially run afoul of antitrust laws that prohibit companies from engaging in price-fixing and collusion. Requirements to jointly negotiate aggregate royalty rates should thus be accompanied by safeguards and guidance that ensure such negotiations comply with antitrust law. An example would be royalty-rate negotiations in patent pools, where pool administrators take a mediatory role, collecting and protecting confidential information from pool members.⁷³

It is also unclear whether these joint royalty negotiations would be of much use to either inventors or implementers. For example, the EU has proposed introducing an aggregate notification regulation along these lines. The regulation appears to allow multiple groups of SEP owners to jointly notify their views concerning the appropriate royalties for a given technology. This could add even more confusion for standard implementers. For example, some SEP owners could announce an aggregate rate of

⁷¹ Request for Comments, *supra* note 1, Question 11.

⁷² Igor Nikolic, *Licensing Negotiations Groups for SEPs: Collusive Technology Buyers Arrangements? Their Pitfalls and Reasonable Alternatives*, LES NOUVELLES 350 (2021).

⁷³ Hector Axel Contreras & Julia Brito, *Patent Pools: A Practical Perspective – Part II*, LES NOUVELLES 39 (2022).

\$10 per product, another 5% of the end-product price, while a third group would prefer a lower \$1 per-product rate.

Moreover, it is unclear how joint aggregate royalty-rate notifications would change the existing practice of unilateral announcement of licensing terms. Many SEP owners already publicly announce their royalty programs in advance. To be on the safe side, SEP owners may simply notify their maximum preference, knowing that negotiations would lead to different prices depending on the unique details of various licensees. As a result, aggregate royalty rates may not produce meaningful data points.

Nonbinding expert opinions on global aggregate royalty rates could also add to the confusion. Implementers would likely initiate the process, which would then proceed in parallel with SEP owners' joint notifications of aggregate rates. All these differing and possibly conflicting estimates might lead to even greater uncertainty. Moreover, if those providing nonbinding opinions are not universally regarded as “experts,” the parties are unlikely to respect such opinions.

Aggregate royalty notifications and nonbinding opinions might be used in the top-down method for FRAND-royalty determinations. A top-down method provides that the SEP owner should receive a proportional share of a standard's total aggregate royalty. It requires establishing a cumulative royalty for a standard and then calculating the share of the total royalty for an individual SEP owner. This may be the reason for having aggregate royalty-rate notifications and opinions. At the same time, essentiality checks would still be needed to filter out which patents are truly essential, and to assess each individual SEP owner's share.

We caution strongly against relying too heavily on the top-down approach for FRAND-royalty determinations. It is not used in commercial-licensing negotiations, and courts have frequently rejected its application. Industry practice is to use comparable licensing agreements. The top-down approach was applied in *Unwired Planet v Huawei* only as a cross-check for the rates derived from comparable agreements.⁷⁴ *TCL v Ericsson* relied on this method, but was vacated on appeal.⁷⁵ The most recent *Interdigital v Lenovo* judgment considered and rejected its use, finding “no value in

⁷⁴ *Unwired Planet v Huawei* [2017] EWHC 711 (Pat).

⁷⁵ *TCL v Ericsson*, Case No. 8:14-cv-003410JVS-DFM (C.D. Cal. 2018); *TCL v Ericsson*, 943 F.3d 1360 (Fed. Cir. 2019)

Interdigital's Top-Down cross-check in any of its guises."⁷⁶ Moreover, the top-down approach, as currently applied, relies solely on patent counting. It fails to consider that not every patent is of equal value, nor that some patents may be invalid or not infringed by a specific device.

In short, there are important legal and practical obstacles to the joint negotiation of aggregate royalty rates. Legal mandates to conduct such negotiations would thus be of dubious added value to players in standard-reliant industries.

⁷⁶ *Interdigital v Lenovo* [2023] EWHC 539 (Pat) 733.