The Antitrust Economics Treatment of Standard Essential Patents—the EU v the US

DANIEL L. RUBINFELD*

University of California, Berkeley and New York University

Abstract

This paper discusses antitrust economics issues underlying the EU and US treatment of the balance between the rights of the developers of standard essential patent technologies technology—the patentees—and the rights of the implementers of the patents that drive the standard-setting organization. Currently, the rights of patentees and implementers are seen very differently by the US enforcement agencies and by the EU Competition Directorate. Absent an unlikely convergence, enforcement efforts are likely to be in conflict. Moreover, the resolution of this conflict could lead to a race with an uncertain outcome—it could be a race to the bottom or a race to the top. Following a brief overview of the antitrust economics issues surrounding the treatment of standard essential patents (SEPs), the paper discusses the differing perspectives of the EU and the US It concludes with commentary as to where the current tension between the EU and the US is likely to lead.

I. Introduction

The role of standard setting organizations (SSOs) in the development of modern technology is and will continue to be central in our economy. The continuing growth of SSOs has, in turn, put into the forefront the treatment of standard essential patents (SEPs). At a broad conceptual level, it is well understood that patented technology that is essential to the functioning of a standard-setting organization should be licensed at a fair, reasonable, and non-discriminatory rate (FRAND). But, controversy continues with respect to several core issues: (1) How should a FRAND rate be determined? (2) Should injunctions to issued and enforced to support the rights of patentees? (3) What is the appropriate balance between the rights of the developers of the technology and the rights of the implementers of the patents that drive the SSO standards?

This essay focuses on antitrust enforcement issues that are driven by the third question. At this moment in time, the tension between the rights of the patentees and the rights of the implementers is being seen very differently by the US enforcement agencies and by the EU

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* Rubinfeld is Robert L. Bridges Professor of Law and Professor of Economics Emeritus, U.C. Berkeley and Professor of Law, NYU. He has served as Deputy Assistant Attorney General for Antitrust in the US Justice Department in 1997 and 1998 and as the President of the American Law and Economics Association.

Competition Directorate. Absent an unlikely convergence, enforcement efforts are likely to be in conflict. Furthermore, the resolution of this conflict could lead to a race, with other enforcement agencies choosing whether to follow the lead of the EU or the lead of the US. Whether that race will turn out to be a race to the bottom or to the top is unclear at this time.

The essay is organized as follows. Section II offers a brief overview of the antitrust economics issues surrounding the treatment of SEPs. Section III describes the perspective of the EU, while Section IV does the same for the US. In concluding, Section V offers brief commentary as to where the current tension between the EU and the US is likely to take us.

II. SEPs and Licensing Practices—the Framework

A commitment to license a SEP obligates the SEP holder—the patentee—to notify the implementer of its technology of its infringement and to offer a license at a fair, reasonable, and non-discriminatory rate. As with any bargaining situation, whether and under what conditions a contractual agreement will be reached is uncertain. From the perspective of the patentee, a good-faith FRAND offer can be made at any level of the supply chain and it need not be updated if the implementer rejects the initial offer.[1] Assuming for the moment that such an offer is made, the implementer of the infringing technology has no legal obligation to accept the offer. It might reject the offer because it believes that the offer is not FRAND, or it might do so knowing that the offer is FRAND, in the hope of negotiating a more suitable royalty arrangement. In either case, given the lack of clarity as to what indeed a FRAND rate, it would not be surprising to find that the underlying contractual dispute will end up in court.

The failure to agree on a FRAND rate is likely to be viewed differently by the patentee and the implementer. From the point of view of the patentee, the failure to accept a valid FRAND offer creates a "holdout" problem, with the implementer (and potential licensee) utilizing its position to engage in ex-post contract renegotiation in an effort to extract bargaining surplus from the implementer. From the point of view of the implementer, the failure to make a valid FRAND

[1] *See* J. Gregory Sidak, *Comments on the Japan Guidelines for Licensing Negotiations Involving Standard-Essential Patents* (Nov. 1, 2017) for a discussion of the contractual legal obligations of the patent holder.

offers creates a "holdup" problem, with the SEP holder utilizing its position as a patent holder to extract bargaining surplus from the potential licensee.

The prospect that SEP holders will take advantage of the fact that implementers will become locked into the standard over time is a real one. The possibility of "lock-in" means that patent holders are in a position to obtain more than the true ex-ante value of their patents, the market value for the patented technologies.[2] Which characterization—*holdup* by patentees or *holdout* by implementers—is more appropriate is likely to vary from case to case; indeed, I am not aware of any hard empirical evidence as to which is more common.

To best evaluate the antitrust implications of holdouts and holdups, an appropriate and useful starting point is a contracts perspective. The literature on incomplete contracts tells us that a lack of a clear standard can diminish the incentive of the SEP intellectual property (IP) holder to invest in innovative activities that are specific to the successful formation of the SSO. In essence, the vulnerability to holdouts by implementers can change the calculus of the potential SEP holder.[3] If the potential threat of holdup does discourage innovative activity, the possibility of resulting inefficiencies becomes real.

However, once we take into account the fact that implementers have the potential to generate substantial downstream value and are often innovators, holdups by patentees can also create economic inefficiencies. Here, the lack of a clear standard opens up the possibility that the patentee will not make a valid FRAND offer. This, in turn, will diminish the incentive of the implementer to engage in R&D and/or make investments in anticipation of downstream production.[4]

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[2] A. Douglas Melamed & Carl Shapiro, *How Antitrust Law Can Make Frand Commitments More Effective*, 127 Yale Law Review, No. 7 (2018)(stressing the importance of the ex post monopoly power that can generate excessive patent royalties. They point, in particular, to the fact that negotiations between patentees and implementers generally occur after the SEP technology has been used and infringes one or more patents).

[3] Giorgio Corda & Antonio Nicita, *That's What FRANDs are For: The Antitrust Problems of the Patent Holdup Problem*, CPI ANTITRUST CHRON. (Nov. 2017) offer a thoughtful discussion of this issue.

[4] Because FRAND terms cannot be fully specified as the SSO is created, the possibility of FRAND-related bargaining breakdowns is inevitable.

There is clearly value to viewing individual disputes as to whether offers are FRAND as contracts disputes. However, once one sees the holdup-holdout issues more broadly in the context of the important roles played by SSOs as drivers of innovation, it makes sense for antitrust law to play an essential role. This is particularly true with respect to holdups, as the American Antitrust Institute has spelled out:

> First, patentees can acquire monopoly power through deception rather than "as a consequence of superior product, business acumen, or historical accident and inflict serious harm on consumers. Second, vertically integrated companies can use patent holdup to raise the cost of rivals that are locked into the standard and thereby reduce competition in the downstream market. Third, holdup, by diluting the credibility of a [F]RAND commitment, hinders informed comparisons of cost and technical performance of alternative technologies at the standard selection stage. Last, the threat of holdup can, in general, deter the formation of SSOs and participation in them.[5]

There are potential holdout concerns as well, if, for example, implementers were to agree among themselves to refuse to accept legitimate FRAND offers. It is conceivable, therefore, that the threat of holdouts will also deter the formation of SSOs with ultimate harm to the competitive process and to innovation.

In evaluating the economic and antitrust implications of the treatment of SEPs, it is essential that one think deeply about the following holdup and holdout issues: (1) Is one more likely to be prevalent than the other? (2) Are the efficiency implications of each similar or are there important differences? (3) What is the appropriate antitrust treatment of the FRAND obligation?

Before moving on to an evaluation of the EU and US antitrust perspectives, it is worth noting that viewing the lack of a license agreement from a contracts perspective is likely to take the court in a different direction than will a court or enforcement authority that is concerned with antitrust. The former will lead to a focus on the relative bargaining power of the two parties,

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[5] Albert A. Foer & Sandeep Vaheesan, *Request for Joint Enforcement Guidelines of the Patent Policies of Standard Setting Organizations*, AAI, 1 (2013), https://www.antitrustinstitute.org/sites/default/files/Request%20for%20Joint%20Enforcement%20Guidelines%20on%20the%20Patent%20Policies%20of%20Standard%20Setting%20Organizations.pdf.

whereas the latter will focus on the broader innovation implications of the failure to achieve a successful bargaining outcome.

While it is tempting to view the holdup and holdout problems as symmetric, doing so could be a mistake. As Melamed and Shapiro point out, there are three inefficiencies that flow from holdups: (1) Excessive pricing creates higher prices that products that use SEP technologies; (2) Excessive pricing amounts to a tax that discourages follow-on innovation; and (3) The prospect of monopoly pricing creates an incentive for firms to overinvest in finding technologies that might become SEPs.[6]

As noted previously, holdouts (or as some call-it "reverse holdups") can also create inefficiencies if they lead to underinvestment in SEP-related technologies. However, the two situations are not symmetric, since the bargaining between the patentee and the implementer occurs post-infringement. This makes the adverse effects of ex post opportunism (holdup) a serious issue. The likelihood of a similar holdout problem does not seem as compelling. As long as a holdout delays rather than ends the possibility of a license agreement being reached, it is difficult to see why a holdout would have a substantial adverse effect on the decision to invest in a technology that will create a SEP that will become part of a successful SSO.

Of course, the balance of bargaining power would be different if the FRAND bargaining occurred prior to the formation of the SSO. In this case, the potential for lock-in and ex post opportunism by patentees would be diminished. Moreover, the likelihood that negotiations would lead to patentees obtaining a reasonable royalty that reflected the true value of the IP would be greatly increased. But, this is not the case. And, as Melamed and Shapiro point out, "patent holders are as a practice matter generally able to recover more than the ex-ante value of the patents when implementers are locked in; and negotiations in the shadow of litigation thus tend to result in royalties in excess or the ex-ante or market value of the patented technology."[7]

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[6] Melamed & Shapiro, *supra* note 2, at 2114-2115.

[7] Melamed & Shapiro, *supra* note 2, at 2114. The authors also point to flaws in the claim that SEP holders are locked-in because they have incurred substantial R&D expenses. But, these risky expenditures are part of firms' broader investment strategies and do not bear directly on the formation or lack of formation of SSOs.

It is, of course, the case that clarity by the courts as to how one should determine a FRAND rate would reduce the likelihood of both holdups and holdouts. But, there is compelling evidence in the economics literature supporting the adverse implication of ex post opportunism flowing from holdup, whereas there is as yet a lack of equivalent evidence with respect to holdout.[8]

III. The EU Perspective

Like the US, the EU Commission's Horizontal Guidelines (Guidelines) do not directly confront SEP issues. But the Guidelines do suggest strongly that patent ownership, which would include SEPs, does not necessarily convey market power. The obvious implication for antitrust is that proof of dominance should be determined on a case-by-case basis. Two recent examples, one in the UK and one in Germany, illustrate the value of a case-sensitive approach.[9] They make it clear that the extent of market power will depend, among things, on the number of SEPs in a standard, the countervailing market power of implementers, and the nature of the FRAND commitment.

Given uncertainty about the extent of market power, it is not surprising that the European Commission would want to tackle questions relating to the relative bargaining power of patentees and implementers. The European Commission's activity with respect to the treatment of SEPs is highlighted by the 2017 Communication to the Parliament, the Council, and the European Economic and Social Committee. The report shows a strong concern for the ability of implementers to utilize SEPs. Its recommendation for increased transparency on SEPs exposure is likely to diminish the magnitude of any holdup problems. More importantly, the Commission makes it clear that the FRAND rate "should not include any element resulting from the decision to include the technology of the standard."[10] Furthermore, the FRAND value "should be

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[8] *Id.* at 6–8. For one counterexample, *see* Richard Epstein & Kayvan Noroozi, *Why Incentives for 'Patent Holdout' Threaten to Dismantle FRAND, and Why It Matters*, 32 BERKELEY TECH. L. J. (2018), 1381-1482.

[9] *See* Unwired Planet International Ltd. v. Huawei Technologies Co. Ltd. & Anor, EWHC 1304 (Pat) (June 7, 2017); Landgerich 8 Dusseldorf, 26.3.2015, 4b O 140/13.

[10] European Commission, *Communication from the Commission to the Institutions on Setting Out the EU Approach to Standard Essential Patents*, 6 (2017), https://ec.europa.eu/docsroom/documents/26583.

irrespective of the market success of the product which is unrelated to the patented technology."[11]

Support for implementers came in part from a July 16, 2015 decision of the Court of Justice in the *Huawei* case.[12] In laying out obligations to both sides of a SEP licensing negotiation, the Court suggested that SEP holders should not use injunctions against willing licensees. As Jim Ratliff and I have suggested, this strong position not only undercuts the bargaining power of the patentees, it also diminishes the likelihood that a licensing agreement will be reached.[13]
That holdup is the core issue for the Court is made abundantly clear when the Court notes that the amount (the FRAND rate) "should be fixed at a level that discourages patent holdup strategies.[14] Moreover, portfolios should not include competing technologies and only those complementary technologies if necessary.[15]

Corda and Nicita point to an important change in EU policy made evident in the *Huawei* case. Unlike prior cases such as *Motorola* [16]and *Samsung* [17], the EC law has moved from the protection of patents to a concern for the protection of the outcome of the standardization process.[18] In effect, the EC has pushed hard for remedies that encourage solutions to the bilateral bargaining process that underlies every SEP FRAND situation.

For Corda and Nicita, eliminating the use of an injunctive remedy generates substantial ex post bargaining power for the implementers. In theory at least, the implementer can make a "take it or leave it" offer and, if the contract negotiations fail, may still have access to the SEP technology. The latter claim is likely overly strong, but the shift in bargaining power is abundantly clear.[19]

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[11] *Id.* at 7.
[12] Huawei Technology Co., Ltd v. ZTE Corp., ZTE Deutschland GmbH (Case D-170/13, EU:C:2015:477).
[13] James Ratliff and Daniel L. Rubinfeld, *The Use and Threat of Injunctions in the RAND Context*, 9(1) Journal of Competition Law and Economics, March (2013), 1-22.
[14] European Commission, *supra* note 11, at 10.
[15] *Id.* at 11.
[16] EU Commission, Motorola—Enforcement of GPRS Standard Essential Patents, Case AT. 3998a5 (2014).
[17] EU Commission, Samsung—Enforcement of UMTS Standard Essential Patents, AT. 39939 (2014).
[18] Corda & Nicita, *supra* note 3, at 3.
[19] *Id.*

To conclude, the EU perspective takes into account the fact that both the potential patentees and the implementers are potential innovators as well as adaptors of technology.[20] To achieve the appropriate balance between the two, the bargaining process must give reasonable weight to the concerns of the implementers as well as the patent holders. However, while both holdup and holdout are potential problem, the EU has given greater emphasis to the potential harms caused by patent owner holdup rather than implementer holdout.

IV. The US Perspective

Until relatively recently (the beginning of the Trump administration), the US antitrust authorities had been relatively silent on SEP FRAND issues. Strikingly, the updated DOJ/FTC IP Licensing Guidelines continued to stress the importance of innovation, but in sharp contrast to the corresponding EU Guidelines, failed to discuss SEPs.[21] This despite the urging of the American Antitrust Institute and many others.[22] To be fair, the US Guidelines do make a number of points that could readily be applied to SEPs. First, the ownership of IP does not necessarily convey market power. Second, licensing is generally pro-competitive and if analyzed from an antitrust perspective should be subject to the rule of reason.[23] Third, unilateral refusals to deal are not necessary anticompetitive.[24]

Moving back in time, the FTC did release a largely descriptive study on Patent Assertion Entities (PAEs), but the study avoided making any specific policy recommendations vis-à-vis SEPs. Interestingly, it was earlier in the Obama administration that the agencies did comment on SEP-FRAND issues. In January 2013, the DOJ and the Patent and Trademark Office (PTO) issued a "Policy Statement on Remedies for SEPs Subject to Voluntary FRAND Commitments,"[25] but avoided direct commentary on the holdout-holdup issues. Other than a push by some for the

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[20] *Qualcomm* is an interesting case study because it is both a patent holder and an implementer.
[21] DOJ/FTC IP Guidelines (Jan. 12, 2017).
[22] Foer & Vaheesan, *supra* note 5, at 12.
[23] This is consistent with the Court's decision in *Leegin Creative Leather Products, Inc. v. PSKS, Inc.*, 551 US 877 (2007).
[24] This is consistent with the Court's decision in *Verizon Communications v. Law Offices of Curtis V. Trinko*, LLP (02-682) 540 US 398 (2004), 305 F.3d 89, reversed and remanded.
[25] DEP'T OF JUSTICE & PATENT AND TRADEMARK OFFICE, POLICY STATEMENT ON Remedies for Standards-Essential Patents Subjet to Voluntary F/RAND Commitments (Jan. 8, 2013), https://www.justice.gov/sites/default/files/atr/legacy/2014/09/18/290994.pdf.

Guidelines to confront the SEP-FRAND issues,[26] it was the American Antitrust Institute that took on the holdup problem directly, arguing that a threat to enforce a SEP against a user of the patented technology in violation of a FRAND commitment can be a Section 2 violation.[27]

It is this backdrop that makes the current positions of those involved in the enforcement process so striking. First, Assistant Attorney General Makan Delrahim has expressed a concern that implementers might initially collectively holdout on reaching agreements with patentees in order to ultimately impose anticompetitive licensing terms, a potential violation of Section 1 of the Sherman Act.[28] Explaining that enforcement has historically undervalued the incentives for investors, in his speech AAG Delrahim expresses a reluctance to pursue antitrust refusals to deal relating to SEPs under Section 2 of the Sherman Act, and further suggests that unilateral refusals to license should be per se lawful. For Delrahim, holdouts by implementers are a more serious risk than holdups by innovators. Finally, he spells out a related concern about the licensing practices of patentees. In contrast to the European Commission, AAG Delrahim's concern for the position of patent holders is evidenced by his support for the extensive use of injunctions, claiming that a patent holder cannot violate the antitrust laws by seeking an injunction. Furthermore, AAG Delrahim has expressed a concern that the implementers have too much bargaining power. Finally, while this author and others have suggested the possibility of a rule that requires royalties to be assessed on the smallest saleable patent-practicing unit ("SSPPU"), Delrahim claims that requiring an SSPPU may itself warrant investigation by the antitrust authority.

With respect to the Federal Trade Commission, Acting Chairman of the FTC, Maureen K. Ohlhausen went out of her way in 2016 to express strong support for the rights of patent owners, emphasizing the importance that patents play with respect to consumer-beneficial innovation. At

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[26] Letter from Richard Gilbert, Joseph Farrell, & Carl Shapiro to the Federal Trade Commission and the Antitrust Division of the US Department of Justice Concerning the Proposed Update of the DOJ/FTC US IP Licensing Guidelines (Sept. 7, 2016).
[27] Foer & Vaheesan, *supra* note 5.
[28] Makan Delrahim, Remarks at the USC Gould School of Law's Center for Transactional Lawand Business (November 10, 2017), https://www.justice.gov/opa/speech/assistant-attorney-general-makan-delrahim-delivers-remarks-usc-gould-school-laws-center.

the same time, she mentions in passing opposition to the view that "unfair high royalties" are illegal under the antitrust laws.[29]

A commentary by Douglas H. Ginsburg and Koren W. Wong-Ervin has also emphasized the holdout problem and the importance of innovation.[30] In reflecting on AAG Delrahim's speech, they point to the sharp contrast between Delrahim's views and those expressed in the DOJ's 23015 Business Review Letter to the Institute of Electrical and Electronics Engineers (IEEE) with respect to amendments to its intellectual property rights policy.[31] They make it clear that AAG Delrahim has rejected the view that holdup by patent holders is a widespread problem. Moreover, AAG Delrahim has pointed out that shifts in bargaining leverage toward implementers of new technologies (acting together) can undermine incentives to innovate. In sum, Delrahim suggests an asymmetry in the holdup-holdout problem, but an asymmetry that penalizes patentees rather than an earlier view that supported the converse asymmetry.

AAG Delharim recently reiterated these views in his February 21, 2018 remarks to College of Europe:

> I worry that we have strayed too far in the direction of accommodating the concerns of technology licensees who participate in standard setting bodies, very likely at the risk of undermining incentives for the creation of new and innovative technologies . . . . The dueling interests of innovator and implementers are always in tension, but the tension is best resolved through free market competition and bargaining. And that bargaining process works best when standard setting bodies respect the intellectual property rights of technology innovators, including the very important right to exclude.[32]

V. The Tension between the EU and the US

[29] Her citation to the Korean Fair Trade Commission's "Review guidelines on Unfair Exercise of Intellectual Property Rights" (March 30, 2016) is particularly noteworthy.

[30] Douglas H. Ginsburg & Koren Wong-Ervin, *The Department of Justice's Long-Awaited and Much Needed Course-Correction on FRAND-Assured Standard-Essential Patents*, GEORGE MASON L. & ECON. RESEARCH PAPER NO. 17–47 (2017).

[31] Letter from Renata Hesse, Acting Assistant Att'y Gen., US Dep't of Justice, to Michael S. Lindsay, Esq., Dorsey & Whitney LLP (Feb. 2, 2015), https://www.justice.gov/sites/defaultfiles/atr/legacy/2015/02/02/311470.pdf.

[32] *Assistant Attorney General Makan Delrahim Delivers Remarks at the College of Europe in Brussels*, DEP'T OF JUSTICE (Feb. 21, 2018), https://www.justice.gov/opa/speech/assistant-attorney-general-makan-delrahim-delivers-remarks-college-europe-brussels.

There is a clear and significant tension between the US and the EU with respect to the treatment of SEPs. For several years now, the EU has emphasized the holdup problem and the potential harm to implementers, in the process putting in place limitations on the bargaining power of SEP holders. The EU has also pushed for limitations on the use of injunctive remedies by patent holders and has suggested the value of the issuing licenses on the smallest saleable patentable unit. In contrast, under the Trump administration, there has been an announced defense of the bargaining power of patent holders and a concern for holdouts by implementers. The US has emphasized that there is role for the use of injunctions. Moreover, the US suggests that the SEP should be able to choose the point in the supply chain at which to license.

One can debate, as many have, the substantive merits of the positions staked out by the enforcement authorities. I, for one, have yet to see empirical evidence that counters the smallest saleable patent practicing unit principle (it could, in theory, lead to overpayments by licensees). And, as explained earlier, if there is asymmetric bargaining power, it seems reasonable to believe that the power lies in the hands of the patent owners. This is turn supports the concerns expressed by some commentators for the need to use contract law or antitrust law to give some balance of power to the implementers.

I have a further concern, one whose implications may dwarf the bargaining power issue. With the EU and the US staking out different policy positions, two implications flow from the continuation of these important differences. First, forum shopping has been and will continue to be prevalent, for obvious reasons. This has clearly been borne out in the smartphone wars, most directly with respect to litigation involving Apple, Samsung, and Qualcomm, among others.[33]

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[33] There has been a continuing battle with respect to the three most significant smartphone operating systems, Microsoft (Windows OS), Apple (iOS), and Google (android OS). For an early discussion, *see* Michael A. Carrier, *A Roadmap to the Smartphone Patent Wars and FRAND Licensing*, 2 CPI ANTITRUST CHRON. (2012). For a recent discussion, *see* Daniel L. Rubinfeld, *IP Privateering in the Market for Desktop and Mobile Operating Systems*, *33* BERKELEY HIGH TECH. L. J. (2018), 89-136. There have also been battles with respect to the core baseband chips, with Samsung, Intel, and Qualcomm among the combatants. In January 2018, Samsung and Qualcomm entered into a cross-licensing arrangement that ended their legal battles in multiple countries. *See, e.g.*, Stephen Nellis, "With Samsung Deal Qualcomm Doubles Down on Licensing Practices," REUTERS (Jan. 31, 2018), https://www.reuters.com/article/us-qualcomm-samsung/with-samsung-deal-qualcomm-doubles-down-on-licensing-practices-idUSKBN1FL3NL.

Second, the EU—US differences are likely to lead to a policy race, with the enforcement authorities of many nations choosing to follow the lead of either the US or the EU.

History suggests that the EU is likely to win such a race. For one thing, the EU competition laws have been closely followed by most other national enforcement authorities. For another, the more aggressive EU position on the treatment of dominant firms (Article 102), is likely to be more appealing than the less aggressive (but more satisfying intellectually) treatment of Section 2 of the Sherman Act and/or FTC Act Section 5 by the US courts and enforcement agencies. Whether any such race will be seen as a race to the bottom or a race to the top remains unclear at this time. But, races of this sort in the antitrust enforcement world are generally costly and inefficiency-generating. Policy convergence avoids costly races, reduces transactions and litigation costs, reduces forum shopping, and generates clear incentives for both patent owners and licensees. Policy convergence seems unlikely in the short run, but it cannot be ruled out, especially in light of the FTC/DOJ revised Antitrust Guidelines for International Enforcement and Cooperation,[34] which encourages case cooperation.

The next five to ten years will be highly informative with respect to these fundamental policy issues. The outcomes are far from clear. We should all look forward to watching, monitoring, and analyzing the worlds of enforcement and litigation relating to SEPs and SSOs during this period.

[34] DEP'T OF JUSTICE & FEDERAL TRADE COMM'N, ANTITRUST GUIDELIENS FOR INTERNATIONAL ENFORCEMENT AND COOPERATION (2017), https://www.justice.gov/atr/internationalguidelines/download.