



LEADERSHIP **IP**

DISCUSS. DEBATE. UNITE. LEAD.

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I. INTRODUCTION

This year's annual IP Leadership conference in Washington, D.C. brought together judges, policy makers, scholars, and experts from around the world to debate and explore critical issues at the forefront of intellectual property ("IP") and antitrust policy.² IP Leadership 2018 began with the broad recognition of the critical importance of 5G/IoT technologies in enabling the Fourth Industrial Revolution, and the topics throughout the day explored the IP and antitrust policies needed to ensure its success. The panels and the keynote addresses by Congressman Steve Stivers and Department of Justice Antitrust Division head Makan Delrahim covered the recent developments related to the following:

- The impact of recent decisions from the U.S. Supreme Court restricting patent eligible subject matter and potentially harming entrepreneurs and social welfare, and the impact of high patent invalidity rates at the U.S. Patent and Trademark Office's ("U.S. PTO") Patent Trial and Appeal Board ("PTAB"), potentially making efficient infringement a widespread practice. Together, these concerns have led to the introduction of the STRONGER Patents Act in the U.S. Congress.
- Antitrust concerns with concerted action (e.g. seller or buyer cartels) in the development of standards-development organization ("SDO") intellectual property rights ("IPR") policies.
- The importance of providing fundamental due process rights and respecting international comity principles in antitrust actions around the world.

Within these broad topics, panelists discussed specific issues such as: the use of non-market-based approaches to determine the value of standard-essential patents ("SEPs"); SDOs as two-sided platforms that must carefully balance the various interests of its members in order to preserve incentives to participate in standardization; and sound principles for antitrust agencies and courts to follow when crafting remedies involving foreign patents.

II. 5G/IOT POLICIES FOR SUCCESS: AVOIDING RENT SEEKING THAT DIMINISHES THE SIZE OF THE PIE, ISSUES WITH THE *EX-ANTE* VALUATION APPROACH, AND MORE

Panelists emphasized the importance of 5G and IoT and the need to adopt antitrust and innovation policies that provide incentives to innovate and participate in standards-development. This section covers the suggested policies as well as concerns raised with the so-called "*ex-ante* valuation" approach towards valuation of SEPs.

The 5G and IoT value chain is a complex, multilateral, vertical chain consisting of complementary layers of technology including: the core communication layers, such as 5G technologies, that form the fundamental building blocks for the entire supply chain, R&D and technology developers, component manufacturers, device manufacturers, infrastructure manufactures, network operators, and data or content providers. There are strong interdependencies among these layers such that the value generated by the entire value chain depends on the success of each individual layer. Panelist Dr. Jorge Padilla remarked that, "The conditions for success are therefore very clear. First, all layers must invest, they must find it optimal to invest; they must have the ability and incentive to invest. Secondly, at each layer the most efficient technologies need to be selected."³ In addition, the overall price, or total cost of ownership, needs to be sufficiently modest for high market penetration to occur.

Dr. Padilla identified some of the potential obstacles to success of 5G and IoT: First, some layers can have significant market power due to a combination of factors such as strong economies of scale and scope. In those layers, the result may be either a duopoly or limited oligopoly or possibly even a situation in which the market tips and results in some monopoly power. The problem with significant market power in multiple layers in a vertical supply chain is double-marginalization — that is, several price markups building on top of one another, which would result in a higher overall cost of ownership that decreases market penetration.⁴

² Video of the conference available at: <http://www.ipleadership.org/events/leadership-2018>.

³ 2018 Leadership Transcript, Panel 2, at 4 [hereinafter Transcript].

⁴ Id. at 5.

The second obstacle is fragmentation: Companies will want to fragment other layers in order to extract rents in the entire value chain.⁵

The third obstacle is regulatory gaming — for instance, filing complaints with antitrust agencies or attempting to change existing laws and policies — by companies in one layer in an attempt to rent-shift and extract more rents for themselves.⁶

Of critical importance is the fact that initiatives to shift rents from one layer to another may have far reaching implications beyond merely distributional effects. Indeed, they may have significant value effects resulting in a shrunk pie for all.⁷

The solution, according to Dr. Padilla, is threefold. First, enforcers and courts should internalize the complexity of the value chain and understand the incentives that the various players have. For example, enforcers should consider whether a particular player is motivated by rent-shifting concerns or considerations in line with consumer welfare benefits to end-users. Second, enforcers and courts should also understand that high margins can be desirable when they incentivize and enable future R&D. Finally, the focus of any scrutiny should be on performance — for instance, the amount of innovation and value created at each layer — as opposed to structural indicators such as high concentration or the existence of monopoly power.⁸

Further guidance on antitrust policies designed to protect innovation incentives were offered in a keynote address by the Assistant Attorney General (“AAG”) for the U.S. Department of Justice’s (“DOJ”) Antitrust Division, Makan Delrahim.⁹

AAG Delrahim expressed his concern that, by denying injunctive relief to SEP holders “except in the rarest circumstances, courts in the U.S. run the risk of turning a FRAND [fair, reasonable, and non-discriminatory] commitment into a compulsory license.”¹⁰ He warned that recent patent law developments with respect to injunctive relief “could have an unintended and harmful effect on dynamic competition by undermining important incentives to innovate, and ultimately, have a detrimental effect on U.S. consumers.”¹¹ AAG Delrahim also advocated for the application of appropriate theories to address disputes between IP holders and implementers regarding the scope of FRAND assurances, reiterating the Division’s position that unilateral patent holdup is not an antitrust problem.¹²

AAG Delrahim reiterated the Division’s position that it will be “inclined to investigate and enforce when we see evidence of collusive conduct undertaken for the purpose of fixing prices, or excluding particular competitors or products.”¹³ He enumerated cases such as *Radiant Burners*, *Hydrolevel*, and *Allied Tube* as providing guidance regarding the types of conduct that would garner the Division’s attention.¹⁴

The AAG also emphasized the critical distinction between advocacy and enforcement, stating that certain foreign enforcers have improperly relied on the Division’s work, including business review letters (“BRLs”), to support antitrust investigations that would not have been brought under U.S. antitrust law. To illustrate, AAG Delrahim explained:

[W]hile the Division decided that it would not challenge as unlawful the IEEE’s [Institute of Electrical and Electronics Engineers] patent policy update in 2015—including the portion of the policy that limits the availability of injunctions to holders of FRAND-encumbered patents—for the reasons I have just explained, this letter should never be cited for the proposition that what IEEE did is

5 Id.

6 Id. at 5-6.

7 Id. at 6.

8 Id. at 6-7.

9 Makan Delrahim, Asst. Att’y Gen., U.S. Dep’t of Justice, Antitrust Div., *The Long Run: Maximizing Innovation Incentives Through Advocacy and Enforcement*, Address Before the Leadership Conference (Apr. 10, 2018), <https://www.justice.gov/opa/speech/file/1050956/download>.

10 Id. at 3.

11 Id. at 2-3.

12 Id. at 3.

13 Id. at 5.

14 Id.; see *Radiant Burners, Inc. v. Peoples Gas Light & Coke Co.*, 364 U.S. 656 (1961); *Am. Soc’y of Mech. Eng’rs, Inc. v. Hydrolevel Corp.*, 456 U.S. 556 (1982); *Allied Tube & Conduit Corp. v. Indian Head, Inc.*, 486 U.S. 492 (1988).

required, or that a patent holder who seeks an injunction is somehow in violation of the antitrust laws.¹⁵

In other words, the Division's IEEE BRL opined on whether a private SDO's decision to adopt certain policy changes were likely to violate U.S. antitrust laws as a matter of advocacy; it did not address whether conduct that violated those policy changes could amount to an antitrust violation, as a matter of enforcement.

Another potential threat to innovation incentives discussed by panelists was the "*ex-ante*" valuation approach, under which the innovators of technology standards — that is, those who serve as the R&D arm of the industry — are deprived of any of the value created due to the process of standardization.

The seminal case adopting an *ex-ante* valuation approach is *Ericsson, Inc. v. D-Link Sys., Inc.*, a 2014 decision by the U.S. Court of Appeals for the Federal Circuit.¹⁶ In *Ericsson*, the Federal Circuit held, among other things, that:

[T]he patentee's royalty must be premised on the value of the patented feature, not any value added by the standard's adoption of the patented technology. These steps are necessary to ensure that the royalty award is based on the incremental value that the patented *invention* adds to the product, not any value added by the standardization of that technology.¹⁷

In explaining the basis for its approach, the court described the standardization process as follows:

When a technology is incorporated into a standard, it is typically chosen from among different options. Once incorporated and widely adopted, that technology is not always used because it is the best or the only option; it is used because its use is necessary to comply with the standard. In other words, widespread adoption of standard essential technology is not entirely indicative of the added usefulness of an innovation over the prior art. This is not meant to imply that SEPs never claim valuable technological contributions. We merely hold that the royalty for SEPs should reflect the approximate value of that technological contribution, not the value of its widespread adoption due to standardization.¹⁸

In other words, the court's rationale for its *ex-ante* valuation approach appears to be based on the assumption that participants in the standardization process pick winners among numerous competing technologies of equal or similar technical superiority.

This underlying assumption is inaccurate, as the process of standards development reveals otherwise as documented in past research. The formation of technology standards is not about selecting between equally suitable existing technical alternatives but about firms cooperatively creating new technical solutions where none existed prior to the articulation of the new problem (or requirement) to solve the problem.¹⁹ Of significance, the active participants in these standards-development meetings are engineers and discussions are of a purely technical nature. Objective metrics for technical merit are relied upon to select between alternative proposed solutions, usually related to performance, efficiency, or a combination of the two.²⁰ Economic research has shown that a sizable portion of the patents included in a standard is more likely to fall into our first scenario of "crowning winners." In other words, any value is inherent in the ownership of the patented technology itself, not due to being incorporated in the standard. Being included in a standard may further enhance this patent's market value or importance even as it reduces its holder's market power as compared to the benchmark of creating a proprietary *de facto* standard from that patented technology.²¹

¹⁵ Delrahim, *supra* note 9, at 8-9.

¹⁶ 773 F.3d 1201 (Fed. Cir. 2014).

¹⁷ *Id.* at 1232.

¹⁸ *Id.* at 1233.

¹⁹ Kirti Gupta, *How SSOs Work: Unpacking the Mobile Industry's 3GPP Standards* 6 (Nov. 2017), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3063360.

²⁰ *Id.* at 15.

²¹ See Layne-Farrar & Padilla, *Assessing the Link Between Standards and Patents*, 9 INT'L J. IT STANDARDS & STANDARDIZATION RES. 19, 25 (2011).

In its 2015 decision in *Commonwealth Scientific & Industrial Research Organization (“CSIRO”) v. Cisco Systems, Inc.*, the Federal Circuit reaffirmed and expanded upon the approach set forth in *Ericsson*.²² In *CSIRO*, the court concluded that “damages awards for SEPs must be premised on methodologies that attempt to capture the asserted patent’s value resulting not from the value added by the standard’s widespread adoption, but only from the technology’s superiority,” and held that this approach applies not only to SEPs upon which a patent holder has made an assurance to license on FRAND terms, but to all SEPs.²³ The court reasoned that a reasonable royalty calculation under U.S. patent law:

[A]ttempts to measure the value of the patented invention. This value—the value of the technology—is distinct from any value that artificially accrues to the patent due to the standard’s adoption. Without this rule, patentees would receive all of the benefit created by standardization—benefit that would otherwise flow to consumers and businesses practicing the standard.²⁴

Ultimately, the Federal Circuit in *CSIRO* found that the lower court “erred because it did not account for standardization,” and instead increased the royalty award because the patent at issue was essential to the relevant standard.²⁵ The court went on to explain that this error impacted the lower court’s analysis of the *Georgia-Pacific* factors, which are the fifteen non-exhaustive factors relevant to a reasonable royalty calculation for damages in a patent infringement suit.²⁶ Specifically, the Federal Circuit concluded that the lower court erred in its analysis of the three such factors that it weighed in favor of the SEP holder. With respect to factor 8 — which examines the “established profitability of the product made under the patent; its commercial success; and its current popularity” — the lower court concluded that “[a]t the time of the hypothetical negotiations, the market for wireless products was growing rapidly, indicating increased commercial success.”²⁷ As to factors 9 and 10, which relate to the advantages of the patented invention, the lower court concluded that “[a]lternative technologies in the wireless industry . . . failed to achieve commercial success.”²⁸ The error, according to the Federal Circuit, was that the lower court “never considered the standard’s role in causing commercial success” — a fundamental assumption that subsequently led the Federal Circuit in *Ericsson* to “call[] out factors 8, 9, and 10 as all being irrelevant or misleading in cases involving SEPs.”²⁹

In addition to administrability problems, the *ex-ante* approach is fundamentally flawed as a matter of economics because of the Federal Circuit’s observation — that the creation of a standard has a role in causing commercial success. Commercial success of any technology creates both additional consumer surplus (thus benefiting end-users) and producer surplus (thus benefiting the firms). However, as a matter of economics, the producer surplus that the process of standardizing a technology creates in causing commercial success should be shared by *both* innovators and implementers, and of that technology. An “*ex-ante*” rule essentially dictates that *none* of this additional producer surplus generated due to the process of standardization should be attributable to innovators, and thus *all* of it should be attributable to implementers of the technology.³⁰ Perhaps the court assumed that by restricting the “value due to the standard” flowing to the innovators, this value will ultimately be passed on to end-consumers. But the likely outcome of dictating rules for how a producer surplus should be divided is rent-shifting, and any flow passed on to end-consumers depends on the pass-through rates for the industry, dictated by a variety of factors and not this rule of division.

22 809 F.3d 1295 (Fed. Cir. 2015), cert. denied, 136 S. Ct. 2530 (2016).

23 *Id.* at 1304.

24 *Id.* at 1305.

25 *Id.*

26 See *Ga.-Pac. Corp. v. U.S. Plywood Corp.*, 318 F. Supp. 1116, 1120 (S.D.N.Y. 1970), modified sub nom. *Ga.-Pac. Corp. v. U.S. Plywood-Champion Papers, Inc.*, 446 F.2d 295 (2d Cir. 1971).

27 *Commw. Sci. & Indus. Research Org.*, 809 F.3d at 1305 (citing *Ga.-Pac. Corp.*, 318 F. Supp. at 1120; *Commw. Sci. & Indus. Research Org. v. Cisco Sys., Inc.*, No. 6:11-CV-343, 2014 WL 3805817, at *13 (E.D. Tex. July 23, 2014)).

28 *Id.*

29 *Id.* (citing *Ericsson, Inc. v. D-Link Sys., Inc.*, 773 F.3d 1201, 1231 (Fed. Cir. 2014)).

30 See Sidak, *The Meaning of FRAND, Part I: Royalties*, 9 J. COMPETITION L. & ECON. 931, 975-76 (2013).

III. SDO IPR POLICIES AS TWO-SIDED PLATFORMS AND THE DANGERS OF SELLER OR BUYER CARTELS

In describing the role of SDOs in facilitating the creation and widespread adoption of new technologies and standards, panelists such as Dr. Anne Layne-Farrar and Joshua D. Wright described SDOs as two-sided platforms that must balance the interdependent interests of both standards innovators and implementers.³¹ This critical balance includes the adoption of consensus-based IPR policies as well as sound governance and voting rules.

Indeed, the highly controversial 2015 amendments to the IEEE's SDO IPR Policy would likely not have been possible if the IEEE had the type of sound governance rules in place in major SDOs such as the European Telecommunications Standards Institute ("ETSI"). Several SDOs, such as the ETSI, operate under rules of governance that necessitate the leadership proposing and voting on changes in rules to directly reflect the interests of their members, require leaders to be appointed based on voting across members, and call for consensus or majority voting to enact changes. Some SDOs, such as the IEEE, differ from those governance rules, and leaders are "appointed" by outgoing leaders, not elected across members, and positions are filled by "passing the baton" from one leader to the next. A disconnect between the interest of the members and leaders enables changes in rules that are controversial.

The IEEE amendments included provisions that essentially prohibit patent holders from seeking or enforcing injunctive relief on FRAND-assured SEPs and essentially require component-level licensing, the latter of which is contrary to the long-standing industry practice of end-user device licensing. These amendments were highly criticized by major SEP holders and others on both procedural and substantive grounds.³² Importantly, they were also rejected by other major SDOs — namely, those with sound governance rules, including the ETSI, Joint Electron Device Engineering Council ("JEDEC"), Cooperative Intelligent Transport System ("C-ITS"), Internet Engineering Task Force ("IETF"), and Telecommunications Standards Development Society, India ("TSDSI"). Yet, despite this rejection, certain implementers have attempted to use domestic and foreign antitrust laws — through complaints to antitrust agencies and their own litigation — to essentially re-write consensus-based IPR policies to achieve what they could not in consensus-based processes — and all to their benefit.

Panelists, as well as AAG Delrahim, also discussed potential antitrust concerns with concerted conduct in the standards-development process such as seller or buyer cartels. AAG Delrahim described "two related situations that would raise concern":

First, if a group of patent implementers were to engage in concerted efforts to exclude a patent holder from meaningful participation in standard setting unless the patent holder agreed to offer particular licensing terms dictated by the group of implementers, those facts would raise red flags. Similarly, if patent holders A, B and C were to agree to exclude from consideration for inclusion substitute technology owned by their competitor patent holder D—for the purpose of harming patent holder D, rather than as a result of good-faith efforts to incorporate the most effective technology—that would also raise concerns.³³

31 See Transcript, Panel 3, at 4-5; see also Kobayashi & Wright, *Intellectual Property and Standard Setting* 1-5 (Geo. Mason Univ. Law & Econ., Research Paper No. 09-40, 2009), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1460997.

32 See, e.g. Letter from Lawrence F. Shay, Exec. Vice President of Intellectual Prop., InterDigital, Inc., to David Law, Patent Comm. Chair, IEEE-SA Standards Bd. (Mar. 24, 2015), <http://wpuploads.interdigital.com.s3.amazonaws.com/uploads/2015/03/Letter-to-IEEE-SA-PatCom.pdf>; Letter from Gustav Brismark, Vice President, Strategy & Portfolio Mgmt., Ericsson AB, to Eileen M. Lach, Gen. Counsel & Chief Compliance Officer, IEEE, at 2 (Oct. 21, 2014), http://www.mlex.com/Attachments/2015-10-26_5P338037F7HPVP5L/rand-terms.pdf; Letter from Irwin Mark Jacobs, Founding Chairman & CEO Emeritus, Qualcomm, to Dr. Roberto Boisson de Marca, President & CEO, IEEE (Nov. 19, 2014), <http://www.advancingengineering.org/irwin-jacobs>; see also Letter from Sen. Christopher A. Coons, U.S. Senator, to Hon. Eric Holder, Att'y Gen., U.S. Dep't of Justice, and Hon. William J. Baer, Assistant Att'y Gen., U.S. Dep't of Justice (Jan. 14, 2015), <http://ipwatchdog.com/materials/1-14-2015-Coons-IEEE.pdf>.

33 Delrahim, *supra* note 9, at 6.

In a prior speech, the AAG also raised concerns about concerted conduct by buyers, stating that SDO rules “purporting to clarify the meaning of ‘reasonable and non-discriminatory’ that skew the bargain in the direction of implementers warrant a close look to determine whether they are the product of collusive behavior.”³⁴ He went on to give the following example: “While the so-called ‘smallest salable component’ rule may be a useful tool among many in determining patent infringement damages for multicomponent products, its use as a requirement by a concerted agreement of implementers as the exclusive determinant of patent royalties may very well warrant antitrust scrutiny.”³⁵

IV. THE NEED FOR FURTHER PROGRESS TO REALIZE DUE PROCESS NORMS AND A FRAMEWORK FOR EXTRA-JURISDICTIONAL REMEDIES

Panelists, including Roger Alford, Deputy Assistant Attorney General (“DAAG”) for the DOJ’s Antitrust Division, discussed the critical importance of antitrust agencies and courts providing fundamental due process rights. While process varies by jurisdiction, core features of fundamental due process have emerged based on substantial work by multilateral organizations such as the International Competition Network (“ICN”) and the Organisation for Economic Co-operation and Development (“OECD”).³⁶ The core principles on due process include: legal representation for parties under investigation, including allowing the participation of local and foreign counsel of parties choosing; Notifying the parties of the legal and factual bases for an investigation and sharing the evidence on which the agency relies (including any exculpatory evidence); Direct and meaningful engagement between the parties and the agency’s investigative and staff decision makers; ability to present a defense to decision makers; protection of confidential information; and ensuring checks and balances on decision making, including meaningful access to independent courts.

Building on his prior remarks, DAAG Alford provided a framework for antitrust agencies and courts to use when considering whether to adopt an extra-jurisdictional remedy such as requiring or prohibiting certain conduct with respect to foreign patents and/or foreign conduct.³⁷ Specifically, he explained that, before imposing such a remedy, antitrust enforcers must “clearly articulate the harm to its commerce and consumers and describe how the proposed remedy is necessary to address that harm.”³⁸ Antitrust enforcers should also take into consideration comity concerns, both positive (actual conflicts) and negative (conflicting policies). For example, the United States has “a clearly articulated policy to support innovation by permitting a patent holder to extract the full value of the patent holder’s rights. As a result, an antitrust remedy that impacts the protections another jurisdiction offers under its intellectual property laws is one i[n] which comity concerns may well arise.”³⁹

34 Makan Delrahim, Assistant Att’y Gen., U.S. Dep’t of Justice, Antitrust Div., Take It to the Limit: Respecting Innovation Incentives in the Application of Antitrust Law, Address Before the USC Gould School of Law – Application of Competition Policy to Technology and IP Licensing 11 (Nov. 10, 2017), <https://www.justice.gov/opa/speech/file/1010746/download>.

35 Id.

36 See INT’L COMPETITION NETWORK, ICN GUIDANCE ON INVESTIGATIVE PROCESS (2018), <http://www.icn2018delhi.in/images/AEWG-New-GIP.pdf>; INT’L COMPETITION NETWORK, ANNOTATED ICN GUIDANCE ON INVESTIGATIVE PROCESS (2018), <http://www.icn2018delhi.in/images/AEWG-Annotated-GIP.pdf>; INT’L COMPETITION NETWORK, ICN GUIDING PRINCIPLES FOR PROCEDURAL FAIRNESS IN COMPETITION AGENCY ENFORCEMENT (2018), <http://www.icn2018delhi.in/images/AEWG-Guiding-Principles-4PF.pdf>; ORG. FOR ECON. CO-OPERATION & DEV., PROCEDURAL FAIRNESS AND TRANSPARENCY (2012), <http://www.oecd.org/daf/competition/mergers/50235955.pdf>.

37 Roger Alford, Deputy Assistant Att’y Gen., U.S. Dep’t of Justice, Antitrust Div., Antitrust Enforcement in an Interconnected World, Address Before the American Chamber of Commerce in South Korea (Jan. 29, 2018, <https://www.justice.gov/opa/speech/file/1034976/download>).

38 Id. at 10.

39 Id.; see also ORG. FOR ECON. CO-OPERATION & DEV., ROUNDTABLE ON THE EXTRATERRITORIAL REACH OF COMPETITION REMEDIES—NOTE BY THE UNITED STATES ¶ 11 (2017), [https://one.oecd.org/document/DAF/COMP/WP3/WD\(2017\)41/en/pdf](https://one.oecd.org/document/DAF/COMP/WP3/WD(2017)41/en/pdf).

V. THE IMPACT OF RECENT U.S. SUPREME COURT AND PTAB DECISIONS

Panelists also discussed the jurisprudence governing "Section 101" of the Patent Act (Section 101) and the ways in which recent U.S. Supreme Court decisions have harmed patent owners and weakened the U.S. patent system.⁴⁰ The Honorable Paul Michel, Former Chief Judge of the United States Court of Appeals for the Federal Circuit, opined that the "anti-patent dynamic" in the United States began with the Supreme Court's 2006 decision in *eBay v. MercExchange*, which weakened patentees' ability to obtain injunctive relief, undermined the enforceability of patent rights, and reduced the rate at which injunctions are issued in patent litigation.^{41,42} Indeed, empirical studies have found that permanent injunctions have been denied in approximately one-third of patent cases post-*eBay*.^{43,44} As a practical matter, the *eBay* decision — and specifically, Justice Kennedy's concurrence — has weakened patent rights by making injunctions essentially unavailable to victorious patent-owner litigants unless they are direct competitors with corresponding products in the same market.^{45, 46}

More recently, the Supreme Court issued a series of decisions on Section 101 that expanded the judicial exceptions to patent subject matter eligibility to the detriment of patent owners.⁴⁷ Notably, in *Mayo Collaborative Services v. Prometheus Laboratories, Inc.*, the Supreme Court limited patent-eligible subject matter by holding that certain processes involved in a diagnostic medical test were unpatentable laws of nature.⁴⁸ Soon thereafter, in *Alice Corp. Pty. Ltd. v. CLS Bank International*, the Court further limited subject matter eligible for a patent by concluding that certain claims regarding computer-implemented inventions were unpatentable abstract ideas.⁴⁹ Judge Michel cautioned that, under the *Mayo-Alice* line of cases, district courts have invalidated thousands of patents pursuant to the "vague, subjective, inconsistent, undefined, irrational standards" articulated by the Supreme Court.⁵⁰ The Court's recent Section 101 decisions have contributed to "a huge cloud of possible invalidity," under which tens of thousands of patents are currently operating.⁵¹ The *Mayo-Alice* precedents have caused tremendous uncertainty specifically with respect to the patentability of medical diagnostics, software, computers, and business methods.⁵² These sources of uncertainty make the value of a patent difficult to ascertain and dissuade entrepreneurs from investing in certain new technologies, purchasing patents, or licensing patent rights.⁵³

40 35 U.S.C. § 101.

41 Transcript, Panel 1, at 26 (citing *eBay Inc. v. MercExchange, LLC*, 547 U.S. 388 (2006)).

42 See Transcript, Panel 1, supra note 41, at 26; Michel & Dowd, *The Need for "Innovation Certainty" at the Crossroads of Patent and Antitrust Law*, 1 CPI ANTITRUST CHRONICLE 1, 2 (2017), <https://www.competitionpolicyinternational.com/wp-content/uploads/2017/04/CPI-Michel-Dowd.pdf> [hereinafter Michel & Dowd, *Innovation Certainty*]; Michel & Dowd, *Understanding the Errors of eBay*, 2 CRITERION J. ON INNOVATION 21, 28 (2017), <https://www.criterioninnovation.com/articles/understanding-the-errors-of-ebay.pdf> [hereinafter Michel & Dowd, *eBay*].

43 Michel & Dowd, *eBay*, supra note 42, at 27 & n.32 (citing Seaman, *Permanent Injunctions in Patent Litigation After eBay: An Empirical Study*, 101 IOWA L. REV. 1949, 1982-84 (2016)).

44 See Gupta & Kesan, *Studying the Impact of eBay on Injunctive Relief in Patent Cases* (Univ. of Ill. Coll. of Law Legal Studies, Research Paper No. 17-03, 2016), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2816701&download=yes.

45 Many district courts have relied on Justice Kennedy's concurrence to deny injunctions in cases where the patent holder is a non-practicing entity and in cases where the patented invention is only a small component of an infringing product. See Michel & Dowd, *eBay*, supra note 42, at 26-27 (criticizing Justice Kennedy's concurrence in *eBay*); Seaman, supra note 43, at 1970-72.

46 See Transcript, Panel 1, supra note 41, at 26; Michel & Dowd, *Innovation Certainty*, supra note 42, at 2; Seaman, supra note 43, at 2002.

47 See Transcript, Panel 1, supra note 41, at 6; Michel & Dowd, *Innovation Certainty*, supra note 42, at 2.

48 *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66 (2012).

49 *Alice Corp. Pty. Ltd. v. CLS Bank Int'l*, 134 S. Ct. 2347 (2014).

50 Transcript, Panel 1, supra note 41, at 6.

51 Transcript, Panel 1, supra note 41, at 6 (quoting Judge Michel).

52 Michel & Dowd, *Innovation Certainty*, supra note 42 at 2; see Transcript, Panel 1, supra note 41, at 10.

53 See Transcript, Panel 1, supra note 41, at 6; Michel & Dowd, *Innovation Certainty*, supra note 42, at 6.

To illustrate, panelist Gary Lauder, described how patent-eligibility concerns have suppressed the amount of venture capital available for U.S. life sciences startups, especially for medical diagnostic and device companies and companies developing new drugs.⁵⁴ Judge Michel opined that this uncertainty has contributed to historically low startup birth rates in the United States, with more startups failing each year than being created.⁵⁵

The Supreme Court's recent Section 101 decisions have also impacted the ability of patent examiners to issue patents reliably. Panelist David Kappos, explained how the patent-eligibility test articulated by the Supreme Court in *Alice* has proven to be "un-implementable" at the U.S. PTO.⁵⁶ Mr. Kappos stressed that this test, which requires patent examiners to determine whether the subject matter of a particular application is directed to "abstract ideas," is not a "repeatable process" that is capable of consistent execution by patent examiners.⁵⁷ The variability inherent to this step of the patent-grant process necessarily contributes to additional uncertainty surrounding the validity of many patents.

The Supreme Court's recent Section 101 case law has also impacted patent owners' forum-selection considerations. Recently, some patent holders who have the option to enforce their rights in multiple jurisdictions have opted to bring enforcement actions in venues outside of the United States.⁵⁸ Specifically, certain multinational companies have elected to enforce their patent rights in China rather than the United States, as the strength and predictability of the U.S. system has declined.⁵⁹

The Supreme Court's recent opinions in Section 101 cases were discussed in further detail, with Judge Michel chastising the Court for citing to "ancient dicta" from cases decided before the enactment of the Patent Act of 1952, and for failing to recognize the distinction between patentability and eligibility under Section 101.⁶⁰ As a result, the Supreme Court has ventured into areas beyond its judicial function and has created "national economic innovation policy."⁶¹ Judge Michel advocated for Congress to reassert itself as a co-equal branch of government and to reclaim control over this area of national economic policy.⁶² Panelist Jamie Simpson, opined that congressional action is needed to fix the problems associated with Section 101, but cautioned that a legislative fix should also "address the concerns" that persuaded the Supreme Court to weaken patent rights in its recent series of Section 101 decisions.⁶³

Apart from the Court's Section 101 jurisprudence, the panel also considered the case of *Oil States Energy Services v. Greene's Energy Group*,⁶⁴ which was then-pending before the Supreme Court. In *Oil States*, the Court was confronted with the question of whether patent rights must be adjudicated by federal courts rather than federal agencies and, consequently, whether *inter partes* review ("IPR") proceedings violate Article III of the Constitution and the Seventh Amendment. Some panelists expressed concerns about the Court reaching a decision in which patent rights were not found to be *bona fide* private property rights.⁶⁵

54 See Transcript, Panel 1, supra note 41, at 13-14.

55 See Transcript, Panel 1, supra note 41, at 10; see also *The Impact of Bad Patents on American Businesses: Hearing Before the H. Comm. on the Judiciary, 115th Cong. (July 13, 2017)* (statement of Judge Michel (Ret.), Former Chief Judge, United States Court of Appeals for the Federal Circuit), <https://judiciary.house.gov/wp-content/uploads/2017/07/Statement-of-Judge-Paul-Michel-House-IP-Subcomm.-7-13-2017.pdf>.

56 Transcript, Panel 1, supra note 41, at 15.

57 See id.

58 See id. at 16.

59 See id. at 9.

60 Id. at 14.

61 Id. at 15.

62 See id.

63 Id. at 13.

64 138 S. Ct. 1365 (2018).

65 See Transcript, Panel 1, supra note 41, at 24-25.

On April 24, 2018, the Court issued its opinion in *Oil States*, upholding IPR proceedings conducted by the PTAB and concluding that patents are public rights — specifically, government-issued “franchises.”⁶⁶ The 7-2 decision, authored by Justice Thomas, relied heavily on the public-rights doctrine, under which Congress may assign adjudication of a dispute to “entities other than Article III courts”⁶⁷ if the dispute “involves a matter ‘arising between the government and others.’”⁶⁸ The Court concluded that the grant of a patent falls within the public-rights doctrine because “patents are public franchises that the Government grants to [] inventors” by statute.⁶⁹ Because IPR proceedings “involv[e] the same basic matter as the grant of a patent,” the Court held that they also “fall on the public-rights side of the line.”⁷⁰

Despite its embrace of the public-rights doctrine, the majority also “emphasize[d] the narrowness of [its] holding.”⁷¹ The decision addressed only the Article III and Seventh Amendment challenges brought by *Oil States* and did not reach the question of whether IPR proceedings may violate the Fifth Amendment’s Due Process Clause.⁷² Importantly, the opinion stressed that it “should not be misconstrued as suggesting that patents are not property for purposes of the Due Process Clause or the Takings Clause.”⁷³

On the same day as the *Oil States* decision, the Court also issued its opinion in *SAS Institute Inc. v. Iancu*, which invalidated the PTAB’s “partial institution” procedure.⁷⁴ Under this procedure, the PTAB was able to institute IPR on only a subset of the patent claims raised in a challenger’s petition.⁷⁵ In a 5-4 decision authored by Justice Gorsuch, the Court held that the America Invents Act (“AIA”) unambiguously requires the PTAB to institute review on all claims raised in an IPR petition if it institutes review on any of the claims.⁷⁶

The Court’s *SAS Institute* decision will reshape the manner in which IPR proceedings are conducted and will likely raise the stakes of the institution stage of IPR proceedings. Indeed, because the PTAB must now institute review on all challenged claims or none of them, the Board might deny review outright more often than it has in the past. Conversely, in some cases the PTAB may review weaker patent claims that it would not have considered under the partial institution regime. This dynamic will likely result in IPR proceedings becoming broader in scope and taking longer to resolve, which will increase costs and potentially cast a cloud over patent claims that previously would have been filtered out at the institution stage. The PTAB recently issued additional guidance in light of the Court’s ruling, in which it informed stakeholders that the Board now “will institute as to all claims or none[,] . . . [and] if the PTAB institutes a trial, the PTAB will institute on all challenges raised in the petition.”⁷⁷

In addition to the impact of recent U.S. Supreme Court decisions, the panel also contemplated the ways in which decisions by the PTAB have affected stakeholders in the U.S. patent system. Judge Michel cited the PTAB’s high invalidation rates as a source of additional innovation uncertainty that is further weakening patent rights in the United States.⁷⁸ Ms. Simpson conveyed how the IPR system has adversely impacted small and solo inventors, a number of whom have seen their patents invalidated by the PTAB.⁷⁹ Judge Michel echoed Ms. Simpson’s concerns

66 *Oil States Energy Servs., LLC*, 138 S. Ct. at 1373-75.

67 *Id.* at 1373.

68 *Id.* (citing *Ex parte Bakelite Corp.*, 279 U.S. 438, 451 (1929)).

69 *Id.*

70 *Id.* at 1374.

71 *Id.* at 1379.

72 *See id.*

73 *Id.*

74 *SAS Inst., Inc. v. Iancu*, 138 S. Ct. 1348, 1358 (2018).

75 *See id.* at 1354.

76 *See id.* at 1354-55.

77 PTAB, *Guidance on the Impact of SAS on AIA Trial Proceedings*, U.S. PTO (Apr. 26, 2018), <https://www.uspto.gov/patents-application-process/patent-trial-and-appeal-board/trials/guidance-impact-sas-aia-trial>.

78 Transcript, Panel 1, *supra* note 41, at 6; see Michel & Dowd, *Innovation Certainty*, *supra* note 42, at 3.

79 Transcript, Panel 1, *supra* note 41, at 19-20.

regarding individual inventors, noting that a decade ago, 24 percent of patent applications filed with the U.S. PTO were by individual inventors.⁸⁰ Today, however, only 4 percent of patent applications are filed by such inventors, due in part to the high cost of defending one's patent rights — an issue the IPR system was intended to address, but has failed to remedy.⁸¹ Indeed, the PTAB's high invalidation rates and the significant financial burden accompanying the defense of one's patent rights has created a business climate in which the rights of patent owners are often ignored.⁸² Some companies, recognizing that many patent owners lack the financial means to enforce or defend their rights, have refused to pay or even negotiate licensing fees and have exploited the IPR process to discourage patent owners from defending their rights.⁸³

At bottom, recent U.S. Supreme Court decisions diluting the strength and value of patent rights, coupled with the PTAB's high invalidation rates, have contributed to the decline of the U.S. patent system.⁸⁴ This decline is reflected in a number of metrics gauging global innovation policy: In 2018, the United States fell to twelfth place worldwide in patent-system strength, down from tenth in 2017 and first every year prior, according to the U.S. Chamber of Commerce Global Innovation Policy Center's International IP Index.⁸⁵ Additionally, the United States recently dropped out of the top ten in the *Bloomberg* Innovation Index for the first time in the six-year history of the Index.⁸⁶ Ultimately, the panelists all agreed that the U.S. patent system needs to be recalibrated to protect the rights of patent owners and properly incentivize investors.⁸⁷

VI. CONCLUSION: A PATH FORWARD

The deep dive by panelists into complicated issues was instructive both for current enforcement and policy goals as well as for providing guidance on areas in need of further study. These areas include:

- The extent to which the *ex-ante* value approach towards SEP valuation is adversely affecting SEP holders.
- The role of buyer power in the standardization and FRAND licensing contexts, and specifically, whether buyer holdout impacts SEP holders.
- The extent to which the Supreme Court's decision in *SAS Institute Inc. v. Iancu* and related guidance from the U.S. PTO alter how the PTAB approaches the institution stage of IPR proceedings.
- Possible legislative and administrative solutions to provide more clarity with respect to issues regarding patent subject matter eligibility under Section 101.

These and other subjects explored at the 2018 IP Leadership conference in Washington, D.C. will increasingly impact the development of IP and competition policy, both in the United States and internationally, with the imminent adoption of 5G and IoT.

80 *Id.* at 20.

81 *See id.*

82 *See id.*

83 *See id.* at 6; Michel & Dowd, *Innovation Certainty*, *supra* note 42 at 3 n.11.

84 *See* Transcript, Panel 1, *supra* note 41, at 6; Michel & Dowd, *Innovation Certainty*, *supra* note 42 at 4.

85 *See* U.S. CHAMBER OF COMMERCE, GLOBAL INNOVATION POLICY CTR., INTERNATIONAL IP INDEX fig. XI (6th ed. 2018), http://globalipcenter.wpengine.com/wp-content/uploads/2018/02/GIPC_IP_Index_2018.pdf.

86 *See* Jamrisko & Lu, *The U.S. Drops Out of the Top 10 in Innovation Ranking*, BLOOMBERG (Jan. 22, 2018), <https://www.bloomberg.com/news/articles/2018-01-22/south-korea-tops-global-innovation-ranking-again-as-u-s-falls>.

87 *See*, e.g. Transcript, Panel 1, *supra* note 41, at 5, 7, 9, 16.