

Standards and Patent Assertion Entities at the IP-Antitrust Interface: Adhering to Basic Principles

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The United States antitrust approach to intellectual property has evolved over time. The same antitrust analysis now applies to conduct involving intellectual property (“IP”) as to conduct involving other forms of property, taking into account the specific characteristics of the particular property right.

However, there have been significant calls recently for presumptions that infringements suits and licensing conduct by patent assertion entities (“PAEs”) labeled “patent trolls” and holders of standard essential patents (“SEPs”) are monopolization or attempts to monopolize that violate Sherman Act § 2, 15 U.S.C. § 2. This paper argues that the basic principles of keeping in mind history and context, and general antitrust principles, apply equally to SEPs and PAEs as to other economic phenomena, and there is no need for any special presumptions.

1. INTRODUCTION

The interaction of intellectual property (“IP”) rights laws and antitrust laws has been the subject of much debate over the years. The United States (“US”) antitrust approach to IP has evolved over time. Earlier, there was an assumption that the IP laws were intended to create and did create monopolies, so that effectively IP was exempt from the antitrust laws. Later, there was a view that there is an inherent conflict between IP laws that grant “monopolies” and antitrust laws that prohibit monopoly. Because an IP right was assumed to confer upon the holder some monopoly, and is an exception to the prohibition against monopolies, there was a focus on ensuring that the exercise of IP rights was strictly within the scope of the rights, and ancillary restraints in IP transactions were generally viewed as outside the scope of IP and therefore an abuse of monopoly power and violation of the antitrust laws. As a result, practices relating to IP licenses such as tying, grantbacks, exclusive dealing and package licensing were commonly considered antitrust violations.¹

The IP laws and the antitrust laws are now commonly viewed as complementary. Both value innovation, competition and consumer welfare. The US view is that the IP laws do not necessarily confer monopolies but confer only the right to exclude others from the areas covered by the IP. Under US law there is the fundamental right unilaterally to exclude others from the scope of the IP.² In actuality, most patents are either never put into practice, or, if practiced, do not convey any market power at all.

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¹ See Bruce B. Wilson, Patent and Know-How License Agreements, Field of Use, Territorial, Price and Quantity Restrictions, Remarks Before the Fourth New England Antitrust Conference 19 (Nov. 6, 1970).

² See, e.g., US Department of Justice and the Federal Trade Commission, Antitrust Enforcement and

Under current US law, the same antitrust analysis applies to conduct involving IP as to conduct involving other forms of property, taking into account the specific characteristics of a particular property right. IP rights are considered to be a form of personal property rights.³ There is no presumption that IP creates market power. The Patent Act makes that clear in the context of patent law,⁴ which requires a demonstration of actual market power before patent misuse may be found.⁵

The Supreme Court's decision in *Illinois Tool Works Inc. v. Independent Ink, Inc.*,⁶ a tie-in case, extended that principle to the antitrust context. The Supreme Court reviewed its earlier cases involving tie-ins and noted that it had moved away from assumptions of market power to requiring proof of actual market power in tie-in cases generally. It also noted that the presumption of market power in a patent arose in the patent misuse context and later was adopted in antitrust cases. However, since those decisions, Congress amended the Patent Act to eliminate that presumption in patent misuse cases. In light of the change in the patent law, and the evolution of the thinking in the antitrust law in non-patent contexts, the Supreme Court concluded that there needs to be evidence of actual market power in a patent rather than a presumption of market power in a tying case involving that patent. It rejected a rebuttable presumption of market power. Moreover, as in other areas of the economy, the mere fact of monopoly power, even if from the holding of IP, is not an antitrust violation.

However, in recent years, there have been significant calls for presumptions of antitrust liability against holders of standard essential patents ("SEPs") and patent assertion entities ("PAEs") labeled "patent trolls", arguing that infringement suits and licensing conduct by PAEs and SEPs holders generally are monopolization or attempts to monopolize that violate Sherman Act § 2, 15 U.S.C. § 2.

This paper considers the question of the appropriate approach under the antitrust laws to SEPs and PAEs, and argues that basic principles apply equally to SEPs and PAEs as to other

Intellectual Property Rights: Promoting Innovation and Competition at 2 (April 2007) ("2007 FTC/DOJ IP & Antitrust Report"), <https://www.justice.gov/atr/antitrust-enforcement-and-intellectual-property-rights-promoting-innovation-and-competition> [last accessed 29 June 2018].

³ US Department of Justice and the Federal Trade Commission, Antitrust Guidelines for the Licensing of Intellectual Property § 2 (January 12, 2017) ("2017 IP Guidelines"), <https://www.justice.gov/atr/IPguidelines/download> [last accessed 9 April 2018].

⁴ "No patent owner otherwise entitled to relief from infringement or contributory infringement of a patent shall be denied relief or deemed guilty of misuse or illegal extension of the patent right by reason of his having done one or more of the following: . . . unless, in view of the circumstances, the patent owner has market power in the relevant market for the patent or patented product on which the license or sale is conditioned." 35 U.S.C. § 271(d).

⁵ *Id.*; *Windsurfing Intern. Inc. v. AMF, Inc.*, 782 F.2d 995 (Fed. Cir. 1986). In fact, a finding of patent misuse under US law may be a greater burden than a finding of an antitrust violation. That is because if there is patent misuse, that patent may not be enforced at all until the misuse has been declared by a court to have been purged. *E.g.*, *Motion Picture Patents Co. v. Universal Film Mfg. Co.*, 243 U.S. 502 (1917). In effect, the patent holder has lost the patent until the misuse is purged. In contrast, if there is an antitrust violation, the patent holder may owe the injured party treble damages and be subject to an injunction requiring it to cease the violation. 15 U.S.C. §§ 15, 26. The patent holder still may otherwise fully practice and enforce the patent.

⁶ 547 U.S. 28 (2006).

economic phenomena. Basic principles in this context are generally the principle of keeping in mind history and context, and general antitrust principles. This paper first considers each of these aspects before addressing the appropriate specific antitrust approach to SEPs and PAEs.

2. HISTORY AND CONTEXT

In the 128 years since the 1890 enactment of the Sherman Act,⁷ the basic US antitrust statute, the US has accumulated vast experience with competition law and policy enforcement. The US enforcers dealt with challenges ranging from breaking up immense cartels that dominated the US economy, such as the legendary Standard Oil trust⁸ at the turn of the 20th century, to reverse payments in patent settlements⁹ and the activities of PAEs¹⁰ today. The understanding and application of the law have evolved significantly over 128 years in light of this experience, including in the IP context.

The context of the state of a country's economy affects its law, including competition law. Many of the early, key US Supreme Court decisions interpreting the Sherman Act and laying the foundations of US antitrust law involved huge cartels that affected substantial portions of the US economy, such as the Standard Oil trust,¹¹ the railroad trust,¹² and the meat packing cartel.¹³ These are cases that may be unlikely to occur today in the US, substantially precisely because of this early law enforcement and because of changes in the US economy in the last 120-plus years.¹⁴

This interplay between changes in the economy and the evolution of the antitrust law may be playing out in jurisdictions around the world, perhaps especially at the IP-antitrust interface. Certainly, the balancing in the US between fostering innovation and ensuring public access to innovation, and the approach of US antitrust law to IP, has evolved over time. Some of the evolution occurred perhaps as a result of the shift of the US from being primarily an IP-taker in the 18th and 19th centuries, to significantly an IP-giver today. Some of this evolution can be seen in other jurisdictions, currently perhaps even in China.¹⁵

⁷ 15 U.S.C. § 1 *et seq.*

⁸ *Standard Oil Co. of New Jersey v. United States*, 221 U.S. 1 (1911).

⁹ *E.g.*, *Federal Trade Commission v. Actavis, Inc.*, 570 U.S. 136 (2013).

¹⁰ *E.g.*, *Federal Trade Commission, Patent Assertion Entity Activity: An FTC Study*, October 2016 ("PAE Study"), https://www.ftc.gov/system/files/documents/reports/patent-assertion-entity-activity-ftc-study/p131203_patent_assertion_entity_activity_an_ftc_study_0.pdf [last accessed 9 April 2018].

¹¹ *Standard Oil v. U.S.*, *supra* note 8.

¹² *Northern Securities Co. v. U.S.*, 193 U.S. 197 (1904).

¹³ *Swift & Co. v. U.S.*, 196 U.S. 375 (1905).

¹⁴ While the US agencies continue vigorously to prosecute cartels, some of which are immense durable multi-national arrangements, obtaining record-breaking fines these latter-day combinations affect smaller parts of the US economy than their predecessors.

¹⁵ *See, e.g.*, Hou Liyang, Qualcomm: How China has Invalidated Traditional Business Models on Standard Essential Patents, 7 *JOURNAL OF EUROPEAN COMPETITION LAW & PRACTICE* 686, 689 (2016), <https://doi.org/10.1093/jeclap/lpw064> [last accessed 9 April 2018]; Sokol, D. Daniel and Zheng, Wentong, FRAND (and industrial policy) in China (May 5, 2016) at 18. Chapter 18 in *THE CAMBRIDGE HANDBOOK OF TECHNICAL*

A reflection of the importance of context may be the following anecdote:¹⁶ A renowned US antitrust professor was invited to speak at the celebration of the fifty anniversary of the enactment of a country's first competition law. Two of the questions that the professor was asked were: (1) how do you protect your witnesses in competition law cases; and (2) how do you prevent your judges from being bribed. These two questions were beyond the learned professor's experience, and he had been an antitrust practitioner early in his career. The questions are likely beyond the experience of US antitrust practitioners today generally. On the other hand, it is unclear that the questions would have been beyond the experience of antitrust practitioners in the US 120 years ago.

These may be situations of where one stands, depends on where one sits. The positions one takes depend on one's particular circumstances. The challenge is to distinguish when the positions may be based on shaky principles, and when the positions may appear to have immediate benefit but will have serious long-term costs.

3. ANTITRUST PRINCIPLES

In the context of IP, the most common scenarios raising competition law concerns involve the unilateral actions of individual IP holders. These are scenarios of monopolization and attempted monopolization.

After over 70 years of experience under the Sherman Act, in 1966, the US Supreme Court established in its decision in *US v. Grinnell Corp.*¹⁷ the US test for monopolization, which includes two elements, first that there is monopoly power in a relevant market, and second, that the power was acquired or maintained willfully as distinct from growing or developing as a result of a superior product, business acumen or historic accident. Therefore, in order for there to be monopolization, or abuse of dominant market position, in the US, there needs to be a dominant market position. Conclusions regarding the existence of market dominance should be reached only after a case-by-case factual analysis.

And over 30 years after *Grinnell*, more than 100 years after the enactment of the Sherman Act, in 1998, the Supreme Court in its decision in *NYNEX Corp. v. Discon*¹⁸ clarified as to the second element for monopolization in violation of the Sherman Act, that simply having an anticompetitive motive, even if there was fraud that enabled a monopolist to raise prices, is insufficient to constitute a violation of the Sherman Act if there was no harm to the competitive process as a result.

Where there may be insufficient market power for monopolization, attempted monopolization may be found, but only if there are the three elements of the specific intent to destroy competition or achieve monopoly, some exclusionary or anticompetitive conduct pursuant to

STANDARDIZATION LAW: COMPETITION, ANTITRUST, AND PATENTS (Jorge L. Contreras, ed., Cambridge Univ. Press 2017), University of Florida Levin College of Law Research Paper No. 16-35, <https://ssrn.com/abstract=2776235> [last accessed 9 April 2018].

¹⁶ This anecdote was recounted in a luncheon speech at a Spring Meeting of the ABA Section of Antitrust Law by the professor who experienced it.

¹⁷ 384 U.S. 563, 570-71 (1966).

¹⁸ 525 U.S. 128 (1998).

that intent, and a dangerous probability of success.¹⁹ Therefore, unless there is a dangerous probability that a monopoly will be achieved as a result of the anti-competitive conduct, there is no attempted monopolization in violation of US antitrust law.

These antitrust principles are based on the premise that the goals of competition law are to promote competition, consumer welfare and efficiency. In this framework, competition law is generally antithetical to industrial policy. To the extent other goals are considered to be competition law goals, then the application of competition law to IP may be different. These may also be situations of where one stands depending on where one sits, as to what are the goals of competition law.

4. APPLICATION TO IP GENERALLY

The above basic antitrust principles apply to IP generally. The consensus in the US is that there should be no special definition of market dominance in the IP context, and the holding of IP does not necessarily mean the holding of market power.²⁰ The US antitrust enforcement agencies have consistently adhered to these principles. This may be seen most recently in the 2017 updates²¹ to their 1995 Antitrust Guidelines for Licensing of IP (“1995 IP Guidelines”),²² and in the Federal Trade Commission’s recent PAE Study.²³

The 1995 IP Guidelines were in place for over 20 years and stated the Department of Justice’s (“DOJ”) and Federal Trade Commission’s (“FTC”) antitrust enforcement policy regarding the licensing of IP protected by patent, copyright, and trade secret law and of know-how. Over the years, the agencies have reviewed the IP Guidelines, including in 2007, when they jointly issued their report “Antitrust Enforcement and Intellectual Property Rights: Promoting Innovation and Competition” (“2007 FTC/DOJ IP & Antitrust Report”).²⁴

The 2017 updates to the 1995 IP Guidelines reaffirm the agencies’ enforcement approach with respect to IP licensing and do not expand the guidelines beyond licensing. They are intended to conform the 1995 IP Guidelines to changes in statutory and case law since 1995. The 2017 updates include updating references to the lengthened patent and copyright terms, as well as references to the Supreme Court’s decisions in *Illinois Tool Works* and in *Leegin Creative Leather Products, Inc. v. PSKS, Inc.*²⁵ applying the rule of reason to vertical price agreements. These changes in the 2017 updates do not affect the application of basic principles, but reaffirm them—that the same antitrust analysis applies to conduct involving IP as to conduct involving other forms of property, taking into account the specific characteristics of the property, that there is no presumption that IP creates market power, and that IP licensing is generally pro-competitive, enabling firm to combine complementary

¹⁹ *Spectrum Sports, Inc. v. McQuillan*, 506 U.S. 447, 456 (1993).

²⁰ *Illinois Tool Works v. Independent Ink*, *supra* note 6.

²¹ 2017 IP Guidelines.

²² <https://www.justice.gov/atr/archived-1995-antitrust-guidelines-licensing-intellectual-property> [last accessed 9 April 2018].

²³ *Supra*, note 10.

²⁴ *Supra*, note 2.

²⁵ 551 U.S. 877 (2007).

factors of production. As the agencies announced, the 2017 updates added language to the 1995 IP Guidelines to reaffirm their longstanding view that “the antitrust laws generally do not impose liability upon a firm for a unilateral refusal to assist its competitors, in part because doing so may undermine incentives for investment and innovation.”²⁶

One update that may further reflect the US agencies’ continuing re-evaluation of their approach is, as they announced:

the analysis of markets affected by licensing arrangements to mirror the approach taken in the 2010 Horizontal Merger Guidelines. The IP Licensing Guidelines’ approach to innovation markets has been revised to reflect the agencies’ actual experience with this mode of analysis. The proposed update retains the concept of “innovation markets”, but refers to them as “Research and Development Markets” to more accurately reflect how these markets have been defined in enforcement actions.²⁷

The FTC has also continuously researched developments relating to IP, including those summarized in its 2011 report, *The Evolving IP Marketplace: Aligning Patent Notice and Remedies with Competition* (“Evolving IP Marketplace Report”).²⁸ In its PAE Study,²⁹ the FTC suggested steps that may address some concerns relating to PAEs, which are consistent with the principle stated in its 2003 report, *To Promote Innovation: The Proper Balance of Competition and Patent Law and Policy* (“2003 Innovation Report”),³⁰ and reiterated in its 2011 *Evolving IP Marketplace Report*,³¹ that when concerns with how patent rights are being exercised are based on aspects of the patent system that allow such abuses, then the remedy may be more appropriately in adjustments in the patent system, unless the abuses clearly have an adverse impact on competition. Where competition concerns are unclear but other

²⁶ Press Release, DOJ and FTC Seek Views on Proposed Update of the Antitrust Guidelines for Licensing of Intellectual Property, August 12, 2016, <https://www.justice.gov/opa/pr/doj-and-ftc-seek-views-proposed-update-antitrust-guidelines-licensing-intellectual-property> [last accessed 9 April 2018].

²⁷ *Id.*

²⁸ FTC, *The Evolving IP Marketplace: Aligning Patent Notice and Remedies with Competition*, March 2011, <https://www.ftc.gov/sites/default/files/documents/reports/evolving-ip-marketplace-aligning-patent-notice-and-remedies-competition-report-federal-trade/110307patentreport.pdf> [last accessed 9 April 2018].

²⁹ Discussed further, *infra*.

³⁰ <https://www.ftc.gov/sites/default/files/documents/reports/promote-innovation-prope -balance-competition-and-patent-law-and-policy/innovationrpt.pdf> [last accessed 9 April 2018].

³¹ *Supra*, note 28. The FTC again noted that the patent system and the antitrust laws share the fundamental goals of enhancing consumer welfare and promoting innovation. It noted that the legal doctrines that most successfully accomplish those goals align the patent system and competition policy so that one does not undermine the effectiveness of the other. One important aspect of that alignment is antitrust enforcement that recognizes the incentives to innovate created by the patent system. Condemning efficient, legitimate uses of patent rights can undermine those incentives and harm consumers. The *Evolving IP Marketplace Report* points out that, for that reason, the guidance of the 2007 FTC/DOJ IP & Antitrust Report focused on incorporating careful consideration of the benefit of patent rights into antitrust analysis. Another aspect of that alignment is a proper balance between exclusivity and competition. Invalid or overbroad patents disrupt that balance by discouraging follow-on innovation, preventing competition, and raising prices through unnecessary licensing and litigation. Similarly, for that reason, many of the recommendations in the 2003 FTC Innovation Report focused on improving patent quality as a means of balancing exclusivity & competition.

concerns exist, then non-competition law remedies may be appropriate instead of competition law enforcement.

5. ANTITRUST APPROACH TO SEPs

One definition of standards is “a set of characteristics or qualities that describes features of a product, process, service, interface or material”.³² The process of standard setting is that of identifying, developing and/or choosing such a set of characteristics or qualities. Standard setting may be as simple as agreeing on the size of paper, such as the A4 size that is common outside the US, so that printers can be built to handle a few sizes of paper, or the configuration of electrical plugs, so that different types of appliances may be connected to wall outlets and get power. Such standards free up market participants to focus on how to build better printers or appliances, instead of expending effort to deal with ancillary issues such as accommodating an unlimited range of paper sizes or electrical wall outlet configurations

Thus, standard setting has beneficial effects, increasing consumer welfare and efficiency by establishing uniform approaches that enable interoperability and scale. However, there are opportunities for anticompetitive conduct and impact. The standards development process, and standards themselves, may be abused and create anticompetitive effects.³³ Standards, and the standards development process, are generally tested in the US under the rule of reason. Some of the factors that may be considered are whether there is economic detriment to a firm excluded or unqualified as a result of the adoption of a particular standard, the scope of the restrictions in the standard, how the standard is applied, and whether a boycott or price fixing is involved.³⁴

Nowadays, many standards incorporate IP and require licenses of IP to be implemented. Under many standard development organization (“SDO”) policies, a patent is “essential” to a standard if it is not possible as a technical matter to implement the standard without infringing the patent.

The activities of holders of IP, often patents, essential to the implementation of a standard, or SEPs, may be subject to antitrust scrutiny, both during the development of the standard, and after the standard has been adopted. There may be antitrust and other implications of a possible failure to disclose SEPs during the standard development process, and of the royalty structure and other terms that the holder of a SEP demands in licenses to enable implementation of the standard. There is a significant concern with SEPs holders controlling and misusing market power that they obtained only because their IP is essential to implement a standard. One court has held that ownership of a SEP does not necessarily confer market

³² Estaban Burrone, Standard, Intellectual Property Rights (IPR) and Standards-setting Process, http://www.wipo.int/sme/en/documents/ip_standards_fulltext.html#P4_83 [last accessed 9 April 2018].

³³ See, e.g., *Allied Tube and Conduit Corp. v. Indian Head, Inc.*, 486 U.S. 492 (1988), where the Supreme Court affirmed the Sherman Act § 1 liability of a member of a firm safety association for influencing the association to adopt a biased safety code to benefit its own product and disfavor competing products. See also, *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).

³⁴ *Supra* note 33.

power.³⁵ The Antitrust Division of the US Department of Justice (“DOJ”) find that inclusion in a standard “does not magically transform a lawful patent right into an unlawful monopoly.”³⁶ Nonetheless, “when a standard incorporating patented technology (owned by a participant in the standard-setting process) becomes established, switching may become difficult and expensive. This lock-in may cause that particular technology to gain market power.”³⁷

The consent order that the FTC reached in 1996 with Dell Computer Corp. may be the first of the current generation of cases reflecting concerns about SEPs.³⁸ In *Dell*, the FTC alleged that Dell had violated Section 5 of the Federal Trade Commission Act through its participation in the Video Electronics Standards Association (“VESA”). While a member of VESA, Dell supported a design standard for a computer bus design, the VL-bus. Dell certified to VESA that the standard did not infringe on any Dell patents. In fact, a year earlier, Dell had received a patent covering the mechanical slot configuration used on the computer motherboard to receive the VL-bus card. Not only did Dell apparently fail to disclose this patent, but, once the standard was implemented, Dell informed VESA members who were manufacturing computers using the new design standard that they were infringing Dell’s patents. The FTC alleged that Dell harmed competition by hindering, preventing, and raising the costs associated with, the acceptance of the VL-bus standard. In addition, the FTC alleged that Dell’s actions had chilled willingness to participate in industry standard setting efforts. Dell entered into a consent decree which required it to cease all efforts to enforce the patent.

Another notable example is the *Rambus* case,³⁹ which was litigated from the FTC in 2002 through to the D.C. Circuit Court of Appeals in 2008. The FTC alleged that Rambus, Inc. had violated Section 5 of the FTC Act by participating in the work of an industry standard setting organization, JEDEC, without disclosing that it possessed a patent and several pending patent applications that covered technologies ultimately adopted in some JEDEC standards. According to the FTC, Rambus perfected its patent rights, and once the standards had become widely adopted, enforced those patents against companies manufacturing products in compliance with the standards.⁴⁰

³⁵ *ChriMar Systems v. Cisco Systems*, 72 F. Supp. 3d 1012 (N.D. Cal. 2014). *Cf. Broadcom Corp. v. Qualcomm Inc.*, 501 F.3d 297, 314 (3d Cir. 2007) (stating, on a motion to dismiss, that “[a] standard, by definition eliminates alternative technologies”).

³⁶ Makan Delrahim, Assistant Att’y Gen., Dep’t of Justice, Antitrust Div., The “New Madison” Approach to Antitrust and Intellectual Property Law, Remarks Before the Univ. of Penn. Law School at 8-9 (March 16, 2018) (“DELRAHIM MAR. 2018 REMARKS”) (citing Alexander Galetovic & Stephen Haber, *The Fallacies of Patent-Holdup Theory*, 13 J. COMP. L. & ECON. 1, 36-41 (2017)), available at <https://www.justice.gov/opa/speech/file/1044316/download> [last accessed 1 July 2018].

³⁷ Renata Hesse, Dep. Assistant Att’y Gen., US Dep’t of Justice, Antitrust Div., Six “Small” Proposals for SSOs Before Lunch, Remarks Before the ITU-T Patent Roundtable, at 5 (Oct. 10, 2012), www.justice.gov/atr/file/518951/download [last accessed 1 July 2018].

³⁸ *In re Dell Computer Corp.*, 121 F.T.C. 616 (1996).

³⁹ *Rambus Inc. v. FTC*, 522 F.3d 456, 464–67 (D.C. Cir. 2008).

⁴⁰ *In the Matter of Rambus, Inc.*, Docket No. 9302 (June 18, 2002) (complaint), <https://www.ftc.gov/sites/default/files/documents/cases/2002/06/020618admincomp.pdf> [last accessed 2 July 2018].

The FTC Administrative Law Judge dismissed the FTC's claims, finding that Complaint Counsel did not demonstrate: (1) that the challenged conduct amounted to a pattern of anticompetitive acts and practices, (2) exclusionary conduct, (3) intent, (4) causation, (5) anticompetitive effects or (6) that manufacturers needed to use Rambus's technology to comply with the standard.⁴¹ The Commission reversed the ALJ and found that Rambus had in fact violated Section 2 of the Sherman Act and Section 5 of the FTC Act.⁴² The Commission found that a key factor was whether the specific standards development process created a reasonable expectation of non-deceptive conduct that Rambus's behavior failed to meet, and rejected Rambus's argument that its non-disclosure of information relating to its patent applications was necessary to protect trade secrets.

The D.C. Circuit reversed, finding that, even if there would have been anticompetitive impact if Rambus had engaged in deception to avoid being excluded from the standards, there would have been no anticompetitive effect if Rambus had only avoided making assurances that it would demand only reasonable and non-discriminatory ("RAND") license fees.⁴³ It reasoned that "an otherwise lawful monopolist's use of deception simply to obtain higher prices normally has no particular tendency to exclude rivals and thus to diminish competition."⁴⁴ Ultimately the FTC dismissed its administrative complaint.⁴⁵

Although US antitrust law imposes no general duty to deal or otherwise aid competitors⁴⁶ and the US antitrust agencies have stated that "[a]ntitrust liability for mere unilateral, unconditional refusals to license will not play a meaningful part" in their enforcement efforts,⁴⁷ another area that has been a focus of concern is that of the alleged refusal to license SEPs, or refusal to license SEPs on RAND or fair, reasonable and non-discriminatory ("FRAND") terms. While, with the exception of one case that is pending,⁴⁸ the cases brought

⁴¹ *In the Matter of Rambus, Inc.*, Docket No. 9302 (February 23, 2004) (Initial Decision) <https://www.ftc.gov/sites/default/files/documents/cases/2004/02/040223initialdecision.pdf> [last accessed 9 April 2018].

⁴² *In the Matter of Rambus, Inc.*, Docket No. 9302 (Aug. 2, 2006), available at <http://www.ftc.gov/os/adjpro/d9302/060802commissionopinion.pdf> [last accessed 9 April 2018].

⁴³ *Rambus v. FTC*, 522 F.3d at 464, *supra* note 39.

⁴⁴ *Id.* at 464. The Court of Appeals also outlined the requirements for finding that a patent holder's knowing or deceptive failure to disclose information about potential patent protection during the standard development process constitutes unlawful monopolization. *Id.* at 464–67.

⁴⁵ *In re Rambus, Inc.*, No. 9302 (FTC 2009), <https://www.ftc.gov/sites/default/files/documents/cases/2009/05/090512orderdismisscomplaint.pdf> [last accessed 9 April 2018].

⁴⁶ See, e.g., *Verizon Commc'ns., Inc. v. Law Offices of Curtis V. Trinko, LLP*, 540 U.S. 398, 408, 409, 411 (2004); *In re Indep. Serv. Orgs. Antitrust Litig.*, 203 F.3d 1322, 1327 (Fed. Cir. 2000); *Image Tech. Servs. v. Eastman Kodak Co.*, 125 F.3d 1195, 1218–19 (9th Cir. 1997); *Data Gen. Corp. v. Grumman Sys. Support Corp.*, 36 F.3d 1147, 1187 (1st Cir. 1994).

⁴⁷ 2007 FTC/DOJ IP & Antitrust Report at 32, *supra* note 2.

⁴⁸ *Federal Trade Commission v. Qualcomm Inc.* is pending before the US District Court in the Northern District of California. The FTC alleges that Qualcomm, a vertically-integrated SEP holder, unlawfully monopolized by seeking to unlawfully maintain its alleged monopoly in baseband processors (chipsets) by conduct including refusing to license its FRAND-committed SEPs to component manufacturers such as rival chipset makers, leading to substantial foreclosure in the downstream chipset market. See Complaint of Federal Trade Commission for Equitable Relief, *Federal Trade Commission v. Qualcomm, Inc.*, 5:17-CV-00220 (N.D.

by the US agencies to date involving allegations of refusal to license on F/RAND terms in breach of a F/RAND commitment have been resolved by consent decree,⁴⁹ and sometimes under the unfair practices prong of the FTC Act instead of the unfair methods of competition prong,⁵⁰ the competition law approach of the US agencies to standards remains adhering to basic principles. There is a concern that a F/RAND commitment not be transformed “into a compulsory licensing scheme.”⁵¹

A significant factor is that SDOs in the US are overwhelmingly private organizations, with little if any government involvement. The practices of SDOs in the US vary widely and are influenced by the industries and histories involved. For example, while many US SDOs require F/RAND commitments from holders of SEPs, often as a quid pro quo for the inclusion of the IP in the standard, other SDOs require only disclosure by IP holders of potential SEPs and of their intent regarding the licensing of the SEPs to standard implementers. In some cases, the holder of the potential SEPs may commit to offer royalty-free licenses or set forth the specific terms under which it will license SEPs. In other cases, the holder of the potential SEPs may make a F/RAND commitment. The terms and conditions of patent license agreements, including agreements under F/RAND commitments, are negotiated bilaterally, between a patent holder and a potential licensee, taking into account the specific facts and circumstances of the parties and the relevant technologies, industries and jurisdictions. There is no one-size-fits-all definition of F/RAND terms.

Initially, it might be noted that “de facto” technical standards, those technologies that become standard because they succeeded in the market place, are treated under US law just like any other IP. The majority view in the US is that there is little reason to subject “de facto” standards to the more stringent requirements that may be appropriate for collaboratively set standards adopted by SDOs, unless the holder of an essential patent for a “de facto” standard

Cal. 2017), https://www.ftc.gov/system/files/documents/cases/170117qualcomm_redacted_complaint.pdf [last accessed 1 July 2018]; *FTC v. Qualcomm Inc.*, No. 17-CV-00220-LHK, 2017 U.S. Dist. LEXIS 98632 (N.D. Cal. June 26, 2017). The 2-1 Commission vote to file the complaint was over the dissent of Commissioner Ohlhausen. Dissenting Statement of Commissioner Maureen K. Ohlhausen, *In re Qualcomm, Inc.* File No. 121-0199 1-2 (Jan. 17, 2017), https://www.ftc.gov/system/files/documents/cases/170117qualcomm_mko_dissenting_statement_17-1-17a.pdf [last accessed 1 July 2018].

⁴⁹ See, e.g., *Motorola Mobility LLC and Google Inc.*, File No. 121-0120, Docket No. C-4410 (July 23, 2013) (Decision and Order), available at <https://www.ftc.gov/sites/default/files/documents/cases/2013/07130724googlemotorolado.pdf> [last accessed 9 April 2018]; *Robert Bosch GmbH*, FTC File Number 121-0081, Docket No. C-4377 (Apr. 23, 2013) (Decision and Order) available at <https://www.ftc.gov/sites/default/files/documents/cases/2013/04/130424robertboschdo.pdf> [last accessed 9 April 2018]; *Negotiated Data Solutions LLC*, Docket No. C-4234 (Sept. 22, 2008) (Decision and Order), available at www.ftc.gov/sites/default/files/documents/cases/2008/09/080923ndsdo.pdf [last accessed 1 July 2018].

⁵⁰ *Id.* Section 5 of the FTC Act prohibits “[u]nfair methods of competition in or affecting commerce, and unfair or deceptive acts or practices in or affecting commerce”. The FTC’s Bureau of Competition is responsible for enforcing the prohibition against unfair methods of competition while its Bureau of Consumer Protection enforces the prohibition against unfair or deceptive practices.

⁵¹ Makan Delrahim, Assistant Att’y Gen., US 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 at 12 (Nov. 10, 2017) (“DELRAHIM NOV. 2017 SPEECH”), www.justice.gov/opa/speech/file/1010746/download [last accessed 1 July 2018].

has made commitments to license its IP to implement the standard. Such a situation was the case in *Intel Corp. v. VIA Technologies, Inc.*⁵² In that case, Intel unilaterally established a standard for certain computer chip specification incorporating its technology and provided a reciprocal royalty-free license available on its website for the technology. Via accepted Intel's license and manufactured products that complied with the standard. Intel sued for infringement, claiming that the license did not cover technology needed to implement optional portions of the standard. The Federal Circuit Court of Appeals found that, while the parties' differing interpretations of the scope of the license each had merit, the District Court did not err in resolving the ambiguity against the drafter, Intel, and affirmed the District Court's summary judgment of non-infringement.

In contrast, de jure standards, those technologies that become standard because they are adopted by an SDO, may appropriately be treated differently, because they may achieve a market position that is not solely the result of competition.

In all cases, there are at least two levels at which the antitrust analysis is made. First, there is the question of whether the particular standard has market power. The competitive impact of conduct relating to a SEP depends significantly on the market power of the standard involved. If the standard is not dominant, does not have the power to control prices or exclude competition, then it would appear difficult to argue that any IP that reads on the standard, whether or not a SEP, has market power by virtue of reading on the standard. In that case, conduct involving that IP in relation to the standard may not rise to the level of an antitrust violation.

Second, even if the standard involved has market power, there is still the question as to whether any particular IP that reads on the standard has market power. The question remains whether the patent holder has the power to control prices or exclude competition in a relevant market. Any conclusion of market dominance should be reached only after a case-by-case factual analysis, including in the case of SEPs. It is not always clear that the IP is a SEP.⁵³ And it is unclear whether a SEP must have market power. During the development of a standard, it is often unclear which patents will ultimately be essential, both because the standard itself is evolving and because the scope of protection afforded by a patent usually changes during the patent application process. Participants therefore typically identify, if required or asked to do so, patents and patent applications that "may be" essential, rather than patents and applications that "are" essential. Whether a declared ("may be") essential patent is actually essential is an issue that may never need to be resolved or that may be resolved later. For example, some holders of SEPs do not actively seek to assert their patents, but instead hold their patents for defensive purposes. There is no need for the holders of such patents or implementers of standards to determine whether such patents are actually essential.

⁵² 319 F.3d 1357 (Fed. Cir. 2003).

⁵³ Determining whether a SEP is actually standard-essential requires a legal and technical review. No SDO evaluates essentiality, which may change as a standard is developed. Instead, many SDOs require participants to declare patents or patent applications that are potentially essential to a standard under development. In any event, even in the case of a truly essential patent, one that the standard reads on, some standard implementers may develop alternatives that enable them to implement the standard without infringing on the SEP.

Moreover, where SEPs are subject to contractual F/RAND obligations, commitments to license the SEPs under F/RAND terms, the SEP holder substantially limits the circumstances in which it may refuse to grant a license or obtain injunctive relief against infringement. A F/RAND commitment may constrain or mitigate a SEP holder's ability to exercise any monopoly power relating to that SEP, to raise prices or exclude competition,⁵⁴ and thus may mitigate the risk of actual "patent hold-up".⁵⁵

There is debate in the US as to whether the "nondiscriminatory" aspect of contractual F/RAND obligations would be best enforced as a contractual matter or whether competition law remedies are required.⁵⁶ The adjudicated cases in the US relating to F/RAND terms have been contract law and patent infringement cases, not competition law cases.⁵⁷ The actual market situation, including the specific contractual F/RAND obligation and the rules of the particular SDO, should be examined. Patent, contract or other remedies may be available and more appropriate.

⁵⁴ See, e.g., *Broadcom v. Qualcomm*, 501 F.3d at 314 *supra* note 35 ("measures such as FRAND commitments become important safeguards against monopoly power" when patented technology is incorporated into a standard).

⁵⁵ Conversely, there is also the potential for licensees to refuse to negotiate in good faith, engaging in "reverse hold-up" or "hold out."

⁵⁶ See US Dep't of Justice and US Patent and Trademark Office, Policy Statement on Remedies for Standard-Essential Patents Subject to Voluntary F/RAND Commitments, 6 (Jan. 8, 2013), <https://www.justice.gov/sites/default/files/atr/legacy/2014/09/18/290994.pdf> [last accessed 9 April 2018]; discussion at DOJ/FTC December 2012 workshop on PAE activity, <http://www.ftc.gov/news-events/events-calendar/2012/12/patent-assertion-entity-activities-workshop> [last accessed 9 April 2018]. The DOJ has concluded that breach of a good faith FRAND commitment should be analyzed under contract or fraud law instead of the "blunt" instrument of antitrust law. DELRAHIM NOV. 2017 SPEECH, *supra* note 51, at 9, 12-13; see also Makan Delrahim, Assistant Att'y Gen., US Dep't of Justice, Antitrust Div., The Long Run: Maximizing Innovation Incentives Through Advocacy and Enforcement at 3, Keynote Address Before the LeadershIP Conference on IP Antitrust, and Innovative Policy (April 10, 2018), <https://www.justice.gov/opa/speech/file/1050956/download> [last accessed 1 July 2018] ("[S]o-called unilateral patent hold-up is not an antitrust problem. Where a patent holder has made commitments to license on particular terms, a contract theory is adequate and more appropriate to address disputes that may arise regarding whether the patent holder has honored those commitments. . . . Using the antitrust laws to impugn a patent holder's efforts to enforce valid IP rights risks undermining the dynamic competition we are charged with fostering."); DELRAHIM MAR. 2018 REMARKS, *supra* note 36 at 9-10; Andrew Finch, Principal Dep. Assistant Att'y Gen., US Dep't of Justice, Antitrust Div., Trump Antitrust Policy After One Year, Address Before the Heritage Foundation 2 (Jan. 23, 2018), www.justice.gov/opa/speech/file/1028906/download [last accessed 1 July 2018] ("expanding the use of antitrust law to police private commitments to standard setting organizations threatens to distort the bargaining process in a way that undermines innovation").

⁵⁷ See *Microsoft Corp. v. Motorola, Inc.*, 795 F.3d 1024 (9th Cir. 2015) (FRAND contract enforced, enforcement of German injunction enjoined, and FRAND royalties determined); *In re Innovatio IP Ventures, LLC Patent Litig.*, 921 F. Supp. 2d 903 (N.D. Ill. 2013); *Realtek Semiconductor Corp. v. LSI Corp.*, 946 F. Supp.2d 998 (N.D. Cal. 2013) (enforcing FRAND contract and granting preliminary injunction against enforcement of ITC exclusion order).

6. ANTITRUST APPROACH TO PAEs

PAEs are entities which hold patents, but do not practice them, and instead gain revenues primarily from enforcing the patents against other entities.⁵⁸ There are at least three types of common PAE business models:

a. The PAE purchases patents from an operating company with the intent to monetize the patents more aggressively than the operating company, because the PAE does not have an operating company's reputational (or business relationship) constraints or need for cross-licenses.

b. The PAE has an established relationship to an operating company. For example, the PAE acquired a patent portfolio from an operating company under terms that would align the PAE's interests with the operating company's, such that the PAE could selectively enforce the patents against the operating company's rivals, thus raising the rivals' costs. Some call it privateering.⁵⁹

c. Two operating companies jointly create a PAE with interests aligned with those of the operating companies.

Patent licenses may be *ex ante* or *ex post*. *Ex ante* licenses are issued to licensees that then implement the technology licensed. With *ex ante* licenses, PAEs offer a path to monetization for individual inventors, which can actually spur innovation. *Ex post* licenses are granted to licensees that sell goods or services developed or obtained independently of the patentholder, and therefore generally do not involve significant technology transfer. Such licenses can distort competition in technology markets and deter innovation. The failure of the patentee and licensee to license *ex ante* with technology transfer results in duplicated R&D effort.⁶⁰

In recent years, PAEs have been established with a business model that focuses on purchasing and asserting patents against manufacturers already using the technology, rather than developing and transferring technology. These PAEs have been dubbed patent trolls and have aroused calls for action. The impact of these PAEs may have been significant⁶¹

⁵⁸ PAEs are a subset of non-practicing entities ("NPEs"). NPEs include research universities and other entities such as semi-conductor design houses that hold patents and do not practice them, but instead license their patent inventions to others to develop and bring to market. *See, e.g.*, Evolving IP Marketplace Report at 8 n.5, *supra* note 28.

⁵⁹ *See, e.g.*, Comments of the Consumer Electronics Association to the United States Federal Trade Commission (December 16, 20013) at 3, *available at* https://www.ftc.gov/sites/default/files/documents/public_comments/2013/12/00066-87874.pdf [last accessed 30 June 2018]; Response of Adobe Systems, Inc. *et al.* to the Federal Trade Commission's Proposed Section 6(b) Information Requests to Patent Assertion Entities and Other Entities Asserting Patents (December 16, 2013) ("Adobe *et al.*") at 16–17, *available at* https://www.ftc.gov/sites/default/files/documents/public_comments/2013/12/00068-87877.pd [last accessed 30 June 2018].

⁶⁰ Evolving IP Marketplace Report at 8, *supra* note 28.

⁶¹ Some industries have been affected more than others. PAE patent litigation may capitalize on ambiguity in the patent scope, so that defendants face greater litigation risk. In some field the scope of patent protection is normally quite clear, such as in the chemical and pharmaceutical areas. For other inventions, especially software and business methods, the patent often fails to provide clear notice of the existence and scope of patent protection. Over 60% of PAE suits involve difficult-to-interpret software patents. Comments of ADTRAN, Inc. ("ADTRAN

- In 2012, PAEs brought 62 percent of all patent infringement cases.⁶² In 2010, PAEs accounted for 29 percent of all cases.⁶³ The number of patent cases filed rose over 12 percent from 2012 to 2013.⁶⁴ As recently as 2002, PAEs accounted for less than five percent of patent lawsuits.⁶⁵
- Some studies indicate that least 66 percent of all defendants named in PAE suits are small companies and start-ups that have revenues of under USD 100 million, and 55 percent of these defendants have revenues USD 10 million or less annually.⁶⁶
- PAEs reportedly lose 92 percent of the time when their cases are actually litigated, far greater than the 60 percent failure rate for infringement claims by non-PAEs.⁶⁷
- For almost 15 years, from 2003 to 2017, median damage awards for NPEs (which includes PAEs) were reportedly nearly double and often over triple the median damages awarded to practicing entities.⁶⁸
- Patent litigation in the US is expensive. A single litigation can cost more than USD 5 million in attorneys' fees and costs.⁶⁹ Discovery costs alone can range from USD 350,000 to USD 3 million.⁷⁰

Comments”) at 3–4, *available at* https://www.ftc.gov/sites/default/files/documents/public_comments/2013/12/00064-87872.pdf [last accessed 1 July 2018].

⁶² Exec. Office of the President, Patent Assertion and US Innovation at 5 (2013) (“Executive Patent Assertion Report”), *available at* https://obamawhitehouse.archives.gov/sites/default/files/docs/patent_report.pdf [last accessed 30 June 2018].

⁶³ *Id.*

⁶⁴ Comments of the National Retail Federation regarding Patent Assertion Entities (June 18, 2018) at 2 (“NRF Comments”), *available at* https://www.ftc.gov/system/files/documents/public_comments/2014/06/00018-90474.pdf [last accessed 30 June 2018].

⁶⁵ ADTRAN Comments at 1, *supra* note 61.

⁶⁶ Colleen Chien, Patent Trolls by the Numbers (March 14, 2013), *available at* <https://patentlyo.com/patent/2013/03/chien-patent-trolls.html> [last accessed 30 June 2018], NRF Comments, *supra* note 64 at 2; Adobe *et al.* *supra* note 59 at 8–9.

⁶⁷ Davis Polk & Wardwell LLP, Public Comment on the Commission’s Section 6(b) Report on Patent Assertion Entities: How the Commission Can Most Effectively Use Its Authority To Protect Both Consumers and Competition (December 16, 2013) at 3, *available at* https://www.ftc.gov/sites/default/files/documents/public_comments/2013/12/00071-87881.pdf [last accessed 30 June 2018].

⁶⁸ PwC, 2013 Patent Litigation Study: Big cases make headlines, while patent cases proliferate at 8, *available at* <http://patentdocs.typepad.com/files/2013-patent-litigation-stud.pdf> [last accessed 30 June 2018]; PwC, 2018 Patent Litigation Study (May 2018) (“2018 PwC Study”) at 9, *available at* <https://www.pwc.com/us/en/forensic-services/publications/assets/2018-pwc-patent-litigation-study.pdf> [last accessed 1 July 2018].

⁶⁹ Additional Comments of Intel Corporation on the Federal Trade Commission’s Revised Proposed Section 6(b) Information Requests About Patent Assertion Entities and Other Entities Asserting Patents (June 18, 2014) at 2 n.4, *available at* https://www.ftc.gov/system/files/documents/public_comments/2014/06/00032-90499.pdf [last accessed 30 June 2018].

⁷⁰ US General Accountability Office, “Intellectual Property: Assessing Factors that Affect Patent Litigation Could Help Improve Patent Quality” (August 2013) at 37 (“GAO IP Report”), *available at* <https://www.gao.gov/assets/660/657103.pdf> [last accessed 1 July 2018]; NRF Comments, *supra* note 64 at 2.

In reaction to troubling reports of abusive IPR infringement litigation, including by PAEs, there was a flurry of reaction.⁷¹ At the federal level, executive actions included: (1) requiring disclosure of the real party-in-interest in proceedings before the Patent & Trademark Office (“PTO”); (2) tightening functional claiming in patents; (3) empowering downstream users by requiring the PTO to publish educational and outreach materials, including an accessible, plain-English website offering answers to common questions by those facing demands from a possible PAE; (4) expanding dedicated outreach and study; (5) strengthening the enforcement process of exclusion orders by having the US IP Enforcement Coordinator launch an interagency review of existing procedures that the Customs & Border Patrol and the International Trade Commission (“ITC”) use to evaluate the scope of exclusion orders.⁷² The president also recommended to Congress legislation: (1) requiring patentees and patent applicants to disclose the real party-in-interest in seeking to enforce patents or PTO review of a patent; (2) permitting more discretion in awarding fees to prevailing parties in patent cases, and providing district courts with more discretion to award attorney’s fees as a sanction for abusive court filings; (3) expanding the PTO’s transitional program for covered business method patents to include a broader category of computer-enabled patents and permit a wider range of challengers to petition for review of issued patents before the Patent Trial & Appeals Board; (4) protecting off-the-shelf use of products covered by patents by consumers and businesses, by providing them with better legal protection against liability; (5) changing the ITC standard for obtaining an injunction to better align it with the traditional four-factor test set forth in the Supreme Court’s decision in *eBay Inc. v. MercExchange, L.L.C.*;⁷³ (6) using demand letter transparency to help curb abusive suits, incentivizing public filing of demand letters in a way that makes them accessible and searchable to the public; and (7) ensuring that the ITC has adequate flexibility in hiring qualified Administrative Law Judges.⁷⁴

Nonetheless, there is little empirical evidence on the competitive costs and benefit of PAE activity. While there is some information on PAE litigation, there is a lack of reliable data regarding the amount of PAE litigation, and the outcome of those cases. The lack of transparency regarding patent ownership also makes it difficult to track litigation. In addition, confidentiality provisions in licensing agreements obscure the outcome of demand letters and settlement negotiations. And settlements generally include non-disclosure provisions. Beyond litigation, patent holders much more frequently issue demand letters than commence infringement litigation. Demand letters are rarely made public. There are reports that just two PAEs have sent approximately 30,000 demand letters to small businesses around the US.⁷⁵

⁷¹ See, e.g., PwC, 2014 Patent Litigation Study: As case volume leaps, damages continue general decline (July 2014) at 2, available at <https://www.pwc.com/us/en/forensic-services/publications/assets/2014-patent-litigation-study.pdf> [last accessed 1 July 2018].

⁷² See, Press Release, White House, “Fact Sheet: White House Task Force on High-Tech Patent Issues” (June 4, 2013) (“White House Press Release”), available at <https://obamawhitehouse.archives.gov/the-press-office/2013/06/04/fact-sheet-white-house-task-force-high-tech-patent-issues> [last accessed 30 June 2018].

⁷³ 547 U.S. 388 (2006).

⁷⁴ See, White House Press Release, *supra* note 72.

⁷⁵ Public Comments of the Electronic Frontier Foundation regarding Investigation of Patent Assertion Entities

In the context of calls for quick action against patent trolls and anecdotes told of abusive practices by PAEs,⁷⁶ in 2014 the US FTC began a study of PAE activity.⁷⁷ The FTC issued its PAE Study in October 2016, reporting on the results of its study.⁷⁸ The following three aspects of the PAE Study are striking:

1. While there have been continuous calls for quick action against patent trolls and anecdotes told of abusive practices by PAEs, the FTC took the time and effort to gather facts before taking or recommending any action.

2. Based upon its study, the FTC recommended several changes in procedures for patent litigation,⁷⁹ and is silent on any application of the antitrust laws. One may conclude that the FTC sees no special application of the antitrust laws to PAE activities.⁸⁰

(June 18, 2014) at 2, available at https://www.ftc.gov/system/files/documents/public_comments/2014/06/0002590484.pdf [last accessed 30 June 2018].

⁷⁶ Numerous hearings were conducted and bills introduced in Congress to address patent litigation procedures in federal court and PAE demand letters. *E.g.*, H.R. 9, H.R. 3309, Innovation Act, at https://judiciary.house.gov/wp-content/uploads/2016/02/GOODLA_008_xml.pdf [last accessed 1 July 2018]; S. 632, STRONG Patents Act of 2015, at <https://www.congress.gov/bill/114th-congress/senate-bill/632> [last accessed 1 July 2018]; S. 1720, Patent Transparency and Improvements Act, at <https://www.congress.gov/bill/113th-congress/senate-bill/1720> [last accessed 4 July 2018]; Apple Inc. letter re: PAE Reports: Paperwork Comment; Project No. P131203 (December 16, 2013) at 2–3, at https://www.ftc.gov/sites/default/files/documents/public_comments/2013/12/00069-87879.pdf [last accessed 4 July 2018].

⁷⁷ Notice of Office of Management and Budget Action (Aug. 8, 2014), available at http://www.mlex.com/US/Attachments/2014-08-15_PA768DT7N27FL736/2014-08-08-omb-pae-study.pdf [last accessed 1 July 2018]; FTC, Patent Assertion (PAE) study, at <https://www.ftc.gov/policy/studies/patent-assertion-entities-pae-study> [last accessed 2 July 2018]. In preparation for its study, the FTC conducted a workshop in 2012 (<https://www.ftc.gov/news-events/events-calendar/2012/12/patent-assertion-entity-activities-workshop> [last accessed on 29 June 2018]) and public consultations in 2013 (https://www.ftc.gov/sites/default/files/documents/federal_register_notices/2013/10/131003paereportsfrm.pdf [last accessed 29 June 2018]) and 2014 (<https://www.ftc.gov/policy/public-comments/2014/06/initiative-568> [last accessed 29 June 2018]). The study sought information regarding questions including: (1) how PAEs organize their corporate legal structure, including parent and subsidiary entities; (2) the types of patents that PAEs hold, and how they organize their holdings; (3) how PAEs acquire patents, and how they compensate prior patent owners; (4) how PAEs engage in assertion activity (*i.e.* demand, litigation, and licensing behavior); (5) the cost to PAEs of assertion activity; and (6) what PAEs earn through assertion activity. (https://www.ftc.gov/system/files/attachments/patent-assertion-entities-pae-study/pae_study_information_request_a.pdf and https://www.ftc.gov/system/files/attachments/patent-assertion-entities-pae-study/pae_study_information_request_b.pdf [both last accessed 29 June 2018]). It also included two case studies, one describing PAE activity generally, and one that compares PAE assertion activity to that of manufacturers and NPEs in the wireless chipset sector. PAE Study, *supra* note 10, at 2–3.

⁷⁸ *Id.*

⁷⁹ The FTC recommended that: (1) rules and case management practices be developed to address discovery burden and cost asymmetries in PAE litigation (PAE Study at 9); (2) Federal Rule of Civil Procedure 7.1 be amended to cover a broader range of non-party interested entities or persons (*id.* at 11); (3) courts be encouraged to stay a PAE's infringement action against a customer or end-user, where the PAE has already sued the manufacturer of the product under the same theory (*id.* at 12); and (4) courts ensure that patent infringement complaints provide sufficient notice of the claims to accused infringers (*id.*).

⁸⁰ However, the FTC's jurisdiction is broader than antitrust, reaching "unfair or deceptive acts or practices" (15 U.S.C. § 45(a)(1)), and it has acted against deceptive PAE practices. *E.g.*, *In the Matter of MPHJ Technology Investments, LLC*, File No. 142 3003, Complaint (<https://www.ftc.gov/system/files/documents/cases/141106mphjcmpt.pdf>

3. The recommendations are apparently based on a view that while there appears to be a significant amount of nuisance infringement lawsuits brought by a significant percentage of PAEs, those suits have little impact on competition, so that the appropriate remedy for such abuse of process should be adjustments to the process to make it more difficult to abuse.

The FTC's PAE Study recommendations are consistent with the principle stated in its earlier studies of IP developments, that the remedy to the perceived abuses may be more appropriately in adjustments to the patent system, unless the abuses likely have an adverse impact on competition.⁸¹ Its findings are also consistent with those of studies by the US General Accountability Office ("GAO")⁸² and by the President's Council of Economic Advisers ("CEA"), the National Economic Council ("NEC") and the Office of Science & Technology ("OST").⁸³ Notably, the CEA, NEC and OST observed that "[s]imilar cases occurred with patents for agricultural equipment and for railroad equipment in the late 19th century, in which there was great uncertainty about whether a valid patent had been infringed. Once these underlying conditions were changed, this business model was no

[last accessed 29 June 2018]); Agreement Containing Consent Order (<https://www.ftc.gov/system/files/documents/cases/141106mphjagree.pdf> [last accessed 29 June 2018]). The FTC alleged that MPHJ Technology Investments, LLC engaged in deceptive practices by claiming to have licensees when it had none, and that it will file infringement claims when had no intention to do so and file none. A consent order was entered prohibiting MPHJ from making misleading or unsubstantiated representations in patent assertion communications. The matter was prosecuted by the FTC's Bureau of Consumer Protection, under the FTC's "unfair or deceptive acts or practices" authority.

⁸¹ The 2017 change in administration has not changed the US enforcement agencies' approach in this area. See, e.g., DELRAHIM NOV. 2017 SPEECH, *supra* note 51 at 3, 11–12; DELRAHIM MAR. 2018 REMARKS, *supra* note 36 at 14; Maureen K. Ohlhausen, *The Elusive Role of Competition in the Standard-Setting Antitrust Debate*, 20 STAN. TECH. L. REV. 93 (2017), at https://www.ftc.gov/system/files/documents/public_statements/1229923/201-3-ohlhausen-antitrust-debate.pdf [last accessed 4 July 2018].

⁸² The GAO conducted a study on NPE patent litigation and reported to Congress in 2013 that three key factors appeared to have contributed to recent growth in patent litigation: (1) prevalence of patents with unclear property rights, such as in software; (2) potential for large monetary awards that can be an incentive to sue; and (3) increased recognition by businesses that patents may be more valuable than they had assumed. GAO IP Report at 28, *supra* note 70. The GAO found that, regardless of the type of litigant, lawsuits involving software-related patents accounted for almost 90% of increases in the number of defendants sued between 2007 and 2011, and that most lawsuits brought by patent monetization entities involved software-related patents. *Id.* at 14, 22, 45. It concluded that the focus on the identity of the party instead of the type of patent, may be misplaced. *Id.* at 45. The GAO recommended that the PTO examine trends in patent litigation and link that information to internal PTO patent examination data to improve patent quality and examination. *Id.* at 46.

⁸³ The CEA, the NEC and the OST in their 2013 "Executive Patent Assertion Report" define PAEs by their behavior ("aggressive litigation" tactics) and not by the business model. (Executive Patent Assertion Report at 1, *supra* note 62.) Among other things, the report found that: (1) "[s]ome firms that own patents but do not make products with them play an important role in US innovation ecosystem, for example by connecting manufacturers with inventors, thereby allowing inventors to focus on what they do best"; (2) however, "[e]stimates suggest that PAEs may have threatened over 100,000 companies with patent infringement" in 2012 alone; (3) some practicing firms are beginning to use the same litigation tactics as PAEs; and (4) "PAEs take advantage of uncertainty about the scope or validity of patent claims, especially in software-related patents because of the relative novelty of the technology and because it has been difficult to separate the 'function' of the software . . . from the 'means' by which that function is accomplished". (*Id.*)

longer profitable and litigation of this type fell dramatically.”⁸⁴ The Councils concluded that the following policies “would likely have a similar effect today”: (1) “fostering clearer patents with a high standard of novelty and non-obviousness”; (2) “reducing disparity in the costs of litigation for patent owners and technology users”; and (3) “increasing the adaptability of the innovation system to challenges posed by new technologies and new business models”.⁸⁵

With changes in PTO⁸⁶ and ITC⁸⁷ procedures and several recent US Supreme Court rulings regarding the appropriate scope and required clarity of patents⁸⁸ and fee shifting in patent litigation,⁸⁹ as well as earlier rulings regarding patentable subject matter and satisfaction of the obviousness and definiteness requirement, there should be relatively fewer patents claims allowed that are overly broad and/or ill-defined and provide opportunities for the abuse that has drawn so much attention. This may be reflected in the fact that although for many years the trends in number of patent cases filed and the number of patents granted were similar, since 2013, when the concern about PAEs may have been at its height, the number of cases filed has been dropping steadily while the number of patents granted has continued to rise.⁹⁰ The number of actions filed dropped 13 percent from 2103 to 2014, in the wake of the US Supreme Court’s decision in *Alice Corp. v. CLS Bank International* that significantly tightened the standards for patents.⁹¹

⁸⁴ *Id.*

⁸⁵ *Id.*

⁸⁶ GAO IP Report at 43–44, *supra* note 70. In addition, the PTO has been working with the software industry to develop more uniform terminology for software-related patents, with the goal of increasing patent quality. *Id.* at 40. It has also been working with the software industry to make it easier to identify relevant patents and patent owners. *Id.* at 41. “In February 2011, the PTO issued supplemental guidelines to assist in the examination of claims in applications for compliance with the definiteness requirement.” *Id.* at 39. “In May 2012, an internal PTO review showed that PTO examiners were making 4 to 6 percent more rejections in patent applications across all technology areas based on claims not being clear and definite than before the supplemental guidelines were issued.” *Id.* at 40. Moreover, the PTO has implemented new procedures under the America Invents Act for post-grant review of patents. *Id.* at 43. Nonetheless, patent requirements are established by statute and case law, which constrains the agency’s ability to alter requirements for patent applications. The PTO does not have substantive rulemaking authority, so its ability to issue regulations requiring, for example, updates to ownership information is limited without additional statutory authority. *Id.* at 41.

⁸⁷ See, e.g., US ITC, Pilot Program Will Test Early Disposition of Certain Section 337 Investigations (June 24, 2013), available at https://www.usitc.gov/press_room/featured_news/pilot_program_will_test_early_disposition_certain.htm [last accessed 1 July 2018]; US ITC, News Release 13-059, Faster Investigation Resolution, Lower Litigation Costs are Goals of USITC Section 337 Pilot Program (June 24, 2013), available at https://www.usitc.gov/press_room/news_release/2013/er0624112.htm [last accessed 4 July 2018].

⁸⁸ *Alice Corporation Pty. Ltd. v. CLS Bank International*, 134 S. Ct. 2347 (2014); *Nautilus, Inc. v. Biosig Instruments, Inc.*, 134 S. Ct. 2120 (2014).

⁸⁹ *Octane Fitness, LLC v. ICON Health & Fitness, Inc.*, 134 S. Ct. 1749 (2014); *Highmark Inc. v. Allcare Health Management Systems, Inc.*, 134 S. Ct. 1744 (2014).

⁹⁰ 2018 PwC Study at 2, *supra* note 68.

⁹¹ PwC, 2015 Patent Litigation Study: A change in patentee fortunes (May 2015) at 3, available at <https://www.pwc.com/us/en/forensic-services/publications/assets/2015-pwc-patent-litigation-study.pdf> [last accessed 1 July 2018].

7. INFRINGEMENT SUITS BY SEPs HOLDERS AND PAEs

There is certainly the potential for patent infringement suits to be used in an abusive manner, by all types of patent holders, including SEPs holders and PAEs. In the case of F/RAND-committed SEPs, there is concern that an injunction may be used essentially to nullify the F/RAND commitment. Nonetheless, the First Amendment to the US Constitution protects the right to petition. Under the *Noerr-Pennington* doctrine,⁹² the Supreme Court has applied the First Amendment to protect lawsuits that may have been brought for anti-competitive purposes, unless the lawsuit was shown to be objectively baseless under the standard established in *Professional Real Estate Investors v. Columbia Pictures Industries* (“*PRE*”).⁹³ *PRE* establishes a two-pronged test for whether there is a sham litigation that is unprotected by the First Amendment:

1. Whether the lawsuit is objectively baseless; and

2. If it was objectively baseless, whether it was brought for the purpose of adversely affecting a competitor through the use of legal processes, instead of through the result of the process. In other words, whether the lawsuit was brought without caring whether it will be won, because the goal is to affect the competitor by forcing the competitor to defend the lawsuit.

In context of IP, the *Walker Process*⁹⁴ and *Handgards*⁹⁵ line of cases establishes that litigation to enforce a patent that is known to be invalid, not enforceable, or not infringed would not be protected by the *Noerr-Pennington* doctrine. In such cases, there is the specific bad intent that is required to show an attempt to monopolize in violation of § 2 of the Sherman Act. *Walker Process* involved a case where a patent was obtained by fraud and a lawsuit was brought to enforce it by a plaintiff that knew that the patent was obtained by fraud. *Handgards* involved a situation where at the time the infringement suit was brought, the plaintiff knew that the patent was invalid. The courts have generally also applied this standard to infringement notices that are customarily sent before lawsuits are commenced.⁹⁶ Therefore, unless the allegations in the notice were objectively baseless and made with that knowledge, the notice would be protected by the *Noerr-Pennington* doctrine.

Noerr immunity applies equally to suits seeking relief from infringement of SEPs subject to a F/RAND assurance.⁹⁷ And implementing a criterion of “objectively baseless” for lawsuits brought by a PAE, that is based on a reasonable litigant’s expectation of success on

⁹² *Eastern Railroad Presidents Conference v. Noerr Motor Freight*, 365 U.S. 127 (1961); *United Mine Workers v. Pennington*, 381 U.S. 657 (1965).

⁹³ 508 U.S. 49 (1993). A “pattern of baseless, repetitive claims” may not be protected by the First Amendment and may violate the antitrust laws. *California Motor Transport Co. v. Trucking Unlimited*, 404 U. S. 508, 513 (1972).

⁹⁴ *Walker Process Equip. v. Food Mach. and Chem. Corp.*, 382 U.S. 172 (1965).

⁹⁵ *Handgards, Inc. v. Ethicon, Inc.*, 601 F.2d 986 (9th Cir. 1979).

⁹⁶ See, e.g., *Highmark v. Allcare Health Management Systems*, *supra* note 89.

⁹⁷ See, e.g., *TCL Commc’ns Tech. Holdings, Ltd. v. Telefonaktienbolaget LM Ericsson*, 2016 US Dist. LEXIS 140566 at *7–10 (C.D. Cal. 2016); see also *Apple Inc. v. Motorola Mobility Inc.*, 886 F. Supp.2d 1061, 1066–67, 1076–77, 1079 (W.D. Wis. 2012).

the facts and law applicable to a particular case, would serve a dual purpose—discouraging the abuse of litigation and governmental process for anticompetitive purposes while preserving the proper use of patent infringement suits for enforcement of patent rights.

However, under US law, even if a lawsuit is a sham and brought for anticompetitive purposes, for the lawsuit to be an antitrust violation, the elements of monopolization or attempted monopolization must still be established. The presence of market power and impact on competition must still be demonstrated to support a monopolization claim. The presence of a specific intent to monopolize the market and a high probability of success must be shown to support an attempt to monopolize claim. Moreover, if a lawsuit is not objectively baseless, then even if it was brought for the purpose of excluding a competitor from the market, there is no antitrust violation whether or not the lawsuit is ultimately successful.

In any event, the IP right to exclude does not imply that an injunction should issue in all cases of infringement. In the US, entitlement to an injunction in a patent infringement dispute is governed by the factors set out by the US Supreme Court in *eBay*.⁹⁸ The factors that a patent holder seeking an injunction must show are: (1) it has suffered an irreparable injury; (2) remedies available at law, such as monetary damages, are inadequate to compensate for that injury; (3) considering the balance of hardships between the plaintiff and defendant, a remedy in equity is warranted; and (4) the public interest would not be disserved by a permanent injunction. This test is the same as that applied in other types of claims for preliminary injunctive relief and requires a case-by-case, fact-specific analysis. One of the factors is whether the patent involved is subject to a F/RAND commitment, in which case an injunction may be unlikely except in cases such as where the prospective licensee is unwilling or unable to enter into a license on F/RAND terms. *eBay* should mitigate much of the concern over injunctions sought by SEPs holders and PAEs against alleged infringement.

Moreover, any changes to the availability of injunctions should consider that patentholders that license as part of a technology transfer program can suffer harm from infringement similar to that suffered by manufacturing patentees. The availability of an injunction is important to such patentholders, who rely on the threat to deter infringement and encourage ex ante licensing. In contrast, denial of an injunction may not prevent a PAE from receiving the full value of the invention. A PAE will not have the same concerns about deterring future infringement and protecting its reputation as an innovator that other patentees may have. No US court has found an antitrust violation where the holder of a FRAND-committed SEP sought or enforced injunctive relief for alleged infringement of the SEP.⁹⁹

8. CONCLUSION

With respect to both SEPs and PAEs, there have been significant steps taken under patent and contract law, as well as under the FTC Act, to address concerns regarding licensing and enforcement practices. Before additional measures are introduced, their potential impact on operating companies that make legitimate efforts to enforce their patents should be considered. It would be worthwhile to consider how to facilitate ex ante transactions while

⁹⁸ 547 U.S. 388 (2006).

⁹⁹ The *Noerr-Pennington* doctrine was applied to immunize such actions from antitrust liability. See, *supra* note 97.

making ex post transactions less necessary or frequent, since it appears that ex post transactions may be more susceptible to abusive conduct.

In any event, it is unclear that any special action is needed under antitrust law. There needs to be care not to fall into the trap of applying competition law to all problems. Sometimes, other remedies are more appropriate. IP should not be viewed as inevitably essential facilities, including in the case of PAEs and SEPs. It is important to make sure of the facts, and act accordingly after careful deliberation. Any special presumptions under competition law relating to conduct involving PAEs or SEPs should be adopted only after careful study. The 2017 IP Guidelines and the FTC's PAE Study are two examples of the adherence to basic principles, that should be applied to SEPs, and PAEs.

It seems clear that, as to the application in the US of antitrust principles to IP, the federal agencies will continue to consider traditional competition law factors such as the presence of market power, the abuse of monopoly power, the presence of coordinated anti-competitive conduct, and acquisitions that may tend to create a monopoly, while also continuing to encourage improvements in the patent system. For example, if a PAE were to acquire a massive portfolio and require targets to take a license to the entire portfolio, this might raise antitrust issues. If a PAE were to acquire SEPs and then renege on the original owner's F/RAND licensing commitment, this would also raise flags. On the other hand, few PAEs hold dominant market positions relating to the IP they hold. Therefore, it is likely that the FTC will be taking more actions along the lines of the actions taken against MPHJ and N-Data.¹⁰⁰

¹⁰⁰ *Negotiated Data Solutions LLC, supra* note 49.

