Chapter 6

Competition, Intellectual Property Rights and Collaboratively Set Standards: Federal Trade Commission Advocacy and Enforcement

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1 Introduction

Since its inception, the Federal Trade Commission (henceforth “FTC”) has served as an expert agency on matters of competition and consumer protection. Its mandate not only includes enforcement of the antitrust laws but also extends to economic and policy research on matters of competition and—when appropriate—dissemination of that research through the issuance of public reports and through competition advocacy. The FTC uses all of these tools to address issues at the intersection of intellectual property and antitrust law. Often, this is necessary because the issues touch upon not only the application of the antitrust law by the FTC but also the application of the patent law by the courts and other federal agencies.

The incorporation of patented technologies into voluntary and collaboratively-set interoperability standards raises issues that touch upon both of these disciplines. It also raises economic issues that may not necessarily implicate either body of law. Many fora—both public and private—and many jurisdictions around the world are in the midst of developing frameworks to address these issues. Much contemporary debate is focused on standard setting organizations’ (henceforth “SSOs”) use of internal procedures that allow participants to commit to licensing on fair, reasonable, and non-discriminatory (henceforth “FRAND”) terms.¹

The views expressed herein are those of the author and do not necessarily reflect the views of the Federal Trade Commission or any individual Commissioner.

¹This chapter will treat the terms FRAND and RAND interchangeably. For simplicity, it will use the term FRAND unless quoting text that uses the term RAND.

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The FTC's most recent work regarding collaborative standard setting relates to the FRAND commitment. The FTC has focused its advocacy and enforcement primarily on one issue: the impact that the voluntary FRAND commitment has on patent holders' ability to obtain an injunction as a remedy for patent infringement. The FTC's approach to this issue had dual prongs: the FTC advocated that tribunals applying the patent law take economic considerations into account when crafting their remedies and the FTC used its enforcement authority to police instances of firms engaging in licensing conduct inconsistent with voluntary FRAND commitments that they had made. The FTC's most recent work is illuminated by a lengthy history of enforcement and advocacy related to the collaborative standard setting process. This chapter provides an overview of that work.

1.1 The FTC's Tools to Promote Innovation and Competition

The FTC promotes innovation and competition through both law enforcement and competition advocacy. Section 5 of the FTC Act empowers the agency to prevent the use of "unfair methods of competition in or affecting commerce."² In addition, Section 6 of the FTC Act provides the FTC with the ability to "gather and compile information," thereby developing economic expertise relevant to competition in a number of markets.³ The FTC has a long history of sharing this expertise by engaging in competition advocacy before regulators, legislatures, the courts and others when these entities contemplate action that may affect competition.⁴

The scope of the prohibition on "unfair methods of competition" in Section 5 of the FTC Act encompasses the scope of the Sherman Act.⁵ Section 1 of the Sherman Act prohibits "every contract ... or conspiracy, in restraint of trade."⁶ Section 2 of the Sherman Act prohibits monopolization and attempts to monopolize.⁷

²15 U.S.C. § 45. The FTC's enforcement authority pursuant to Section 5 also extends to "unfair or deceptive acts or practices in or affecting commerce," providing the FTC with the authority to police conduct related to consumer protection. This chapter will focus on the FTC's application of its competition authority—not its consumer protection authority.

³15 U.S.C. § 46.

⁴See Tara Koslov, *Competition Advocacy at the Federal Trade Commission: Recent Developments Build on Past Successes*, CPI ANTITRUST CHRONICLE (August 2012).

⁵Fed. Trade Comm'n, STATEMENT OF ENFORCEMENT PRINCIPLES REGARDING "UNFAIR METHODS OF COMPETITION" UNDER SECTION 5 OF THE FTC ACT (August 15, 2015).

⁶15 U.S.C. § 1.

⁷15 U.S.C. § 2.

In addition, Section 5 of the FTC Act can also reach “acts or practices that are anticompetitive but may not fall within the scope of the” Sherman Act.⁸

The FTC generally enforces Section 5 of the FTC Act through administrative proceedings.⁹ Most proceedings are resolved through consent decrees negotiated with the parties resulting in agreed-upon cease and desist orders.¹⁰ In the cases where the party does not agree to a consent decree, proceedings are tried by an administrative law judge, whose findings are subject to review by the FTC Commissioners.¹¹ Final Commission decisions can be appealed to a federal court of appeal.¹²

In addition to law enforcement, Section 6 of the FTC Act provides the FTC with the authority to conduct economic and policy research and public reporting. Section 6(f) of the FTC Act provides it with the authority to “make public from time to time such portions of the information obtained by it hereunder as are in the public interest,” and to “make annual and special reports to the Congress and to submit therewith recommendations for additional legislation.”¹³ The FTC has a large staff of economists and legal and policy experts focused on this work.¹⁴

Leveraging this expertise, the FTC uses competition advocacy to address markets where regulation or legislation may impact competition.¹⁵ It has conducted workshops and disseminated public reports to educate public and private stakeholders. It has filed *amicus curiae* briefs with courts. It has submitted written comments to state and federal legislatures and federal agencies.

Recently, it has addressed issues such as taxicab regulations which may prevent entry from innovative ridesharing services¹⁶ and regulations which may prevent non-physicians, such as nurses and dental hygienists, from providing certain health care services in competition with physicians.¹⁷

⁸Fed. Trade Comm’n., *supra* note 5.

⁹See PHILLIP E. AREEDA & HERBERT HOVENKAMP, *ANTITRUSTLAW: AN ANALYSIS OF ANTITRUST PRINCIPLES AND THEIR APPLICATION* (1995), ¶ 302.

¹⁰*Id.*

¹¹*Id.*

¹²*Id.*

¹³15 U.S.C. § 46.

¹⁴See generally William E. Kovacic, *Measuring What Matters Most: The Federal Trade Commission and Investments in Competition Policy Research and Development*, 72 ANTITRUST L.J. 861 (2005).

¹⁵Koslov, *supra* note 4.

¹⁶See, e.g., Comment of the Staff of the Office of Policy Planning, Bureau of Competition and Bureau of Economics of the Fed. Trade Comm’n to Mr. Brendan Reilly, Alderman – 42nd Ward, City of Chicago, regarding Proposed Ordinance O2014-1367. (April 15, 2014).

¹⁷Koslov, *supra* note 4, at 8.

1.2 *The Intersection of Intellectual Property Law and Antitrust Law*

The FTC has used both enforcement and advocacy to address issues at the intersection of intellectual property and competition. When addressing these matters, the FTC adopts the contemporary view that intellectual property laws and antitrust laws can work in harmony and share the same fundamental goals: enhancing consumer welfare and promoting innovation.¹⁸ This now-widely-held view is a significant shift from the view prevalent in the early twentieth century that the two areas of law were in conflict.¹⁹

Intellectual property laws create exclusive rights that can provide their holders with incentives for innovation.²⁰ The rights allow their owners to prevent others from appropriating the value of their inventions.²¹ These rights can also facilitate the commercialization of products embodying the inventions.²² Similarly, the antitrust laws ensure that innovative technologies and product are traded and licensed in a competitive environment.²³ As a result, both bodies of law work together to bring innovation to consumers: antitrust laws protect competition in the marketplace, while intellectual property laws provide incentives to invest in innovation.²⁴

The FTC has also recognized that the licensing of intellectual property often benefits competition.²⁵ Intellectual property is often just one of many inputs necessary to bring an innovative product to market and it only creates value when combined with complementary factors of production such as manufacturing and distribution facilities, workforces, and other complimentary intellectual property.²⁶ Licensing can facilitate integration of intellectual property with these complementary factors, leading to more efficient exploitation of the intellectual property and benefiting consumers through the reduction of costs and the availability of innovative products.²⁷

¹⁸U.S. Dep't of Justice & Fed. Trade Comm'n. (2007). ANTITRUST ENFORCEMENT AND INTELLECTUAL PROPERTY RIGHTS: PROMOTING INNOVATION AND COMPETITION, at 1. [hereinafter *2007 Report*].

¹⁹*Id.*

²⁰*Id.*

²¹*Id.*

²²*Id.*

²³*Id.*

²⁴*Id.*

²⁵See U.S. Dep't of Justice & Fed. Trade Comm'n., ANTITRUST GUIDELINES FOR THE LICENSING OF INTELLECTUAL PROPERTY, at 4-5 (1995). [hereinafter *1995 Guidelines*].

²⁶*Id.*

²⁷*Id.*

The FTC has provided guidance on the application of the antitrust laws to the exploitation of intellectual property. In 1995, it joined the Department of Justice in issuing Antitrust Guidelines for the Licensing of Intellectual Property, which the agencies revised in 2017.²⁸ In 2007, it joined the Department of Justice in issuing a report on Antitrust Enforcement and Intellectual Property Rights (henceforth “2007 Report”).²⁹ In addition, the FTC has used its law enforcement authority to address situations where it alleged that parties’ patent licensing practices ran afoul of the antitrust laws.³⁰

In addition, the FTC has provided competition advocacy to the courts and policymakers regarding the application of patent law. In 2003, it issued a report on “The Proper Balance of Competition and Patent Law and Policy,” which surveyed a number of economic issues and provided recommendations on how the Patent Office could improve patent quality to benefit competition.³¹ In 2011, the FTC issued a report on “The Evolving IP Marketplace,” (henceforth “2011 Report”) which studied how patent law motivates market behavior for patent licensing and issued a number of recommendations to the courts regarding both patent notice and remedies.³²

2 FTC Policy Reports Discuss Economic Issues Raised by Collaborative Standard Setting

The FTC has engaged in policy and economic research into a number of issues related to collaborative standard setting. In 1996, FTC staff issued a report on competition policy in high-technology industries, which included one chapter on competitive concerns related to networked industries and interoperability standards.³³ In 2007, the FTC issued its first guidance on the role of patents in standardization, as part of a joint report with the Department of Justice on antitrust enforcement and intellectual property rights.³⁴ Most recently, in 2011, the FTC issued a report offering policy recommendations addressing judicially-awarded remedies for patent infringement including guidance regarding the appropriate remedies for infringement of FRAND-encumbered patents.³⁵ Each of these reports

²⁸See *id.* See also U.S. Dep’t of Justice & Fed. Trade Comm’n., ANTITRUST GUIDELINES FOR THE LICENSING OF INTELLECTUAL PROPERTY (2017).

²⁹See 2007 Report, *supra* note 18.

³⁰See, e.g., *In the Matter of Summit Tech., Inc.* 127 F.T.C. 208 (1999).

³¹See Fed. Trade Comm’n., TO PROMOTE INNOVATION: THE PROPER BALANCE OF COMPETITION LAW AND POLICY (2003) [hereinafter 2003 Report].

³²See Fed. Trade Comm’n., THE EVOLVING IP MARKETPLACE: ALIGNING PATENT NOTICE AND REMEDIES WITH COMPETITION (2011) [hereinafter 2011 Report].

³³See Fed. Trade Comm’n. Staff, ANTICIPATING THE 21ST CENTURY: COMPETITION POLICY IN THE NEW HIGH-TECH, GLOBAL MARKETPLACE (1996) [hereinafter 1996 Report].

³⁴See 2007 Report, *supra* note 18.

³⁵See 2011 Report, *supra* note 32.

was based upon workshops soliciting the testimony of experts and written comments of interested members of the public. In addition to these workshops, the FTC has engaged in additional research in 2011, hosting a workshop on IP Rights in Standard Setting.³⁶

There are many different types of standards. Interoperability standards guarantee that products made by different firms can interoperate.³⁷ Safety or quality standards set minimum requirements for all products sold in a general category.³⁸ Standards also vary depending on how they are created. Collaboratively-set standards are created jointly by businesses working together through SSOs to select technology for incorporation into the standard.³⁹ *De facto* standards, in contrast, are often created unilaterally and become adopted by the market following competition with rival standards.⁴⁰

As a general matter, one way that standardization impacts competition and innovation is by altering the dynamics of competition between technologies. In the absence of interoperability standards, complex products may be offered to consumers in an integrated form. Competition between technologies would take place when rival firms introduced differing products to consumers in the marketplace. Peripherals—be they mobile handsets connected to a wireless network or a printer connected to a computer—would be purchased along with the accompanying platform. Standardization often changes this dynamic and facilitates competition by creating interfaces around which products produced by rival manufacturers can interoperate and—in many cases—be sold independently.

Interoperability standards often arise in networked technologies, such as the telegraph, telephone, or wireless smartphone.⁴¹ The standards govern the interaction between components of the network.⁴² Many networked industries demonstrate substantial demand-side scale economies—i.e., network effects⁴³:

Networks and standards are intertwined in the sense that every network is based on certain standards that permit linking different users or terminals in the first place. Both share the distinctive characteristic that their value tends to rise as more users subscribe. Just as a telephone system becomes more valuable as new customers join because more parties can be reached through it, so, too, the English language becomes more important to learn as it becomes more prevalent throughout the world. Thus, in addition to the cost savings that suppliers frequently derive from conventional economies of scale, standards and networks exhibit economies of scale on the demand side as well.⁴⁴

³⁶See Fed. Trade Comm'n, Event Description, Workshop on Tools to Prevent Patent "Hold-up:" IP Rights in Standard Setting (June 21, 2011), available at <https://www.ftc.gov/news-events/events-calendar/2011/06/tools-prevent-patent-hold-ip-rights-standard-setting>.

³⁷See 2007 Report, *supra* note 18, at 33 n.1.

³⁸*Id.*

³⁹*Id.* at 33.

⁴⁰*Id.*

⁴¹See 1996 Report, *supra* note 33, Ch. 9 at 1.

⁴²*Id.* at 1.

⁴³*Id.* at 2.

⁴⁴*Id.* at 1.

The adoption of standardized interfaces can facilitate competition between products and services that are complimentary to networks.⁴⁵ Standardization could be achieved through either competitive rivalry between different proprietary standards in the market or through cooperation between competitors to create a standard jointly.⁴⁶ On the one hand, marketplace competition between products implementing different standards would provide consumers with a choice between competing technologies incorporated into the standards.⁴⁷ Such competition may also provide incentives for the development of innovative standards.⁴⁸ On the other hand, competition between rival standards can impose costs upon consumers and firms that use the standards.⁴⁹

One potential source of costs is the possibility of a standards war where substitute products with incompatible designs are introduced into a market.⁵⁰ Standards wars may result in a single *de facto* standard in markets where network effects are strong.⁵¹ During a standards war, however, some consumers may delay purchasing until the *de facto* standard is chosen because they do not want to be stuck with the costs of moving from a losing standard to the winning standard.⁵² In contrast, by agreeing on an industry standard, firms may be able to avoid many of the costs and delays of a standards war, thus substantially reducing transaction costs to both consumers and businesses.⁵³

The FTC has observed that, “in many contexts, [collaborative standard setting] can produce substantial benefits.”⁵⁴ The collaborative standard setting process does replace the agreement of competitors for marketplace competition as a means of selecting technology. While technologies still compete with one another to be chosen by the SSO for inclusion into the standard, this competition occurs pursuant to the policies and practices of the SSOs. This competition can only occur until the point in time in which the standard is finalized. Following that point, competition between technologies for inclusion into the standard no longer occurs and competition between technologies can only occur in the product market if the technologies are incorporated into rival standards—or rival integrated products.

After a standard is adopted, competition between technologies is often frustrated due to high switching costs faced by consumers and businesses. There are several sources of switching costs:

⁴⁵*Id.* at 11.

⁴⁶*Id.* at 27.

⁴⁷*Id.*

⁴⁸*Id.*

⁴⁹*Id.*

⁵⁰*See 2007 Report, supra* note 18, at 34 n.6.

⁵¹*Id.*

⁵²*Id.* at 34 n.8.

⁵³*Id.* at 34.

⁵⁴*Id.*

The most direct source of switching costs is the difference between the costs of acquiring new infrastructure to implement a new standard and the salvage value of current infrastructure that is supporting the existing standard but would not be used to support a new standard.... A second source of switching costs can be network effects such as compatibility. It may be impractical to change the existing standard for one piece of infrastructure if that piece must be compatible with other pieces of infrastructure. Thus, for example, a person wanting to upgrade his word processing software may be locked in to his current software if there is a large benefit to maintaining compatibility with the software of other colleagues.⁵⁵

These high switching costs can also create issues when standards incorporate technologies that are protected by patents. These issues include the potential for “hold-up” by the owner of patented technology after its technology has been chosen by the SSO⁵⁶:

The hold-up problem indicates the prospect of under-investment in collaborations in which parties must sink investments that are specific to the collaboration, investments that may be costly to redeploy or have a significantly lower value if redeployed outside of the collaboration. The potential for one party to hold up another party that has sunk investments specific to the relationship may discourage that other party from investing efficiently in the collaboration in the first place.... In the standard-setting context, firms may make sunk investments in developing and implementing a standard that are specific to particular intellectual property. To the extent that these investments are not [re-deployable] using other IP, those developing and using the standard may be held up by the IP holders.⁵⁷

This hold-up may give the owner of a patented technology necessary to implement the standard the power to extract higher royalties or other licensing terms that reflect the absence of competitive alternatives.⁵⁸ This illustrates the distinction between licensing terms a patent holder could obtain solely based on the merits of its technology and the terms that it could obtain because its technology was included in the standard.⁵⁹ The former reflects the value, if any, that the patent owner obtains from its intellectual property. The latter reflects the value that derives from the standard setting process and the elevation of chosen technologies over others.

The FTC has recognized that there are a number of market forces that may reduce the potential for hold-up. Reputational concerns may discourage many firms out of concern that their technologies will not be incorporated into future standards.⁶⁰ In addition, some firms may not engage in hold-up because they focus on utilizing the advantages that come from having their product adopted into the standard.⁶¹ Patent holders “that produce and sell a product using the standard

⁵⁵*Id.* at 38 n.25.

⁵⁶*Id.*, at 35.

⁵⁷*Id.* at 35 n.11.

⁵⁸*Id.*

⁵⁹*Id.* at 39.

⁶⁰*Id.* at 40-41.

⁶¹*Id.*

sometimes may find it more profitable to offer attractive licensing terms in order to promote the adoption of the product using the standard, increasing demand for its product rather than extracting high royalties.”⁶²

In addition, many SSOs utilize internal policies to prevent the risk of hold-up. Many of these policies require SSO participants to disclose patents related to a standard under consideration.⁶³ Such disclosure rules can help avoid hold-up by informing SSO members about relevant patents held by those participating in the standard-setting process and allowing SSO members jointly to decide whether to incorporate the patented technology.⁶⁴ In addition to disclosure rules, some SSOs also use licensing rules which rules require SSO participants to commit to license their patents on certain terms once the standard is set.⁶⁵

3 The FTC’s Enforcement and Advocacy Regarding Standardization in the 1980s

The collaborative standard setting process relies upon the voluntary cooperation of groups of competitors. While contemporary concerns may relate to patent hold-up, this competitor collaboration has given rise to a number of antitrust concerns for some time. The FTC first addressed competitive concerns regarding the standard setting process in the 1980s through policy reports, amicus filings and enforcement actions.⁶⁶ During this time, the Supreme Court issued a number of decisions regarding the application of antitrust law to the collaborative standard setting process.⁶⁷ The FTC participated as *amicus curiae* in *American Society of Mechanical Engineers v. Hydrolevel Corporation* and *Allied Tube & Conduit*

⁶²*Id.*

⁶³*Id.* at 42.

⁶⁴*Id.*

⁶⁵*Id.*

⁶⁶Although the FTC’s action during this time primarily involved safety standards as opposed to interoperability standards, it addressed the same types of issues regarding the manipulation of SSO procedures that later arose in the context of interoperability standards. Safety standards specify aspects of a product’s design or performance that are deemed necessary for the product’s safe use. Fed. Trade Comm’n. Bureau of Consumer Prot., FINAL STAFF REPORT: STANDARDS AND CERTIFICATION (1983) [hereinafter *1983 Report*] at 14-15. Such standards can facilitate product sales in situations where the buyer may lack the resources or knowledge to independently verify that the product will perform suitably and safely in actual use. *Id.* at 12-13. Collaboratively-set safety standards are often incorporated by state or municipal governments into regulations such as building codes and workplace safety regulations. *Id.* at 28-32. In addition to creating such standards, SSOs are also involved in certifying that particular products are compliant with those standards. *Id.* at 23-24.

⁶⁷See, e.g., *American Soc. of Mechanical Engineers*, 456 U.S. 556 (1982); *Northwest Wholesale Stationers, Inc. v. Pacific Stationery and Printing Co.*, 472 U.S. 284 (1985); *Allied Tube & Conduit Corporation v. Indian Head, Inc.*, 486 U.S. 492 (1988). See also *Radiant Burners, Inc. v. Peoples Gas Light & Coke Co.*, 364 U.S. 656 (1961).

*Corporation v. Indian Head, Inc.*⁶⁸ The FTC participated in both cases to advocate for the advancement of the antitrust law in its application to standard setting; in addition, the facts of both cases—as well as the policy arguments articulated in the *amicus* filings—reflect more general competition concerns. As discussed below, the competitive harm in these cases followed from attempts by competitors to use the collaborative standard setting process as means to enact standards that kept rival technologies out of the product market. Recognizing the value of the standard setting process, the cases focused on the SSO's internal policies that self-policed such misconduct. The FTC applied similar theories in its own enforcement in *In re American Society of Sanitary Engineering*.⁶⁹

These concerns were also raised in the FTC's policy reporting. In 1983, the staff of the FTC's Bureau of Consumer Protection issued a staff report on Standards and Certification.⁷⁰ The staff report observed that product standards and certification “play a vital role in the nation's economy,” and can “produce significant societal benefits by aiding information flow, hastening technology transfer and promoting efficiencies in production and distribution.”⁷¹ Nevertheless, it also noted that participants in the standards process “often have incentives to promulgate standards that enhance their own competitive position at the expense of their competitors or consumers⁷².”

Standards are developed by committees composed substantially of representatives of competing firms within the affected industry and others with clear commercial interests. These representatives have incentives to make standards decisions which benefit their commercial interests at the expense of competition.... Participation in the standards development process provides these representatives with the opportunity, though shaping resulting standards actions, to restrict competitors' markets or protect their own markets from the rigors of competition.⁷³

Based upon its research, FTC staff observed that, “when standards developers lack procedural safeguards ... there is no effective check upon unreasonable standards decisions.”⁷⁴ Similarly, in a later speech, Commissioner Christine Varney observed that, “when the imposition of a standard might restrain or prohibit market

⁶⁸In addition, the FTC joined the Department of Justice on several *amicus curiae* filings before circuit courts of appeal. See Brief of the United States and the Federal Trade Commission Amicus Curiae, *Indian Head, Inc. v. Allied Tube & Conduit Corporation*, 817 F.2d 938 (2d Cir. 1987) (Nos. 86-7734; 86-7758); Brief of the United States and the Federal Trade Commission Amicus Curiae, *Sessions Tank Liners, Inc. v. Joor Manufacturing, Inc. et al.*, 827 F.2d 458 (9th Cir.1987) (Nos. 86-6208, 86-6407).

⁶⁹*In the Matter of American Society of Sanitary Engineering*, 106 F.T.C. 324 (1985).

⁷⁰1983 Report, *supra* note 66, at 12.

⁷¹*Id.*, at 12.

⁷²*Id.* at 2.

⁷³*Id.* at 333.

⁷⁴*Id.* at 334.

access, the fairness of the standard setting procedure and the procedural safeguards extended to interested parties will be evaluated⁷⁵

3.1 *American Society of Mechanical Engineers v. Hydrolevel Corporation*

American Society of Mechanical Engineers v. Hydrolevel Corporation, decided by the Supreme Court in 1982, concerned the failure of the American Society of Mechanical Engineers (henceforth “ASME”) to certify a low-water fuel cutoff device as being compliant with its Boiler and Pressure Vessel Code.⁷⁶ The fuel cutoff was a safety device intended to prevent boiler explosions that could result from the operation of a boiler without adequate water; the device would automatically stop the flow of fuel to the boiler in the event that the water level fell low.⁷⁷

The case concerned the actions of a manufacturer of a fuel cutoff device, M&M, whose vice-president John James was also the vice chairman of the ASME subcommittee responsible for drafting and interpreting the Boiler and Pressure Vessel Code.⁷⁸ M&M faced competition from Hydrolevel, a manufacturer of competing fuel cutoff devices, and had lost a major customer to Hydrolevel.⁷⁹ Following the loss of this customer, M&M’s management met with T.R. Hardin, an executive of another competitor, who was also the chairman of the ASME subcommittee.⁸⁰ The group—including James and Hardin—wrote a letter to the secretary of the ASME subcommittee.⁸¹ The letter inquired whether the Hydrolevel fuel cutoffs complied with the ASME standard.⁸² Its drafters wrote the letter in such a way as to solicit a negative response.⁸³ M&M sent the letter on its letterhead and signed by one of its executives.⁸⁴

In accordance with ASME procedures, upon its receipt, the letter was referred to Mr. Hardin to draft a response in his capacity as the subcommittee chairman.⁸⁵

⁷⁵Christine A. Varney, *Antitrust Implications in Standard Setting*, Remarks Before the District of Columbia Bar Annual Seminar on Antitrust and Trade Associations (Feb. 22, 1995).

⁷⁶456 U.S. at 559-60.

⁷⁷*Id.*

⁷⁸*Id.* at 560.

⁷⁹*Id.*

⁸⁰*Id.*

⁸¹*Id.*

⁸²*Id.*

⁸³*Id.* at 560-61.

⁸⁴*Id.*

⁸⁵*Id.* at 561.

Mr. Hardin prepared a letter stating that the Hydrolevel product did not comply with the ASME standard.⁸⁶ The committee secretary accepted this draft, signed it and sent it to M&M on ASME stationary.⁸⁷ Upon receipt, M&M used this letter in its sales materials to tell its customers that Hydrolevel's products did not comply with the ASME standard.⁸⁸

Hydrolevel brought suit alleging violation of the antitrust laws against both ASME and the successors to M&M, which had since been acquired.⁸⁹ Only the case against ASME proceeded to trial and appeal through the Supreme Court. The Court affirmed the finding that ASME was liable under Section 1 of the Sherman Act—prohibiting agreements in restraint of trade—due to the conduct of its agents, *i.e.*, James and Hardin.⁹⁰

The Supreme Court took the case to address the issue of whether ASME could be held liable for violating the antitrust laws solely due to the acts of its agents.⁹¹ The FTC joined the Department of Justice as *amicus curiae* in a brief before the Supreme Court.⁹² The brief supported affirming the judgement against ASME.⁹³ In general discussion, the brief recognized the value of collaborative standard setting, as well as its potential to distort competition:

We do not for a moment question the substantial social contribution made by organizations such as ASME. But it cannot be disputed that ASME is a standard-prescribing body whose actions effectively govern competitive entry of new products into numerous lines of commerce. As the facts in this case demonstrate, a ruling by ASME that a product is dangerous or not in compliance with its Code can deprive a manufacturer of its customers....⁹⁴

The brief then noted the importance of promoting adoption of internal safeguards by SSOs to prevent competitive harm:

Application of the antitrust laws ... is necessary to assure the survival of competitive conditions in the lines of commerce that are subject to their code-making activities. Indeed, exposure to actions such as the present ... will spur organizations such as ASME ... to adopt the very kinds of procedural safeguards which this Court has determined to be essential to avoid antitrust violations in similar cases.⁹⁵

The Court similarly observed in its decision that, in “holding ASME liable under the antitrust laws ... we recognize the important role of ASME and its agents in the

⁸⁶*Id.*

⁸⁷*Id.*

⁸⁸*Id.* at 562.

⁸⁹*Id.* at 564.

⁹⁰*Id.* at 565.

⁹¹*Id.*

⁹²Brief for United States as Amici Curiae, *American Soc. of Mechanical Engineers, Inc. v. Hydrolevel Corp.*, 456 U.S. 556 (1981) (No. 80-1765) (joined by Ernest J. Isenstadt, Acting General Counsel, Federal Trade Commission).

⁹³*Id.* at 15.

⁹⁴*Id.* at 31.

⁹⁵*Id.* at 31 (citations omitted).

economy, and we help to ensure that standard setting organizations will act with care when they permit their agents to speak for them....”⁹⁶

3.2 *In re American Society of Sanitary Engineering*

In 1985, the FTC brought an enforcement action against the American Society of Sanitary Engineering (henceforth “ASSE”) pursuant to Section 5 of the FTC Act.⁹⁷ The matter settled by consent decree. The ASSE was a private standard setting organization that promulgated plumbing product standards.⁹⁸ Its members included plumbers, contractors, inspectors, equipment manufactures and engineers, amongst others.⁹⁹ Many state and municipal governments incorporated its standards into their building codes.¹⁰⁰ The FTC’s complaint related to the ASSE 1002 standard for backflow prevention products in toilets.¹⁰¹ These products prevented the contamination of the water supply with septic water.¹⁰² The ASSE 1002 standard required the use of a particular type of valve to meet this goal: a ballcock valve.¹⁰³

J.H. Industries, Inc. (J.H.) manufactured an innovative backflow prevention system that did not use a ballcock valve and relied upon a different structure to prevent backflow.¹⁰⁴ The J.H. design offered several advantages over ballcock valves, including lower costs and lower maintenance requirements.¹⁰⁵ J.H. also commissioned expert testing and analysis showing that it protected against backflow at least as well as ballcock valves.¹⁰⁶ Nevertheless, because it did not utilize a ballcock valve, the J.H. product did not comply with the ASSE 1002 standard.¹⁰⁷

The ASSE refused J.H.’s request to modify ASSE 1002 to permit the use of its type of valve for backflow prevention.¹⁰⁸ It did so despite the fact that J.H. provided expert evidence of its performance.¹⁰⁹ In its complaint, the FTC alleged that the ASSE failed to address or identify any inadequacies in the evidence that

⁹⁶*American Society of Mechanical Engineers*, 456 U.S. at 577-78.

⁹⁷106 F.T.C. 324.

⁹⁸Complaint, *In the Matter of American Society of Sanitary Engineering*, F.T.C. Docket No. C-3169, 106 F.T.C. 324, 324 at ¶ 2 (1985).

⁹⁹*Id.* at ¶ 1.

¹⁰⁰*Id.* at ¶ 9.

¹⁰¹*Id.* at ¶ 11.

¹⁰²*Id.*

¹⁰³*Id.* at ¶ 12.

¹⁰⁴*Id.* at ¶ 14.

¹⁰⁵*Id.*

¹⁰⁶*Id.* at ¶ 16.

¹⁰⁷*Id.* at ¶ 15.

¹⁰⁸*Id.* at ¶ 18; 21.

¹⁰⁹*Id.*

J.H. offered.¹¹⁰ The FTC alleged that the ASSE lacked a reasonable basis or justification for refusing J.H.’s request to modify that ASSE 1002 standard.¹¹¹

The FTC alleged that this conduct constituted a concerted refusal to deal with J. H. on the part of ASSE’s members.¹¹² The FTC alleged that this conduct hindered competition in the manufacture and sale of plumbing devices and harmed consumers for several reasons.¹¹³ The FTC alleged that this conduct violated Section 5 of the FTC Act.¹¹⁴

3.3 *Allied Tube & Conduit Corporation v. Indian Head, Inc.*

Allied Tube & Conduit Corporation v. Indian Head, Inc., decided by the Supreme Court in 1988, concerned the manipulation of voting at the National Fire Protection Association (henceforth “NFPA”) for updates to its National Electrical Code (henceforth “NEC”) standard.¹¹⁵ The NEC concerned the design and installation of electrical wiring systems.¹¹⁶ The NFPA was a private organization with members representing industry, academia, firefighters, and many other stakeholders. Its NEC was routinely adopted into regulations promulgated by state and local governments.¹¹⁷ In addition, its code was frequently relied upon by insurance underwriters, building inspectors and electrical contractors.¹¹⁸ The case involved electrical conduit, the hollow tubing used to carry electrical wires through the walls and floors of buildings.¹¹⁹ At the time of the conduct in question, conduit was traditionally made of steel; however, innovative firms began to offer conduit made of plastic that offered cost and performance advantages over steel.¹²⁰ The NEC only permitted the use of steel conduit.¹²¹

Indian Head manufactured plastic conduit and initiated a proposal that NFPA include plastic conduit in an upcoming edition of the NEC.¹²² NFPA scheduled this proposal for consideration at its annual meeting.¹²³ According to NFPA procedures,

¹¹⁰*Id.* at ¶ 19; 23.

¹¹¹*Id.* at ¶ 18.

¹¹²*Id.*

¹¹³*Id.* at ¶ 24.

¹¹⁴*Id.* at ¶ 18.

¹¹⁵486 U.S. 492.

¹¹⁶*Id.*

¹¹⁷*Id.* at 495.

¹¹⁸*Id.* at 495-96.

¹¹⁹*Id.* at 496.

¹²⁰*Id.*

¹²¹*Id.*

¹²²*Id.*

¹²³*Id.*

a majority vote of members present at the meeting would determine whether NFPA approved or rejected the proposal.¹²⁴

A number of producers of steel conduit agreed to pack the annual meeting with new members for the purpose of voting against the proposal.¹²⁵ They recruited 230 persons to join NFPA and to attend the annual meeting.¹²⁶ The group of producers paid the expenses of these new members and directed their voting at the annual meeting through group leaders using radios and hand signals.¹²⁷ As a result, the members present at the meeting voted 394 to 390 to reject the proposal.¹²⁸

Indian Head brought suit against a number of steel manufacturers, alleging violation of Section 1 of the Sherman Act.¹²⁹ At trial, the manufacturers conceded that they had conspired to exclude Indian Head's product from the NEC.¹³⁰ Applying the rule of reason, the jury found that the manufacturers unreasonably restrained trade in violation of Section 1 of the Sherman Act.¹³¹

The district court set aside the verdict following trial because it found that the steel manufacturers' conduct was government petitioning protected by the *Noerr-Pennington* doctrine.¹³² The manufacturers argued that their conduct before the NFPA was akin to government petitioning because many state and local governments adopted the NFC into law.¹³³

This issue was presented to the Supreme Court, which rejected this argument, finding that the conduct was not protected because the ASME was a private standard setting organization.¹³⁴

The Supreme Court's decision articulated the antitrust concerns raised by the collaborative standard setting process:

Typically, private standard-setting associations, like the Association in this case, include members having horizontal and vertical business relations. There is no doubt that the members of such associations often have economic incentives to restrain competition and that the product standards set by such associations have a serious potential for anticompetitive harm. Agreement on a product standard is, after all, implicitly an agreement not to manufacture, distribute, or purchase certain types of products.

Accordingly, private standard-setting associations have traditionally been objects of anti-trust scrutiny.¹³⁵

¹²⁴*Id.*

¹²⁵*Id.*

¹²⁶*Id.* at 497.

¹²⁷*Id.*

¹²⁸*Id.*

¹²⁹*Id.*

¹³⁰*Id.*

¹³¹*Id.* at 498.

¹³²*Id.* at 498-99; *Eastern Railroad Presidents Conference v. Noerr Motor Freight, Inc.*, 365 U.S. 127 (1961); *Mine Workers v. Pennington*, 381 U.S. 657 (1965).

¹³³*Allied Tube*, 486 U.S. at 499.

¹³⁴*Id.* at 511.

¹³⁵*Id.* at 500 (citations omitted).

Nevertheless, the Court recognized the value of collaborative standard setting, when the standard setting process reflected unbiased expert analysis:

When, however, private associations promulgate safety standards based on the merits of objective expert judgments and through procedures that prevent the standard-setting process from being biased by members with economic interests in stifling product competition those private standards can have significant [pro-competitive] advantages.¹³⁶

In addition, the Court noted the importance of internal SSO safeguards to prevent anticompetitive conduct, explaining that “the hope of pro-competitive benefits depends upon the existence of safeguards sufficient to prevent the standard-setting process from being biased by members with economic interests in restraining competition.”¹³⁷

The FTC joined the Department of Justice as *amicus curiae* in a brief before the Supreme Court.¹³⁸ The brief argued that *Noerr-Pennington* immunity should not apply to exempt conduct before private standard setting organizations from antitrust scrutiny.¹³⁹ The brief further observed:

Private standard-making organizations play an important role in the marketplace. But as this Court observed in *Hydrolevel*, such organizations may have power that can “‘result in economic prosperity or economic failure, for a number of businesses of all sizes throughout the country,’ as well as entire segments of an industry.” Private standard-making also “can be rife with opportunities for anticompetitive activity,” in part because the proceedings of such organizations are conducted in private and are not open to public scrutiny. Application of the antitrust laws to standard-making organizations is necessary to assure the survival of competitive conditions in those industries that engage in such activities.¹⁴⁰

4 The FTC’s Enforcement Regarding Standard Setting Conduct Involving Patented Technologies

The FTC’s initial advocacy and enforcement in the 1980s focused on efforts by competitors to use collaboratively set standards to exclude their rivals from product markets. The cases highlighted the importance of procedural safeguards at SSOs to prevent misconduct by their members. Beginning in the 1990s, the FTC examined

¹³⁶*Id.*

¹³⁷*Id.* at 509 (citations omitted).

¹³⁸Brief for United States & Fed. Trade Comm’n as Amici Curiae Supporting Respondent, *Allied Tube & Conduit Corp. v. Indian Head, Inc.* 486 U.S. 492 (1987) (No. 87– 157).

¹³⁹*Id.* at 1.

¹⁴⁰*Id.* at 24 (quoting *American Society of Mechanical Engineers, Inc. v. Hydrolevel Corp.*, 456 U.S. 556, 570-71 (1982)) (citations omitted).

the effect of such safeguards in cases where competitors abused the standard setting process not as a means of excluding their rivals from product markets, but rather as a means of ensuring that their patented technology was incorporated into standards.

The first three cases, *Dell*, *Unocal* and *Rambus*, each addressed a similar factual scenario. Each party was a participant in the standard setting process and—during deliberations on the technical content of the standard—made deceptive or misleading comments to other participants that hid the existence of patents or patent applications that related to the content of the standard. In each case—without knowledge of the patents or applications—the SSO adopted technology that was covered by the parties’ patents. In each case, the party subsequently attempted to obtain royalties from firms that practiced the standard.

The FTC brought *Dell* and *Unocal* as actions pursuant to Section 5 of the FTC act. In *Rambus*, however, it expressly limited its claims to the scope of Section 2 of the Sherman Act and its prohibition on monopolization. While *Dell* and *Unocal* settled by consent decree, *Rambus* was ultimately appealed to a federal appellate court which did not find liability.

Unlike the previous three cases, *N-Data* dealt with conduct that took place after a standard was set. In this case, a patent holder made an explicit commitment to license a patent for set fee if the patent was incorporated into the standard. After the standard was adopted, it assigned the patent to a party who reneged on the commitment, asking for royalties higher than the commitment. The FTC alleged that this conduct threatened to undermine the integrity of the standard setting process and constituted a standalone violation of Section 5 of the FTC Act.

4.1 *In re Dell Computer Corporation*

In re Dell Computer Corporation, which settled by consent decree in 1996, concerned conduct before the Video Electronics Standards Association (henceforth “VESA”).¹⁴¹ VESA set the VESA Local Bus, or “VL-bus,” standard.¹⁴² The standard related to the design of a computer bus, which carried information and instructions between a computer’s central processing unit and its peripheral devices, such as a hard disk drive, video display, or modem.¹⁴³

Dell concerned conduct by Dell Computer Corporation (henceforth “Dell”).¹⁴⁴ Dell became a VESA member in February 1992.¹⁴⁵ Dell’s representatives were

¹⁴¹Complaint, *In the Matter of Dell Computer Corporation*, F.T.C. Docket No. C-3658, 121 F.T.C. 616, 616 at ¶ 4 (May 20, 1996).

¹⁴²*Id.* at ¶ 5.

¹⁴³*Id.* at ¶ 5.

¹⁴⁴*Id.* at ¶ 1.

¹⁴⁵*Id.* at ¶ 4.

members of VESA's Local Bus Committee when the committee approved the VL-bus design in June 1992.¹⁴⁶ Following committee approval of the VL-bus design, VESA sought approval by all of its voting members.¹⁴⁷ In July and August 1992, Dell voted to approve the preliminary proposal and the final version of the VL-bus standard.¹⁴⁸ In each instance, its representative certified in writing that the "proposal does not infringe on any trademarks, copyrights, or patents" possessed by Dell.¹⁴⁹ This certification was part of the VESA approval process.¹⁵⁰ As the Statement accompanying the consent explains:

The Dell case involved an effort by [VESA] to identify potentially conflicting patents and to avoid creating standards that would infringe those patents. In order to achieve this goal, VESA—like some other standard-setting entities—has a policy that member companies must make a certification that discloses any potentially conflicting intellectual property rights. VESA believes that its policy imposes on its members a good-faith duty to seek to identify potentially conflicting patents. This policy is designed to further VESA's strong preference for adopting standards that do not include proprietary technology.¹⁵¹

The VL-bus standard was widely adopted, being included in over 1.4 million computers sold within the first eight months of its adoption.¹⁵² Dell was the owner of U.S. Patent No. 5,036,481 (henceforth "481 patent"), which it received in June 1991.¹⁵³ As Dell later asserted, the '481 patent claimed a feature used on motherboards compliant with the VL-bus standard.¹⁵⁴ Following the successful adoption of the VL-bus standard, Dell requested meetings with several VESA members, claiming that their implementation of the VL-bus standard violated Dell's patent rights.¹⁵⁵

In its Statement, the FTC explained its analysis that "had VESA known of the Dell patent, it could have chosen an equally effective, non-proprietary standard."¹⁵⁶ In addition, the Statement explained that "the Commission has reason to believe that once VESA's VL-bus standard had become widely accepted, the standard effectively conferred market power upon Dell as the patent holder."¹⁵⁷ In its complaint, the FTC alleged that Dell's conduct constituted an unfair method of

¹⁴⁶*Id.* at ¶ 5.

¹⁴⁷*Id.*

¹⁴⁸*Id.* at ¶ 7.

¹⁴⁹*Id.*

¹⁵⁰*Id.*

¹⁵¹Statement of the Federal Trade Commission, *In the Matter of Dell Computer Corporation*, F.T.C. Docket No. C-3658, 121 F.T.C. 616 at 623-24.

¹⁵²Complaint, *In the Matter of Dell Computer Corporation*, at ¶ 8.

¹⁵³*Id.* at ¶ 6.

¹⁵⁴*Id.*

¹⁵⁵*Id.* at ¶ 8.

¹⁵⁶Statement of the Federal Trade Commission, *In the Matter of Dell Computer Corporation*, at 624 n. 2.

¹⁵⁷*Id.*

competition in violation of Section 5 of the FTC act.¹⁵⁸ The FTC settled the complaint with a consent decree.¹⁵⁹

In its Statement, the FTC explained that enforcement was appropriate “in the limited circumstances presented by this case,” specifically “where there is evidence that the association would have implemented a different non-proprietary design had it been informed of the patent conflict during the certification process, and where Dell failed to act in good faith to identify and disclose patent conflicts.”¹⁶⁰

Responding to public comments, the Statement explained that the decision was not intended to express an endorsement of any certain type of standard or standard-setting process, or to “signal that there is a general duty to search for patents when a firm engages in a standard- setting process.”¹⁶¹ The FTC explained that the decision was not intended to signal a preference for standards that incorporated non-proprietary technology over those that incorporated proprietary technology.¹⁶² Rather, the Statement explained that its action “is not intended to address ... these broader issues.”¹⁶³

Another issue of discussion was whether defenses under patent law were adequate to address Dell’s conduct without the need for FTC enforcement. FTC Commissioner Mary Azcuenaga dissented from the decision and argued that anti-trust enforcement may not be necessary because “the private remedy of patent estoppel should suffice to remedy expectations based on Dell’s conduct by barring inappropriate enforcement of a patent claim.” The majority’s Statement disagreed with this view and, while acknowledging that such conduct could be addressed through equitable estoppel defenses to patent infringement, noted that FTC enforcement also “serves an important role in this type of case, where there is a likelihood of consumer harm.”¹⁶⁴

4.2 *In re Union Oil Company of California*

In 2005, the FTC entered into a consent decree settling its case against Union Oil Company of California (henceforth “Unocal”).¹⁶⁵ The consent was part of a larger

¹⁵⁸Complaint, *In the Matter of Dell Computer Corporation*, at 10.

¹⁵⁹Decision and Order, *In the Matter of Dell Computer Corporation*, F.T.C. Docket No. C-3658 121 F.T.C. 616, 618 at § III.

¹⁶⁰Statement of the Federal Trade Commission, *In the Matter of Dell Computer Corporation*, 121 F.T.C. at 626.

¹⁶¹*Id.* at 625.

¹⁶²*Id.*

¹⁶³*Id.*

¹⁶⁴*Id.*

¹⁶⁵Statement of the Federal Trade Commission, *In the Matter of Union Oil Company of California*, F.T.C. Docket No. 9305 and *In the Matter of Chevron Corporation and Unocal Corporation*, F.T.C. Docket No. C-4144.

consent arrangement that allowed Chevron Corporation to acquire Unocal.¹⁶⁶ The case involved Unocal's conduct before the California Air Resources Board (henceforth "CARB").¹⁶⁷ CARB promulgated standards for low-emissions reformulated gasolines (henceforth "RFG") through a rulemaking process initiated in the late 1980s.¹⁶⁸

Unocal filed a patent application in December 1990 which led to the issuance of a number of patents related to low-emissions gasoline between 1994 and 2000.¹⁶⁹ At the same time, beginning in 1990, Unocal participated in the CARB rulemaking process.¹⁷⁰ During the course of this participation, Unocal presented the technical work leading to its patent applications to CARB staff, although it did not disclose the existence of the pending patent application.¹⁷¹ Rather, Unocal represented that its research was nonproprietary:

Please be advised that Unocal now considers this data to be non-proprietary and available to CARB, environmental interest groups, other members of the petroleum industry, and the general public upon request.¹⁷²

Unocal did not disclose the existence of its patent rights until 1995, shortly before the relevant CARB RFG regulations took effect.¹⁷³ At that point, it began a campaign of litigating and licensing its patent rights and obtained infringement verdicts against a number of major refiners.¹⁷⁴

The FTC alleged that Unocal obtained market power in markets for the technology claimed in its issued patents and the market for CARB-compliant RFG gasoline.¹⁷⁵ The complaint alleged that it obtained this market power illegally through engaging in fraudulent conduct, citing a number of "knowing and willful misrepresentations to CARB," and alleging that, but for this fraud, CARB would not have adopted RFG technology that overlapped with its claims.¹⁷⁶ The FTC alleged that this conduct violated Section 5 of the FTC Act.¹⁷⁷ The FTC resolved the matter by a consent decree.¹⁷⁸

¹⁶⁶*Id.*

¹⁶⁷Complaint, *In the Matter of Union Oil Company of California*, F.T.C. Docket No. 9305 at 1.

¹⁶⁸*Id.*

¹⁶⁹*Id.* at ¶¶ 15, 32.

¹⁷⁰*Id.* at ¶ 36.

¹⁷¹*Id.* at ¶¶ 37-38.

¹⁷²*Id.* at ¶ 41.

¹⁷³*Id.* at ¶ 6.

¹⁷⁴*Id.* at ¶¶ 5; 9.

¹⁷⁵*Id.* at ¶¶ 73-75.

¹⁷⁶*Id.* at ¶¶ 76-80.

¹⁷⁷*Id.* at ¶¶ 97-103.

¹⁷⁸Decision and Order, *In the Matter of Union Oil Company of California*, F.T.C. Docket No. 9305, § II. Prior to entering into the consent, the FTC issued a Commission Opinion on the issue of whether *Noerr-Pennington* immunity protected Unocal's conduct before CARB. Opinion of the Commission, *In the Matter of Union Oil Company of California*, F.T.C. Docket No. 9305.

4.3 *In re Rambus, Incorporated*

Unlike *Dell* and *Unocal*, *In re Rambus, Incorporated* did not settle by consent decree. Rather, the FTC pursued an administrative action with a hearing before an administrative law judge that culminated in an opinion by the Commission, which Rambus ultimately appealed to federal court. Unlike the prior actions, the FTC explicitly limited its theory to Section 2 of the Sherman Act. The FTC filed its administrative complaint against Rambus in 2002, and the D.C. Circuit issued its decision on appeal in 2008.

Rambus concerned conduct before the Joint Electron Device Engineering Council (henceforth “JEDEC”).¹⁷⁹ The JEDEC JC 42.3 committee developed standards for dynamic random access memory (henceforth “DRAM”) technology used in computer memory.¹⁸⁰ The case involved the development of JEDEC’s SDRAM and DDR SDRAM standards, which JEDEC approved in 1993 and 1999, respectively.¹⁸¹ The case concerned four different technologies that JEDEC ultimately incorporated into its SDRAM and DDR SDRAM standards.¹⁸² In April 1990, Rambus filed U.S. Patent Application No. 07/510,898.¹⁸³ Through filing continuation and divisional applications, this application was the original source of patents that Rambus later asserted against each of the four technologies at issue in the case.¹⁸⁴

Rambus joined JEDEC and began attending its meetings in December 1991.¹⁸⁵ At that time, JEDEC was in the early stages of developing the SDRAM standard.¹⁸⁶ Rambus also participated in JEDEC’s JC 42.3 subcommittee.¹⁸⁷ During this time, Rambus took information that it gathered from its participation in JEDEC and used the information to amend the claims of its pending patent applications, such that developing standards would infringe its claims.¹⁸⁸ Nevertheless, Rambus did not disclose the existence of these applications to JEDEC while it participated in JC 42.3.¹⁸⁹

Rambus continued this participation until June 1996, when Rambus sent a letter to JEDEC indicating that it was not renewing its membership.¹⁹⁰ The letter enclosed a partial list of Rambus’ patents, but omitted several patents relevant to the

¹⁷⁹*Rambus, Inc. v. F.T.C.*, 522 F.3d 456, 460 (D.C. Cir. 2008).

¹⁸⁰*Id.*

¹⁸¹*Id.*

¹⁸²*Id.*; Opinion of the Commission, *In the Matter of Rambus, Inc.*, F.T.C. Docket No. 9302 at 5.

¹⁸³*Id.* at 7.

¹⁸⁴*Id.*

¹⁸⁵*Id.* at 37.

¹⁸⁶*Id.*

¹⁸⁷*Id.* at 8, 39.

¹⁸⁸*Id.* at 41–43.

¹⁸⁹*Id.*

¹⁹⁰*Id.* at 45.

technology then under consideration by JEDEC.¹⁹¹ The letter also explained that Rambus “reserves all rights regarding its intellectual property.”¹⁹² Beginning in 1999, Rambus began a campaign of licensing its patents that claimed technology incorporated in SDRAM and DDR SDRAM.¹⁹³ It informed a number of manufacturers of DRAM and chipsets that the continued manufacture of its products infringed those rights.¹⁹⁴ Many manufacturers opted to take a license.¹⁹⁵

The FTC’s Opinion reviewed JEDEC’s rules and evidence of its procedures regarding patent disclosure. It noted that JEDEC’s patent policies were “not a model of clarity,” but it did conclude that JEDEC’s members had an expectation that Rambus would disclose its pending patent applications to the JC 42.3 committee.¹⁹⁶ For example, an appendix to the JEDEC manual explained that:

Standards that call for use of a patented item or process may not be considered by a JEDEC committee unless all of the relevant technical information covered by the patent or pending patent is known to the committee, subcommittee, or working group.”¹⁹⁷

Based upon the evidence of JEDEC’s practices and procedures, the Commission concluded that:

JEDEC’s policies (fairly read) and practices, as well as the actions of JEDEC participants, provide a basis for the expectation that JEDEC’s standard-setting activity would be conducted cooperatively and that members would not try to distort the process by acting deceptively with respect to the patents they possessed or expected to possess. Those policies rested on an express duty of good faith, as well as an objective of avoiding creation of unnecessary competitive advantages. The policies also included rules to ensure that members periodically were reminded to disclose patents and patent applications, and that patented technologies would be included in standards only after receipt of RAND assurances.¹⁹⁸

As a result, the Commission observed, “JEDEC’s members expected disclosure of both patents and patent applications that might be applicable to the work JEDEC was undertaking, if the patents ever were going to be enforced against JEDEC-compliant products.”¹⁹⁹ The Commission also found that Rambus acted deceptively in light of its obligation to disclose:

Rambus’s course of conduct played on these expectations. Rambus sat silently when other members discussed and adopted technologies that became subject to Rambus’s evolving patent claims.... At the same time that Rambus was avoiding disclosure of its patent activity, Rambus was engaged in a program of amending its applications to develop a

¹⁹¹*Id.* at 45-46.

¹⁹²*Id.*

¹⁹³*Rambus*, 522 F.3d at 460-61.

¹⁹⁴*Id.*

¹⁹⁵*Id.*

¹⁹⁶Opinion of the Commission, *In the Matter of Rambus, Inc.*, at 52.

¹⁹⁷*Id.* at 66.

¹⁹⁸*Id.*

¹⁹⁹*Id.*

patent portfolio that would cover JEDEC's standards. Rambus made full use of information gleaned from its JEDEC participation to accomplish this objective.²⁰⁰

Ultimately, the Commission found that "Rambus violated Section 5 of the FTC Act by engaging in exclusionary conduct that contributed significantly to the acquisition of monopoly power in four relevant and related markets."²⁰¹ Rambus appealed this decision to the Court of Appeals for the D.C. Circuit, which found that the FTC "failed to sustain its allegation of monopolization."²⁰²

4.4 *In re Negotiated Data Solutions*

In re Negotiated Data Solutions, which settled by consent decree in 2008, related to standardization at the Institute of Electrical and Electronics Engineers (henceforth "IEEE").²⁰³ The case related to an update to the IEEE 802.3 Ethernet standard, used to connect computer equipment attached to local area networks (LAN).²⁰⁴ Around 1993, IEEE authorized its 802.3 Working Group to develop a new, "Fast Ethernet" standard that would support even faster data transmission rates.²⁰⁵

In 1992, National Semiconductor (henceforth "National") filed a patent application related to its "NWay" technology.²⁰⁶ In 1994, National proposed that the 802.3 Working Group adopt this NWay technology into its pending Fast Ethernet standard.²⁰⁷ National represented, both at IEEE meetings and in writing, that it would license its pending patents should NWay be incorporated into the Fast Ethernet standard:

In the event that the IEEE adopts an [auto-detection] standard based upon National's NWay technology, National will offer to license its NWay technology to any requesting party for the purpose of making and selling products which implement the IEEE standard. Such a license will be made available on a nondiscriminatory basis and will be paid-up and royalty-free after payment of a one-time fee of one thousand dollars (\$1,000.00).²⁰⁸

IEEE ultimately adopted NWay as part of the Fast Ethernet standard and published the standard in 1995.²⁰⁹ In 1997, National's patent applications covering NWay issued as granted patents.²¹⁰ In 1998, National assigned the patents to

²⁰⁰*Id.*

²⁰¹*Id.* at 5.

²⁰²*Rambus*, 522 F.3d at 459.

²⁰³Complaint, *In the Matter of Negotiated Data Solutions, LLC*, F.T.C. Docket No. C-4234.

²⁰⁴*Id.* ¶ 6.

²⁰⁵*Id.* ¶ 7.

²⁰⁶*Id.* ¶ 9.

²⁰⁷*Id.* ¶ 10.

²⁰⁸*Id.* ¶¶ 12-13.

²⁰⁹*Id.* ¶¶ 14; 16.

²¹⁰*Id.* ¶ 22.

Vertical Networks (henceforth “Vertical”).²¹¹ In 2002, Vertical sent a letter to the IEEE offering to license the NWay patents on “reasonable terms and conditions,” and stating that the “assurances provided in this letter supersede any assurances provided by National...”²¹² Soon thereafter, Vertical began a campaign to license the NWay patents, demanding fees that were a “substantial increase” over National’s \$1,000 commitment.²¹³

The FTC’s complaint challenged Vertical’s conduct under both the competition and consumer protection prongs of Section 5 of the FTC Act, alleging that it was both an “unfair method of competition” and an “unfair act or practice.”²¹⁴ The accompanying Analysis explained that the FTC’s Section 5 theories were stand-alone theories that—unlike, for example, *In re Rambus*—were not premised upon a violation of the Sherman Act.²¹⁵ The FTC settled the case by consent decree.²¹⁶

The FTC’s action was accompanied by discussion as to whether conduct taking place after standard adoption could give rise to a claim under Section 5. Chairman Majoras wrote a dissenting opinion explaining that “[t]his case departs materially from the prior line ... in that there is no allegation that National engaged in improper or exclusionary conduct to induce IEEE to specify its NWay technology in the 802.3u standard.”²¹⁷ Similarly, in a later speech, Commissioner Rosch explained his view that the facts differed from the prior actions:

The facts in N-Data were different from those of the Commission’s earlier standard setting cases. For example, unlike in *Rambus*, there were no allegations of misconduct or [anti-competitive] behavior at the time the standard was adopted by the IEEE. Nor were there any allegations of anticompetitive behavior that led the market to subsequently implement IEEE’s standard. The conduct in the case – the breach of the licensing commitment – did not cause N-Data to either acquire or maintain its monopoly power. The monopoly power exploited by N-Data was conferred by the standard setting organization and the subsequent marketplace adoption of the standard.²¹⁸

The majority Statement explained that N-Data’s conduct constituted a harm to the standard setting process:

²¹¹*Id.* ¶ 23.

²¹²*Id.* ¶ 27.

²¹³*Id.*

²¹⁴*Id.* ¶¶ 38-39. This paper focuses on the competition claims raised under the “unfair method of competition” prong of Section 5.

²¹⁵Analysis of Proposed Consent Order to Aid Public Comment, *In the Matter of Negotiated Data Solutions LLC*, F.T.C. File No. 051-0094, at 4.

²¹⁶Decision and Order, *In the Matter of Negotiated Data Solutions LLC*, F.T.C. File No. 051-0094.

²¹⁷Dissenting Statement of Chairman Majoras, *In the Matter of Negotiated Data Solutions LLC*, F.T.C. File No. 051-0094.

²¹⁸J. Thomas Rosch, *Section 2 and Standard Setting: Rambus, N-Data & The Role of Causation*, LSI 4th Antitrust Conference on Standard Setting & Patent Pools (Oct. 2, 2008).

The impact of Respondent's alleged actions, if not stopped, could be enormously harmful to standard-setting. Standard-setting organization participants have long worried about the impact of firms failing to disclose their intellectual property until after industry lock-in. Many standard-setting organizations have begun to develop policies to deal with that problem. But if N-Data's conduct became the accepted way of doing business, even the most diligent standard-setting organizations would not be able to rely on the good faith assurances of respected companies.²¹⁹

In addition, the dissent questioned whether renegeing on contractual commitments alone would constitute an antitrust violation.²²⁰ In contrast, the analysis explained that "Section 5 intervention may serve an unusually important role" in the case because, "contract remedies may prove ineffective" in the standard-setting context as N-Data's conduct impacts "numerous, injured third parties who lack privity with patentees" and could "raise costs market-wide."²²¹ The Analysis further explained that a "mere departure from a previous licensing commitment is unlikely to constitute an unfair method of competition under Section 5," but that it may be so in the case of "conduct that threatens to undermine the standard-setting process or to render it anticompetitive."²²²

5 The FTC's Enforcement and Advocacy Regarding the Voluntary FRAND Commitment

5.1 The Interpretation of the FRAND Commitment

Dell, *Unocal* and *Rambus* each involved a SSO participant's failure to disclose patents during the standard setting process. As a result, when the SSO members selected technologies for inclusion into the standard, they lacked knowledge that some technologies may be covered by patents. This knowledge would have shed light on the potential costs involved in incorporating those technologies, as the SSO could have considered the likely royalty that each patent holder may seek on its relevant patents. With knowledge of the patent rights, the SSO could have weighed whether alternative technologies would have presented an overall better value.

N-Data also involved information regarding future royalties associated with a technology under consideration by a SSO. Unlike *Dell*, *Unocal* and *Rambus*, this information did not merely include the fact that N-Data held relevant patents. It also included explicit information regarding the future royalty associated with those patents. In the case of N-Data, it committed to license its patents for \$1,000 if they

²¹⁹Statement of the Federal Trade Commission, *In the Matter of Negotiated Data Solutions LLC*, F.T.C. File No. 051-0094.

²²⁰*Id.*

²²¹Analysis of Proposed Consent Order to Aid Public Comment, *In the Matter of Negotiated Data Solutions LLC*, F.T.C. File No. 051-0094, at 4.

²²²*Id.* at 6.

were included in the standard. The SSO could weigh this cost when evaluating the overall value of N-Data's technology.

Similar to N-Data's unilateral license offer, many SSOs make use of some form of licensing rule as part of their internal procedures. Licensing rules allow SSO participants to commit to some form of licensing term for patents that may cover technologies incorporated in the standard. Depending on the SSO, they may accompany the disclosure of patents, or be a blanket commitment that covers any patents subsequently found to cover the standard. The licensing rule requires that a commitment be made before the standard is set. That way, the nature of commitment given is known to the SSO as it chooses between technologies for incorporation into the standard. The commitment then governs the licensing that may occur after the standard is set.

Licensing rules can mitigate hold-up of a standard. Because they provide information regarding future royalties at the time that the standard is set; they allow the SSO's to choose between competing technologies—which may come with differing licensing commitments—at the time when technologies can be chosen without incurring switching costs. This avoids some of the distortive effects that standardization can have on competition between technologies.

The FRAND commitment is a licensing rule.²²³ The 2007 Report explained that SSOs may use FRAND licensing commitments to mitigate hold-up.²²⁴ Nevertheless, it noted varying views from commentators regarding whether the FRAND commitment was specific enough to effectively combat hold-up.²²⁵ Some commentary suggested that the FRAND commitment was effective.²²⁶ Others suggested that terms such as “reasonable” and “non-discriminatory” were difficult to define.²²⁷

In addition to licensing rules, a similar method of combatting hold-up by SSO members would be to agree upon royalty rates before the standard was set. If parties were to explicitly disclose the royalties that they would require, similar to N-Data, then this information would unambiguously be available at the time that the standard is being set. In addition to unilaterally announcing royalty rates, patent holders could also engage in *ex ante* negotiations of royalty rates before the standard was set.

The 2007 Report noted some practical challenges for the use of *ex ante* license negotiations. Such negotiations may lead to increased administrative costs and delays and may therefore not be adopted by many SSOs.²²⁸ One reason was that the selection of technologies for inclusion in a standard was often done by participants'

²²³2007 Report, *supra* note 18, at 47-48. In addition to the FRAND commitment, the 2007 report also discussed royalty-free licensing commitments.

²²⁴*Id.* at 46.

²²⁵*Id.* at 47-48.

²²⁶*Id.*

²²⁷*Id.*

²²⁸*Id.* at 50.

engineers and technical experts whereas license negotiation involved different personnel such as lawyers.²²⁹ For such reasons, one commentator noted that the use of the FRAND commitment functioned by allowing SSO participants to delay licensing negotiation until after the standard is set, while still mitigating hold-up based upon technology selection.²³⁰

1. *FTC Guidance Regarding Licensing Negotiations*

The FTC's 2007 Report provided guidance regarding the use of licensing rules and *ex ante* licensing discussions. Absent certain group *ex ante* licensing conduct, however, the report did not suggest that SSO's choice of any particular licensing approach would raise antitrust issues. Nor did it recommend that SSOs adopt any particular approach.

The 2007 Report made clear that the FTC and DOJ did not endorse any particular type of licensing rule. The report explained that there may be a number of business motivations that a SSO would have to consider when selecting a policy that worked for its membership.²³¹ The 2007 Report explained:

Neither Agency advocates that SSOs adopt any specific disclosure or licensing policy, and the Agencies do not suggest that any specific disclosure or licensing policy is required.²³²

The report addressed one type of antitrust concern related to *ex ante* licensing: that the collective negotiation of royalty rates prior to the standard being set could sometimes raise concerns under Section 1 of the Sherman Act.²³³ The 2007 Report addressed two types of concerns. First, discussions between either patent holders or SSO members could constitute a naked restraint of trade that may be *per se* illegal.²³⁴ This may include conduct such as using licensing negotiations as a cover for discussing downstream product pricing, or if patent holders would reach naked agreements on the license terms they would offer SSOs.²³⁵ Second, SSO members could exercise group buying power when negotiating for licenses to relevant patents.²³⁶

²²⁹*Id.* at 50.

²³⁰Suzanne Michel, *Bargaining for RAND Royalties in the Shadow of Patent Remedies Law*, 77 ANTITRUST L. J. 889, 893 (2011).

²³¹2007 Report, *supra* note 18, at 50.

²³²*Id.* at 48.

²³³*Id.* at 51. In addition to guidance regarding licensing discussions in the standard setting context, the FTC and DOJ have jointly issued guidance regarding patent licensing which would apply to conduct involving the licensing of both standard essential patents as well as all other patents. See 1995 Guidelines, *supra* note 25.

²³⁴2007 Report, *supra* note 18, at 50-51.

²³⁵*Id.* at 51.

²³⁶*Id.* at 52-53.

The 2007 Report noted that *ex ante* discussion of licensing terms had the potential to be a pro-competitive means of preventing patent hold-up and that such conduct would be evaluated under the rule of reason.²³⁷ When considering such conduct, the report laid out three considerations. First, the report noted that a unilateral disclosure of licensing terms would not constitute a collective act subject to review under Sherman Act Section 1.²³⁸ Second, the report similarly noted that bilateral *ex ante* license negotiations were unlikely to require special antitrust scrutiny.²³⁹ Finally, the report noted that joint SSO activities undertaken to mitigate hold-up would likely be evaluated under the rule of reason, although the sham use of licensing negotiations to cover up naked agreements on licensing terms may be accorded *per se* treatment.²⁴⁰

Nevertheless, the 2007 Report expressed that SSOs may choose not to adopt *ex ante* licensing practices “for practical reasons, independent of antitrust considerations”²⁴¹:

The Agencies do not suggest that SSOs are required to sponsor such discussions during the standard-setting process Moreover, it is fully within the legitimate purview of each SSO and its members to conclude that *ex ante* licensing discussions are unproductive or too time consuming or costly ... The Agencies take no position as to whether SSOs should engage in joint *ex ante* discussion of licensing terms²⁴²

2. Policy Research Regarding the FRAND Commitment

While the 2007 Report touched upon the use of FRAND commitments during the standard setting process by SSOs, the 2011 Report shared several observations regarding the impact of FRAND commitments on licensing taking place after standards are set. The 2011 Report observed that parties attempting to determine a FRAND rate would look to the law of patent remedies as a guide.

The 2011 Report recommended that the “reasonable royalty” remedy for patent infringement serve as a guidepost for determining the FRAND rate. A “reasonable royalty” is one measure of damages for patent infringement available to patent holders.²⁴³ One common framework used by courts to compute a reasonable royalty is that of the “hypothetical negotiation.”²⁴⁴ Under this framework, the reasonable

²³⁷*Id.* at 53-54.

²³⁸*Id.* at 54.

²³⁹*Id.*

²⁴⁰*Id.* at 54-55.

²⁴¹*Id.* at 50.

²⁴²*Id.* at 55.

²⁴³Under U.S. law, a patent holder is entitled to “damages adequate to compensate for the infringement, but in no event less than a reasonable royalty for the use made of the invention by the infringer.” 35 U.S.C. § 284.

²⁴⁴*See 2011 Report, supra* note 32, at 166.

royalty would approximate the royalty that a willing licensor and a willing licensee would have agreed to, assuming that the relevant patents were valid and infringed.²⁴⁵

The 2011 Report observed that courts considering contract disputes over the determination of a FRAND rate “may look to reasonable royalty damages law for guidance,” noting that “commentators have observed a close relationship between the ‘reasonable’ prong of a RAND commitment and the legal rules for determining reasonable royalty damages.”²⁴⁶ In addition to serving as a guide for the judicial determination of a FRAND rate, the 2011 Report explained that patent remedies law could influence real-world negotiations for FRAND-licenses:

When a patentee and implementer of standardized technology bargain for a licensing rate, they do so within a framework defined by patent remedies law. That law sets the implementer’s liability if negotiations break down and the parties enter patent litigation, and therefore heavily influences the negotiated amount.²⁴⁷

5.2 *Competition Advocacy Regarding Remedies for Infringement of a FRAND-Encumbered Patent*

1. *Background*

Patent holders are often entitled to request injunctive relief as a remedy to patent infringement. It is available as a remedy in litigation brought in district court. In addition, one specialized tribunal in the United States, the International Trade Commission (henceforth “ITC”), can issue orders prohibiting the import of patented goods. Both district courts and the ITC apply multi-factor inquiries to determine whether to grant an exclusionary remedy. The FTC’s 2011 Report offered economic considerations for both tribunals to consider when applying these tests. Much of the analysis in the 2011 Report addressed considerations that applied to all patents—both SEPs and others. In addition, the report offered some specific observations regarding SEPs.

²⁴⁵*Id.*

²⁴⁶*Id.* After the issuance of the report, the Ninth Circuit Court of Appeals affirmed one district court’s use of a modified version of the reasonable royalty analysis to compute a FRAND rate in a breach of contract dispute *Microsoft Corp. v. Motorola, Inc.*, 795 F.3d 1024, 1031-34 (9th Cir. 2015).

²⁴⁷2011 Report, *supra* note 32 at 138.

The FTC's 2011 Report discussed how—for all patents including non-SEPs—the grant of injunctive relief influenced the economic incentives provided by the patent system.²⁴⁸ It observed that innovation is best served “by awarding a permanent injunction in the large majority of cases.”²⁴⁹ The report discussed three reasons that generally supported granting injunctive relief.²⁵⁰ First, injunctive relief preserves the exclusivity that provides the foundation of the patent system's incentives to innovate.²⁵¹ Second, the credible threat of an injunction provides a significant deterrent to infringement.²⁵² Third, a predictable injunction threat will encourage private ordering and licensing by the parties.²⁵³

The 2011 Report also discussed the ability of an injunction to cause patent hold-up²⁵⁴:

The threat of an injunction will lead the manufacturer to pay royalties up to its switching costs, which may be higher than the cost at the time of product design. Commentators explain that the threat of hold-up gives patent holders excessive bargaining power in component-based industries that allows the “patent owner to capture value that has nothing to do with its invention, merely because the infringer cannot separate the infringing component from the non-infringing ones” after it has sunk costs into the design and marketing of a product. The implementers of the patented technology do not receive the price benefits that competition among technologies can provide...²⁵⁵

The 2011 Report did note that some commentators were critical of allowing concerns about hold-up inform the injunction analysis. The report noted that such critics argued that decreasing the likelihood of an injunction would lead implementers to choose infringement over licensing.²⁵⁶ Some commenters also argued that it would result in lower royalties that provide insufficient incentives for inventors to invest in optimal levels of research and development.²⁵⁷

The 2011 Report expressed that the proper balance between intellectual property and competition policy could be met by balancing the reasons militating for and against the grant of an injunction.²⁵⁸ The report explained that “although the potential costs from hold-up should be considered, not all hold-up warrants denial of an injunction.”²⁵⁹

²⁴⁸See 2011 Report, *supra* note 32, at 215.

²⁴⁹*Id.* at 224.

²⁵⁰*Id.*

²⁵¹*Id.*

²⁵²*Id.*

²⁵³*Id.*

²⁵⁴*Id.* at 225.

²⁵⁵*Id.*

²⁵⁶*Id.*

²⁵⁷*Id.*

²⁵⁸*Id.* at 227.

²⁵⁹*Id.*

2. Advocacy Regarding Injunctive Relief in the District Courts

(a) *The 2011 Report on the Evolving IP Marketplace*

The 2011 Report discussed how economic considerations should factor into the analysis that courts perform to determine when to grant an injunction. The patent statute provides that courts “may grant injunctions in accordance with the principles of equity ... on terms as the court deems reasonable.”²⁶⁰ The Supreme Court’s 2006 *eBay v. MercExchange* decision reaffirmed that the traditional four-factor test for equitable relief applied.²⁶¹ The test requires that a party seeking an injunction demonstrate:

1. that it has suffered an irreparable injury;
2. that remedies available at law, such as monetary damages, are inadequate to compensate for that injury;
3. that, considering the balance of hardships between the plaintiff and defendant, a remedy in equity is warranted; and
4. that the public interest would not be disserved by a permanent injunction.²⁶²

The 2011 Report offered economic considerations regarding the application of these factors. Regarding the fourth factor, “that the public interest would not be disserved by a permanent injunction,” the report recommended that, “when warranted by the facts,” courts should consider the public’s interest in avoiding patent hold-up, “which can increase costs and deter innovation.”²⁶³ The report noted that the patent system would nevertheless, “very often award injunctions to patentees,” outside of exceptional circumstances.²⁶⁴ The report cautioned against expanding the public interest analysis “to include the benefit of lower prices.”²⁶⁵ The report explained:

Beyond the circumstances of hold-up that can raise prices by distorting competition with unpatented technology ... the public’s interest in lower-priced goods generally should not influence the injunction analysis. In enacting the Patent Act, Congress made the judgment that an exclusive right, through its ability to allow patentees to charge higher prices, encourages innovation to the public benefit. Courts should not second-guess that judgment as a general matter.²⁶⁶

The 2011 Report also addressed the application of the *eBay* analysis to SEPs. It noted that “hold- up in the standard setting context can be particularly acute,” because lock-in due to standardization can make an entire industry susceptible to

²⁶⁰35 U.S.C. § 285.

²⁶¹547 U.S. 388, 391.

²⁶²*Id.*

²⁶³*Id.* at 233.

²⁶⁴*Id.* at 234.

²⁶⁵*Id.*

²⁶⁶*Id.*

hold-up.²⁶⁷ The report recommended that courts “give careful consideration” to each *eBay* factor when considering an injunction prohibiting use of patented technology incorporated into an industry standard.²⁶⁸ It also explained that the presence of a FRAND commitment would be relevant to the injunction analysis.²⁶⁹

(b) *Apple v. Motorola*

The FTC submitted a brief as *amicus curiae* before the Court of Appeals for the Federal Circuit in *Apple v. Motorola*. The case was an appeal from a decision dismissing a patent infringement lawsuit in the Western District of Wisconsin following summary judgment.²⁷⁰ The FTC’s brief addressed the district court’s application of the *eBay* analysis to determine whether it would issue a permanent injunction on one of Motorola’s patents, which Motorola had declared essential to ETSI for the UMTS standard used in some 3G cellular telephones.²⁷¹

The *amicus* brief explained concerns regarding hold-up:

High switching costs combined with the threat of an injunction could allow the patentee to obtain unreasonable licensing terms despite its RAND commitment because implementers are locked into practicing the standard. The resulting imbalance between the value of the patented technology and the rewards to the patentee may be especially acute where the injunction is based on a patent covering a minor component of a complex multicomponent product, as is often the case with standard-essential patents in information technology industries.

The brief explained that hold-up could allow a patent holder to negotiate royalties beyond the “competitive value” of the technology:

Under these circumstances, the threat of an injunction may allow the holder of a RAND-encumbered SEP to realize royalty rates that reflect the investments firms make to implement the standard, rather than the competitive value of the patented technology, which could raise prices to consumers while undermining the standard-setting process.²⁷²

The brief described how the FRAND commitment could mitigate the risk of hold-up and the impact of the threat of an injunction:

RAND commitments mitigate the risk of patent hold-up, and encourage investment in the standard. After a RAND commitment is made, the patentee and the implementer will typically negotiate a royalty or, in the event they are unable to agree, may seek a judicial determination of a reasonable rate. However, a royalty negotiation that occurs under the

²⁶⁷*Id.*

²⁶⁸*Id.* at 235.

²⁶⁹*Id.*

²⁷⁰*Apple, Inc. v. Motorola, Inc.*, 757 F.3d 1286, 1294 (Fed. Cir. 2014).

²⁷¹Brief of Amicus Curiae Federal Trade Commission Supporting Neither Party at 13 n. 11, *Apple, Inc. v. Motorola, Inc.*, 757 F.3d 1286 (Fed. Cir. 2014) (No. 2012-1548, 2012-1549).

²⁷²*Id.* at 6.

threat of an injunction may be heavily weighted in favor of the patentee in a way that is in tension with the RAND commitment.²⁷³

The legal argument in the brief focused on how the presence of a FRAND commitment would affect the injunction analysis under the *eBay* standard. The *amicus* brief discussed the application of each *eBay* factor to the situation of a FRAND-encumbered SEP.

The brief discussed the application of the first two *eBay* factors: that the patent holder be irreparably harmed and that monetary relief would be inadequate.²⁷⁴ Citing the decision below, the brief argued that “a RAND commitment means that the patentee ‘implicitly acknowledged that a royalty is adequate compensation for a license to use that patent.’”²⁷⁵ The brief also cited to decisions holding “that a practice of widespread licensing, including offers to license to the defendant, strongly militates against a finding of irreparable harm.”²⁷⁶ In sum, the brief concluded:

A fortiori, a commitment to offer a license to *all* comers on FRAND terms should be sufficient to establish that a reasonable royalty is adequate to compensate the patentee for infringement by any particular implementer willing and able to abide by those terms.²⁷⁷

Addressing the other factors, the brief argued that the public interest would also support denial of an injunction:

The public interest in promoting innovation and protecting consumers also weighs heavily against an injunction here. To be sure, consumers would be harmed by the immediate impact of being deprived of a popular product. But consumers would also suffer in the longer run because an injunction would reduce the returns to innovation by Apple and other patent holders who have patents that are essential to the same standard or otherwise read on Apple’s excluded products, who may face lower royalties....²⁷⁸

In addition to this argument, Commissioner Rosch expressed a separate view in the FTC’s *amicus* brief, concurring yet separately arguing that issuing injunctive relief is “inappropriate where the patent holder had made a FRAND commitment.”²⁷⁹ He argued that, “even if the patentee contends that it has met its FRAND obligation,” the FRAND commitment is a commitment to license that is inconsistent with seeking injunctive relief.²⁸⁰ He argued that “the only exception to this is when the licensee refuses to comply with the decision of a federal court or some other neutral arbitrator defining the FRAND terms.”²⁸¹

²⁷³*Id.* at 5-6.

²⁷⁴*Id.* at 8.

²⁷⁵*Id.* at 9.

²⁷⁶*Id.* at 10.

²⁷⁷*Id.* at 11.

²⁷⁸*Id.* at 12-13.

²⁷⁹*Id.* at 2 n.3.

²⁸⁰*Id.*

²⁸¹*Id.*

The Federal Circuit issued a decision finding that Motorola was not entitled to an injunction on its SEP.²⁸² The court declined to adopt a *per se* rule that injunctions are unavailable for SEPs. Rather, it held that courts should apply the *eBay* analysis, taking the FRAND commitment into account.²⁸³ Performing the analysis, the court reasoned that “a patentee subject to FRAND commitments may have difficulty establishing irreparable harm.”²⁸⁴

In so doing, the decision recognized that there may be situations where an injunction would still be warranted, notwithstanding the presence of a FRAND commitment:

[A]n injunction may be justified where an infringer unilaterally refuses a FRAND royalty or unreasonably delays negotiations to the same effect... To be clear, this does not mean that an alleged infringer’s refusal to accept any license offer necessarily justifies issuing an injunction. For example, the license offered may not be on FRAND terms. In addition, the public has an interest in encouraging participation in standard-setting organizations but also in ensuring that SEPs are not overvalued.²⁸⁵

Several justices expressed differing views on the circumstances where it would be appropriate to grant an injunction on a FRAND-encumbered patent. Judge Rader dissented from the Federal Circuit’s opinion, noting that the determination of whether a licensee was willing required “requires intense economic analysis of complex facts” and is “not likely to be susceptible to summary adjudication.”²⁸⁶ Judge Prost, on the other hand, concurred, yet “disagree[d] that an alleged infringer’s refusal to enter into a licensing agreement justifies entering an injunction against its conduct...” He expressed that an injunction would be appropriate only in limited situations, such as when an infringer were judgement-proof or refused to pay a court-ordered damages award after being found to infringe a valid patent.²⁸⁷

3. Advocacy Regarding Exclusion Orders at the International Trade Commission

(a) *The 2011 Report on the Evolving IP Marketplace*

The FTC has also engaged in competition advocacy before the ITC. The ITC provides a specialized tribunal for patent holders to block the importation of goods that infringe their patents.²⁸⁸ Remedies in the ITC are generally limited to an

²⁸²*Apple*, 757 F.3d at 1332.

²⁸³*Id.*

²⁸⁴*Id.*

²⁸⁵*Id.*

²⁸⁶*Id.* at 1333.

²⁸⁷*Id.* at 1342-43.

²⁸⁸2011 Report, *supra* note 32, at 239.

exclusion order that directs U.S. Customs to bar articles from entry into the United States.²⁸⁹

The ITC's grant of an exclusion order is not governed by the *eBay* standard.²⁹⁰ Rather, it is governed by a public interest inquiry, provided in Section 337, which has four prongs:

1. the public health and welfare;
2. competitive conditions in the United States economy;
3. the production of like or directly competitive articles in the United States; and
4. United States consumers.

The ITC considers these factors when issuing an exclusion order, but it "has rarely used the provision to deny an order."²⁹¹ In addition, should the ITC grant an exclusion order, Section 337 provides that the President has the ability to review to order to ensure that its grant is consistent with the public interest.

The 2011 Report recommended that the ITC take hold-up concerns into account when applying the public interest factors, arguing that the analysis "should allow consideration of how an exclusion order can cause hold-up, raise prices and decrease innovation."²⁹² The report also raised concerns regarding standard essential patents, recommending that "the ITC incorporate concerns about patent hold-up, especially of standards, into the decision of whether to grant an exclusion order in accordance with the public interest."²⁹³ Nevertheless, the report also explained that "the instances in which the ITC would deny an exclusion order based on these considerations would be rare."²⁹⁴ The report also explained that such a denial would leave the patent holder without an infringement remedy in the ITC because that agency lacks the power to award monetary damages. In conclusion, the report explained that "potential solutions deserve further study."²⁹⁵

(b) *Public Interest Statements*

The FTC submitted statements on the public interest in two ITC investigations, 337-TA- 745 and 337-TA-752.²⁹⁶ The investigations involved complaints by Motorola against Apple and Microsoft. The FTC's comments raised the concern

²⁸⁹*Id.*

²⁹⁰*Id.* at 230.

²⁹¹*Id.* at 242.

²⁹²*Id.* at 243.

²⁹³*Id.*

²⁹⁴*Id.*

²⁹⁵*Id.*

²⁹⁶Third Party United States Federal Trade Commission's Statement on the Public Interest, *In the Matter of Certain Gaming and Entertainment Consoles, Related Software, and Components Thereof*, Inv. No. 337-TA-752 (June 6, 2012); Third Party United States Federal Trade Commission's Statement on the Public Interest, *In the Matter of Certain Wireless Communication Devices, Portable Music and Data Processing Devices, Computers and Components Thereof*, Inv. No. 337-TA-745 (June 6, 2012).

that “patentee can make a RAND commitment as part of the standard setting process, and then seek an exclusion order for infringement of the RAND-encumbered SEP as a way of securing royalties that may be inconsistent with that RAND commitment.”²⁹⁷ Each comment observed that “high switching costs combined with the threat of an exclusion order could allow a patentee to obtain unreasonable licensing terms despite its RAND commitment,” and that these concerns “may be especially acute where the exclusion order is based on a patent covering a small component of a complex multicomponent product.”²⁹⁸

The FTC provided several suggestions to the ITC to mitigate the risk of hold-up. First, it suggested that the ITC consider the risk of hold-up in its public interest analysis.²⁹⁹ Alternatively, it suggested that the ITC craft its exclusion order remedy to provide time for parties to mediate for an ongoing royalty prior to the exclusion of its products.³⁰⁰ Nevertheless, the FTC’s comments acknowledged that there would be circumstances when the public interest would support the grant of an exclusion order, such as when “the holder of the RAND-encumbered SEP has made a reasonable royalty offer.”³⁰¹

1. *Ongoing Developments*

Following the FTC’s comments, other federal agencies also addressed the grant of ITC exclusion orders in cases involving FRAND-encumbered SEPs. The Department of Justice and the Patent and Trademark Office issued a joint Policy Statement raising concerns regarding the potential for hold-up from the grant of exclusion orders.³⁰² The Statement noted that “[i]n some circumstances, the remedy of an injunction or exclusion order may be inconsistent with the public interest,” particularly “where an exclusion order based on a F/RAND-encumbered patent appears to be incompatible with the terms of a patent holder’s existing F/RAND licensing commitment to an SDO.”³⁰³ Nevertheless, the Statement also indicated:

An exclusion order may still be an appropriate remedy in some circumstances, such as where the putative licensee is unable or refuses to take a F/RAND license and is acting outside the scope of the patent holder’s commitment to license on F/RAND terms.... An exclusion order also could be appropriate if a putative licensee is not subject to the jurisdiction of a court that could award damages. This list is not an exhaustive one.³⁰⁴

²⁹⁷*Id.* at 1.

²⁹⁸*Id.* at 3.

²⁹⁹*Id.* at 4.

³⁰⁰*Id.*

³⁰¹*Id.*

³⁰²U.S. Dep’t. of Justice & Pat. & Trademark Off., Policy Statement on Remedies for Standards-Essential Patents Subject to Voluntary F/Rand Commitments (January 8, 2013).

³⁰³*Id.* at 6.

³⁰⁴*Id.* at 7.

In 2014, the Executive Office of the President took these considerations into account when conducting its review of an exclusion order granted in 337-TA-794, a complaint by Samsung against Apple.³⁰⁵ Relying upon the analysis laid out in the Policy Statement, the office found the grant of the exclusion order was inconsistent with the public interest and instructed the ITC to consider the possibility of patent hold-up when conducting its public interest analyses in the future:

[I]n any future cases involving SEPs that are subject to voluntary FRAND commitments, the Commission should be certain to (1) to examine thoroughly and carefully on its own initiative the public interest issues presented both at the outset of its proceeding and when determining whether a particular remedy is in the public interest and (2) seek proactively to have the parties develop a comprehensive factual record related to these ... including information on the standards-essential nature of the patent at issue if contested by the patent holder and the presence or absence of patent hold-up or reverse hold-up. In addition, the Commission should make explicit findings on these issues to the maximum extent possible.³⁰⁶

In June 2015, the ITC issued a request for written submissions with respect to its review of a decision in 337-TA-613, which found infringement of a FRAND-encumbered SEP.³⁰⁷ The request solicited responses on a number of questions regarding how the public interest analysis should be implemented to account for the FRAND commitment. Chairwoman Ramirez and Commissioners Ohlhausen and Wright offered differing suggestions. Chairwoman Ramirez suggested that “the SEP holder should have the burden of establishing that the putative licensee is unwilling or unable to take a license on FRAND terms.”³⁰⁸ In contrast, Commissioners Ohlhausen and Wright argued “[t]he ITC should not begin its analysis by initially imposing upon the SEP holder the burden of proving that the accused infringer is unwilling or unable to take a license on FRAND terms.”³⁰⁹

³⁰⁵Letter from Michael B.G. Froman, Amb., U.S. Trade Rep., to Irving A. Williamson, Chairman, U.S. Int’l Trade Comm’n (Aug. 3, 2013).

³⁰⁶*Id.* at 3.

³⁰⁷Notice of Commission Decision to Review in Part a Final Initial Determination on Remand; Request for Written Submission, *In the Matter of Certain 3G Mobile Handsets and Components Thereof*, 337-TA-613.

³⁰⁸Written Submission on the Public Interest of Federal Trade Commission Chairwoman Edit Ramirez, *In the Matter of Certain 3G Mobile Handsets and Components Thereof*, 337-TA-613 (June 25, 2015).

³⁰⁹Reply Submission on the on the Public Interest of Federal Trade Commission Commissioners Maureen K. Ohlhausen and Joshua D. Wright, *In the Matter of Certain 3G Mobile Handsets and Components Thereof*, 337-TA-613.

5.3 *Enforcement Actions Regarding Seeking Injunctive Relief on FRAND-Encumbered Patents*

The FTC has brought two cases under Section 5 of the FTC Act related to parties who sought injunctive relief on patents for which they have made voluntary FRAND commitments. Both cases build upon the theory first laid out in the *N-Data* consent: that a party can violate Section 5 of the FTC Act by making a voluntary licensing commitment during the standard setting process and subsequently reneging on that commitment. In these cases, the licensing commitment was a FRAND commitment, and the parties reneged on the commitment by seeking injunctive relief in the district courts and before the ITC.

5.3.1 *In re Robert Bosch GmbH*

In 2012, the FTC entered into a consent decree with Robert Bosch GmbH (henceforth “Bosch”) relating to its acquisition of SPX Service Solutions (henceforth “SPX”).³¹⁰ During the course of investigating the merger, the FTC uncovered evidence that SPX was pursuing claims for injunctive relief on patents it had committed to license on FRAND terms.³¹¹ The patents were essential to J-2788 and J-2843 standards for automotive air conditioning equipment promulgated by SAE International.³¹² SAE’s policies required firms to license standard essential patents on either royalty-free or FRAND terms:

[The SAE Policy Manual] requires that a working group member that owns, controls or licenses potentially standard essential patents make such patents available for licensing either (1) without compensation or (2) under reasonable terms and conditions that are demonstrably free of any unfair discrimination.³¹³

Nevertheless, SPX sued several competitors for patent infringement for technologies related to the J-2788 and J-2843 standards and asserted claims for injunctive relief.³¹⁴ The FTC alleged that this conduct violated Section 5 of the FTC act, and Bosch settled this claim by consent.³¹⁵

The FTC’s Statement accompanying the consent cited “increasing judicial recognition, coinciding with the view of the Commission, of the tension between

³¹⁰See Complaint, *In the Matter of Robert Bosch GmbH*, F.T.C. Docket No. C-4377 (November 21, 2012).

³¹¹See Analysis of Agreement Containing Consent Orders to Aid Public Comment, *In the Matter of Robert Bosch GmbH*, F.T.C. Docket No. C-4377, at 4.

³¹²See Complaint, *In the Matter of Robert Bosch GmbH*, at ¶¶ 11-14.

³¹³*Id.* ¶ 15.

³¹⁴*Id.* ¶ 16.

³¹⁵Decision and Order, *In the Matter of Robert Bosch GmbH*, F.T.C. Docket No. C-4377 at § IV.

offering a RAND commitment and seeking injunctive relief.”³¹⁶ The accompanying Analysis to Aid Public Comment further observed that “SPX’s suit for injunctive relief against implementers of its standard essential patents constitutes a failure to license its standard-essential patents under the FRAND terms it agreed to while participating in the standard setting process...”. The Analysis further noted that “[s]eeking injunctions against willing licensees of FRAND-encumbered standard essential patents ... is a form of FRAND evasion and can reinstate the risk of patent hold-up that FRAND commitments are intended to ameliorate.”³¹⁷ The Statement further explained that—when such patent holders seek an injunction against a willing licensee—“in appropriate cases the Commission can and will challenge this conduct as an unfair method of competition under Section 5 of the FTC Act.”³¹⁸

Commissioner Ohlhausen dissented from the *Bosch* consent.³¹⁹ She raised concerns that—because the conduct related to the seeking of relief in the courts or ITC—the FTC’s enforcement action raised issues of jurisdictional conflict and regulatory humility.³²⁰ Commissioner Ohlhausen did express support for the FTC’s advocacy filings related to injunctive relief, noting that “the FTC is well positioned to offer its views and to advocate on the important issue of patent hold-up using its policy tools.” Nevertheless, she took issue that the use of an enforcement action “implies that our judgment on the availability of injunctive relief on FRAND-encumbered SEPs is superior to that of these other institutions.” In response, the majority Statement explained that SPX’s conduct included that it “voluntarily gave up the right to seek an injunction against a willing licensee” which fell within the scope of Section 5.

Commissioner Ohlhausen also questioned whether other law would be better-suited to police SPX’s conduct, noting that “breaches of FRAND commitments, including potentially the seeking of injunctions if proscribed by SSO rules, are better addressed by the relevant SSOs or by the affected parties via contract and/or patent claims resolved by the courts or through arbitration.” In response, the Statement explained that “in the standard-setting context ..., long an arena of concern to the Commission, a breach of contract risks substantial consumer injury,” and that enforcement was justified because of “the standard setting context, together with the acknowledgment that a FRAND commitment also depends on the presence of a willing licensee.”

³¹⁶See Analysis of Agreement Containing Consent Orders to Aid Public Comment, *In the Matter of Robert Bosch GmbH* at 4.

³¹⁷*Id.* at 4-5.

³¹⁸See Statement of the Federal Trade Commission, *In the Matter of Robert Bosch GmbH*, F.T.C. Docket No. C-4377, 2.

³¹⁹See Statement of Commissioner Maureen K. Ohlhausen, *In the Matter of Robert Bosch GmbH*, F.T.C. File No. 121-0081.

³²⁰*Id.* at 1.

5.3.2 In re Google, Inc. and Motorola Mobility, Inc.

In 2013, the FTC entered into a consent agreement with Google ending its investigation into Motorola Mobility's SEP licensing practices, which Google continued after acquiring Motorola Mobility.³²¹ This conduct related to FRAND commitments that Motorola Mobility made to IEEE, ETSI and ITU.³²² It related to ETSI's 3G and 4G standards, IEEE's 802.11 Wi-Fi standards and ITU's H.264 video compression standards.³²³ The FTC alleged that Motorola Mobility breaching its promises to license its SEPs on FRAND terms:

ETSI, ITU, and IEEE require that firms disclose whether they will commit to license their SEPs on FRAND terms in order for the SSO to decide if the patents should be included in the relevant cellular, video codec, or wireless LAN standards. Motorola promised to license its patents essential to these standards on FRAND terms, inducing ETSI, ITU, and IEEE to include its patents in cellular, video codec, and wireless LAN standards.

These commitments created express and implied contracts with the SSOs and their members....

The Complaint alleged that, after making these commitments, Motorola violated them through seeking injunctive relief:

Motorola then violated the FRAND commitments made to ETSI, ITU, and IEEE by seeking, or threatening, to enjoin certain competitors from marketing and selling products compliant with the relevant standards, like the iPhone and the Xbox, from the market unless the competitor paid higher royalty rates or made other concessions. At all times relevant to the allegations in the Proposed Complaint, these competitors –Microsoft and Apple– were willing to license Motorola's SEPs on FRAND terms.³²⁴

The FTC alleged that Motorola Mobility's conduct constituted an unfair method of competition in violation of Section 5 of the FTC Act. In its accompanying Analysis, the FTC explained that "FRAND commitments help ensure the efficacy of the standard-setting process and that the outcome of that process is [pro-competitive]" and that the "process is undermined when those promises are reneged."³²⁵ The Analysis went on to explain that such conduct could be reached by Section 5 of the FTC Act:

Consistent with these principles, courts have found that patent holders may injure competition by breaching FRAND commitments they made to induce SSOs to standardize their patented technologies. Each of these cases, brought under Section 2 of the Sherman Act, involved allegations of bad faith or deceptive conduct by the patent holder before the standard was adopted. However, under its stand-alone Section 5 authority, the Commission

³²¹Complaint, *In the Matter of Motorola Mobility, LLC and Google, Inc.*, F.T.C. Docket No. C-4410 (July 23, 2013).

³²²*Id.* at ¶ 8.

³²³*Id.* at 11.

³²⁴Analysis of Proposed Consent Order to Aid Public Comment, *In the Matter of Motorola Mobility, LLC and Google, Inc.*, F.T.C. File No. 121-0120.

³²⁵*Id.* at 4.

can reach opportunistic conduct that takes place after a standard is adopted that tends to harm consumers and undermine the standard-setting process.³²⁶

The accompanying Statement explained that “[b]y taking action that may deter the owners of standard-essential patents from unilaterally defining the terms of FRAND agreements through the exercise of leverage acquired solely through the standard-setting process, we protect the integrity of that process.”³²⁷

Citing its *N-Data* consent, the Analysis further explained that “courts have traditionally viewed opportunistic breaches as conduct devoid of countervailing benefits.” Nevertheless, the Analysis also repeated N-Data’s explanation that a “mere departure from a previous licensing commitment is unlikely to constitute an unfair method of competition under Section 5,” but that the present case was an exception because the “context here is standard setting.”³²⁸

The case settled by a consent decree. As the Analysis explained, it “does not define FRAND but requires Google to offer, and follow, specific procedures that will lead to that determination.” The procedures were “tailored to prevent Google ... from using injunctions or threats of injunctions against current or future potential licensees who are willing to accept a license on FRAND terms.”³²⁹

6 Conclusion

Collaborative standard setting can influence competition between technologies. In many cases, it can be extremely beneficial. Interoperability standards facilitate the commercialization of new technologies that are compatible with the standard, and they can make competition between such complimentary goods possible. Nevertheless, the standard setting process does change the nature of competition between technologies that are incorporated into the standard itself. Due to the high costs of switching to alternatives once a standard is set, competition between technologies after the standard is set is diminished. Opportunistic firms can exploit this change.

The FTC’s law enforcement efforts were preceded by antitrust cases addressing the fact that collaborative standard setting leaves product design to the collective decision making of competitors. Early decisions recognized the incentives that participants in this process would have to advance the interest of their own firms by excluding technologies produced by their rivals. These decisions noted that—if unbiased by commercial interests—collaborative standard setting offered technical and competitive advantages. These decisions recognized the importance of SSO

³²⁶*Id.* at 4-5.

³²⁷*Id.* at 4.

³²⁸*Id.* at 5.

³²⁹Analysis of Proposed Consent Order to Aid Public Comment, *In the Matter of Motorola Mobility, LLC and Google, Inc.*, F.T.C. File No. 121-0120 at 6.

policies and procedures that ensured that technology selection was made on the merits of the technology itself. The FTC's enforcement actions regarding SEP-licensors related to concerns regarding the integrity of the standard setting process and the safeguards implemented by SSOs. *Dell*, *Unocal* and *Rambus* all concerned deceptive conduct that took place during the standard setting process. *N-Data*, *Bosch* and *Google* all concerned voluntary commitments that patent holders made before standards were set.

The FTC has also engaged in competition advocacy to address concerns regarding patent hold-up. These concerns relate to remedies granting exclusionary relief because a patent holder seeking an injunction is poised to negotiate a royalty that captures the costs of switching an existing product to an alternative design. The standard setting process enhances these switching costs. When it has raised these concerns, the FTC has articulated how existing legal standards could take hold up concerns into account.

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